

FINAL

ENVIRONMENTAL IMPACT REPORT
VOLUME I

ORANGE COUNTY GREAT PARK



FILE NOS: 47782-GA
47785-ZC

SCH# 2002101020

CERTIFIED MAY 27, 2003
IRVINE CITY COUNCIL RESOLUTION NO. 03-60

CITY OF IRVINE



Cotton/Bridges/Associates
A Division of P&D Consultants

Final

Program Environmental Impact Report
Volume I

for the

Orange County Great Park
(Annexation, General Plan Amendment, Zoning
and Related Actions)

File Nos: 47782-GA
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- Appendix I: Air Quality Assessment City of Irvine General Plan Amendment, Pre-Zoning, and Annexation File Nos: 47782-GA, 47785-ZC. January 16, 2003. Black & Veatch.
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1.0 Introduction

This Program Environmental Impact Report is prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code Section 21000 et seq.); the Guidelines for the Implementation of the California Environmental Quality Act (CEQA Guidelines) published by the Resources Agency of the State of California (California Administrative Code Sections 15000 et seq.); and the environmental review guidelines of the City of Irvine.

Overview of the Project

Assuring the reuse of the site of the former Marine Air Corps Station El Toro (MCAS El Toro) in accord with the Orange County Great Park Plan is of primary importance to the City of Irvine and the residents of Orange County. The City of Irvine has actively supported the development of a major park and related non-aviation uses on the site for a number of years. This Final Program EIR and the related project are part of the continuing process required to realize this objective.

Project

The project land area involves approximately 4,806 acres. At present, 414 acres are within the City of Irvine and the balance are unincorporated area as shown in Table 1-1. Of this acreage, 4,693 represent the former MCAS El Toro property.

**Table 1-1
Project Area Acreages**

Acres	Unincorporated Areas¹	City of Irvine²	Total
Former MCAS El Toro:			
Planning Area 51	4,279	16	4,295
Planning Area 30	0	398	398
Subtotal	4,279	414	4,693
Musick Jail & IRWD Parcel:			
Planning Area 35	113	0	113
Subtotal	113	0	113
Project Area Total	4,392	414	4,806

¹ Project area proposed for annexation. See Figure 3-1 in Project Description.

² Project area proposed for zone change. See Figure 3-1 in Project Description.

The project consists of the following actions: 1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; 2) Annexation of the unincorporated portion of Planning Area 35 (James A. Musick Branch Jail and the Irvine Ranch Water District Parcel); and 3) General Plan Amendment and Zone Change for Planning Area 30 which is presently in the City of Irvine; and 4) Approval of the form of a Development Agreement vesting approval of higher intensity overlay uses in consideration for dedication of land for public purposes and for developing and funding certain infrastructure improvements and maintenance of the public uses by the

purchaser/developer and subsequent landowners and funding for specific park, roadways, and other circulation facilities and infrastructure. Together, these actions establish the policy and legislative structure to guide the development of the former MCAS El Toro property and the implementation of the “Orange County Great Park.”

These actions are described in greater detail in Section 3.0 - Project Description. The reader should refer to Section 3.0 for a discussion of all actions included in the project.

Purpose

The purpose of the project is to assure that reuse of the former MCAS El Toro is consistent with the intent of Measure W approved by the voters in March, 2002 while responding to the decision of the federal government to sell the land. The City also wishes to assure the orderly development of public infrastructure and public open space amenities. Securing local control over land use decisions and the coordination of all infrastructure improvements is essential to meet the City’s objectives. Annexation of portions of the property not currently within the City limits and an amendment of the City’s General Plan and Zoning Ordinance are actions required to transfer complete land use control from the County of Orange to the City of Irvine.

Background

The decision to close MCAS El Toro was made by the Department of Navy (DON) under the Base Realignment and Closure Act in July, 1993. Since that time several plans for the reuse of the site have been prepared by various entities including the County of Orange, El Toro Reuse Planning Authority (ETRPA), and the City of Irvine. The current plan, called the Orange County Great Park Plan, is consistent with the concept for reuse of El Toro approved by the voters of Orange County in the March, 2002 initiative (Measure W). The Measure W initiative amended the County General Plan north of the Southern California Regional Rail Authority (SCRRA) Metrolink rail line to designate the unincorporated land for park, open space and other uses, removing the designation of the site as a commercial airport from the County General Plan. While the amendment to the County General Plan created by Measure W does not govern land use regulations in the City, the intent of providing significant public open space land use designations has been incorporated into the City’s Great Park Plan.

Orange County Board of Supervisors Actions

Following the passage of Measure W in March 2002, the City of Irvine immediately embarked on the refinement of the Orange County Great Park Plan. On April 16, 2002, the Orange County Board of Supervisors formally voted to cease further planning for the former MCAS El Toro and to support the annexation and land use planning of the property by the City of Irvine. The Board of Supervisors also decided not to pursue receipt of title to the former MCAS El Toro property and to negotiate with the DON to terminate the El Toro Master Lease existing between the County and the DON. The El Toro Master Lease between the County and DON was terminated in July 2002.

Decision by Navy to Sell El Toro Lands

On April 23, 2002, shortly after the passage of Measure W, the DON issued a Record of Decision (ROD) for the former MCAS El Toro property. The DON announced that the transfer of the property would be in accordance with the will of the people and the intent of Measure W. Subsequently the DON announced its intention to sell the property by public auction in accordance with federal surplus property disposal procedures.

Following the DON decision to sell the land at public auction, the City of Irvine concept plan was modified to assure that the orderly development of the “great park” could be realized through the private sector. The modification recognized that the land would not be transferred to the City or other public agency through a Public Benefit Conveyance or a no-cost Economic Development Conveyance. The Orange County Great Park Plan recognizes that sale of the land will require a reasonable economic return to the private sector buyer. At the same time the City and other local interests want to assure park, open space and other public areas are dedicated to the City or other non-profit or governmental entity in perpetuity and improved without cost to the local taxpayer.

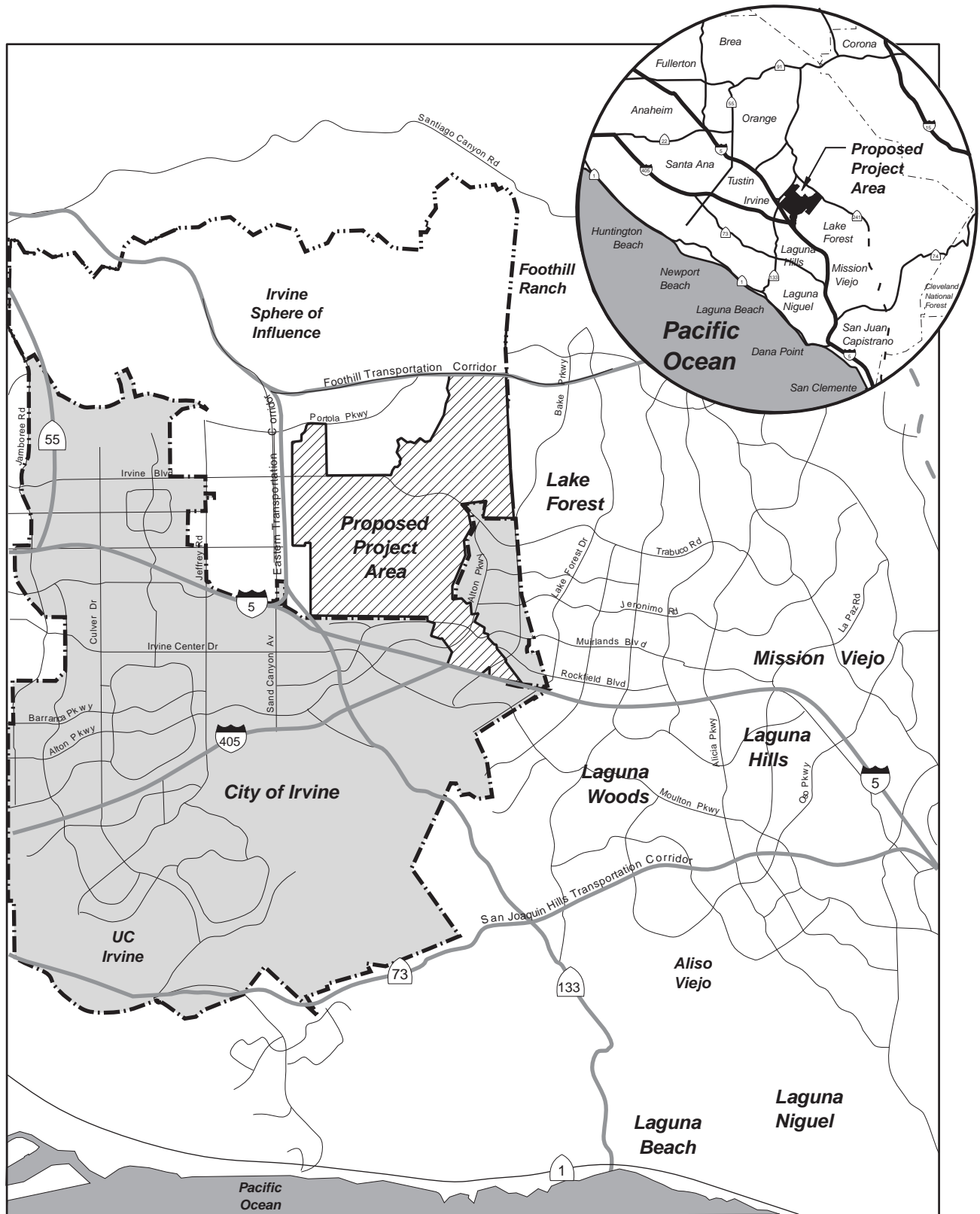
The City prepared a revised land plan that would allow for increased development intensities in exchange for the private sector participation in a development agreement that required the full dedication and improvement of public infrastructure and open space amenities. The City’s strategy is to allow for intensified private development under a Development Agreement arrangement in return for dedication of lands to be used for park, open space and public and institutional purposes. By also allowing for a less intense development plan as the base/underlying zoning designation, the future private sector owner’s decision as to whether to pursue the more development intense overlay zoning through a development agreement is voluntary.

Project Location

The project is located in the center of Orange County and includes land within the City of Irvine and unincorporated area. The project area is northeast of the intersection of Interstate 5 and the Eastern Transportation Corridor Toll Road. Figure 1-1 (Project Location) depicts the location of the project area in a regional and local context, respectively. The total project area encompasses approximately 4,806 acres or 7.5 square miles. The total area proposed for annexation is 4,392 acres.

The project area is generally bounded by the cities of Irvine and Lake Forest on the south and east, and unincorporated area in the County of Orange on the north. Other nearby local jurisdictions include the cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo and Tustin.

Major roadways bordering the project area include I-5 to the southwest, Sand Canyon Avenue to the northwest, Portola Parkway and Irvine Boulevard to the north, and Bake Parkway to the northeast. John Wayne Airport is located seven miles to the west of the project area. The Irvine Transportation Center, a major multi-modal transit center linking Orange County Transportation Authority (OCTA) bus, Metrolink commuter rail, and Amtrak rail services, is adjacent to the SCRRA tracks which traverse the site and separate Planning Areas 51 and 30.



Source: Cotton/Bridges/Associates, 2002.

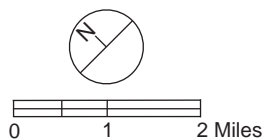


Figure 1-1
Project Location

The James A. Musick Jail Facility is located on a 105-acre parcel northwest of existing Bake Parkway and east of the future extension of Alton Parkway. The northern boundary of the Musick Jail site abuts the former MCAS El Toro. Existing buildings of the Irvine Spectrum abut the Musick Jail site to the west/southwest. An eight-acre (IRWD) parcel west of the Musick Jail contains the IRWD East Irvine Zone IV Pumping Station, Zone III 5.0 million gallon potable water reservoir, and a 7.0 million gallon potable water reservoir.

The Orange County Great Park Plan

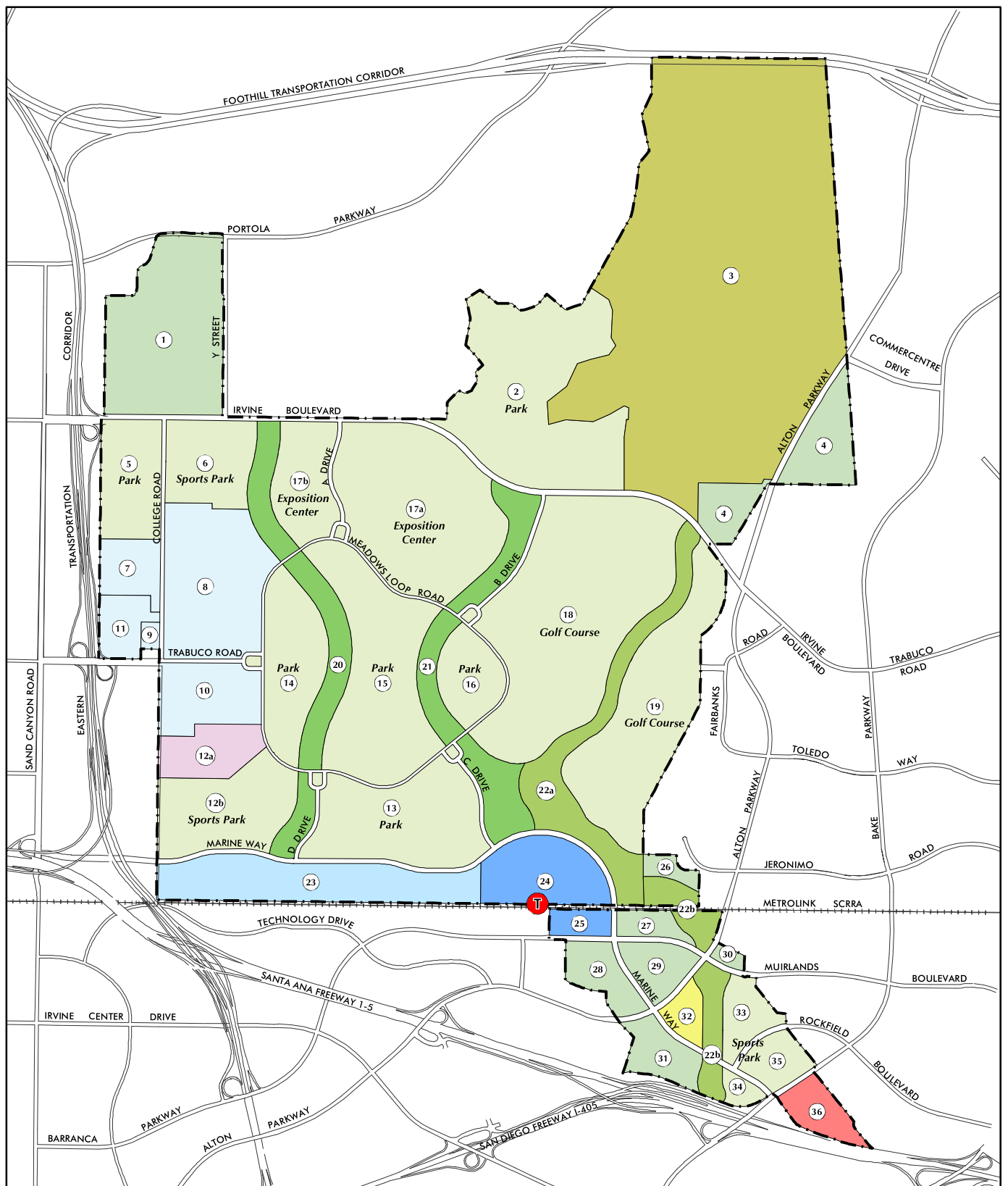
In 2001, the City of Irvine devoted substantial time and resources to prepare a plan for the reuse of the former MCAS El Toro property. The plan included large areas of park, recreational uses and open space. Other uses in the plan were institutional uses, research and development uses, agriculture, educational uses and various others. This concept plan was based on the assumption that the federal government would transfer the land to public entities at low or no cost via public benefit conveyances and/or economic development conveyances similar to other base reuse efforts.

With the prospect that the land would be sold to the private sector, a strategy was incorporated in the Plan to assure the realization of the park, open space and other public uses to dedicate to the City and other non-profit or governmental entities through a Development Agreement. To accomplish the goal of substantial public use of the site while providing economic return to potential buyers, the Great Park Plan is formulated as an overlay plan, i.e., a base plan with an overlay. Zoning for the project area has a zoning overlay. This is a tool traditionally used to permit more creative use of the land and possible increased intensity of use, just as it is proposed in this case by the City of Irvine.

The Base plan is illustrated in Figure 1-2 and represents the minimum level of development anticipated for the site. The Overlay Plan defines additional development rights which may be granted if the property owner enters into a Development Agreement with the City. The Development Agreement will include a requirement for the dedication of land for public uses and for funding of certain infrastructure and public open space amenity improvements and their long term maintenance by the purchaser/developer as well as any future owners of the property. Actual development of the El Toro site will occur at an intensity no greater than that shown in the Overlay Plan illustrated in Figure 1-3. Development intensities for the Base and Overlay plans are listed in Table 1-2.

Project Area Setting

The general locale and surrounding uses are shown in a recent aerial of the site (Figure 1-4). Surrounding land uses include the Irvine Spectrum business park, Wild Rivers Water Park and the Verizon Wireless Amphitheater to the southwest, industrial/business parks to the southeast, residential neighborhoods to the west within the City of Irvine, residential neighborhoods to the southeast within the City of Lake Forest, and agriculture and open space to the northeast.



- | | |
|---------------------------------------|-------------------|
| --- Orange County Great Park Boundary | Retail |
| Education | Auto Center |
| Institutional | Agriculture |
| Transportation Facilities | Riparian Corridor |
| Transit Oriented Development | Wildlife Corridor |
| Research and Development | Habitat Preserve |

- | |
|----------------------------------|
| Open Space |
| (17c) Planning Area Zone |
| (T) Irvine Transportation Center |

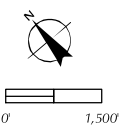
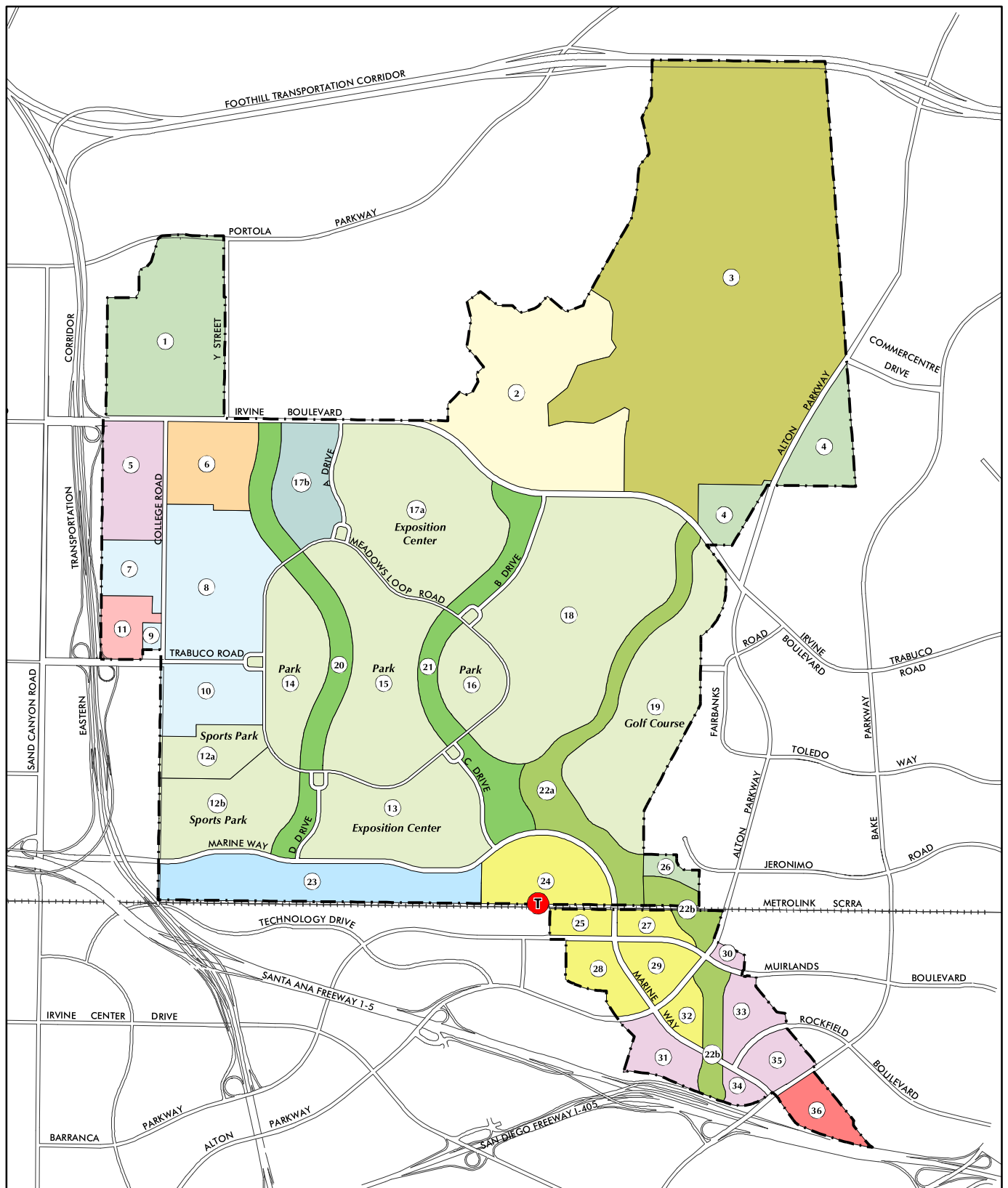


Figure 1-2
Orange County
Great Park Base Plan 2025



--- Orange County Great Park Boundary

Education

Institutional

Low Density Residential

Medium Density Residential

Transit Oriented Development

Research and Development

Retail

Auto Center

Cemetery

Agriculture

Riparian Corridor

Wildlife Corridor

Habitat Preserve

Open Space

(17c) Planning Area Zone

T Irvine Transportation Center



0' 1,500'

Figure 1-3
Orange County
Great Park Overlay Plan 2025

**Table 1-2
Great Park Land Use Summary
Base Plan and Overlay - 2025**



Land Use Type	OCCP Base				OCCP Overlay			
	Acres	Dwelling Units	Square Feet	Other Detail	Acres	Dwelling Units	Square Feet	Other Details
Residential								
Low Density Residential	--	--	--		320	1,100	--	
Medium Density Residential	15	60	--		95	860	--	
Medium-High Density Residential	--	--	--		145	1,500	--	
Education								
College/University	293	--	1,285,000	7,637 Students	260	--	1,452,594	7,800 Students
Elementary School	--	--	--		13	--	40,000	650 Students
Cultural and Institutional								
Cultural/Institutional	156	--	468,000		156	--	468,000	
Institutional	100	--	563,000		100	--	563,000	
Exposition Center	322	165	963,500					
Transportation Facilities								
OCTA Facility	35	--	122,500		35	--	122,500	
Transit-Related Public Uses	99	--	--	375 Parking Spaces	15	--	--	375 Parking Spaces
Remote Airport Terminal	10	--	9,000	675 Parking Spaces	10	--	9,000	675 Parking Spaces
Remote Airport Terminal Maintenance	10	--	44,500		10	--	44,500	
Research and Development								
Research and Development	50	--	300,000		200	--	2,600,000	
Retail and Office								
Retail	--	--	--		43	--	300,000	
Office	--	--	--		5	--	75,000	
Auto Center								
Auto Sales, Parking and Storage	34	--	50,000		34	--	102,000	
Agriculture								
Agriculture	438	--	--		303	--	--	
Open Space and Recreational Uses								
Open Space/Park	716	--	--		382	--	--	
Sports Park	272	--	26,000		165	--	26,000	
Golf Course	576	--	25,000	54 Holes	526	--	25,000	45 Holes
Habitat Preserve	974	--	--		974	--	--	
Drainage/Riparian Corridor	229	--	--		229	--	--	
Wildlife Corridor	179	--	--		179	--	--	

Table 1-2
Great Park Land Use Summary
Base Plan and Overlay - 2025

Land Use Type	OCGP Base				OCGP Overlay			
	Acres	Dwelling Units	Square Feet	Other Detail	Acres	Dwelling Units	Square Feet	Other Details
Fairgrounds/Commercial Rec.	--	--	--		236	165	708,000	
Cemetery	--	--	--		73	--	50,000	
Roadways								
Roadways	185	--	--		185	--	--	
Total	4,693	225	3,856,500		4,693	3,625	6,585,594	



Source: IK Curtis Aerial Photography, 2000

-  Project Boundary
-  Irvine Transportation Center

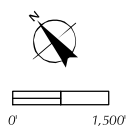


Figure 1-4
Aerial Photograph

Former MCAS El Toro (PAs 51 and 30)

In 1993, in accordance with the Base Realignment and Closure Act (BRAC), the Department of Defense (DOD) listed MCAS El Toro for base realignment and operational closure by 1999, and subsequent transfer of the base to civilian control. Closure officially occurred in July, 1999.

Many existing buildings, structures, ancillary facilities, runways, etc. have been left on-site by the Navy. Portions of the site are currently utilized for agricultural operations. The Department of the Navy (DON) provides caretaker responsibilities for the former MCAS El Toro. The Navy is leasing some of the existing facilities for various interim activities, such as the golf course and equestrian facilities and the Cal State University, Fullerton Extension Campus, agricultural operations and recreational vehicle storage.

James A. Musick Jail Facility (portion of PA 35)

The James A. Musick Jail Facility is currently a minimum-security detention and corrections facility, housing approximately 1,250 inmates. This property is owned and operated by the County of Orange. Inmate housing and detention facilities are located in the northeast corner of the site. The remainder of the site is used for agriculture uses associated with inmate detention.

An expansion of the Musick Jail Facility was approved by the County. The proposed expansion was evaluated in County EIR 564. Depending on future need the expansion could potentially house 7,584 inmates in a minimum/medium/maximum security facility. This expansion would occur in three phases and include a Sheriff's Southeast Station, ancillary jail facilities (warehouse, central plant, food service, laundry, staff and visitor parking, etc.), and a relocated Interim Care Facility. The phasing of expansion would depend mostly on the availability; however, the County would like to complete the expansion project by 2006. Construction has not yet commenced.

IRWD Parcel (portion of PA 35)

An eight-acre parcel owned by the Irvine Ranch Water District contains the IRWD East Irvine Zone IV Pumping Station, Zone III 5.0 million-gallon potable water reservoir, and 7.0 million-gallon potable water reservoir. This parcel is west of the Musick facility abutting both the Musick site and the El Toro site.

Federal Disposal Process

Once a federal property has been selected for closure, disposal of the land or facility must follow federal guidelines. Generally, if a federal agency no longer has a need for real property it declares the property excess to its needs and reports the availability of the property to the General Services Administration for transfer or disposal. The excess property is then screened with other federal agencies to ascertain if other federal requirements exist. The excess property can be assigned to any federal agency that has demonstrated a need. Pursuant to this screening process, 905 acres were transferred to the FAA on December 3, 2001. The Navy also anticipates that 70 acres will be transferred to

the Department of Justice. At this point in time, the former MCAS El Toro property determined to be not surplus and therefore available for sale are illustrated on Figure 1-5. Subsequent decisions by the Navy regarding additional FAA sites, a California Air National Guard site, and other potential transfer opportunities may further reduce this surplus area.

The federal screening process for possible conveyances began in 1995. Federally-recognized Native American tribes, providers of housing for the homeless, and public or private non-profit entities may request conveyances. The Community Reuse Plan (CRP) approved by the County of Orange County acting as the Local Redevelopment Authority [LRA] made recommendations to the DON for conveyances of MCAS El Toro property or buildings that were identified during the federal, state, local, and homeless screening processes. Nine conveyances are recommended under this process at this time. A list of these possible conveyances is contained in Appendix F. The DON is reviewing these conveyances and the manner in which these conveyances will be made is being determined. For purposes of this document the land uses represented in the conveyances are assumed to be a part of the project.

Reference Documents

Whenever existing documentation is used in the preparation of this Final Program EIR, the information is summarized for the convenience of the reader and referenced accordingly through the use of endnotes at the conclusion of each section.

The primary documents consulted in the preparation of this Final Program EIR are as follows:

- County of Orange. *Marine Corps Air Station El Toro Community Reuse Plan, Draft Environmental Impact Report No. 563, Vol. 1. SCH No. 96041043. August 1996.*
- County of Orange. *Responses to Comments on the Marine Corps Air Station El Toro Community Reuse Plan, Draft Environmental Impact Report No. 563, Comments and Responses, vols. 15-24. 1996.*
- County of Orange. *Draft Supplemental Analysis for the Marine Corps Air Station El Toro Community Reuse Plan FEIR No. 563 and Technical Appendices. SCH No. 96041043. February 1999.*
- County of Orange. *Recirculated Sections of Environmental Impact Report No. 564: James A. Musick Jail Expansion and Operation. SCH No. 96061024. September 1998.*
- County of Orange. *EIR No. 564 for James A. Musick Jail Expansion and Operation. SCH No. 96061024. August 1996.*
- Department of the Navy. *Base Realignment and Closure Cleanup Plan (BCP) for Marine Corps Air Station, El Toro, CA. March 1998.*

- City of Irvine. *General Plan Amendment 37594-GA, Zone Change 37595-ZC, and Annexation No. 17 for MCAS El Toro and James A. Musick Branch Jail, FEIR.* SCH No. 98-111078. June 14, 1999.
- City of Irvine. *Planning Area 40/Spectrum 8 General Plan Amendment, Zone Change, Development Agreement, Annexation Draft Program EIR,* SCH No. 2000071014. January 2001.
- City of Irvine. *Planning Area 40/Spectrum 8 General Plan Amendment, Zone Change, Development Agreement, Annexation Draft Supplement to the Program EIR,* SCH No. 2000071014. November 2002.
- City of Irvine. *Northern Sphere Area General Plan Amendment and Zone Change Draft EIR,* SCH No. 2001051010. December 2001.

Section 8.0 – References provides a complete listing of references utilized in the preparation of this Final Program EIR. These documents are all incorporated by reference into this Final Program EIR. All of the documents listed in Section 8.0 are available for review at:

City of Irvine
Community Development Department
One Civic Center Plaza
Irvine, CA 92623-9575
Contact Glen Worthington at (949) 724-6370

EIR As An Information Document

This EIR is intended to provide information to public agencies, the general public, and decision makers, regarding the environmental impacts from the construction and operation of the proposed project. Under the provisions of CEQA, “The purpose of the Environmental Impact Report is to identify the significant effects of a project on the environment, to identify alternatives to the proposed project, and to indicate the manner in which significant environmental effects can be mitigated or avoided.” (Public Resources Code 21002.1(a)).

According to the CEQA Guidelines (Section 15168), a Program EIR may be prepared on a series of actions that can be characterized as one large project, are related geographically, and as logical parts in a chain of contemplated actions in connection with issuance of rules, regulations or plans. The Program EIR allows for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on separate individual actions, and ensures consideration of cumulative impacts that might not otherwise be addressed on a case-by-case basis. The proposed project involves several land use actions covering approximately 4,806 acres of land.

Full development of the project area in accordance with the Orange County Great Park Plan is estimated to take over 20 years. As such, the Program EIR provides a first-tier analysis of the proposed project by analyzing the broad environmental effects. Subsequent activities in the project area must be examined in light of the Program EIR to determine whether an additional environmental document must be prepared. If a subsequent project or later activity would have effects that were not examined in this Program EIR, or not examined at

an appropriate level of detail to be used for the later activity, an initial study would need to be prepared, leading to a negative declaration or an EIR. If the City finds that pursuant to Section 15152 of the CEQA Guidelines, no new effects could occur or new mitigation measures would be required for a subsequent project, the City can approve the activity as being within the scope of the project covered by this Program EIR, and no new environmental documentation would be required.

Numerous acronyms are used throughout the Final Program EIR. These acronyms and meanings are included in Appendix A of this EIR.

Notice of Preparation

The Notice of Preparation (NOP) of an EIR was distributed on October 2, 2002. The NOP, the NOP distribution list, and NOP comments are included in Appendix B and C. The comment letters to the NOP are on file at the City of Irvine, Community Development Department, One Civic Center Plaza, Irvine, California 92623-9575, contact Glen Worthington (949) 724-6370.

Scoping Session

On October 29, 2002, the City of Irvine held a scoping session at the Irvine City Hall to answer questions and permit discussion on the project. The University Village alternative land use plan was developed in response to public comments made at the meeting and subsequently provided as written responses to the NOP.

Public Review Period

Comments of all agencies and individuals on the Draft Program EIR were accepted during the 45-day public review period which opened on February 18, 2003 and closed on April 4, 2003. A Response to Comments document was published by the City of Irvine on May 15, 2003. In response to comments received, minor revisions were made to the EIR. These clarifications/modifications do not constitute significant additional information that changes the conclusions of the environmental analysis or requires re-circulation of the document (CEQA Guidelines Section 15088.5). All changes made were noted in the Response to Comments document and incorporated in to the Final Program EIR certified by the City Council.

2.0 Executive Summary

Project Description

The project consists of the following actions: 1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; 2) Annexation of the unincorporated portion of Planning Area 35 (James A. Musick Branch Jail and the Irvine Ranch Water District Parcel); and 3) General Plan Amendment and Zone Change for Planning Area 30 which is presently in the City of Irvine; and 4) Approval of the form of a Development Agreement vesting approval of higher intensity overlay uses in consideration for dedication of land for public purposes and for developing and funding certain infrastructure improvements and maintenance of the public uses by the purchaser/developer and subsequent landowners and funds for specified park, roadways, and other circulation facilities and infrastructure. Together, these actions establish the policy and legislative structure to guide the development of the former MCAS El Toro property and the implementation of the "Orange County Great Park."

These actions are described in greater detail in Section 3.0 - Project Description. The reader should refer to Section 3.0 for a discussion of all actions included in the project.

The purpose of the project is to assure that reuse of the former MCAS El Toro is consistent with the intent of Measure W approved by the voters in March, 2002 while responding to the decision of the federal government to sell the land at a public auction. The City also wishes to assure a financially viable development consistent with the intent of Measure W with the orderly development of public infrastructure and public open space amenities at no cost to the local taxpayer. Securing local control over land use decisions and the coordination of all infrastructure improvements is essential to meet the City's objectives. Annexation of the portions of the property not currently within the City limits and an amendment of the City's General Plan and Zoning Ordinance are actions required to transfer complete land use control from the County of Orange to the City of Irvine.

Project Location

The project is located in the center of Orange County and includes land within the City of Irvine and unincorporated area. The project area is northeast of the intersection of Interstate 5 and the Eastern Transportation Corridor Toll Road. Figure 1-1 (Project Location) depicts the location of the project area in a regional and local context, respectively. The former MCAS El Toro portion of the project area encompasses approximately 4,693 acres or 7.3 square miles. Approximately 4,279 acres of the former MCAS El Toro portion of the project area (PA 51) are located on unincorporated County land, but within the City of Irvine Sphere of Influence. Approximately 398 acres (PA 30) and 16 acres (PA 51) are within the city limits of Irvine. The James A. Musick Jail facility and the Irvine Ranch Water District (IRWD) parcel comprise approximately 113 acres, and are located on unincorporated County land. The total land area being annexed is 4,287 acres.

The project area is generally bounded by the cities of Irvine and Lake Forest on the south and east, and unincorporated area in the County of Orange on the north. Other nearby

local jurisdictions include the cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo and Tustin.

Major roadways bordering the project area include I-5 to the southwest, Sand Canyon Avenue to the northwest, Portola Parkway and Irvine Boulevard to the north, and Bake Parkway to the northeast. John Wayne Airport is located seven miles to the west of the project area. The Irvine Transportation Center, a major multi-modal transit center linking Orange County Transportation Authority (OCTA) bus, Metrolink commuter rail, and Amtrak rail services, is adjacent to the SCRRRA tracks which traverse the site and separate Planning Areas 51 and 30.

The James A. Musick Jail Facility is located on a 105-acre parcel northwest of existing Bake Parkway and east of the future extension of Alton Parkway. The northern boundary of the Musick Jail site abuts the former MCAS El Toro. Existing buildings of the Irvine Spectrum abut the Musick Jail site to the west/southwest. An eight-acre (IRWD) parcel west of the Musick Jail contains the IRWD East Irvine Zone IV Pumping Station, Zone III 5.0 million gallon potable water reservoir, and a 7.0 million gallon potable water reservoir.

Environmental Impacts

The City of Irvine has determined that an EIR is required pursuant to the CEQA Guidelines. The environmental issue areas identified for study in the Final Program EIR are land use, traffic/circulation, air quality, noise, public health and safety, geology and seismicity, hydrology and water quality, agricultural resources, biological resources, paleontological resources, cultural resources, aesthetics, population/housing, public services and facilities, utilities, cumulative impacts, growth-inducing impacts, and significant irreversible environmental changes. Table 2-1 presents a summary of the environmental impacts of the proposed project, mitigation measures to reduce potential significant impacts for the proposed project, and the level of significance of each impact after mitigation. Significant unavoidable project-level impacts have been identified for air quality, agricultural resources and population/housing. Cumulative unavoidable impacts have been identified for traffic/circulation, air quality, population/housing, and agricultural resources.

Potential Areas of Controversy

The primary area of controversy surrounding the proposed project is whether the former air station should be reused as a non-aviation use versus an aviation use. Until the recent passage of Measure W on March 5, 2002, the County of Orange was proceeding with plans for a commercial airport at the former MCAS El Toro site. While the Orange County voters approved Measure W, limited opposition remains to the non-aviation use of the property. Other issues related to the proposed project are addressed in Sections 5.1 through 5.15 of this Final Program EIR.

Alternatives to the Proposed Project

The alternatives evaluation during the analysis of the proposed project include:

1. No Project/Measure W/PA51/Millennium Plan II PA30

2. Existing City of Irvine General Plan (Millennium Plan II Land Uses)
3. Measure W PA 51/Millennium Plan II PA 30 - Modified
4. Alternative Land Use Plan – University Village
5. Increased Residential Alternative

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
5.1 Land Use		
Base Plan and Overlay Plan No significant land use impact has been identified.	Base Plan and Overlay Plan No mitigation measure is proposed, as no significant land use impact has been identified.	Base Plan and Overlay Plan Not applicable.
5.2 Traffic/Circulation		
Base Plan Tran B1. Implementation of the Base Plan will cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestion at intersections) in the 2007, 2025, and Post 2025 scenarios as follows: ROADWAY/FREEWAY/TOLLWAY/RAMP SEGMENTS Year 2007 I-5 Freeway Southbound off ramp at Alton Parkway Year 2025	Base Plan Locations experiencing peak hour deficiencies and significantly impacted by the project have been evaluated to determine what improvements are necessary to provide acceptable levels of service in accordance with City of Irvine and adjacent jurisdiction standards. Project mitigation in the form of (1) constructing new on-site arterial highways, (2) constructing new off-site roadway improvements, and (3) participating on a fair share basis to needed off-site freeway/tollway ramp improvements, have all been determined as part of the traffic analysis. The traffic impact study has presented a multi-phase analysis of the potential traffic related impacts that would be anticipated to occur under the Orange County Great Park proposed network and land use concepts. The following identifies the measures needed to mitigate the impacts that have been identified. As the planning process for the project proceeds, and the land use plan becomes more defined and refined, additional analyses will be required to determine the cost, assign responsibility and refine the phasing of mitigation measures.	Base Plan Less than significant.

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>I-5 Freeway at Jeffrey Road – southbound on ramp (AM/PM) I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM) I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM) I-5 Freeway at Bake Parkway – southbound off ramp (AM) I-405 Freeway at Jeffrey Road – northbound off ramp (PM) I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM) I-405 Freeway at Sand Canyon Avenue – southbound off ramp (AM)</p> <p>Post 2025</p> <p>I-5 Freeway from Jeffrey Road to Sand Canyon Avenue- southbound (AM) I-405 Freeway from Jeffrey Road Sand Canyon Avenue- southbound (AM)</p> <p>I-5 Freeway at Jeffrey Road – southbound on ramp (AM/PM) I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM) I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM) I-5 Freeway at Bake Parkway – southbound off ramp (AM) I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM) I-405 Freeway at Sand Canyon Avenue –</p>	<p>Tran 1. Prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) (“Spectrumotion”) in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs. The primary purpose of this mitigation measure is to reduce traffic, air quality and noise impacts. Should annexation into Spectrumotion not be approved, the landowner or subsequent project applicant shall develop and implement a similar transportation management plan containing the elements and meeting the criteria described below:</p> <p>Transportation Management Plan (TMP)</p> <p>The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for the Great Park Project. This document summarizes the key elements of the TMP.</p> <p>1.0 Introduction</p> <p>The purpose of this document is to provide an outline for a comprehensive TMP for the Great</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>southbound off ramp (AM)</p> <p>INTERSECTIONS</p> <p>Year 2007</p> <p>Please refer to Table 5.2-6.</p> <p>Year 2025</p> <p>Please refer to Table 5.2-7.</p> <p>Post 2025</p> <p>Please refer to Table 5.2-8.</p> <p>Tran B2. Implementation of the Base Plan will result in inconsistencies with the adopted Orange County Master Plan of Arterial Highways (MPAH). These inconsistencies are associated with Marine Way and Rockfield Boulevard.</p> <p>Tran B3. Implementation of the Base Plan will exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways in the 2025 scenario. The Base Plan will impact the following:</p>	<p>Park. This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.</p> <p>It is the intent to annex Planning Area 51 and a portion of Planning Area 35 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.</p> <p>In the event that annexation of PAs 51 and 35 into Spectrumotion is not approved, a TMP similar to that provided by Spectrumotion will be implemented. This document sets forth the components of the TMP should it be necessary.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>INTERSECTION</p> <p>Year 2025</p> <p>El Toro Road/Avenida de la Carlota</p>	<p>2.0 Transportation Management Plan Framework</p> <p>The key elements of the Great Park TMP are set forth below:</p> <p>New Hire Orientation: Inform newly hired employees of commuting services available to them.</p> <p>Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services ((i.e., OCTA buses, Metrolink, Amtrak, etc.).</p> <p>Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.</p> <p>On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.</p> <p>Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.</p> <p>Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>each other.</p> <p>Website: Maintain a website with all of their program information available.</p> <p>Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.</p> <p>Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.</p> <p>Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.</p> <p>3.0 Transportation Management Plan Implementation</p> <p>As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Great Park. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.</p> <p>Tran 2. Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of this EIR.</p> <p>Tran 3. Prior to issuance of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the project traffic study (Urban Crossroads, December 2002) to maintain satisfactory levels of service as defined by the City's General Plan, based on thresholds of significance, performance standards, and methodologies used in this EIR, Orange County Congestion Management Program, and established in the transportation system/infrastructure fee program described in Mitigation Measure Tran 2 above.</p> <p>Tran 4. Prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>traffic forecasts. The updated traffic study will evaluate the cumulative impact of the subject map and all previously approved or concurrently submitted maps. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City approved traffic study scope of work. The landowner or subsequent project applicant shall construct, bond for, or enter into a funding agreement for necessary improvements identified in the updated traffic study and/or participate in the City fee program (Tran 2 above) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of this EIR.</p> <p>Traffic signals that are on-site or directly related to the Great Park development will be installed as warranted through the mitigation implementation plan process.</p> <p>Tran 5. In conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the following actions:</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<ol style="list-style-type: none"> 1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-tollway ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in this EIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines. 2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency. 3. The landowner or subsequent project applicant shall enter into an agreement with the City prior to recordation of the first final map for each Master Tentative Map or equivalent to establish the method and timing of payment of the identified percentage responsibility. 4. The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or 	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>funding participation in a regional transportation improvement fee program, if adopted.</p> <p>Tran 6. The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.</p> <p>Tran 7. Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-compete clause or any similar agreement restricting a public agency's authority to construct improvement.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	Tran 8. Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of building permits with the base property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdictions to amend the Orange County Master Plan of Arterial Highways (MPAH). Marine Way, Trabuco Road from SR-133 tollway to College Road, and Y Street shall be included on the MPAH.	
Overlay Plan Tran O1. Implementation of the Overlay Plan will cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestion at intersections) in the 2007, 2025, and Post 2025 scenarios as follows: ROADWAY/FREEWAY/TOLLWAY/RAMP SEGMENTS Year 2007 I-5 at Alton Parkway – southbound offramp (AM) I-405 at Irvine Center Drive – southbound offramp (AM)	Overlay Plan Same as Base Plan mitigation.	Overlay Plan Less than significant.

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>Year 2025</p> <p>University Drive from the I-405 Freeway to Michelson Drive (AM)</p> <p>I-5 Freeway from Sand Canyon Avenue to Jeffrey Road – northbound (PM)</p> <p>I-5 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)</p> <p>I-405 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)</p> <p>I-5 Freeway at Jeffrey Road – southbound on ramp (AM)</p> <p>I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM)</p> <p>I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM)</p> <p>I-5 Freeway at Alton Parkway - southbound off ramp (AM)</p> <p>I-5 Freeway at Bake Parkway – southbound off ramp (AM)</p> <p>I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM)</p> <p>I-405 Freeway at Sand Canyon Avenue - southbound off ramp (AM)</p> <p>I-405 Freeway at Irvine Center Drive - southbound off ramp (AM)</p> <p>SR-241 Tollway at Lake Forest Drive – southbound off ramp (AM)</p> <p>SR-133 Freeway at Barranca Parkway – northbound direct on ramp (PM)</p>		

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>Post 2025</p> <p>I-5 Freeway from Sand Canyon Avenue to Jeffrey Road – northbound (PM) I-5 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM) I-405 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)</p> <p>I-5 Freeway at Jeffrey Road – southbound on ramp (AM) I-5 Freeway at Sand Canyon Avenue - northbound on ramp (PM) I-5 Freeway at Sand Canyon Avenue - southbound off ramp (AM) I-5 Freeway at Alton Parkway - southbound off ramp (AM) I-5 Freeway at Bake Parkway - southbound off ramp (AM) I-5 Freeway at El Toro Road – southbound off ramp (PM) I-405 Freeway at Jeffrey Road – northbound off ramp (PM) I-405 Freeway at Sand Canyon Avenue - northbound direct on ramp (AM/PM) I-405 Freeway at Sand Canyon Avenue - southbound off ramp (AM) I-405 Freeway at Irvine Center Drive – southbound off ramp (AM)</p>		

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>INTERSECTIONS</p> <p>Year 2007</p> <p>Please refer to Table 5.2-12.</p> <p>Year 2025</p> <p>Please refer to Table 5.2-13.</p> <p>Post 2025</p> <p>Please refer to Table 5.2-14.</p> <p>Tran O2. Implementation of the Overlay Plan will result in inconsistencies with the adopted Orange County Master Plan of Arterial Highways (MPAH). These inconsistencies are associated with Marine Way and Rockfield Boulevard.</p> <p>Tran O3. Implementation of the Overlay Plan will exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways in the 2007 and 2025 scenarios. The Overlay Plan will impact the following:</p>		

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>FREEWAY/TOLLWAY LOCATIONS</p> <p>Year 2025</p> <p>I-5 from Sand Canyon Avenue to Jeffrey Road – northbound (PM) I-5 from Jeffrey Road to Sand Canyon Avenue– southbound (AM) I-405 from Jeffrey Road to Sand Canyon Avenue- southbound (AM)</p> <p>INTERSECTIONS</p> <p>Year 2007</p> <p>El Toro Road/Avenida de la Carlota</p> <p>Year 2025</p> <p>El Toro Road/Avenida de la Carlota</p>		
5.3 Air Quality		
<p>Base Plan and Overlay Plan</p> <p>AQ1. Implementation of the proposed project will result in a significant air quality impact associated with the fugitive dust emissions resulting from the demolition of existing structures, and land preparation and excavation for the construction of proposed structures. Additionally, the operation of the project will result in a significant impact</p>	<p>Base Plan and Overlay Plan</p> <p>The following section provides a summary of the possible mitigation measures that could be implemented for the development of the former MCAS El Toro according to the proposed project. The limited availability of specific data to quantify air quality impacts for emission sources within the proposed project make it impossible to accurately quantify the effectiveness of each of the mitigation measures. However, these measures are identified as possibilities for the project,</p>	<p>BasePlan/Overlay Plan</p> <p>Due to the size of the project, certain impacts that result from development will be "unavoidable" as these impacts cannot be completely mitigated and most of these changes are irreversible. This is</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
associated with motor vehicle emissions.	<p>while some are recommended by the SCAQMD for all development projects within the SCAB. As expected, the implementation of some or all of the mitigation measures will result in an overall reduction in potential air emissions from the proposed project. However, the implementation of any of these emission mitigation measures cannot be guaranteed at this stage of the proposed project, because they may not be technically or economically feasible once actual development gets underway. Therefore, the emission mitigation measures discussed in the following sections are defined as alternate control measures that could be implemented for the proposed project.</p> <p>Construction Emissions Mitigation</p> <p>The major source of construction emissions are fugitive dust emissions resulting from the demolition of existing structures, and land preparation and excavation for the construction of proposed structures. Actual erection of structures is considered a minimal source of construction related dust emissions. The following mitigation measures are intended to effectively reduce pollutant emissions from construction activities. Some or all of the mentioned mitigation measures can be implemented as necessary, but quantification and application of these measures cannot be specified at this time.</p> <p>AQ1. Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as</p>	<p>considered a significant unavoidable impact, although the overall effect on air quality within the Basin for the life of the proposed project is estimated at less than one half of one percent. Construction-related emissions are expected to result in unavoidable short-term impacts in terms of ROG and NO_x, although implementation of mitigation measures during construction will minimize these impacts to the extent feasible. Short-term impacts on sensitive receptors are expected to be mitigated during construction and no long-term CO hotspots will be created that may affect sensitive receptors. Operational emissions from future development under the proposed project will consist of area source and motor vehicle emissions, which will exceed SCAQMD thresholds. These air quality emissions from future development</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors; etc.; shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.</p> <p>AQ2. Prior to the commencement of construction activities required to demolish and/or remove existing DON infrastructure, including runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.</p> <ul style="list-style-type: none"> C Evaluate the availability and use, if available, of low-emission (i.e., methanol- or natural gas-powered) construction equipment instead of diesel for each construction phase. C Water exposed soils at least twice daily and maintain equipment and vehicle engines in good condition and in proper tune. C Wash off trucks leaving the site. C Replace ground cover on construction sites when it is determined that the site will be undisturbed for 	<p>under the proposed project will remain significant, even after mitigation.</p> <p>Area Source (Post-Construction) Emission Mitigation</p> <p>Emissions resulting from the post-construction and routine operation of various sources within a development contribute to long term impacts on air quality throughout its life. Some of the mitigation measures that could reduce energy consumption within the proposed project and thus, reduce associated emissions should be considered for implementation and are listed below.</p> <ul style="list-style-type: none"> C Central residential space heating and cooling for multi-dwelling units. C Orient buildings north/south for reducing energy-related combustion

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>lengthy periods.</p> <ul style="list-style-type: none"> C Reduce speeds on unpaved roads to less than 15 miles per hour. C Halt all grading and excavation operations when wind speeds exceed 25 miles per hour. C Suspend all emission generating activities during smog alerts. C Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible. C Properly maintain diesel-powered on-site mobile equipment. C Sweep streets at the end of the day if substantial visible soil material is carried over to the adjacent streets. C Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible. C Use of low-VOC asphalt. C Cover all trucks hauling dirt, sand, soil or other loose material to and from the site. C Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic. C Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible. C Reroute construction trucks away from congested streets, whenever feasible. C Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible. 	<p>emissions.</p> <ul style="list-style-type: none"> C Central commercial space heating. <p>These measures could be accounted for in the planning process such that the overall impact of the proposed project on prevalent air quality in the SCAB is minimized.</p> <p><i>Motor Vehicle (Operational) Emission Mitigation</i></p> <p>Motor vehicle emissions form a large portion of the total operational emissions from the proposed project. These emissions can be mitigated by the use of fuel-efficient vehicles and a well designed transportation system. However, most of the measures will be ineffective unless the occupants of various commercial and residential establishments within the project contribute their share in the mitigation effort. The implementation</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>AQ3. Prior to the issuance of building permits for any future development, the applicant shall submit, and the Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.</p> <ul style="list-style-type: none"> C Utilize built-in energy-efficient appliances to reduce energy consumption and emissions. C Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions. C Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible. C Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning. C Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible. C Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods. C Centralize space heating and cooling for multiple-family dwelling units and commercial space. C Orient buildings north/south for reducing energy-related combustion emissions. C Use solar energy, when feasible. 	<p>of some of the measures cannot be stated with certainty, as they are owner and employer specific and related specific land use types within the proposed project. Development of the proposed project will identify motor vehicle mitigation measures that would result in reductions in emissions and thereby contribute to the overall improvement in air quality within the SCAB. The inclusion of the OCTA facility within the proposed project is aimed at encouraging the use of alternative transportation thereby reducing motor vehicle congestion and related air quality emissions and impacts. The implementation of an emission reduction program under SCAQMD Rule 2202 is also expected to result in reducing motor vehicle air quality emissions and impacts.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>C Use high rating insulation in walls and ceilings.</p> <p>AQ4. Information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find employment nearby.</p> <p>AQ5. Future employment generating non-residential development shall include measures to reduce vehicle trips including: the promotion of carpool incentives and alternative work schedules, easy access to public transit systems, trail linkages between uses, low-emissions vehicle fleets, and the provision of on-site facilities such as banking and food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.</p>	
5.4 Noise		
<p>Base Plan and Overlay Plan</p> <p>No significant noise impact has been identified.</p>	<p>Base Plan and Overlay Plan</p> <p>No mitigation measure is proposed, as no significant noise impact has been identified.</p>	<p>Base Plan and Overlay Plan</p> <p>Not applicable.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
5.5 Public Health and Safety		
<p>Base Plan and Overlay Plan</p> <p>HH 1. Construction activities involving demolition and possible substantial remodeling of existing structures in the project area as the project area develops could result in the disturbance of structures and soils containing ACMs or LBPs. This is considered a significant impact.</p> <p>The presence of ACMs and LBP in structures and soils of properties conveyed by the DON may pose a future hazard to the public if the materials degrade or are otherwise disturbed. This is considered a significant impact.</p> <p>HH 2. IRP Site 24 is located in zoning districts categorized as 6.1 Institutional and 1.5 Recreation. The site may be conveyed with temporary restrictions on use that are not appropriate for transportation facility use. This is considered a significant impact.</p> <p>Future uses of IRP Site 3 may be potentially constrained by the implementation of institutional controls. This is considered a significant impact.</p>	<p>Base Plan and Overlay Plan</p> <p>HH 1.</p> <ul style="list-style-type: none"> a. Prior to the conveyance of the property and issuance of subsequent grading permits, where the presence of ACMs is identified, the DON or its transferee shall ensure that all available information concerning ACMs has been provided to the City of Irvine, and the purchasers of the property, including: <ul style="list-style-type: none"> C The type, location and condition of ACMs C The results of any asbestos testing C Description of asbestos control measures taken, if any C The costs or time necessary to remove existing ACMs C The results of any site-specific asbestos inventory updates b. For any structures known to contain ACMs that will be renovated and/or demolished prior to transfer, the DON shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements. c. Prior to transfer of any structure constructed before October 1988, scheduled for renovation and/or demolition, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by the DON. This requirement can be waived if an 	<p>Base Plan/Overlay Plan</p> <p>Less than significant.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>HH 3. IRP Site 16 (Crash Crew Pit No. 2) is located in zoning district designation 1.5 Recreation. The site may be conveyed with temporary restrictions on use that are not appropriate for recreational land uses. This issue is considered a significant impact.</p> <p>The Habitat Preserve, Wildlife Corridor, and Recreational areas in the northeastern portion of PA 51 will be exposed to the highest level of fire risk from wildfires because these areas and adjacent areas area currently defined as having high risk for wildland fires. The proposed project will result in an increase in both population and structures adjacent to this high fire risk area and the impact is considered significant. Additionally, existing structures may not meet City fire safety requirements.</p>	<p>architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building material, and to the best of their knowledge, no ACMs were used as a building material.</p> <p>d. Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.</p> <p>e. Any renovation and/or LBP abatement activities on residential units at former MCAS El Toro shall be conducted in accordance with all applicable federal, state and local regulatory requirements.</p> <p>HH 2.</p> <p>a. Prior to transfer, the City of Irvine shall receive from the DON, with the concurrence of the appropriate regulatory agencies, a statement that the "Action Required" IRP Site 3 is to be conveyed for restricted use and that all institutional controls have been identified and implemented. The City of Irvine will adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>and acreages are approximate and shall be established by master plan approval.</p> <p>b. Prior to transfer, if the DON chooses to impose temporary restrictions on the use of Sites 16 and 24 pending adequate remediation of groundwater, the City of Irvine shall receive from the DON a statement of temporary restrictions on the use of the sites and the release of the sites for unrestricted use following implementation of adequate remediation of groundwater. The City of Irvine shall adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.</p> <p>HH 3. The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for "Development Within and Exclusion from Very High</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>Fire Severity Zones” and “Fuel Modification Plans and Maintenance.” Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the proposed project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.</p> <p>HH 4. Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.</p> <p>HH 5. Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>regulatory agencies, and the Director of Community Development of the City of Irvine in a timely manner. Additionally, said protocol plan shall be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities.</p> <p>HH 6. The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells located on the former MCAS El Toro in a geographic information system (GIS). The City shall review all permit applications on the former air station for well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to wells shall be limited to authorized personnel.</p>	
5.6 Geology and Seismicity		
<p>Base Plan and Overlay Plan</p> <p>GS 1. Future development of the project area has the potential to result in the exposure of people or structures to strong seismic ground shaking in the event a major earthquake occurs along any one of the active faults in the region. This is considered a significant impact.</p> <p>GS 2. The level of seismic activity expected in the project area is similar to the County as a whole, and other areas of Southern California. As such, the risk of loss, injury or</p>	<p>Base Plan and Overlay Plan</p> <p>GS 1. Prior to issuance of a building permit, the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.</p> <p>GS 2. Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to</p>	<p>Base Plan and Overlay Plan</p> <p>Less than significant.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>death involving strong seismic ground shaking is similar to the risk associated with other regions within Southern California.</p> <p>GS 3. Some expansive soils may be present in localized areas within the project area. The presence of expansive soils could create risks to life or property through the post 2025 development levels. This impact is considered significant.</p> <p>GS 4. Many of the existing buildings on the former MCAS El Toro site may not have been constructed in a manner that is acceptable for its intended use. Temporary or permanent reuse of these facilities could expose people to a greater seismic risk than buildings that are constructed to applicable seismic codes. This is considered a significant impact.</p> <p>GS 5. Future development of the project area has the potential for impacts resulting from soil erosion or the loss of topsoil. This impact is considered significant through the post 2025 development levels.</p> <p>GS 6. Some expansive soils may be present in localized areas within the project area. The presence of expansive soils could create risks to life or property. This is considered a significant impact.</p>	<p>address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.</p> <p>1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be conducted. The purpose of the subsurface evaluation is to:</p> <ul style="list-style-type: none"> a. Further evaluate the subsurface conditions in the area of the proposed structures. b. Provide specific data on potential geologic and geotechnical hazards. c. Provide information pertaining to the engineering characteristics of earth materials in the project area. <p>From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural sections, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:</p> <p>C Seismic Ground Shaking - Measures to prevent risk of loss, injury or death involving</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.</p> <p>C Erosion or Loss of Topsoil – Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances.</p> <p>C Where Expansive Soils Exist – Measures for the design of foundations, slabs, flatwork and other improvements subject to drainage from expansive soils.</p> <p>Compliance with this measure shall be verified by the Community Development Department.</p> <p>GS 3. Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of any existing structure if a building permit is not issued, a seismic evaluation of the structure including recommendations for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.</p> <p>GS 4. Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.	
5.7 Hydrology/Water Quality		
<p>Base Plan and Overlay Plan</p> <p>H/WQ 1. Grading and excavation activities required for future development could result in the exposure of bare soils which could result in both wind and water-related erosion, and a significant water quality impact if not properly treated. Through buildout of the proposed project, wind and water related erosion has the potential to violate water quality standards or waste discharge requirements. This is considered a significant impact. Implementation of Mitigation Measures HW1 and HW2 will reduce the impact associated with the potential to violate water quality standards and waste discharge requirements to a level less than significant.</p> <p>Additionally, a Storm Water Pollution Prevention Plan (SWPPP), Water Quality Management Plan (WQMP) will be</p>	<p>Base Plan and Overlay Plan</p> <p>H/WQ 1. Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City of Irvine adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area . . . and residential construction sites that result in the disturbance of five acres or more . . . shall be required to develop and implement BMPs . . . to control erosion and siltation and contaminated runoff from the construction sites." Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of</p>	<p>Base Plan and Overlay Plan</p> <p>Less than significant.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>prepared. A Notice of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the City Engineer for: a) any disturbance of one acre or more of soil in the project area; b) General Dewatering NPDES Permit of the Santa Ana RWQCB; and c) provisions of the Countywide Permit.</p> <p>These measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned, designed, and constructed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future.</p> <p>H/WQ 2. Improvements to the flood control system shall be evenly scheduled during the various phases of development. However, a substantial increase in the rate or amount of surface runoff due to new development may occur, resulting in flooding on- or off-site depending on the future proposed</p>	<p>one acre or more.</p> <p>The City's standard conditions of approval indicate that a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.</p> <p>Additionally, prior to the issuance of a grading permit, project applicants must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.), and shall reference the location(s) of structural BMPs.</p> <p>Also in accordance with standard City project</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>development. The potential for flooding to occur on-or off-site as a result of future development of the project area is considered a significant impact. Implementation of Mitigation Measure HW3 will reduce this impact to a level less than significant.</p> <p>H/WQ 3. With recent improvements to upstream flood control facilities, the floodplain area has likely decreased and fewer areas of the project area are subject to inundation. The phasing of the flood control system improvements in PAs 51 and 30 will be coordinated with the street-phasing schedule so that the storm drains are installed prior to or in concert with road construction. Improvements to the flood control system shall be evenly scheduled during the various phases of development. However, a substantial increase in the rate or amount of surface runoff due to new development may occur, resulting in flooding on- or off-site depending on the future proposed development. This is considered a significant impact. Implementation of Mitigation Measure HW3 will reduce on- or off-site flooding due to surface runoff to a level less than significant.</p> <p>H/WQ 4. As per the requirements of the Regional Water Quality Control Board, proposed</p>	<p>permitting and approval procedures, Notices of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the Director of Community Development for any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES Permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.</p> <p>The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.</p> <p>H/WQ 2. Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>projects occurring upstream of or discharging into impaired waterbodies listed on the Clean Water Act Section 303(D) list may be subject to additional controls (specifically Total Maximum Daily Loads or TMDLs) pursuant to that regulation. Depending on the specific type of project proposed, these controls could include discharge prohibitions, revisions to discharge permits or management plans to address water quality impacts. This is especially important in the Newport Bay watershed. At this program level of planning, the potential to degrade surface water quality is considered a significant impact. Implementation of Mitigation Measure HW1 will reduce the impact of future development on surface water quality to a level less than significant.</p> <p>Additionally, a Storm Water Pollution Prevention Plan (SWPPP), Water Quality Management Plan (WQMP), Notice of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the City Engineer for: a) any disturbance of one acre or more of soil in the project area; b) General Dewatering NPDES Permit</p>	<p>water quality requirements identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TDML) Implementation Plan adopted for this watershed.</p> <p>H/WQ 3. Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrology and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.</p> <p>H/WQ 4. Prior to issuance of a building permit, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>of the Santa Ana RWQCB; and c) provisions of the Countywide Permit.</p> <p>The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Grading or building permit applicants will be required to submit and obtain approval of a Water Quality Management Plan (WQMP) from the City of Irvine prior to issuance of the permits. The WQMP will specifically identify BMPs that will be used on-site to control predictable pollutant runoff. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.), and shall reference the location(s) of structural BMPs.</p> <p>Future projects in the proposed project area will acknowledge and implement those additional requirements that may be</p>	<p>After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.</p> <p>H/WQ 5. Project development is proposed in areas of PAs 51 and 30. Existing and proposed development within these areas could be subject to potential flooding associated with a 100-year frequency storm. Mitigation Measure HW4 will reduce the impact of exposure of future residential development in the project area to a level less than significant.</p>		
5.8 Agricultural Resources		
<p>Base Plan and Overlay Plan</p> <p>Ag 1. The project Base Plan will convert 574 acres of Prime Farmland, 63 acres of Unique Farmland, and 46 acres of Farmland of Statewide Importance to non-agricultural use. The Overlay Plan will convert 651 acres of Prime Farmland, 63 acres of Unique Farmland and 88 acres of Farmland of Statewide Importance to non-agricultural uses.</p> <p>Ag 2. The project will involve changes in the existing environment, which, due to their location or nature, could result in conversion of existing farmland to non-agricultural use.</p>	<p>Base Plan and Overlay Plan</p> <p>Ag 1. In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operations, City Of Irvine Standard Discretionary Case Condition B.4 and City Of Irvine Standard Subdivision Condition 3.4 regarding disclosure statements shall be amended to include the following for subdivisions proposed adjacent to existing agricultural operations:</p> <p>Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The</p>	<p>Base Plan and Overlay Plan</p> <p>Significant and unavoidable.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:</p> <p>Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.</p> <p>Ag 2. Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.</p> <p>Ag 3. Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operation and adjacent urban uses.</p>	
5.9 Biological Resources		
<p>Base Plan and Overlay Plan</p> <p>Bio 1. The southern tarplant, a federal species of concern, may be affected by development of the site. This is considered a significant impact.</p>	<p>Base Plan and Overlay Plan</p> <p>Bio 1. Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. Prior to approval of a subdivision map for</p>	<p>Base Plan and Overlay Plan</p> <p>Less than significant.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>Bio 2. There is a limited amount of highly disturbed wetland habitat on the project site. The project may result in an impact to this habitat.</p> <p>Bio 3. PAs 51 and 30 contain a large number of trees, many of them mature, representing a wide range of species. Implementation of the proposed project may result in damage and destruction to the trees. A significant impact related to conflicts with the City of Irvine's Urban Forestry Ordinance may occur.</p>	<p>development within, or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).</p> <p>Bio 2. Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan subarea that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, re-creation (i.e. within the proposed wildlife corridor), and/or revegetation as deemed acceptable by the appropriate jurisdictional agencies.</p> <p>Bio 3. The City shall continue to work with State and federal agencies during the implementation of the proposed project to implement the revegetation/restoration plan for the wildlife corridor. Measures such as sight and</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>sound barriers, including artificial sound walls and natural diversions (e.g. hedges and tree lines) shall be incorporated into corridor design to ensure the viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the EIR.</p> <p>Bio 4. Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered "Significant Trees" under the City of Irvine's Urban Forestry Ordinance (UFO) (Section 5-7-401 et al) and the UFO shall apply to all trees included in this inventory.</p>	
5.10 Paleontological Resources		
<p>Base Plan and Overlay Plan</p> <p>P1. Earthmoving operations such as grading and trenching has the potential to impact buried paleontological resources in the moderately to highly sensitive areas in the coastal plain and washes, northeast, northwest and southern</p>	<p>Base Plan and Overlay Plan</p> <p>P1. Prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. (A qualified paleontologist is</p>	<p>Base Plan and Overlay Plan</p> <p>Less than significant.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>portions of PA 51. This is considered a significant impact.</p> <p>Additionally, pleistocene terrestrial vertebrates have been discovered four miles from PA 30. Similar beds of Pleistocene terrestrial vertebrates may underlie PA 30. This impact is considered significant.</p>	<p>defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.</p> <p>When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossils specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screen-washing operation on-site.</p> <p>Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
5.11 Cultural Resources		
<p>Base Plan and Overlay Plan</p> <p>Cult1. Grading activities associated with future development of the project area may cause a substantial adverse change in the significance of an archaeological resource. Mitigation Measures Cult B1 through Cult B3 will reduce this impact to a level less than significant.</p> <p>Cult2. Grading activities could uncover previously unknown human remains, including those interred outside of formal cemeteries. Mitigation Measure Cult B4 will reduce this impact to a level less than significant.</p>	<p>Base Plan and Overlay Plan</p> <p>The following measures have been developed to provide assurances that significant cultural resource impacts or potentially significant cultural resource impacts associated with the proposed project will be mitigated to a level less than significant. This assurance is obtained by verification, which would occur at subsequent levels of environmental review. Finally, in some instances, it is not possible at this program level of analysis to determine if cultural resource impacts would occur from the implementation of specific actions. For these situations, mitigation measures provide for further review at the time of specific development proposals in the project area. Increased planning detail developed at the development proposal level will clarify the specific impacts and options available for mitigation. As such, these measures are not intended to restrict the development of appropriate mitigation measures, as determined through analysis at a subsequent level of review.</p> <p>Cult1. Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PAs 51 and 30. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.</p>	<p>Base Plan and Overlay Plan</p> <p>Less than significant.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>Cult2. Monitoring of excavation and grading activities associated with future development in PAs 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure Cult1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and an assessment of their importance under CEQA and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.</p> <p>Cult3. Prior to the issuance of grading permits and/or building permits for any future development in PAs 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City of Irvine to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and scientific</p>	

Table 2-1
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Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.</p> <p>Cult4. Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City of Irvine to address the accidental discovery or recognition of any human remains. The program shall include the following:</p> <p>There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:</p> <p>C <i>The county coroner must be contacted to determine that no investigation of the cause of death is required, and</i></p> <p>If the coroner determines the remains to be Native American:</p> <p>C <i>The coroner shall contact the Native American Heritage Commission within 24 hours.</i></p> <p>C <i>The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.</i></p> <p>C <i>The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods</i></p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p><i>as provided in Public Resources Code Section 5097.98, or</i></p> <p>C <i>Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.</i></p> <p>C <i>The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.</i></p> <p>C <i>The descendant identified fails to make a recommendation; or</i></p> <p>C <i>The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.</i></p> <p>Compliance with this measure shall be verified by the Community Development Department.</p>	
5.12 Aesthetics		
Base Plan and Overlay Plan	Base Plan and Overlay Plan	Base Plan and Overlay Plan
A1. Future development of PAs 51 and 30 pursuant to the proposed GPA and Zone Change, and consistent with the Orange County Great Park land use plan, will lead to the introduction of	A1. Prior to issuance of grading permits, lighting plans and signage plans for new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent	Less than significant.

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>new sources of light within the project area. These sources include street lighting along planned roadways and exterior lighting (including security lighting and parking lot lighting) for various educational and institutional developments, and lighting associated with athletic fields. The potential for a significant light impact may occur should proposed light sources be directed into or located near existing or planned residential uses, which are sensitive to light intrusion during nighttime hours. This is considered a significant impact. Implementation of Mitigation Measures A1 and A2 will reduce the impact to a level less than significant.</p> <p>A2. Future development of PAs 51 and 30 pursuant to the proposed GPA and Zone Change, and consistent with the Orange County Great Park Base Plan, will lead to the introduction of new sources of glare within the project area. Reflective materials and glazed or polished exterior surfaces associated with the research and development land uses may create glare, which could cause visual nuisance to residential land uses. This is considered a significant impact. Implementation of Mitigation Measures A1 and A2 will reduce the impact to a level less than significant.</p>	<p>residential areas occurs.</p> <p>A2. Prior to the issuance of grading permits, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
5.13 Population and Housing		
Base Plan and Overlay Plan A significant impact to jobs/housing ratio will occur.	Base Plan and Overlay Plan No mitigation is available to rectify conflicts with the numerical objectives of regional planning documents including the jobs/housing balance.	Base Plan and Overlay Plan Although the proposed amendments to the City of Irvine General Plan will be incorporated into regional SCAG and County of Orange planning projections, the impact associated with jobs/housing balance will remain significant and unavoidable.
5.14 Public Services and Facilities		
<u>Law Enforcement</u> Base Plan and Overlay Plan The general significant impacts associated with the construction and operation of public facilities have been addressed within this EIR, including the possible construction and operation of a new police substation. The need for new public facilities will be mitigated by utilizing existing City standards.	<u>Law Enforcement</u> Base Plan and Overlay Plan Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of police facilities to serve new growth expected in the northern portion of the City.	<u>Law Enforcement</u> Base Plan and Overlay Plan Less than significant.
<u>Fire and Emergency Medical Services</u> Base Plan and Overlay Plan	<u>Fire and Emergency Medical Services</u> Base Plan and Overlay Plan	<u>Fire and Emergency Medical Services</u> Base Plan and Overlay Plan

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>The specific significant environmental impact of constructing new fire protection facilities that will be needed to serve the Base Plan cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new fire protection facilities. The need for new public facilities will be mitigated by utilizing existing City standards.</p> <p><u>Parks and Recreation</u></p> <p>Base Plan and Overlay Plan</p> <p>The specific significant environmental impact of constructing new recreational facilities that will be needed to serve the Base and Overlay Plans cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new recreational facilities. The need for new public facilities will be mitigated by utilizing existing City standards.</p> <p><u>School Services</u></p> <p>Base Plan and Overlay Plan</p>	<p>Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of fire protection facilities to serve new growth expected in the planning area.</p> <p><u>Parks and Recreation</u></p> <p>Base Plan and Overlay Plan</p> <p>Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of park and recreational facilities to serve new growth expected in the planning area.</p> <p><u>School Services</u></p> <p>Base Plan and Overlay Plan</p>	<p>Less than significant.</p> <p><u>Parks and Recreation</u></p> <p>Base Plan and Overlay Plan</p> <p>Less than significant.</p> <p><u>School Services</u></p> <p>Base Plan and Overlay Plan</p>

**Table 2-1
Environmental Impacts and Mitigation Measures**

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>The specific significant environmental impact of constructing new educational facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new educational facilities. The need for new public facilities will be mitigated by utilizing existing City standards.</p>	<p>Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of educational facilities to serve new growth expected in the planning area.</p>	<p>Less than significant.</p>
5.15 Utilities		
<p><u>Potable Water</u></p> <p>Base Plan and Overlay Plan</p> <p>The specific significant environmental impact of constructing a new potable water facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new potable water facilities.</p> <p><u>Recycled Water</u></p> <p>Base Plan and Overlay Plan</p>	<p><u>Potable Water</u></p> <p>Base Plan and Overlay Plan</p> <p>Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new potable water facilities identified in this section to serve new growth expected in the project area.</p> <p><u>Recycled Water</u></p> <p>Base Plan and Overlay Plan</p>	<p><u>Potable Water</u></p> <p>Base Plan and Overlay Plan</p> <p>Less than significant.</p> <p><u>Recycled Water</u></p> <p>Base Plan and Overlay Plan</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>The specific significant environmental impact of constructing new recycled water facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new recycled water facilities.</p> <p><u>Sewer</u></p> <p>Base Plan and Overlay Plan</p> <p>The specific significant environmental impact of constructing new wastewater facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new wastewater facilities.</p> <p><u>Solid Waste</u></p> <p>Base Plan and Overlay Plan</p> <p>SW1. The project site may contain solid waste unsuitable for recycling or reuse. Also, the</p>	<p>Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new recycled water facilities identified in this section to serve new growth expected in the project area.</p> <p><u>Sewer</u></p> <p>Base Plan and Overlay Plan</p> <p>Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new wastewater facilities identified in this section to serve new growth expected in the project area.</p> <p><u>Solid Waste</u></p> <p>Base Plan and Overlay Plan</p> <p>SW1. It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other</p>	<p>Less than significant.</p> <p><u>Sewer</u></p> <p>Base Plan and Overlay Plan</p> <p>Less than significant.</p> <p><u>Solid Waste</u></p> <p>Base Plan and Overlay Plan</p> <p>Implementation of the proposed project will not</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>project will generate solid waste as result of demolition, operation of proposed land uses, and landscape maintenance.</p>	<p>deconstruction of the aged structures and property, including but not limited to buildings and runways, at El Toro MCAS is contaminated with lead based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the El Toro MCAS site by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.</p> <p>If it is determined by the technical evaluation that the material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as “waste-to-energy” (WTE) plants.</p> <p>SW2. For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the</p>	<p>result in a significant impact related to solid waste.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>project applicant must submit a written plan to the City and implement such plan to ensure that 75% of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.</p> <p>SW3. For that solid waste which the technical study deems to be suitable for recycling, the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75% of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180. ("Recycling" does not include transformation, as defined in Public Resources Code Section 40201.)</p> <p>SW4. To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by "weight ticket" receipts from state-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p><u>Energy and Communications</u></p> <p>Base Plan and Overlay Plan</p> <p>The specific significant environmental impact of constructing new energy and communication facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new energy and communication facilities.</p>	<p>To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.</p> <p>SW5. For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50% of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.</p> <p><u>Energy and Communications</u></p> <p>Base Plan and Overlay Plan</p> <p>Mitigation Measures identified in other sections of this EIR address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new energy and communication transmission facilities identified in this section to serve new growth expected in the project area.</p>	<p><u>Energy and Communications</u></p> <p>Base Plan and Overlay Plan</p> <p>Less than significant.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
No significant impact is anticipated related to substantial use of fuel and/or energy sources by the project was identified.		

2.0 Executive Summary

Project Description

The project consists of the following actions: 1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; 2) Annexation of the unincorporated portion of Planning Area 35 (James A. Musick Branch Jail and the Irvine Ranch Water District Parcel); and 3) General Plan Amendment and Zone Change for Planning Area 30 which is presently in the City of Irvine; and 4) Approval of the form of a Development Agreement vesting approval of higher intensity overlay uses in consideration for dedication of land for public purposes and for developing and funding certain infrastructure improvements and maintenance of the public uses by the purchaser/developer and subsequent landowners and funds for specified park, roadways, and other circulation facilities and infrastructure. Together, these actions establish the policy and legislative structure to guide the development of the former MCAS El Toro property and the implementation of the "Orange County Great Park."

These actions are described in greater detail in Section 3.0 - Project Description. The reader should refer to Section 3.0 for a discussion of all actions included in the project.

The purpose of the project is to assure that reuse of the former MCAS El Toro is consistent with the intent of Measure W approved by the voters in March, 2002 while responding to the decision of the federal government to sell the land at a public auction. The City also wishes to assure a financially viable development consistent with the intent of Measure W with the orderly development of public infrastructure and public open space amenities at no cost to the local taxpayer. Securing local control over land use decisions and the coordination of all infrastructure improvements is essential to meet the City's objectives. Annexation of the portions of the property not currently within the City limits and an amendment of the City's General Plan and Zoning Ordinance are actions required to transfer complete land use control from the County of Orange to the City of Irvine.

Project Location

The project is located in the center of Orange County and includes land within the City of Irvine and unincorporated area. The project area is northeast of the intersection of Interstate 5 and the Eastern Transportation Corridor Toll Road. Figure 1-1 (Project Location) depicts the location of the project area in a regional and local context, respectively. The former MCAS El Toro portion of the project area encompasses approximately 4,693 acres or 7.3 square miles. Approximately 4,279 acres of the former MCAS El Toro portion of the project area (PA 51) are located on unincorporated County land, but within the City of Irvine Sphere of Influence. Approximately 398 acres (PA 30) and 16 acres (PA 51) are within the city limits of Irvine. The James A. Musick Jail facility and the Irvine Ranch Water District (IRWD) parcel comprise approximately 113 acres, and are located on unincorporated County land. The total land area being annexed is 4,287 acres.

The project area is generally bounded by the cities of Irvine and Lake Forest on the south and east, and unincorporated area in the County of Orange on the north. Other nearby

local jurisdictions include the cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo and Tustin.

Major roadways bordering the project area include I-5 to the southwest, Sand Canyon Avenue to the northwest, Portola Parkway and Irvine Boulevard to the north, and Bake Parkway to the northeast. John Wayne Airport is located seven miles to the west of the project area. The Irvine Transportation Center, a major multi-modal transit center linking Orange County Transportation Authority (OCTA) bus, Metrolink commuter rail, and Amtrak rail services, is adjacent to the SCRRRA tracks which traverse the site and separate Planning Areas 51 and 30.

The James A. Musick Jail Facility is located on a 105-acre parcel northwest of existing Bake Parkway and east of the future extension of Alton Parkway. The northern boundary of the Musick Jail site abuts the former MCAS El Toro. Existing buildings of the Irvine Spectrum abut the Musick Jail site to the west/southwest. An eight-acre (IRWD) parcel west of the Musick Jail contains the IRWD East Irvine Zone IV Pumping Station, Zone III 5.0 million gallon potable water reservoir, and a 7.0 million gallon potable water reservoir.

Environmental Impacts

The City of Irvine has determined that an EIR is required pursuant to the CEQA Guidelines. The environmental issue areas identified for study in the Final Program EIR are land use, traffic/circulation, air quality, noise, public health and safety, geology and seismicity, hydrology and water quality, agricultural resources, biological resources, paleontological resources, cultural resources, aesthetics, population/housing, public services and facilities, utilities, cumulative impacts, growth-inducing impacts, and significant irreversible environmental changes. Table 2-1 presents a summary of the environmental impacts of the proposed project, mitigation measures to reduce potential significant impacts for the proposed project, and the level of significance of each impact after mitigation. Significant unavoidable project-level impacts have been identified for air quality, agricultural resources and population/housing. Cumulative unavoidable impacts have been identified for traffic/circulation, air quality, population/housing, and agricultural resources.

Potential Areas of Controversy

The primary area of controversy surrounding the proposed project is whether the former air station should be reused as a non-aviation use versus an aviation use. Until the recent passage of Measure W on March 5, 2002, the County of Orange was proceeding with plans for a commercial airport at the former MCAS El Toro site. While the Orange County voters approved Measure W, limited opposition remains to the non-aviation use of the property. Other issues related to the proposed project are addressed in Sections 5.1 through 5.15 of this Final Program EIR.

Alternatives to the Proposed Project

The alternatives evaluation during the analysis of the proposed project include:

1. No Project/Measure W/PA51/Millennium Plan II PA30

2. Existing City of Irvine General Plan (Millennium Plan II Land Uses)
3. Measure W PA 51/Millennium Plan II PA 30 - Modified
4. Alternative Land Use Plan – University Village
5. Increased Residential Alternative

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
5.1 Land Use		
Base Plan and Overlay Plan No significant land use impact has been identified.	Base Plan and Overlay Plan No mitigation measure is proposed, as no significant land use impact has been identified.	Base Plan and Overlay Plan Not applicable.
5.2 Traffic/Circulation		
Base Plan Tran B1. Implementation of the Base Plan will cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestion at intersections) in the 2007, 2025, and Post 2025 scenarios as follows: ROADWAY/FREEWAY/TOLLWAY/RAMP SEGMENTS Year 2007 I-5 Freeway Southbound off ramp at Alton Parkway Year 2025	Base Plan Locations experiencing peak hour deficiencies and significantly impacted by the project have been evaluated to determine what improvements are necessary to provide acceptable levels of service in accordance with City of Irvine and adjacent jurisdiction standards. Project mitigation in the form of (1) constructing new on-site arterial highways, (2) constructing new off-site roadway improvements, and (3) participating on a fair share basis to needed off-site freeway/tollway ramp improvements, have all been determined as part of the traffic analysis. The traffic impact study has presented a multi-phase analysis of the potential traffic related impacts that would be anticipated to occur under the Orange County Great Park proposed network and land use concepts. The following identifies the measures needed to mitigate the impacts that have been identified. As the planning process for the project proceeds, and the land use plan becomes more defined and refined, additional analyses will be required to determine the cost, assign responsibility and refine the phasing of mitigation measures.	Base Plan Less than significant.

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>I-5 Freeway at Jeffrey Road – southbound on ramp (AM/PM) I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM) I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM) I-5 Freeway at Bake Parkway – southbound off ramp (AM) I-405 Freeway at Jeffrey Road – northbound off ramp (PM) I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM) I-405 Freeway at Sand Canyon Avenue – southbound off ramp (AM)</p> <p>Post 2025</p> <p>I-5 Freeway from Jeffrey Road to Sand Canyon Avenue- southbound (AM) I-405 Freeway from Jeffrey Road Sand Canyon Avenue- southbound (AM)</p> <p>I-5 Freeway at Jeffrey Road – southbound on ramp (AM/PM) I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM) I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM) I-5 Freeway at Bake Parkway – southbound off ramp (AM) I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM) I-405 Freeway at Sand Canyon Avenue –</p>	<p>Tran 1. Prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) (“Spectrumotion”) in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs. The primary purpose of this mitigation measure is to reduce traffic, air quality and noise impacts. Should annexation into Spectrumotion not be approved, the landowner or subsequent project applicant shall develop and implement a similar transportation management plan containing the elements and meeting the criteria described below:</p> <p>Transportation Management Plan (TMP)</p> <p>The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for the Great Park Project. This document summarizes the key elements of the TMP.</p> <p>1.0 Introduction</p> <p>The purpose of this document is to provide an outline for a comprehensive TMP for the Great</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>southbound off ramp (AM)</p> <p>INTERSECTIONS</p> <p>Year 2007</p> <p>Please refer to Table 5.2-6.</p> <p>Year 2025</p> <p>Please refer to Table 5.2-7.</p> <p>Post 2025</p> <p>Please refer to Table 5.2-8.</p> <p>Tran B2. Implementation of the Base Plan will result in inconsistencies with the adopted Orange County Master Plan of Arterial Highways (MPAH). These inconsistencies are associated with Marine Way and Rockfield Boulevard.</p> <p>Tran B3. Implementation of the Base Plan will exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways in the 2025 scenario. The Base Plan will impact the following:</p>	<p>Park. This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.</p> <p>It is the intent to annex Planning Area 51 and a portion of Planning Area 35 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.</p> <p>In the event that annexation of PAs 51 and 35 into Spectrumotion is not approved, a TMP similar to that provided by Spectrumotion will be implemented. This document sets forth the components of the TMP should it be necessary.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>INTERSECTION</p> <p>Year 2025</p> <p>El Toro Road/Avenida de la Carlota</p>	<p>2.0 Transportation Management Plan Framework</p> <p>The key elements of the Great Park TMP are set forth below:</p> <p>New Hire Orientation: Inform newly hired employees of commuting services available to them.</p> <p>Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services ((i.e., OCTA buses, Metrolink, Amtrak, etc.).</p> <p>Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.</p> <p>On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.</p> <p>Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.</p> <p>Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>each other.</p> <p>Website: Maintain a website with all of their program information available.</p> <p>Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.</p> <p>Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.</p> <p>Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.</p> <p>3.0 Transportation Management Plan Implementation</p> <p>As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Great Park. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.</p> <p>Tran 2. Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of this EIR.</p> <p>Tran 3. Prior to issuance of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the project traffic study (Urban Crossroads, December 2002) to maintain satisfactory levels of service as defined by the City's General Plan, based on thresholds of significance, performance standards, and methodologies used in this EIR, Orange County Congestion Management Program, and established in the transportation system/infrastructure fee program described in Mitigation Measure Tran 2 above.</p> <p>Tran 4. Prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>traffic forecasts. The updated traffic study will evaluate the cumulative impact of the subject map and all previously approved or concurrently submitted maps. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City approved traffic study scope of work. The landowner or subsequent project applicant shall construct, bond for, or enter into a funding agreement for necessary improvements identified in the updated traffic study and/or participate in the City fee program (Tran 2 above) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of this EIR.</p> <p>Traffic signals that are on-site or directly related to the Great Park development will be installed as warranted through the mitigation implementation plan process.</p> <p>Tran 5. In conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the following actions:</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<ol style="list-style-type: none"> 1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-tollway ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in this EIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines. 2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency. 3. The landowner or subsequent project applicant shall enter into an agreement with the City prior to recordation of the first final map for each Master Tentative Map or equivalent to establish the method and timing of payment of the identified percentage responsibility. 4. The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or 	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>funding participation in a regional transportation improvement fee program, if adopted.</p> <p>Tran 6. The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.</p> <p>Tran 7. Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-compete clause or any similar agreement restricting a public agency's authority to construct improvement.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	Tran 8. Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of building permits with the base property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdictions to amend the Orange County Master Plan of Arterial Highways (MPAH). Marine Way, Trabuco Road from SR-133 tollway to College Road, and Y Street shall be included on the MPAH.	
Overlay Plan Tran O1. Implementation of the Overlay Plan will cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestion at intersections) in the 2007, 2025, and Post 2025 scenarios as follows: ROADWAY/FREEWAY/TOLLWAY/RAMP SEGMENTS Year 2007 I-5 at Alton Parkway – southbound offramp (AM) I-405 at Irvine Center Drive – southbound offramp (AM)	Overlay Plan Same as Base Plan mitigation.	Overlay Plan Less than significant.

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>Year 2025</p> <p>University Drive from the I-405 Freeway to Michelson Drive (AM)</p> <p>I-5 Freeway from Sand Canyon Avenue to Jeffrey Road – northbound (PM)</p> <p>I-5 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)</p> <p>I-405 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)</p> <p>I-5 Freeway at Jeffrey Road – southbound on ramp (AM)</p> <p>I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM)</p> <p>I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM)</p> <p>I-5 Freeway at Alton Parkway - southbound off ramp (AM)</p> <p>I-5 Freeway at Bake Parkway – southbound off ramp (AM)</p> <p>I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM)</p> <p>I-405 Freeway at Sand Canyon Avenue - southbound off ramp (AM)</p> <p>I-405 Freeway at Irvine Center Drive - southbound off ramp (AM)</p> <p>SR-241 Tollway at Lake Forest Drive – southbound off ramp (AM)</p> <p>SR-133 Freeway at Barranca Parkway – northbound direct on ramp (PM)</p>		

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>Post 2025</p> <p>I-5 Freeway from Sand Canyon Avenue to Jeffrey Road – northbound (PM) I-5 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM) I-405 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)</p> <p>I-5 Freeway at Jeffrey Road – southbound on ramp (AM) I-5 Freeway at Sand Canyon Avenue - northbound on ramp (PM) I-5 Freeway at Sand Canyon Avenue - southbound off ramp (AM) I-5 Freeway at Alton Parkway - southbound off ramp (AM) I-5 Freeway at Bake Parkway - southbound off ramp (AM) I-5 Freeway at El Toro Road – southbound off ramp (PM) I-405 Freeway at Jeffrey Road – northbound off ramp (PM) I-405 Freeway at Sand Canyon Avenue - northbound direct on ramp (AM/PM) I-405 Freeway at Sand Canyon Avenue - southbound off ramp (AM) I-405 Freeway at Irvine Center Drive – southbound off ramp (AM)</p>		

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>INTERSECTIONS</p> <p>Year 2007</p> <p>Please refer to Table 5.2-12.</p> <p>Year 2025</p> <p>Please refer to Table 5.2-13.</p> <p>Post 2025</p> <p>Please refer to Table 5.2-14.</p> <p>Tran O2. Implementation of the Overlay Plan will result in inconsistencies with the adopted Orange County Master Plan of Arterial Highways (MPAH). These inconsistencies are associated with Marine Way and Rockfield Boulevard.</p> <p>Tran O3. Implementation of the Overlay Plan will exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways in the 2007 and 2025 scenarios. The Overlay Plan will impact the following:</p>		

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>FREEWAY/TOLLWAY LOCATIONS</p> <p>Year 2025</p> <p>I-5 from Sand Canyon Avenue to Jeffrey Road – northbound (PM) I-5 from Jeffrey Road to Sand Canyon Avenue– southbound (AM) I-405 from Jeffrey Road to Sand Canyon Avenue- southbound (AM)</p> <p>INTERSECTIONS</p> <p>Year 2007</p> <p>El Toro Road/Avenida de la Carlota</p> <p>Year 2025</p> <p>El Toro Road/Avenida de la Carlota</p>		
5.3 Air Quality		
<p>Base Plan and Overlay Plan</p> <p>AQ1. Implementation of the proposed project will result in a significant air quality impact associated with the fugitive dust emissions resulting from the demolition of existing structures, and land preparation and excavation for the construction of proposed structures. Additionally, the operation of the project will result in a significant impact</p>	<p>Base Plan and Overlay Plan</p> <p>The following section provides a summary of the possible mitigation measures that could be implemented for the development of the former MCAS El Toro according to the proposed project. The limited availability of specific data to quantify air quality impacts for emission sources within the proposed project make it impossible to accurately quantify the effectiveness of each of the mitigation measures. However, these measures are identified as possibilities for the project,</p>	<p>BasePlan/Overlay Plan</p> <p>Due to the size of the project, certain impacts that result from development will be "unavoidable" as these impacts cannot be completely mitigated and most of these changes are irreversible. This is</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>associated with motor vehicle emissions.</p>	<p>while some are recommended by the SCAQMD for all development projects within the SCAB. As expected, the implementation of some or all of the mitigation measures will result in an overall reduction in potential air emissions from the proposed project. However, the implementation of any of these emission mitigation measures cannot be guaranteed at this stage of the proposed project, because they may not be technically or economically feasible once actual development gets underway. Therefore, the emission mitigation measures discussed in the following sections are defined as alternate control measures that could be implemented for the proposed project.</p> <p><i>Construction Emissions Mitigation</i></p> <p>The major source of construction emissions are fugitive dust emissions resulting from the demolition of existing structures, and land preparation and excavation for the construction of proposed structures. Actual erection of structures is considered a minimal source of construction related dust emissions. The following mitigation measures are intended to effectively reduce pollutant emissions from construction activities. Some or all of the mentioned mitigation measures can be implemented as necessary, but quantification and application of these measures cannot be specified at this time.</p> <p>AQ1. Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as</p>	<p>considered a significant unavoidable impact, although the overall effect on air quality within the Basin for the life of the proposed project is estimated at less than one half of one percent. Construction-related emissions are expected to result in unavoidable short-term impacts in terms of ROG and NO_x, although implementation of mitigation measures during construction will minimize these impacts to the extent feasible. Short-term impacts on sensitive receptors are expected to be mitigated during construction and no long-term CO hotspots will be created that may affect sensitive receptors. Operational emissions from future development under the proposed project will consist of area source and motor vehicle emissions, which will exceed SCAQMD thresholds. These air quality emissions from future development</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors; etc.; shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.</p> <p>AQ2. Prior to the commencement of construction activities required to demolish and/or remove existing DON infrastructure, including runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.</p> <ul style="list-style-type: none"> C Evaluate the availability and use, if available, of low-emission (i.e., methanol- or natural gas-powered) construction equipment instead of diesel for each construction phase. C Water exposed soils at least twice daily and maintain equipment and vehicle engines in good condition and in proper tune. C Wash off trucks leaving the site. C Replace ground cover on construction sites when it is determined that the site will be undisturbed for 	<p>under the proposed project will remain significant, even after mitigation.</p> <p>Area Source (Post-Construction) Emission Mitigation</p> <p>Emissions resulting from the post-construction and routine operation of various sources within a development contribute to long term impacts on air quality throughout its life. Some of the mitigation measures that could reduce energy consumption within the proposed project and thus, reduce associated emissions should be considered for implementation and are listed below.</p> <ul style="list-style-type: none"> C Central residential space heating and cooling for multi-dwelling units. C Orient buildings north/south for reducing energy-related combustion

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>lengthy periods.</p> <ul style="list-style-type: none"> C Reduce speeds on unpaved roads to less than 15 miles per hour. C Halt all grading and excavation operations when wind speeds exceed 25 miles per hour. C Suspend all emission generating activities during smog alerts. C Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible. C Properly maintain diesel-powered on-site mobile equipment. C Sweep streets at the end of the day if substantial visible soil material is carried over to the adjacent streets. C Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible. C Use of low-VOC asphalt. C Cover all trucks hauling dirt, sand, soil or other loose material to and from the site. C Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic. C Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible. C Reroute construction trucks away from congested streets, whenever feasible. C Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible. 	<p>emissions.</p> <ul style="list-style-type: none"> C Central commercial space heating. <p>These measures could be accounted for in the planning process such that the overall impact of the proposed project on prevalent air quality in the SCAB is minimized.</p> <p><i>Motor Vehicle (Operational) Emission Mitigation</i></p> <p>Motor vehicle emissions form a large portion of the total operational emissions from the proposed project. These emissions can be mitigated by the use of fuel-efficient vehicles and a well designed transportation system. However, most of the measures will be ineffective unless the occupants of various commercial and residential establishments within the project contribute their share in the mitigation effort. The implementation</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>AQ3. Prior to the issuance of building permits for any future development, the applicant shall submit, and the Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.</p> <ul style="list-style-type: none"> C Utilize built-in energy-efficient appliances to reduce energy consumption and emissions. C Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions. C Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible. C Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning. C Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible. C Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods. C Centralize space heating and cooling for multiple-family dwelling units and commercial space. C Orient buildings north/south for reducing energy-related combustion emissions. C Use solar energy, when feasible. 	<p>of some of the measures cannot be stated with certainty, as they are owner and employer specific and related specific land use types within the proposed project. Development of the proposed project will identify motor vehicle mitigation measures that would result in reductions in emissions and thereby contribute to the overall improvement in air quality within the SCAB. The inclusion of the OCTA facility within the proposed project is aimed at encouraging the use of alternative transportation thereby reducing motor vehicle congestion and related air quality emissions and impacts. The implementation of an emission reduction program under SCAQMD Rule 2202 is also expected to result in reducing motor vehicle air quality emissions and impacts.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>C Use high rating insulation in walls and ceilings.</p> <p>AQ4. Information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find employment nearby.</p> <p>AQ5. Future employment generating non-residential development shall include measures to reduce vehicle trips including: the promotion of carpool incentives and alternative work schedules, easy access to public transit systems, trail linkages between uses, low-emissions vehicle fleets, and the provision of on-site facilities such as banking and food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.</p>	
5.4 Noise		
<p>Base Plan and Overlay Plan</p> <p>No significant noise impact has been identified.</p>	<p>Base Plan and Overlay Plan</p> <p>No mitigation measure is proposed, as no significant noise impact has been identified.</p>	<p>Base Plan and Overlay Plan</p> <p>Not applicable.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
5.5 Public Health and Safety		
<p>Base Plan and Overlay Plan</p> <p>HH 1. Construction activities involving demolition and possible substantial remodeling of existing structures in the project area as the project area develops could result in the disturbance of structures and soils containing ACMs or LBPs. This is considered a significant impact.</p> <p>The presence of ACMs and LBP in structures and soils of properties conveyed by the DON may pose a future hazard to the public if the materials degrade or are otherwise disturbed. This is considered a significant impact.</p> <p>HH 2. IRP Site 24 is located in zoning districts categorized as 6.1 Institutional and 1.5 Recreation. The site may be conveyed with temporary restrictions on use that are not appropriate for transportation facility use. This is considered a significant impact.</p> <p>Future uses of IRP Site 3 may be potentially constrained by the implementation of institutional controls. This is considered a significant impact.</p>	<p>Base Plan and Overlay Plan</p> <p>HH 1.</p> <ul style="list-style-type: none"> a. Prior to the conveyance of the property and issuance of subsequent grading permits, where the presence of ACMs is identified, the DON or its transferee shall ensure that all available information concerning ACMs has been provided to the City of Irvine, and the purchasers of the property, including: <ul style="list-style-type: none"> C The type, location and condition of ACMs C The results of any asbestos testing C Description of asbestos control measures taken, if any C The costs or time necessary to remove existing ACMs C The results of any site-specific asbestos inventory updates b. For any structures known to contain ACMs that will be renovated and/or demolished prior to transfer, the DON shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements. c. Prior to transfer of any structure constructed before October 1988, scheduled for renovation and/or demolition, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by the DON. This requirement can be waived if an 	<p>Base Plan/Overlay Plan</p> <p>Less than significant.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>HH 3. IRP Site 16 (Crash Crew Pit No. 2) is located in zoning district designation 1.5 Recreation. The site may be conveyed with temporary restrictions on use that are not appropriate for recreational land uses. This issue is considered a significant impact.</p> <p>The Habitat Preserve, Wildlife Corridor, and Recreational areas in the northeastern portion of PA 51 will be exposed to the highest level of fire risk from wildfires because these areas and adjacent areas area currently defined as having high risk for wildland fires. The proposed project will result in an increase in both population and structures adjacent to this high fire risk area and the impact is considered significant. Additionally, existing structures may not meet City fire safety requirements.</p>	<p>architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building material, and to the best of their knowledge, no ACMs were used as a building material.</p> <p>d. Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.</p> <p>e. Any renovation and/or LBP abatement activities on residential units at former MCAS El Toro shall be conducted in accordance with all applicable federal, state and local regulatory requirements.</p> <p>HH 2.</p> <p>a. Prior to transfer, the City of Irvine shall receive from the DON, with the concurrence of the appropriate regulatory agencies, a statement that the "Action Required" IRP Site 3 is to be conveyed for restricted use and that all institutional controls have been identified and implemented. The City of Irvine will adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>and acreages are approximate and shall be established by master plan approval.</p> <p>b. Prior to transfer, if the DON chooses to impose temporary restrictions on the use of Sites 16 and 24 pending adequate remediation of groundwater, the City of Irvine shall receive from the DON a statement of temporary restrictions on the use of the sites and the release of the sites for unrestricted use following implementation of adequate remediation of groundwater. The City of Irvine shall adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.</p> <p>HH 3. The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for "Development Within and Exclusion from Very High</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>Fire Severity Zones” and “Fuel Modification Plans and Maintenance.” Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the proposed project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.</p> <p>HH 4. Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.</p> <p>HH 5. Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>regulatory agencies, and the Director of Community Development of the City of Irvine in a timely manner. Additionally, said protocol plan shall be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities.</p> <p>HH 6. The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells located on the former MCAS El Toro in a geographic information system (GIS). The City shall review all permit applications on the former air station for well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to wells shall be limited to authorized personnel.</p>	
5.6 Geology and Seismicity		
<p>Base Plan and Overlay Plan</p> <p>GS 1. Future development of the project area has the potential to result in the exposure of people or structures to strong seismic ground shaking in the event a major earthquake occurs along any one of the active faults in the region. This is considered a significant impact.</p> <p>GS 2. The level of seismic activity expected in the project area is similar to the County as a whole, and other areas of Southern California. As such, the risk of loss, injury or</p>	<p>Base Plan and Overlay Plan</p> <p>GS 1. Prior to issuance of a building permit, the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.</p> <p>GS 2. Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to</p>	<p>Base Plan and Overlay Plan</p> <p>Less than significant.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>death involving strong seismic ground shaking is similar to the risk associated with other regions within Southern California.</p> <p>GS 3. Some expansive soils may be present in localized areas within the project area. The presence of expansive soils could create risks to life or property through the post 2025 development levels. This impact is considered significant.</p> <p>GS 4. Many of the existing buildings on the former MCAS El Toro site may not have been constructed in a manner that is acceptable for its intended use. Temporary or permanent reuse of these facilities could expose people to a greater seismic risk than buildings that are constructed to applicable seismic codes. This is considered a significant impact.</p> <p>GS 5. Future development of the project area has the potential for impacts resulting from soil erosion or the loss of topsoil. This impact is considered significant through the post 2025 development levels.</p> <p>GS 6. Some expansive soils may be present in localized areas within the project area. The presence of expansive soils could create risks to life or property. This is considered a significant impact.</p>	<p>address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.</p> <p>1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be conducted. The purpose of the subsurface evaluation is to:</p> <ul style="list-style-type: none"> a. Further evaluate the subsurface conditions in the area of the proposed structures. b. Provide specific data on potential geologic and geotechnical hazards. c. Provide information pertaining to the engineering characteristics of earth materials in the project area. <p>From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural sections, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:</p> <p>C Seismic Ground Shaking - Measures to prevent risk of loss, injury or death involving</p>	

Table 2-1
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Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.</p> <p>C Erosion or Loss of Topsoil – Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances.</p> <p>C Where Expansive Soils Exist – Measures for the design of foundations, slabs, flatwork and other improvements subject to drainage from expansive soils.</p> <p>Compliance with this measure shall be verified by the Community Development Department.</p> <p>GS 3. Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of any existing structure if a building permit is not issued, a seismic evaluation of the structure including recommendations for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.</p> <p>GS 4. Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.	
5.7 Hydrology/Water Quality		
<p>Base Plan and Overlay Plan</p> <p>H/WQ 1. Grading and excavation activities required for future development could result in the exposure of bare soils which could result in both wind and water-related erosion, and a significant water quality impact if not properly treated. Through buildout of the proposed project, wind and water related erosion has the potential to violate water quality standards or waste discharge requirements. This is considered a significant impact. Implementation of Mitigation Measures HW1 and HW2 will reduce the impact associated with the potential to violate water quality standards and waste discharge requirements to a level less than significant.</p> <p>Additionally, a Storm Water Pollution Prevention Plan (SWPPP), Water Quality Management Plan (WQMP) will be</p>	<p>Base Plan and Overlay Plan</p> <p>H/WQ 1. Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City of Irvine adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area . . . and residential construction sites that result in the disturbance of five acres or more . . . shall be required to develop and implement BMPs . . . to control erosion and siltation and contaminated runoff from the construction sites." Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of</p>	<p>Base Plan and Overlay Plan</p> <p>Less than significant.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>prepared. A Notice of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the City Engineer for: a) any disturbance of one acre or more of soil in the project area; b) General Dewatering NPDES Permit of the Santa Ana RWQCB; and c) provisions of the Countywide Permit.</p> <p>These measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned, designed, and constructed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future.</p> <p>H/WQ 2. Improvements to the flood control system shall be evenly scheduled during the various phases of development. However, a substantial increase in the rate or amount of surface runoff due to new development may occur, resulting in flooding on- or off-site depending on the future proposed</p>	<p>one acre or more.</p> <p>The City's standard conditions of approval indicate that a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.</p> <p>Additionally, prior to the issuance of a grading permit, project applicants must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.), and shall reference the location(s) of structural BMPs.</p> <p>Also in accordance with standard City project</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>development. The potential for flooding to occur on-or off-site as a result of future development of the project area is considered a significant impact. Implementation of Mitigation Measure HW3 will reduce this impact to a level less than significant.</p> <p>H/WQ 3. With recent improvements to upstream flood control facilities, the floodplain area has likely decreased and fewer areas of the project area are subject to inundation. The phasing of the flood control system improvements in PAs 51 and 30 will be coordinated with the street-phasing schedule so that the storm drains are installed prior to or in concert with road construction. Improvements to the flood control system shall be evenly scheduled during the various phases of development. However, a substantial increase in the rate or amount of surface runoff due to new development may occur, resulting in flooding on- or off-site depending on the future proposed development. This is considered a significant impact. Implementation of Mitigation Measure HW3 will reduce on- or off-site flooding due to surface runoff to a level less than significant.</p> <p>H/WQ 4. As per the requirements of the Regional Water Quality Control Board, proposed</p>	<p>permitting and approval procedures, Notices of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the Director of Community Development for any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES Permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.</p> <p>The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.</p> <p>H/WQ 2. Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>projects occurring upstream of or discharging into impaired waterbodies listed on the Clean Water Act Section 303(D) list may be subject to additional controls (specifically Total Maximum Daily Loads or TMDLs) pursuant to that regulation. Depending on the specific type of project proposed, these controls could include discharge prohibitions, revisions to discharge permits or management plans to address water quality impacts. This is especially important in the Newport Bay watershed. At this program level of planning, the potential to degrade surface water quality is considered a significant impact. Implementation of Mitigation Measure HW1 will reduce the impact of future development on surface water quality to a level less than significant.</p> <p>Additionally, a Storm Water Pollution Prevention Plan (SWPPP), Water Quality Management Plan (WQMP), Notice of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the City Engineer for: a) any disturbance of one acre or more of soil in the project area; b) General Dewatering NPDES Permit</p>	<p>water quality requirements identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TDML) Implementation Plan adopted for this watershed.</p> <p>H/WQ 3. Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrology and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.</p> <p>H/WQ 4. Prior to issuance of a building permit, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>of the Santa Ana RWQCB; and c) provisions of the Countywide Permit.</p> <p>The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Grading or building permit applicants will be required to submit and obtain approval of a Water Quality Management Plan (WQMP) from the City of Irvine prior to issuance of the permits. The WQMP will specifically identify BMPs that will be used on-site to control predictable pollutant runoff. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.), and shall reference the location(s) of structural BMPs.</p> <p>Future projects in the proposed project area will acknowledge and implement those additional requirements that may be</p>	<p>After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.</p> <p>H/WQ 5. Project development is proposed in areas of PAs 51 and 30. Existing and proposed development within these areas could be subject to potential flooding associated with a 100-year frequency storm. Mitigation Measure HW4 will reduce the impact of exposure of future residential development in the project area to a level less than significant.</p>		
5.8 Agricultural Resources		
<p>Base Plan and Overlay Plan</p> <p>Ag 1. The project Base Plan will convert 574 acres of Prime Farmland, 63 acres of Unique Farmland, and 46 acres of Farmland of Statewide Importance to non-agricultural use. The Overlay Plan will convert 651 acres of Prime Farmland, 63 acres of Unique Farmland and 88 acres of Farmland of Statewide Importance to non-agricultural uses.</p> <p>Ag 2. The project will involve changes in the existing environment, which, due to their location or nature, could result in conversion of existing farmland to non-agricultural use.</p>	<p>Base Plan and Overlay Plan</p> <p>Ag 1. In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operations, City Of Irvine Standard Discretionary Case Condition B.4 and City Of Irvine Standard Subdivision Condition 3.4 regarding disclosure statements shall be amended to include the following for subdivisions proposed adjacent to existing agricultural operations:</p> <p>Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The</p>	<p>Base Plan and Overlay Plan</p> <p>Significant and unavoidable.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:</p> <p>Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.</p> <p>Ag 2. Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.</p> <p>Ag 3. Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operation and adjacent urban uses.</p>	
5.9 Biological Resources		
<p>Base Plan and Overlay Plan</p> <p>Bio 1. The southern tarplant, a federal species of concern, may be affected by development of the site. This is considered a significant impact.</p>	<p>Base Plan and Overlay Plan</p> <p>Bio 1. Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. Prior to approval of a subdivision map for</p>	<p>Base Plan and Overlay Plan</p> <p>Less than significant.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>Bio 2. There is a limited amount of highly disturbed wetland habitat on the project site. The project may result in an impact to this habitat.</p> <p>Bio 3. PAs 51 and 30 contain a large number of trees, many of them mature, representing a wide range of species. Implementation of the proposed project may result in damage and destruction to the trees. A significant impact related to conflicts with the City of Irvine's Urban Forestry Ordinance may occur.</p>	<p>development within, or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).</p> <p>Bio 2. Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan subarea that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, re-creation (i.e. within the proposed wildlife corridor), and/or revegetation as deemed acceptable by the appropriate jurisdictional agencies.</p> <p>Bio 3. The City shall continue to work with State and federal agencies during the implementation of the proposed project to implement the revegetation/restoration plan for the wildlife corridor. Measures such as sight and</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>sound barriers, including artificial sound walls and natural diversions (e.g. hedges and tree lines) shall be incorporated into corridor design to ensure the viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the EIR.</p> <p>Bio 4. Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered "Significant Trees" under the City of Irvine's Urban Forestry Ordinance (UFO) (Section 5-7-401 et al) and the UFO shall apply to all trees included in this inventory.</p>	
5.10 Paleontological Resources		
<p>Base Plan and Overlay Plan</p> <p>P1. Earthmoving operations such as grading and trenching has the potential to impact buried paleontological resources in the moderately to highly sensitive areas in the coastal plain and washes, northeast, northwest and southern</p>	<p>Base Plan and Overlay Plan</p> <p>P1. Prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. (A qualified paleontologist is</p>	<p>Base Plan and Overlay Plan</p> <p>Less than significant.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>portions of PA 51. This is considered a significant impact.</p> <p>Additionally, pleistocene terrestrial vertebrates have been discovered four miles from PA 30. Similar beds of Pleistocene terrestrial vertebrates may underlie PA 30. This impact is considered significant.</p>	<p>defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.</p> <p>When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossils specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screen-washing operation on-site.</p> <p>Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
5.11 Cultural Resources		
<p>Base Plan and Overlay Plan</p> <p>Cult1. Grading activities associated with future development of the project area may cause a substantial adverse change in the significance of an archaeological resource. Mitigation Measures Cult B1 through Cult B3 will reduce this impact to a level less than significant.</p> <p>Cult2. Grading activities could uncover previously unknown human remains, including those interred outside of formal cemeteries. Mitigation Measure Cult B4 will reduce this impact to a level less than significant.</p>	<p>Base Plan and Overlay Plan</p> <p>The following measures have been developed to provide assurances that significant cultural resource impacts or potentially significant cultural resource impacts associated with the proposed project will be mitigated to a level less than significant. This assurance is obtained by verification, which would occur at subsequent levels of environmental review. Finally, in some instances, it is not possible at this program level of analysis to determine if cultural resource impacts would occur from the implementation of specific actions. For these situations, mitigation measures provide for further review at the time of specific development proposals in the project area. Increased planning detail developed at the development proposal level will clarify the specific impacts and options available for mitigation. As such, these measures are not intended to restrict the development of appropriate mitigation measures, as determined through analysis at a subsequent level of review.</p> <p>Cult1. Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PAs 51 and 30. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.</p>	<p>Base Plan and Overlay Plan</p> <p>Less than significant.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>Cult2. Monitoring of excavation and grading activities associated with future development in PAs 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure Cult1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and an assessment of their importance under CEQA and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.</p> <p>Cult3. Prior to the issuance of grading permits and/or building permits for any future development in PAs 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City of Irvine to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and scientific</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.</p> <p>Cult4. Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City of Irvine to address the accidental discovery or recognition of any human remains. The program shall include the following:</p> <p>There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:</p> <p>C <i>The county coroner must be contacted to determine that no investigation of the cause of death is required, and</i></p> <p>If the coroner determines the remains to be Native American:</p> <p>C <i>The coroner shall contact the Native American Heritage Commission within 24 hours.</i></p> <p>C <i>The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.</i></p> <p>C <i>The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods</i></p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p><i>as provided in Public Resources Code Section 5097.98, or</i></p> <p>C <i>Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.</i></p> <p>C <i>The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.</i></p> <p>C <i>The descendant identified fails to make a recommendation; or</i></p> <p>C <i>The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.</i></p> <p>Compliance with this measure shall be verified by the Community Development Department.</p>	
5.12 Aesthetics		
Base Plan and Overlay Plan	Base Plan and Overlay Plan	Base Plan and Overlay Plan
A1. Future development of PAs 51 and 30 pursuant to the proposed GPA and Zone Change, and consistent with the Orange County Great Park land use plan, will lead to the introduction of	A1. Prior to issuance of grading permits, lighting plans and signage plans for new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent	Less than significant.

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>new sources of light within the project area. These sources include street lighting along planned roadways and exterior lighting (including security lighting and parking lot lighting) for various educational and institutional developments, and lighting associated with athletic fields. The potential for a significant light impact may occur should proposed light sources be directed into or located near existing or planned residential uses, which are sensitive to light intrusion during nighttime hours. This is considered a significant impact. Implementation of Mitigation Measures A1 and A2 will reduce the impact to a level less than significant.</p> <p>A2. Future development of PAs 51 and 30 pursuant to the proposed GPA and Zone Change, and consistent with the Orange County Great Park Base Plan, will lead to the introduction of new sources of glare within the project area. Reflective materials and glazed or polished exterior surfaces associated with the research and development land uses may create glare, which could cause visual nuisance to residential land uses. This is considered a significant impact. Implementation of Mitigation Measures A1 and A2 will reduce the impact to a level less than significant.</p>	<p>residential areas occurs.</p> <p>A2. Prior to the issuance of grading permits, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
5.13 Population and Housing		
Base Plan and Overlay Plan A significant impact to jobs/housing ratio will occur.	Base Plan and Overlay Plan No mitigation is available to rectify conflicts with the numerical objectives of regional planning documents including the jobs/housing balance.	Base Plan and Overlay Plan Although the proposed amendments to the City of Irvine General Plan will be incorporated into regional SCAG and County of Orange planning projections, the impact associated with jobs/housing balance will remain significant and unavoidable.
5.14 Public Services and Facilities		
<u>Law Enforcement</u> Base Plan and Overlay Plan The general significant impacts associated with the construction and operation of public facilities have been addressed within this EIR, including the possible construction and operation of a new police substation. The need for new public facilities will be mitigated by utilizing existing City standards.	<u>Law Enforcement</u> Base Plan and Overlay Plan Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of police facilities to serve new growth expected in the northern portion of the City.	<u>Law Enforcement</u> Base Plan and Overlay Plan Less than significant.
<u>Fire and Emergency Medical Services</u> Base Plan and Overlay Plan	<u>Fire and Emergency Medical Services</u> Base Plan and Overlay Plan	<u>Fire and Emergency Medical Services</u> Base Plan and Overlay Plan

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>The specific significant environmental impact of constructing new fire protection facilities that will be needed to serve the Base Plan cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new fire protection facilities. The need for new public facilities will be mitigated by utilizing existing City standards.</p> <p><u>Parks and Recreation</u></p> <p>Base Plan and Overlay Plan</p> <p>The specific significant environmental impact of constructing new recreational facilities that will be needed to serve the Base and Overlay Plans cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new recreational facilities. The need for new public facilities will be mitigated by utilizing existing City standards.</p> <p><u>School Services</u></p> <p>Base Plan and Overlay Plan</p>	<p>Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of fire protection facilities to serve new growth expected in the planning area.</p> <p><u>Parks and Recreation</u></p> <p>Base Plan and Overlay Plan</p> <p>Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of park and recreational facilities to serve new growth expected in the planning area.</p> <p><u>School Services</u></p> <p>Base Plan and Overlay Plan</p>	<p>Less than significant.</p> <p><u>Parks and Recreation</u></p> <p>Base Plan and Overlay Plan</p> <p>Less than significant.</p> <p><u>School Services</u></p> <p>Base Plan and Overlay Plan</p>

**Table 2-1
Environmental Impacts and Mitigation Measures**

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>The specific significant environmental impact of constructing new educational facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new educational facilities. The need for new public facilities will be mitigated by utilizing existing City standards.</p>	<p>Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of educational facilities to serve new growth expected in the planning area.</p>	<p>Less than significant.</p>
5.15 Utilities		
<p><u>Potable Water</u></p> <p>Base Plan and Overlay Plan</p> <p>The specific significant environmental impact of constructing a new potable water facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new potable water facilities.</p> <p><u>Recycled Water</u></p> <p>Base Plan and Overlay Plan</p>	<p><u>Potable Water</u></p> <p>Base Plan and Overlay Plan</p> <p>Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new potable water facilities identified in this section to serve new growth expected in the project area.</p> <p><u>Recycled Water</u></p> <p>Base Plan and Overlay Plan</p>	<p><u>Potable Water</u></p> <p>Base Plan and Overlay Plan</p> <p>Less than significant.</p> <p><u>Recycled Water</u></p> <p>Base Plan and Overlay Plan</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>The specific significant environmental impact of constructing new recycled water facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new recycled water facilities.</p> <p><u>Sewer</u></p> <p>Base Plan and Overlay Plan</p> <p>The specific significant environmental impact of constructing new wastewater facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new wastewater facilities.</p> <p><u>Solid Waste</u></p> <p>Base Plan and Overlay Plan</p> <p>SW1. The project site may contain solid waste unsuitable for recycling or reuse. Also, the</p>	<p>Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new recycled water facilities identified in this section to serve new growth expected in the project area.</p> <p><u>Sewer</u></p> <p>Base Plan and Overlay Plan</p> <p>Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new wastewater facilities identified in this section to serve new growth expected in the project area.</p> <p><u>Solid Waste</u></p> <p>Base Plan and Overlay Plan</p> <p>SW1. It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other</p>	<p>Less than significant.</p> <p><u>Sewer</u></p> <p>Base Plan and Overlay Plan</p> <p>Less than significant.</p> <p><u>Solid Waste</u></p> <p>Base Plan and Overlay Plan</p> <p>Implementation of the proposed project will not</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>project will generate solid waste as result of demolition, operation of proposed land uses, and landscape maintenance.</p>	<p>deconstruction of the aged structures and property, including but not limited to buildings and runways, at El Toro MCAS is contaminated with lead based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the El Toro MCAS site by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.</p> <p>If it is determined by the technical evaluation that the material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as “waste-to-energy” (WTE) plants.</p> <p>SW2. For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the</p>	<p>result in a significant impact related to solid waste.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>project applicant must submit a written plan to the City and implement such plan to ensure that 75% of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.</p> <p>SW3. For that solid waste which the technical study deems to be suitable for recycling, the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75% of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180. ("Recycling" does not include transformation, as defined in Public Resources Code Section 40201.)</p> <p>SW4. To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by "weight ticket" receipts from state-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p><u>Energy and Communications</u></p> <p>Base Plan and Overlay Plan</p> <p>The specific significant environmental impact of constructing new energy and communication facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new energy and communication facilities.</p>	<p>To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.</p> <p>SW5. For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50% of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.</p> <p><u>Energy and Communications</u></p> <p>Base Plan and Overlay Plan</p> <p>Mitigation Measures identified in other sections of this EIR address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new energy and communication transmission facilities identified in this section to serve new growth expected in the project area.</p>	<p><u>Energy and Communications</u></p> <p>Base Plan and Overlay Plan</p> <p>Less than significant.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
No significant impact is anticipated related to substantial use of fuel and/or energy sources by the project was identified.		

3.0 Project Description

Project Characteristics

The project consists of the following actions: 1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; 2) Annexation of the unincorporated portion of Planning Area 35 (James A. Musick Branch Jail and the Irvine Ranch Water District Parcel); and 3) General Plan Amendment and Zone Change for Planning Area 30 which is presently in the City of Irvine; and 4) Approval of the form of a Development Agreement vesting approval of higher intensity overlay uses in consideration for dedication of land for public purposes and for developing and funding certain infrastructure improvements and maintenance of the public uses by the purchaser/developer and subsequent landowners and funds for specified park, roadways, and other circulation facilities and infrastructure. The proposed actions, by City of Irvine Planning Area are illustrated in Figure 3-1 and detailed in Table 3-1 entitled Proposed Action by Area.

Figure 3-2 depicts the proposed General Plan designations for the site. Figure 3-3 depicts the allowed uses within the Orange County Great Park (OCCP) designation by Planning Area Zone (PAZ). The base and overlay provisions of the OCCP designation are illustrated for each PAZ for all land being annexed and the portion of the project area currently in the City. The proposed General Plan land use designations and related zoning districts are summarized by PAZ in Table 3-2. Land uses planned in the project area are open space/park, residential, cultural facilities, transit oriented development, golf courses, habitat preserve/wildlife corridor, sports parks, agriculture, auto center use, educational, research and development, institutional, exposition centers, and transportation facilities.

The proposed zoning districts for the Base and Overlay Plans are illustrated in Figure 3-4. Certain zoning districts illustrated are not currently in the City's Zoning Ordinance at present and the creation of these districts constitutes an amendment to the City's Zoning Ordinance.

For purposes of the environmental analysis contained in this document, Tables 3-3 and 3-4 indicate the type and intensity of development permitted under the Base Plan and the Overlay Plan. The base line against which the impacts are analyzed is the existing conditions within the project area, including the present California State University-Fullerton satellite operation, golf course, and equestrian facilities.

Development standards for each PAZ are identified in terms of maximum acreage, maximum number of units, maximum square footage, and other development maximums. The proposed project represents a reduction of intensity of use compared to those uses that are presently designated in the City of Irvine General Plan. The proposed project includes street system modifications and other infrastructure improvements outside the area of the lands being annexed. These improvements are currently conceptual but are considered part of the project and are addressed in the Final Program EIR as related improvements.

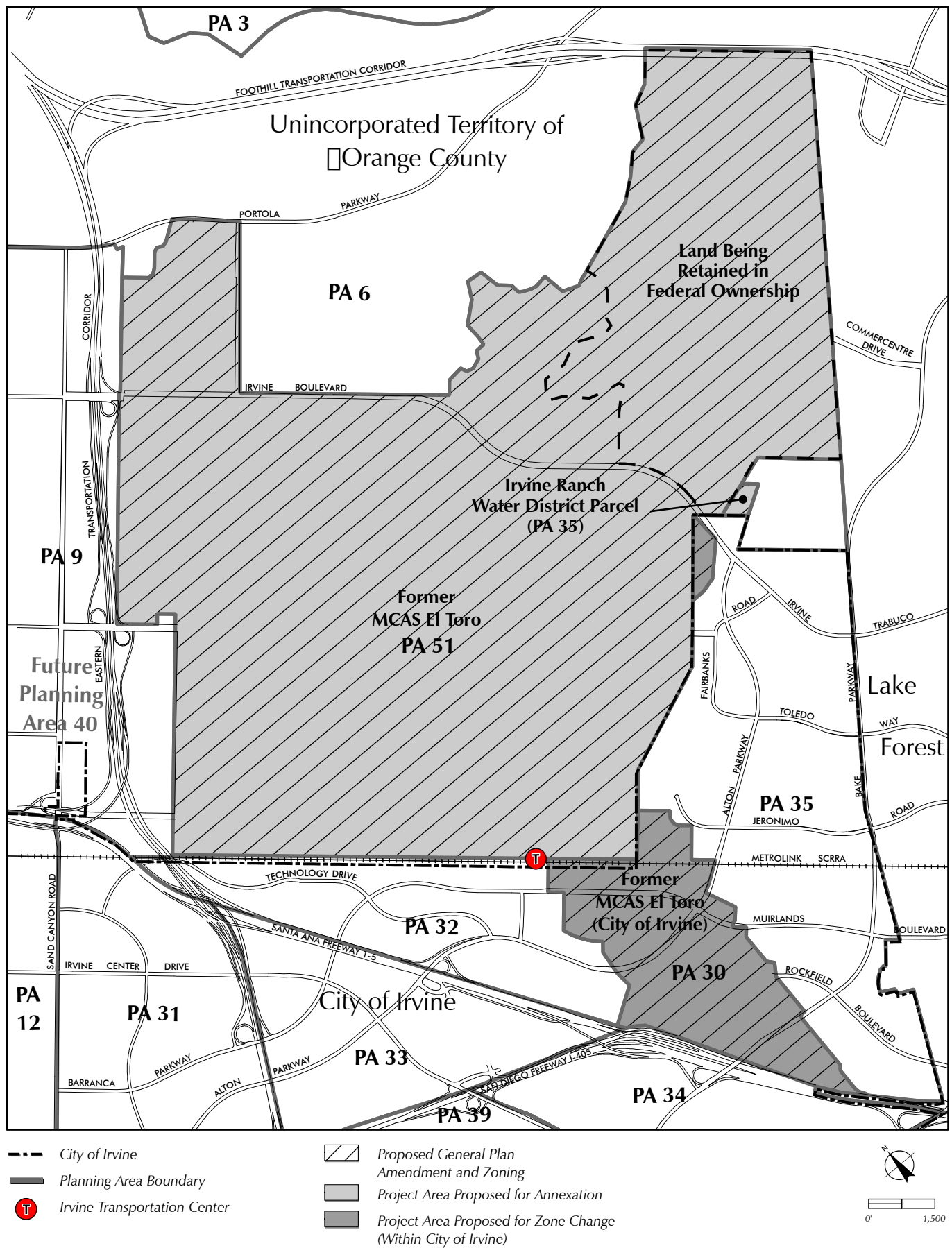
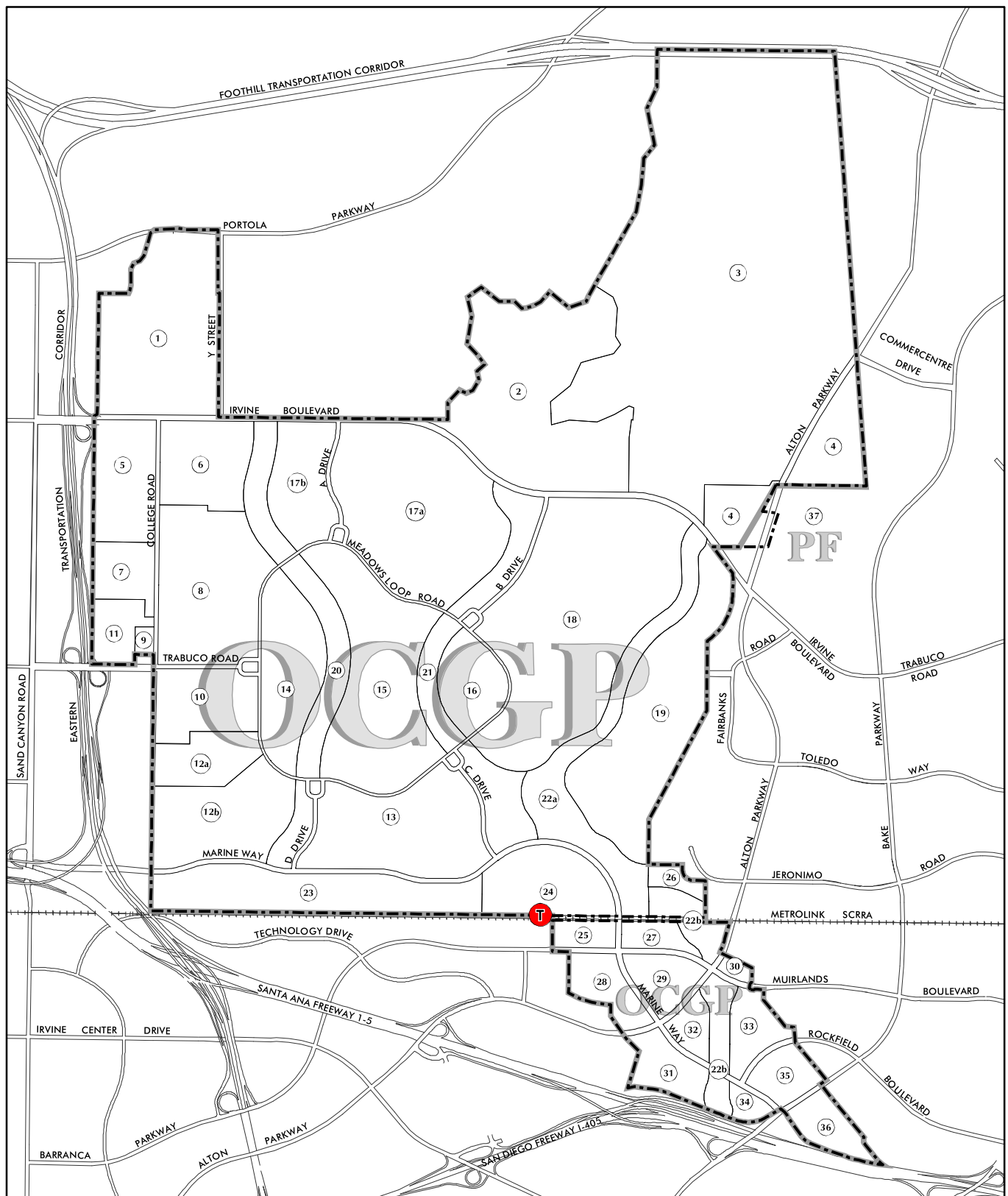


Figure 3-1
Proposed Actions

Table 3-1
Proposed Action By Area

Area	Proposed Actions
PLANNING AREA 51 Portion of MCAS El Toro in unincorporated County	<ol style="list-style-type: none"> Annexation of the majority of Planning Area 51 into City of Irvine. A small portion of Planning Area 51 is already in the City of Irvine. General Plan Amendment to establish a land use category consistent with the Orange County Great Park Plan land use designations.* General Plan Amendments (Circulation Element) to realign Millennium Parkway as Marine Way and eliminate a portion of the extension of Trabuco Road, as well as modify the trails network. General Plan Amendment (Parks and Recreation and the Conservation and Open Space Elements) to establish land use policies consistent with the Orange County Great Park Plan land use designations. This amendment includes broadening the types of activities permitted in City park facilities, as well as modifying the location of recreational facilities and conservation/open space lands. Pre-zoning prior to annexation and rezoning to permit implementation of the Orange County Great Park Plan designations. Creation of new or expanded zoning categories and overlay zones to implement the OCGP General Plan designation.
Portion of PA 51 located within City Limits	<ol style="list-style-type: none"> General Plan Amendment to establish a land use category consistent with the Orange County Great Park Plan land use designations.* Zone Changes in Planning Area 51 to permit implementation of the Orange County Great Park Plan designations and zoning overlay. Creation of new of expanded zoning categories and overlay zones to address other components of the Great Park land use designations.
PLANNING AREA 35	<ol style="list-style-type: none"> Annexation of a portion of Planning Area 35 (the Musick Jail Facility and IRWD parcel) to prevent creation of an unincorporated County island. No General Plan amendment or zoning change is proposed.
PLANNING AREA 30 Portion of MCAS El Toro located within City limits	<ol style="list-style-type: none"> General Plan Amendment to establish a land use category consistent with the Orange County Great Park Plan land use designations.* Circulation element revisions to realign Marine Way and Rockfield Boulevard and the trails network. Modification of the Parks and Recreation Element to relocate certain recreation facilities. Zone changes in Planning Area 30 to permit implementation of the OCGP designations for the base zoning and the Overlay. Creation of new or expanded zoning categories and overlay zones to address the other components of the Great Park land use designations.

* The General Plan designation permits a base intensity of development with additional intensity available through compliance with criteria spelled out in a Development Agreement with the City and implemented through the City Zoning Ordinance.



- Project Boundary
- General Plan Designation Boundary
- ① Planning Area Zones
- T** Irvine Transportation Center
- OCGP** Orange County Great Park
- PF** Public Facility

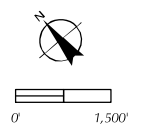
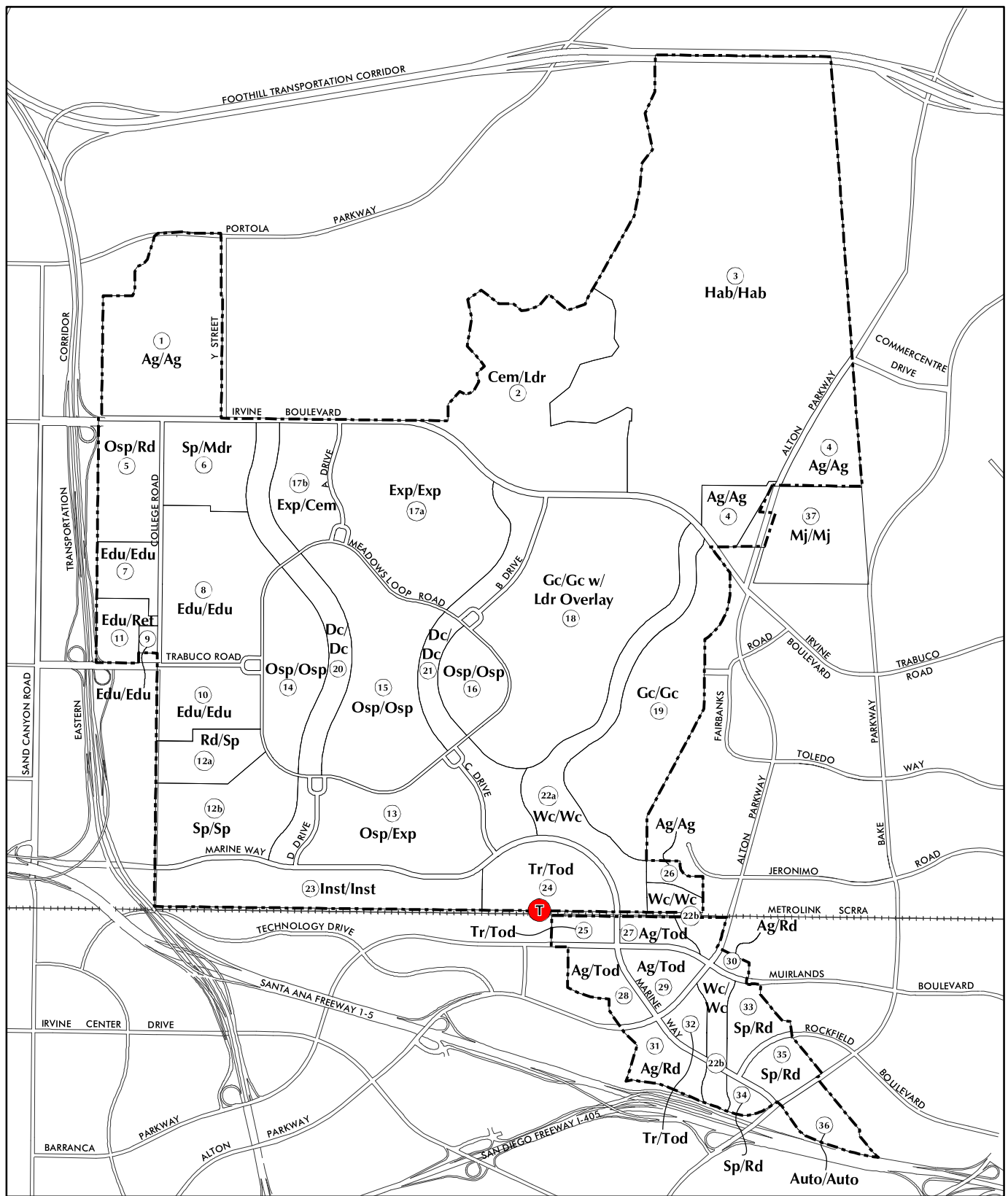


Figure 3-2
Proposed General Plan
Designations



--- Project Boundary

General Plan Uses [Base/Overlay]

Edu OCGP Education

Inst OCGP Institutional

Tr OCGP Transportation

Ldr OCGP Low Density Residential

Mdr OCGP Medium Density Residential

Tod OCGP Transit Oriented Development

Rd OCGP Research and Development

Ret OCGP Retail

Auto OCGP Auto

Cem OCGP Cemetery

Ag OCGP Agriculture

Dc OCGP Drainage Corridor

Wc OCGP Wildlife Corridor

Hab OCGP Habitat Preserve

Osp OCGP Open Space/Park

Sp OCGP Sports Park

Gc OCGP Golf Course

Exp OCGP Exposition Center

Mj Musick Jail/IRWD

① Planning Area Zones

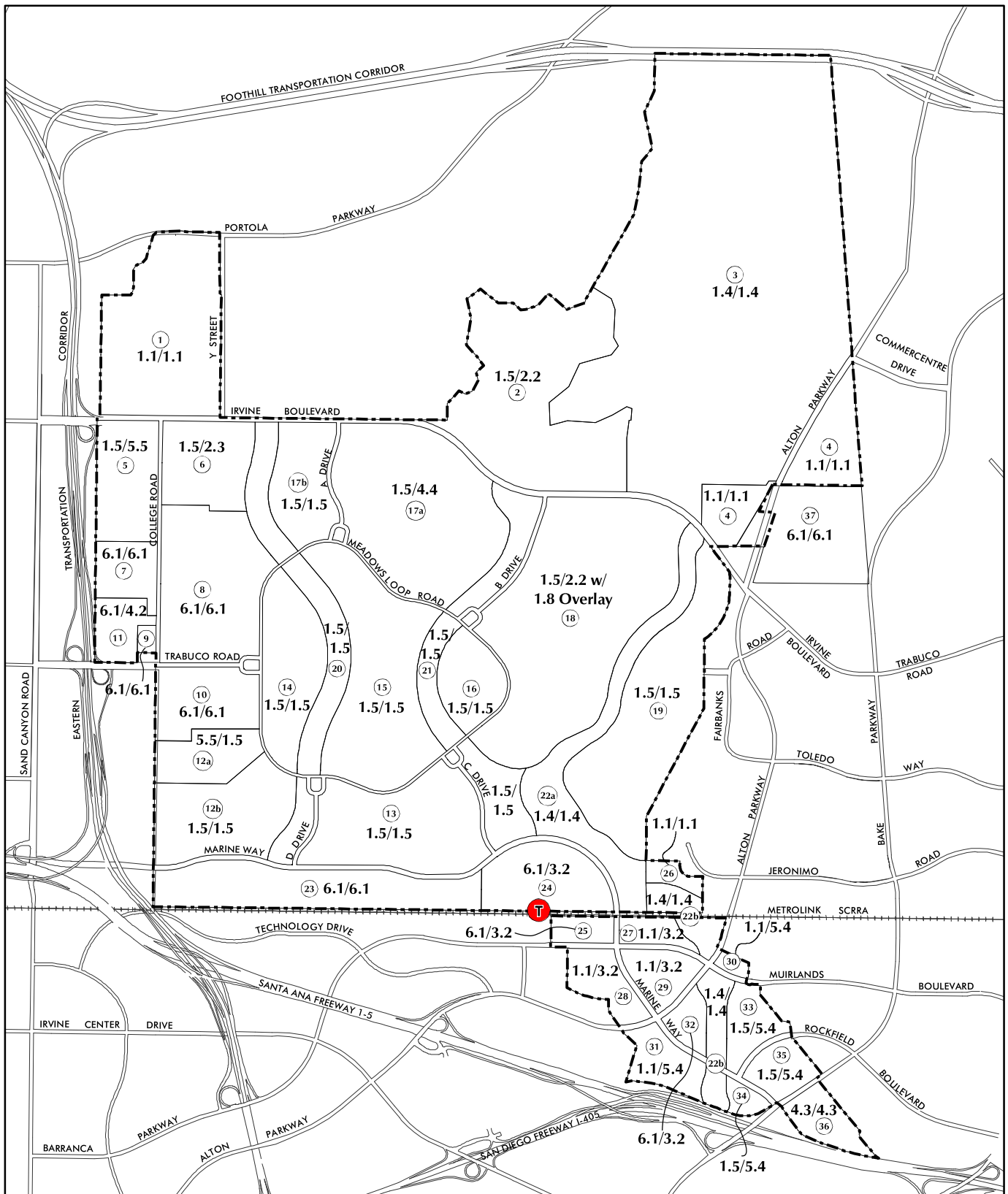
Ⓣ Irvine Transportation Center



0' 1,500'

Figure 3-3

Proposed General Plan Uses



--- Project Boundary

Zoning Designations [Base/Overlay]

1.1 Exclusive Agriculture

1.4 Preservation

1.5 Recreation

1.8 Golf Course Overlay
(0-6.5 du/ac)

2.2 Low Density Residential
(0-6.5 du/ac)

2.3 Medium Density Residential
(0-12.5 du/ac)

3.2 Transit Oriented Development

4.2 Community Commercial

4.3 Vehicle-Related Commercial

4.4 Commercial Recreation

5.4 General Industrial

5.5 Medical and Science

6.1 Institutional

(1) Planning Area Zones

(T) Irvine Transportation Center



0' 1,500'

Figure 3-4
Proposed Zoning
City of Irvine

Table 3-2
Orange County Great Park
General Plan Designation and Zoning

PAZ	General Plan Designation	General Plan Uses		Zoning District	
		Base	Overlay	Base	Overlay
1	OCGP (Orange County Great Park) ¹	OCGP Agriculture	OCGP Agriculture	1.1 Exclusive Agriculture	1.1 Exclusive Agriculture
2		OCGP Cemetery	OCGP Low Density Residential	1.5 Recreation	2.2 Low Density Residential (0-6.5 du/ac)
3		OCGP Habitat Preserve	OCGP Habitat Preserve	1.4 Preservation	1.4 Preservation
4		OCGP Agriculture	OCGP Agriculture	1.1 Exclusive Agriculture	1.1 Exclusive Agriculture
5		OCGP Open Space/Park	OCGP Research and Development	1.5 Recreation	5.5 Medical and Science
6		OCGP Sports Park	OCGP Medium Density Residential	1.5 Recreation	2.3 Medium Density Residential (0-12.5 du/ac)
7		OCGP Education	OCGP Education	6.1 Institutional	6.1 Institutional
8		OCGP Education	OCGP Education	6.1 Institutional	6.1 Institutional
9		OCGP Education	OCGP Education	6.1 Institutional	6.1 Institutional
10		OCGP Education	OCGP Education	6.1 Institutional	6.1 Institutional
11		OCGP Education	OCGP Retail	6.1 Institutional	4.2 Community Commercial
12a		OCGP Research and Development	OCGP Sports Park	5.5 Medical and Science	1.5 Recreation
12b		OCGP Sports Park	OCGP Sports Park	1.5 Recreation	1.5 Recreation
13		OCGP Open Space/Park	OCGP Exposition Center	1.5 Recreation	1.5 Recreation
14		OCGP Open Space/Park	OCGP Open Space/Park	1.5 Recreation	1.5 Recreation
15		OCGP Open Space/Park	OCGP Open Space/Park	1.5 Recreation	1.5 Recreation
16		OCGP Open Space/Park	OCGP Open Space/Park	1.5 Recreation	1.5 Recreation
17a		OCGP Exposition Center	OCGP Exposition Center	1.5 Recreation	4.4 Commercial Recreation
17b		OCGP Exposition Center	OCGP Cemetery	1.5 Recreation	1.5 Recreation <i>Modified regulations to allow cemetery use.</i>
18		OCGP Golf Course	OCGP Golf Course OCGP Residential Overlay	1.5 Recreation	2.2 Low Density Residential with 1.8 Golf Course Overlay (0-6.5 du/ac)
19		OCGP Golf Course	OCGP Golf Course	1.5 Recreation	1.5 Recreation
20		OCGP Drainage Corridor	OCGP Drainage Corridor	1.5 Recreation	1.5 Recreation

¹ The General Plan designation permits a base intensity of development with an overlay of additional intensity available through compliance with established criteria and in accord with Development Agreements entered into between the City and the future property owner.

Table 3-2
Orange County Great Park
General Plan Designation and Zoning

PAZ	General Plan Designation	General Plan Uses		Zoning District	
		Base	Overlay	Base	Overlay
20	OCGP (Orange County Great Park) ²	OCGP Drainage Corridor	OCGP Drainage Corridor	1.5 Recreation	1.5 Recreation
21		OCGP Drainage Corridor	OCGP Drainage Corridor	1.5 Recreation	1.5 Recreation
22a		OCGP Wildlife Corridor	OCGP Wildlife Corridor	1.4 Preservation	1.4 Preservation
22b		OCGP Wildlife Corridor	OCGP Wildlife Corridor	1.4 Preservation	1.4 Preservation
23		OCGP Institutional	OCGP Institutional	6.1 Institutional	6.1 Institutional
24		OCGP Transportation	OCGP Transit Oriented Development	6.1 Institutional	<i>New zoning district: 3.2 Transit Oriented Development</i>
25		OCGP Transportation	OCGP Transit Oriented Development	6.1 Institutional	<i>New zoning district: 3.2 Transit Oriented Development</i>
26		OCGP Agriculture	OCGP Agriculture	1.1 Exclusive Agriculture	1.1 Exclusive Agriculture
27		OCGP Agriculture	OCGP Transit Oriented Development	1.1 Exclusive Agriculture	<i>New zoning district: 3.2 Transit Oriented Development</i>
28		OCGP Agriculture	OCGP Transit Oriented Development	1.1 Exclusive Agriculture	<i>New zoning district: 3.2 Transit Oriented Development</i>
29		OCGP Agriculture	OCGP Transit Oriented Development	1.1 Exclusive Agriculture	<i>New zoning district: 3.2 Transit Oriented Development</i>
30		OCGP Agriculture	OCGP Research and Development	1.1 Exclusive Agriculture	5.4 General Industrial
31		OCGP Agriculture	OCGP Research and Development	1.1 Exclusive Agriculture	5.4 General Industrial
32		OCGP Transportation	OCGP Transit Oriented Development	6.1 Institutional	<i>New zoning district: 3.2 Transit Oriented Development</i>
33		OCGP Sports Park	OCGP Research and Development	1.5 Recreation	5.4 General Industrial
34		OCGP Sports Park	OCGP Research and Development	1.5 Recreation	5.4 General Industrial
35		OCGP Sports Park	OCGP Research and Development	1.5 Recreation	5.4 General Industrial
36		OCGP Auto	OCGP Auto	4.3 Vehicle-Related Commercial	4.3 Vehicle-Related Commercial
37	PF (Public Facilities)	Musick Jail/IRWD Parcel	Musick Jail/IRWD Parcel	6.1 Institutional	6.1 Institutional

² The General Plan designation permits a base intensity of development with an overlay of additional intensity available through compliance with established criteria and in accord with Development Agreements entered into between the City and the future property owner.

Table 3-3
Development Data for Base Plan 2025

PAZ and Use Description	Acres		Dwelling Units		Square Feet		Other Details	
	Quantity	Type	Quantity	Type	Quantity	Type	Quantity	Type
1 Open Space Agriculture	200	Agriculture						
Subtotal Area 1:	200							
2 Open Space Cemetery	270	Open Space / Park						
Subtotal Area 2:	270							
3 Open Space / Habitat Preserve	974	Habitat Preserve						
Subtotal Area 3:	974							
4 Agriculture	90	Agriculture						Portions may be used for low flow wildlife corrid. connection to Borrego Cyn Wash
Subtotal Area 4:	90							
5 Open Space Park	79	Open Space / Park						
Subtotal Area 5:	79							
6 Open Space Sports Park	80	Sports Park						
Subtotal Area 6:	80							
7 Education	38	College/University			185,083	College/University	1,102	Students
Subtotal Area 7:	38				185,083			
8 Education	162	College/University			789,035	College/University	4,697	Students
Subtotal Area 8:	162				789,035			
9 Education	5	College/University			24,352	College/University	145	Students
Subtotal Area 9:	5				24,352			
10 Education	15	Medium Density Residential	60	Multiple-Family Residential	125,800	College/University	736	Students
	55	College/University						
Subtotal Area 10:	70		60		125,800			
11 Education	33	College/University			160,730	College/University	957	Students
Subtotal Area 11:	33				160,730			
12a Research and Development	50	Research and Development			300,000	Research and Development		
Subtotal Area 12a:	50				300,000			
12b Open Space Sports Park	115	Sports Park			26,000	Sports Park		
Subtotal Area 12b:	115				26,000			
13 Open Space Park	156	Open Space / Park			468,000	Museum/Library Facilities		
Subtotal Area 13:	156				468,000			
14 Open Space Park	103	Open Space / Park						
Subtotal Area 14:	103							
15 Open Space Park	208	Open Space / Park						
Subtotal Area 15:	208							
16 Open Space Park	56	Open Space / Park						
Subtotal Area 16:	56							
17a Open Space Exposition Center	249	Open Space / Expo Center	165	Multiple-Family Residential	708,000	Exposition Center		
Subtotal Area 17a:	249		165		708,000			
17b Open Space Exposition Center	73	Open Space / Expo Center			255,500	Exposition Center		
Subtotal Area 17b:	73				255,500			
18 Open Space Golf Course	365	Golf Course					36	Golf Course Holes
Subtotal Area 18:	365							

Table 3-3
Development Data for Base Plan 2025

PAZ and Use Description	Acres		Dwelling Units		Square Feet		Other Details	
	Quantity	Type	Quantity	Type	Quantity	Type	Quantity	Type
19 Open Space Golf Course	211	Golf Course			25,000	Clubhouse	18	Golf Course Holes
Subtotal Area 19:	211				25,000			
20 Drainage Corridor	114	Drainage Corridor						
Subtotal Area 20:	114							
21 Drainage Corridor	115	Drainage Corridor						
Subtotal Area 21:	115							
22a Drainage / Wildlife Corridor Planning Area 51	118	Wildlife Corridor						
Subtotal Area 22a:	118							
22b Drainage / Wildlife Corridor Planning Area 30	61	Wildlife Corridor						
Subtotal Area 22b:	61							
23 Institutional	100	Institutional			300,000	Institutional	Includes Salvation Army (45,000 Bldg 360), St. Vincent De Paul (127,000 warehouse Bldg 319, 11,000 commercial kitchen Bldg 322), Orange County Community Housing Corporation (70,000 warehouse Bldg 360), Families Forward (10,000 admin Bldg 360)	
	35	OCTA Facility			122,500	OCTA Facility		
					263,000	McKinney Act Warehousing		
Subtotal Area 23:	135				685,500			
24 Transportation Facilities	81	Station-Related Public Uses					375	Parking Spaces In Structure
Subtotal Area 24:	81							
25 Transit	18	Station-Related Public Uses						
Subtotal Area 25:	18							
26 Open Space / Agriculture	13	Agriculture						
Subtotal Area 26:	13							
27 Open Space / Agriculture	19	Agriculture						
Subtotal Area 27:	19							
28 Open Space/ Agriculture	38	Agriculture						
Subtotal Area 28:	38							
29 Open Space / Agriculture	34	Agriculture						
Subtotal Area 29:	34							
30 Open Space / Agriculture	6	Agriculture						
Subtotal Area 30:	6							
31 Open Space / Agriculture	38	Agriculture						
Subtotal Area 31:	38							
32 Transit Oriented Development	10	Remote Airport Terminal			9,000	Remote Airport Terminal	675	Parking Spaces
	10	Remote Airport Maintenance			44,500	Remote Airport Maintenance		Parking and shuttle facility for LAX and Ontario
Subtotal Area 32:	20				53,500			
33 Open Space Sports Park	35	Sports Park						
Subtotal Area 33:	35							
34 Open Space Sports Park	11	Sports Park						
Subtotal Area 34:	11							

Table 3-3
Development Data for Base Plan 2025

PAZ and Use Description	Acres		Dwelling Units		Square Feet		Other Details	
	Quantity	Type	Quantity	Type	Quantity	Type	Quantity	Type
35 Research and Development	31	Research and Development			410,000	Research and Development		
Subtotal Area 35:	31				410,000			
36 Auto	34	Auto Sales, Parking and Storage			102,000	Auto Sales, Parking and Storage		
Subtotal Area 36:	34				102,000			
37 Musick Jail and IRWD Parcel	113	Musick Jail and IRWD Parcel						
Subtotal Area 37:	113							
Net Total:	4,621		3,625		6,585,594			
Roadways:	185		-		-			
Gross Total:	4,806		3,625		6,585,594			
Planning Area 51 (Proposed annexation, General Plan Amendment, pre-Zoning and Zoning)								
Net Total:	4,150		2,760		4,725,094			
Roadways:	145		-		-			
Gross Total:	4,295		2,760		4,725,094			
Planning Area 30 (Proposed General Plan Amendment and Zone Change)								
Net Total:	358		865		1,860,500			
Roadways:	40		-		-			
Gross Total:	398		865		1,860,500			
Planning Area 35 (Proposed annexation)								
Net Total:	113		-		-			
Roadways:	-		-		-			
Gross Total:	113		-		-			
Project area currently outside the City of Irvine								
Net Total:	4,247		2,760		4,725,094			
Roadways:	145		-		-			
Gross Total:	4,392		2,760		4,725,094			
Project area currently within the City of Irvine								
Net Total:	374		865		1,860,500			
Roadways:	40		-		-			
Gross Total:	414		865		1,860,500			

Table 3-4
Development Data for Overlay Plan 2025

PAZ and Use Description	Acres		Dwelling Units		Square Feet		Other Details	
	Quantity	Type	Quantity	Type	Quantity	Type	Quantity	Type
1 Open Space Agriculture	200	Agriculture						
Subtotal Area 1:	200							
2 Low Density Residential	270	Low Density Residential	850	Single-Family Residential				
Subtotal Area 2:	270		850					
3 Open Space / Habitat Preserve	974	Habitat Preserve						
Subtotal Area 3:	974							
4 Agriculture	90	Agriculture						Portions may be used for low flow wildlife corrid. connection to Borrego Cyn Wash
Subtotal Area 4:	90							
5 Research and Development	79	Research and Development			1,000,000	Research and Development		
Subtotal Area 5:	79				1,000,000			
6 Medium Density Residential	80	Medium Density Residential	800	Senior Housing				
Subtotal Area 6:	80		800					
7 Education	38	College/University			243,302	College/University (Sq. Footage expanded based on ratio (186 sf per student) and new student total)	1,306	Students (Students split between zones on a size-proportional basis)
Subtotal Area 7:	38				243,302			
8 Education	162	College/University			1,037,234	College/University	5,570	Students
Subtotal Area 8:	162				1,037,234			
9 Education	5	College/University			32,013	College/University	172	Students
Subtotal Area 9:	5				32,013			
10 Education	15	Medium Density Residential	60	Multiple-Family Residential	140,045	College/University	752	Students
Subtotal Area 10:	70	55 College/University	60		140,045			
11 Retail	33	Retail			225,000	Retail		
Subtotal Area 11:	33				225,000			
12a Open Space Sports Park	50	Sports Park						
Subtotal Area 12a:	50							
12b Open Space Sports Park	115	Sports Park			26,000	Sports Park		
Subtotal Area 12b:	115				26,000			
13 Open Space Exposition Center	156	Cultural/Institutional			468,000	Museum/Library Facilities		
Subtotal Area 13:	156				468,000			
14 Open Space Park	103	Open Space / Park						
Subtotal Area 14:	103							
15 Open Space Park	208	Open Space / Park						
Subtotal Area 15:	208							
16 Open Space Park	56	Open Space / Park						
Subtotal Area 16:	56							
17a Open Space Exposition Center	236	Fairgrounds/Commercial Rec 13 Elementary School	165	Multiple-Family Residential	708,000	Fairgrounds/Exposition Halls 40,000 Elementary School	Includes Equestrian Stables 650 Students	
Subtotal Area 17a:	249		165		748,000			
17b Open Space Cemetery	73	Cemetery			30,000	Mausoleum 20,000 Mortuary		
Subtotal Area 17b:	73				50,000			
18 Open Space Golf Course w/ Residential Overlay	315	Golf Course 50 Low Density Residential	250	Single-Family Residential	25,000	Clubhouse and Driving Range	27	Golf Course Holes
Subtotal Area 18:	365		250		25,000			

Table 3-4
Development Data for Overlay Plan 2025

PAZ and Use Description	Acres		Dwelling Units		Square Feet		Other Details	
	Quantity	Type	Quantity	Type	Quantity	Type	Quantity	Type
19 Open Space Golf Course	211	Golf Course					18 Golf Course Holes	
Subtotal Area 19:	211							
20 Drainage Corridor	114	Drainage Corridor						
Subtotal Area 20:	114							
21 Drainage Corridor	115	Drainage Corridor						
Subtotal Area 21:	115							
22a Drainage / Wildlife Corridor Planning Area 51	118	Wildlife Corridor						
Subtotal Area 22a:	118							
22b Drainage / Wildlife Corridor Planning Area 30	61	Wildlife Corridor						
Subtotal Area 22b:	61							
23 Institutional	100 Institutional 35 OCTA Facility				300,000 Institutional 122,500 OCTA Facility 263,000 McKinney Act Warehousing		Includes Salvation Army (45,000 Bldg 360), St. Vincent De Paul (127,000 warehouse Bldg 319, 11,000 commercial kitchen Bldg 322), Orange County Community Housing Corporation (70,000 warehouse Bldg 360), Families Forward (10,000 admin Bldg 360)	
Subtotal Area 23:	135				685,500			
24 Transit Oriented Development	8 Station-Related Public Uses 6 TOD Open Space Amenities 6 Retail 61 Medium-High Density Residential		635 Multiple-Family Residential		45,000 Retail		375 Parking Spaces In Structure Schools are permitted uses	
Subtotal Area 24:	81		635		45,000			
25 Transit Oriented Development	7 Station-Related Public Uses 1 TOD Open Space Amenities 5 Office 5 Medium-High Density Residential		50 Multiple-Family Residential		75,000 Office		Schools are permitted uses	
Subtotal Area 25:	18		50		75,000			
26 Open Space / Agriculture	13 Agriculture							
Subtotal Area 26:	13							
27 Transit Oriented Development	2 TOD Open Space Amenities 17 Medium-High Density Residential		170 Multiple-Family Residential				Schools are permitted uses	
Subtotal Area 27:	19		170					
28 Transit Oriented Development	3 TOD Open Space Amenities 2 Retail 33 Medium-High Density Residential		345 Multiple-Family Residential		15,000 Retail		Schools are permitted uses	
Subtotal Area 28:	38		345		15,000			
29 Transit Oriented Development	3 TOD Open Space Amenities 2 Retail 29 Medium-High Density Residential		300 Multiple-Family Residential		15,000 Retail		Schools are permitted uses	
Subtotal Area 29:	34		300		15,000			
30 Research and Development	6 Research and Development				80,000 Research and Development			
Subtotal Area 30:	6				80,000			
31 Research and Development	38 Research and Development				500,000 Research and Development			
Subtotal Area 31:	38				500,000			
32 Transit Oriented Development	10 Remote Airport Terminal 10 Remote Airport Maintenance				9,000 Remote Airport Terminal 44,500 Remote Airport Maintenance		675 Parking Spaces Parking and shuttle facility for LAX and Ontario	
Subtotal Area 32:	20				53,500			
33 Research and Development	35 Research and Development				460,000 Research and Development			
Subtotal Area 33:	35				460,000			
34 Research and Development	11 Research and Development				150,000 Research and Development			
Subtotal Area 34:	11				150,000			

Table 3-4
Development Data for Overlay Plan 2025

PAZ and Use Description	Acres		Dwelling Units		Square Feet		Other Details	
	Quantity	Type	Quantity	Type	Quantity	Type	Quantity	Type
35 Research and Development	31	Research and Development			410,000	Research and Development		
Subtotal Area 35:	31				410,000			
36 Auto	34	Auto Sales, Parking and Storage			102,000	Auto Sales, Parking and Storage		
Subtotal Area 36:	34				102,000			
37 Musick Jail and IRWD Parcel	113	Musick Jail and IRWD Parcel						
Subtotal Area 37:	113							
Net Total:	4,621		3,625		6,585,594			
Roadways:	185		-		-			
Gross Total:	4,806		3,625		6,585,594			
Planning Area 51 (Proposed annexation, General Plan Amendment, pre-Zoning and Zoning)								
Net Total:	4,150		2,760		4,725,094			
Roadways:	145		-		-			
Gross Total:	4,295		2,760		4,725,094			
Planning Area 30 (Proposed General Plan Amendment and Zone Change)								
Net Total:	358		865		1,860,500			
Roadways:	40		-		-			
Gross Total:	398		865		1,860,500			
Planning Area 35 (Proposed annexation)								
Net Total:	113		-		-			
Roadways:	-		-		-			
Gross Total:	113		-		-			
Project area currently outside the City of Irvine								
Net Total:	4,247		2,760		4,725,094			
Roadways:	145		-		-			
Gross Total:	4,392		2,760		4,725,094			
Project area currently within the City of Irvine								
Net Total:	374		865		1,860,500			
Roadways:	40		-		-			
Gross Total:	414		865		1,860,500			

In addition, interim activities may be conducted by the City or designee on properties to be conveyed to the City after the purchase of the property by private parties and prior to build-out of the Plan. Interim activities may include agricultural and nursery operation, and open storage. Extensive materials reclamation activities related to the removal of the runways and the recycling and distribution of concrete, asphalt, and other materials resulting from runway removal and recycling and/or removal of other facilities and buildings will also occur.

Other interim activities involving short-term use of the land or on-site buildings may also occur periodically. By the year 2007 a portion of the overall development will occur. The expected reuse of facilities and land and the new development projected is shown in Table 3-5. Some of the activities shown in the table currently exist on the site. Interim activities must be consistent with the interim uses allowed in the City's Zoning Ordinance.

Ownership and management of the land and buildings will ultimately transfer to the party or agency to whom title transfers as a result of the sale of the land. Demolition of buildings will occur if they interfere with the orderly development of the property or become obsolete or uneconomic to repair for reuse.

Certain lands within the former MCAS El Toro property are being retained in federal ownership. At present, these lands lie primarily north of Irvine Boulevard and are indicated as "Lands being retained in federal ownership" on Figure 3-1 Proposed Actions. Subsequent decisions by the Department of Navy may result in additional areas that will remain in federal ownership. Although these lands are within the project area and are considered a part of the project, land use control will remain with the federal government as the pre-empting agency. Any action proposed by a federal agency would require review under NEPA, as applicable.

Annexation Background and Rationale

Annexation is the procedure used by a city to extend its corporate boundaries. The Local Agency Formation Commission Orange County (LAFCO) is empowered to evaluate, consider, and approve proposals for city, county, and special district incorporations, formations and boundary changes. LAFCO acts within a set of state-mandated parameters that encourage planned, well-ordered, efficient urban development patterns, encourage the preservation of agricultural and open space lands, and discourage urban sprawl. A project area must be within a city's Sphere of Influence before annexation can be considered by LAFCO. As defined by State law (Government Code Section 56076), a Sphere of Influence is "a plan for the probable physical boundaries and service area of a local government agency." Once LAFCO approves an annexation, only protest from the affected landowners(s) or registered voters can terminate proceedings.

Spheres of Influence are adopted for each city by LAFCO. The Orange County LAFCO policy on Spheres of Influence states that spheres are a planning tool to guide LAFCO decisions and that the sphere boundaries are meant to facilitate the logical and economical extensions of government facilities and services: "Territory placed within a city's sphere indicates that the city is the most logical provider of urban services for development." (Sphere Policy Guideline #5).

Table 3-5
2007 Base Plan and Overlay Plan
Land Use Summary

Great Park Land Use Description	Units	Base Plan Quantity	Overlay Plan Quantity
Auto Center	TSF	50	50
Education	Students	3,000	3,000
Elementary School	Students	-	650
Retail	TSF	-	-
University Residential	DU	60	60
Interim Housing	DU	350	-
Senior Housing	DU	-	600
Transitional Housing	DU	-	-
Research & Development (N&S.)	TSF	300	1,250
Institutional Warehouse	TSF	263	263
OCTA Facility/Fly-Away Facility	TSF	54	53.5
Transportation Center/Fly-Away Center	Parking Spaces	675	675
Cultural/Institutional/Exposition	TSF	500	500
Agriculture	Acres	1,218	961
Golf Course	Acres	576	526
Habitat, Wildlife Corridor & Nature Walk	Acres	1,382	1,382
OS Park	Acres	-	-
Cemetery	Acres	-	73
Chapel/Mortuary1	TSF	-	50
Sports Park	Acres	192	115
TOD Residential	DU	-	750
TOD Retail	TSF	-	30
TOD Office	TSF	-	-
Residential/Golf Village	DU	-	850

Units:

TSF = Thousand Square Feet

DU = Dwelling Units

Source: Urban Crossroads

The City of Irvine's application for annexation to LAFCO states the City has determined that to ensure the most efficient and economical provision of public services, the City should be designated as the area's legal service provider through annexation. Annexation will provide the City with means to effectively plan for necessary public services. It will ensure coordination between public service agencies and encourage consistency in the development of service delivery and development standards. Annexation will also enable planning for infrastructure financing to ensure that services and facilities will be available at the time of need.

The City of Irvine is considered the logical local government service provider for the subject property because the unincorporated area is within the City's Sphere of Influence and a

portion of the former MCAS El Toro is already in the City. The proposed annexation area's northern perimeter is bounded by the dedicated Natural Communities Conservation Plan (NCCP) habitat preserve, which clearly defines the limits of potential urban growth. Reuse of the former MCAS El Toro will directly impact the City of Irvine by placing demands on existing City infrastructure and requiring extension of new facilities and services. Employees, residents, visitors, etc. will use City streets for access, be assisted by City law enforcement and shop and play in surrounding City areas.

The Orange County Sphere Guidelines include a specific policy on unincorporated county islands. Sphere Policy Guideline #4 states: "City spheres that include unincorporated islands of territory should be encouraged to annex the islands to the city. The Commission acknowledges that unincorporated islands are generally costly for county government to serve and often have service impacts on the surrounding city." Government Code Section 56375(a)(3) also discourages the creation of unincorporated County islands. As stated under Section 56375(a)(3), "As a condition to the annexation of an area that is surrounded, or substantially surrounded, by the city to which the annexation is proposed, the commission may require, where consistent with the purposes of this division, that the annexation include the entire island of surrounded, or substantially surrounded, territory." For this reason the annexation proposal includes the Musick Jail Facility and the IRWD parcel.

General Plan Element Amendments

The impacts of the amendment to the General Plan are those associated with the maximum intensity of development permitted by the Overlay provisions contained within the OCGP designation. A description of proposed amendments to the City of Irvine General Plan is provided below by General Plan element. In all the elements all existing references to Millennium Plan would be removed. Factual and technical information would be modified to reflect the General Plan Amendment.

Existing General Plan Policy is:

A. Land Use - Promote land use patterns which maintain safe residential neighborhoods, bolster economic prosperity, preserve open space, and enhance the overall quality of life in Irvine.

The objectives and implementing policies contained in the Land Use Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park.

The General Plan Amendment will make the following changes in the Land Use Element:

- The General Plan Land Use map (General Plan Figure A-3) will be amended to reflect the land uses contemplated in the Orange County Great Park plan using a designation of "OCGP." This designation is not presently contained within the General Plan.
- Figure A-4, Scenic Highways, will be amended to remove Millennium Parkway.
- Maximum land use intensity and density standards by Planning Area will be revised in Tables A-1 and A-2 as indicated in Tables 3-3 and 3-4 of this Final Program EIR.

B. Circulation - The majority of the objectives and implementing policies contained in the Circulation Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park. The project includes modification of Policy B-1(c) regarding Level of Service, as well as, roadway characteristics for roadways within the project area. These characteristics are enumerated in Table 3-6. Roadway classification and operation characteristics have been determined based on the volume of traffic and traffic characteristics (e.g., local versus through traffic).

The project will make the following changes in the Circulation Element:

- The General Plan Amendment will modify Policy B-1 (c) to add the following sentence:

In conjunction with individual subdivision map level traffic studies for development proposed in Planning Areas 30 and 51, a LOS "E" would be considered acceptable for application to intersections impacted in Planning Areas 13, 30, 31, 32, 34, 35, and 39.

- Figure B-1 "Master Plan of Arterial Highways" and Figure B-2 "Operational Characteristics" will be amended as illustrated in Figure 3-5 and Figure 3-6 to reflect the alignment of roadways within the Orange County Great Park as follows:

Major Highways:

- (a) Marine Way is aligned to join the Bake Parkway north bound exit ramp from I-5 and terminate at Sand Canyon at I-5.
- (b) Trabuco Road terminates at proposed Meadows Loop Road.

Primary Highway:

- (a) Realign Rockfield Boulevard to terminate at Marine Way.

Secondary Highways:

- (a) On-site circulation includes a new commuter highway/collector (Y Street) to serve the development between Irvine Boulevard and Portola Parkway.
- (b) Research Parkway is renamed College Road and modified to extend from Irvine Boulevard to Marine Way.

Table 3-6
Project Roadway Characteristics

Roadway	Limits	Facility Classification	Operational Classification
Irvine Boulevard	Eastern Project Boundary to Western Project Boundary	Major Highway	Thruway
Alton Parkway	Western Project Boundary to Barranca Parkway / Muirlands Boulevard	Major Highway	Parkway
Alton Parkway	Barranca Parkway / Muirlands Boulevard to Eastern Project Boundary	Major Highway	Thruway
Alton Parkway	Southern Project Boundary to Eastern Project Boundary	Major Highway	Thruway
Bake Parkway	Southern Project Boundary to Western Project Boundary	Major Highway	Parkway
Barranca Parkway	Western Project Boundary to Alton Parkway	Primary Highway	Parkway
Muirlands Boulevard	Alton Parkway to Eastern Project Boundary	Primary Highway	Parkway
Marine Way	Eastern Project Boundary to Western Project Boundary	Primary Highway	Thruway
"Y" Street	Portola Parkway to Irvine Boulevard	Primary Highway	Parkway
Trabuco Road	Eastern Transportation Corridor (SR-133) to College Road	Primary Highway	Parkway
Trabuco Road	College Road to Meadows Loop Road	Local Street	Local Street
Rockfield Boulevard	Western Project Boundary to Marine Way	Primary Highway	Parkway
College Road	Irvine Boulevard to Trabuco Road	Secondary Highway	Parkway
College Road	Trabuco Road to Marine Way	Commuter Highway	Community Collector
Meadows Loop Road	Entire Length	Local Street	Local Street
"A" Drive	Irvine Boulevard to Exposition Center Access	Primary Highway	Community Collector
"A" Drive	Exposition Center Access to Meadows Loop Road	Local Street	Local Street
"B" Drive	Irvine Boulevard to Meadows Loop Road	Local Street	Local Street
"C" Drive	Marine Way to Meadows Loop Road	Local Street	Local Street
"D" Drive	Marine Way to Meadows Loop Road	Local Street	Local Street

Source: Urban Crossroads 2002



- | | | |
|--------------------------------|---------------------------|--------------------------------|
| — City of Irvine Boundary | == Major Highway (6 Lane) | ① Planning Area Zones |
| — Sphere of Influence Boundary | — Primary Highway | ⓧ Irvine Transportation Center |
| ● Interchange | — Secondary Highway | |
| == Freeway | == Commuter Highway | |
| ... Transportation Corridor | — Local Street | |
| Major Highway (8 Lane) | | |

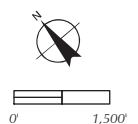
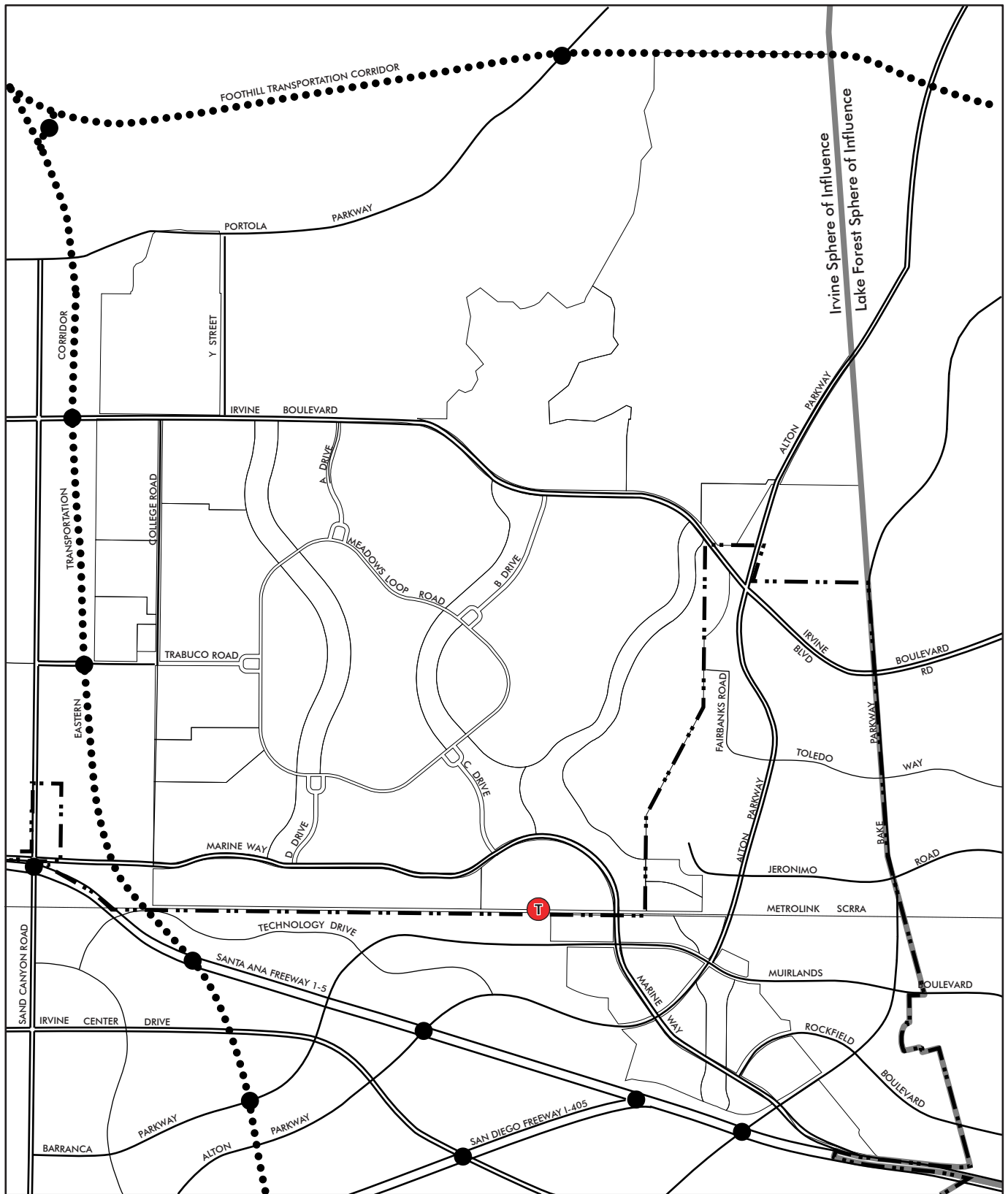


Figure 3-5
Proposed Master Plan of Arterial
Highways Amendments



- City of Irvine Boundary
- Sphere of Influence Boundary
- Interchange
- Freeway
- ... Transportation Corridor

- Thruway
- Parkway
- Collector
- Local Street

- ① Planning Area Zones
- Ⓣ Irvine Transportation Center

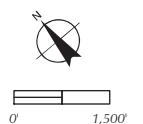


Figure 3-6
Proposed Irvine General Plan
Operational Characteristics Amendments

- Figure B-3 “Public Transit” will be amended to reflect the alignment of roadways within the Orange County Great Park. The potential for Inter-City and Local Feeder Transit Corridors on Trabuco Road and Marine Way will continue to be shown.
- Figure B-4 “Trails Network” will be amended to reflect the realigned roadways within the Orange County Great Park. Additional on-site Class I trails will link the recreational, educational, and cultural uses within the Orange County Great Park. In addition, the roadway network amendments to Figure B-1 Master Plan of Arterial Highways will result in an expansion of the Class II (On-Street) Bike Trail system through Planning Areas 30 and 51. Figure 3-7 illustrates the proposed Irvine General Plan Trails Network Alignments.

The Riding and Hiking Trail will be realigned parallel Irvine Boulevard until it reaches the Open Space/Habitat Preserve. At this point, the Riding and Hiking Trail will then extend north toward SR 241 and the Agua Chinon Reservoir. The Riding and Hiking Trail along Portola Parkway east of Jeffrey Road will be eliminated.

C. Housing - The objectives and implementing policies contained in the Housing Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park. Up to 3,625 new units may be added to the housing stock in the City with this amendment which will create and improved jobs-housing balance when compared to the existing General Plan.

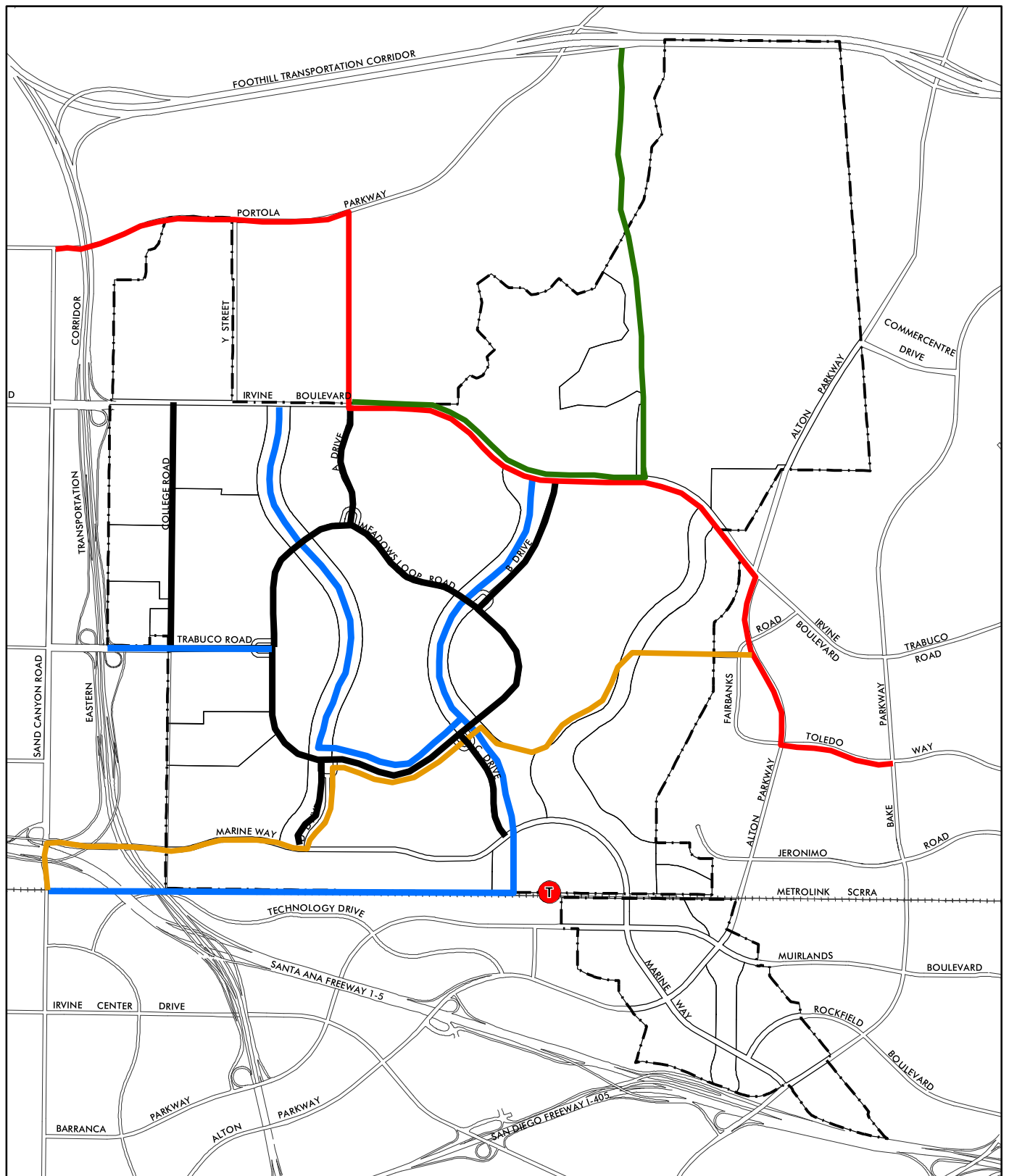
D. Seismic Element - The objectives and implementing policies contained in the Seismic Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park.

E. Cultural Resources - The objectives and implementing policies contained in the Cultural Resources Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park. Whether the amount of land available for development of cultural facilities will be increased by this amendment is not known at this time—substantial land area is designated for cultural facilities in the present General Plan and substantial land area is designated in the Orange County Great Park Plan.

F. Noise - The objectives and implementing policies contained in the Noise Element of the General Plan are unchanged by this amendment.

G. Public Facilities and Services - The objectives and implementing policies contained in the Public Facilities and Services Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park. Public facilities and service responsibilities will expand due to the land use changes associated with this amendment.

H. Integrated Waste Management - The objectives and implementing policies contained in the Integrated Waste Management Land Use Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park.



- Orange County Great Park Boundary
- Blue line Class I (off-street) Trails - Add
- Black line Class II (on-street) Trails - Add (all new OCGP streets)
- Green line Riding and Hiking Trails - Add

- Orange line Class I (off-street) Trails - Delete
- Red line Riding and Hiking Trails - Delete
- Red 'T' symbol Irvine Transportation Center

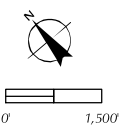


Figure 3-7
Proposed Irvine General Plan
Trails Network Amendments

I. Energy - The objectives and implementing policies contained in the Energy Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park.

J. Safety - The objectives and implementing policies contained in the Safety Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park.

K. Parks and Recreation - The objectives and implementing policies contained in the Parks and Recreation Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park.

The General Plan Amendment will make the following changes in the Parks and Recreation Element:

- Figure K-1 “Recreational Facilities” will be amended to add public golf courses, regional parks, and public and private exposition centers shown within the Orange County Great Park (Figure 3-8).

L. Conservation and Open Space - The objectives and implementing policies contained in the Conservation and Open Space Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park. Objective L-10 Agriculture is specifically implemented by the project. Agriculture uses are part of both the Base Plan and the Overlay Plan (see Section 5.8 Agricultural Resources for more detailed discussion related to this issue).

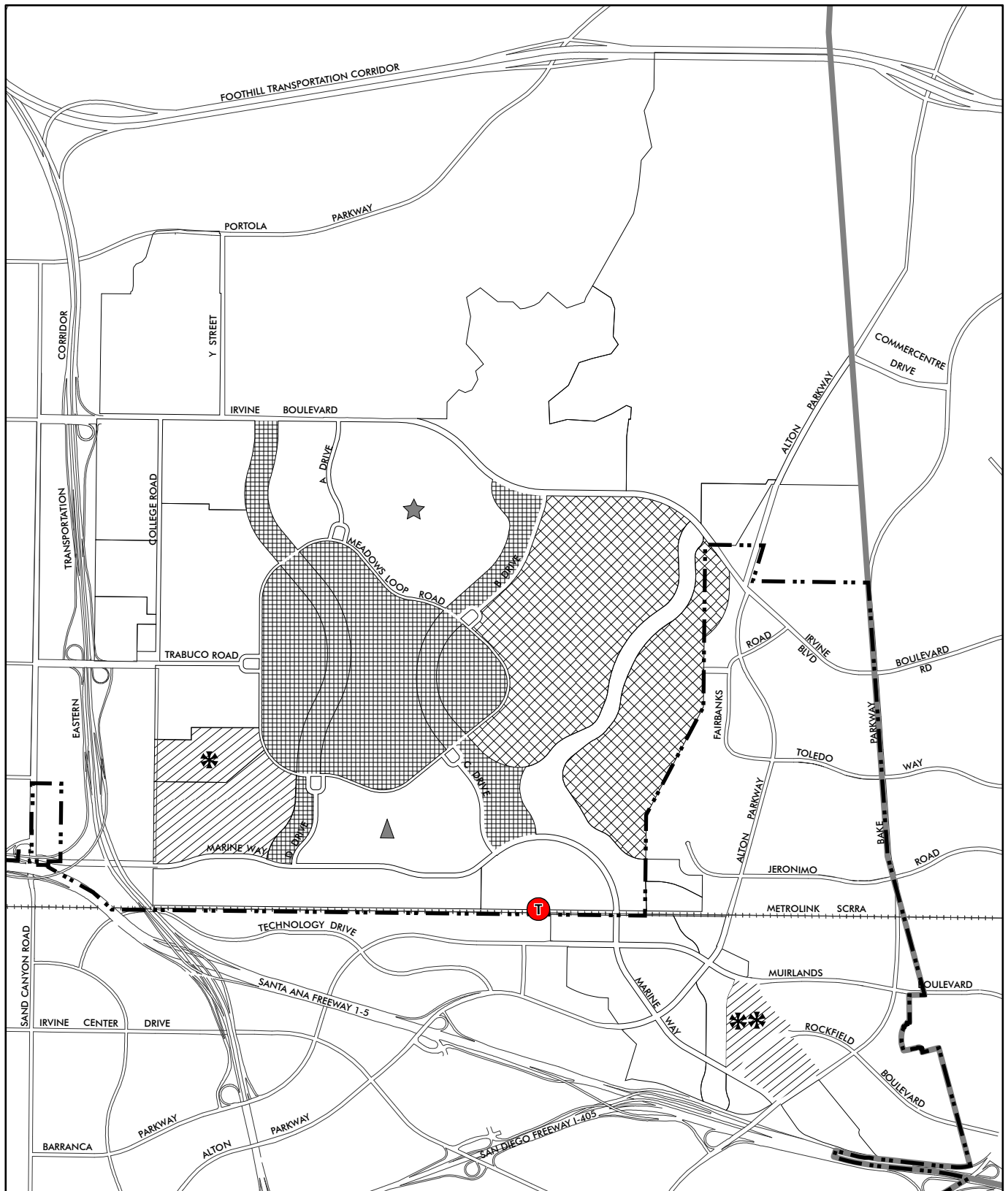
The General Plan Amendment will make the following changes in the Conservation and Open Space Element:

- Figure L-2 “Conservation and Open Space” will be amended to add Preservation, Recreation, and Agriculture areas, consistent with Orange County Great Park uses. (Figure 3-9).

M. Growth Management - The objectives and implementing policies contained in the Growth Management Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park.

The General Plan Amendment will contribute to the following actions in support of the Growth Management Element:

- The General Plan amendment will modify General Plan Figures B-1 “Master Plan of Arterial Highways” and B-2 “Operational Characteristics” in the City of Irvine Circulation Element. The County of Orange Master Plan of Arterial Highways currently reflects a military base at MCAS El Toro. The Circulation Element changes will lead to a cooperative study to be coordinated with the Orange County Transportation Authority (OCTA) and other inter-jurisdictional planning forums following annexation of the property to reconcile the circulation system differences between the County General Plan and the City General Plan.



Source: Fuscoe Engineering, City of Irvine, 2002.

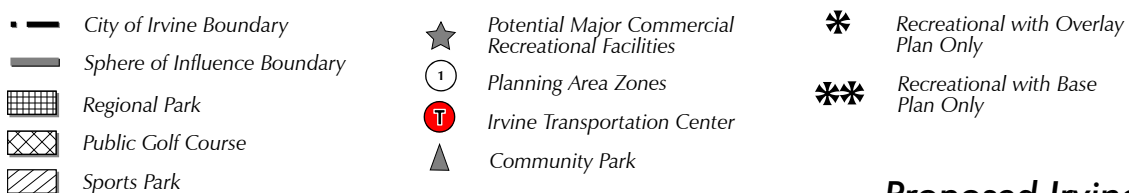
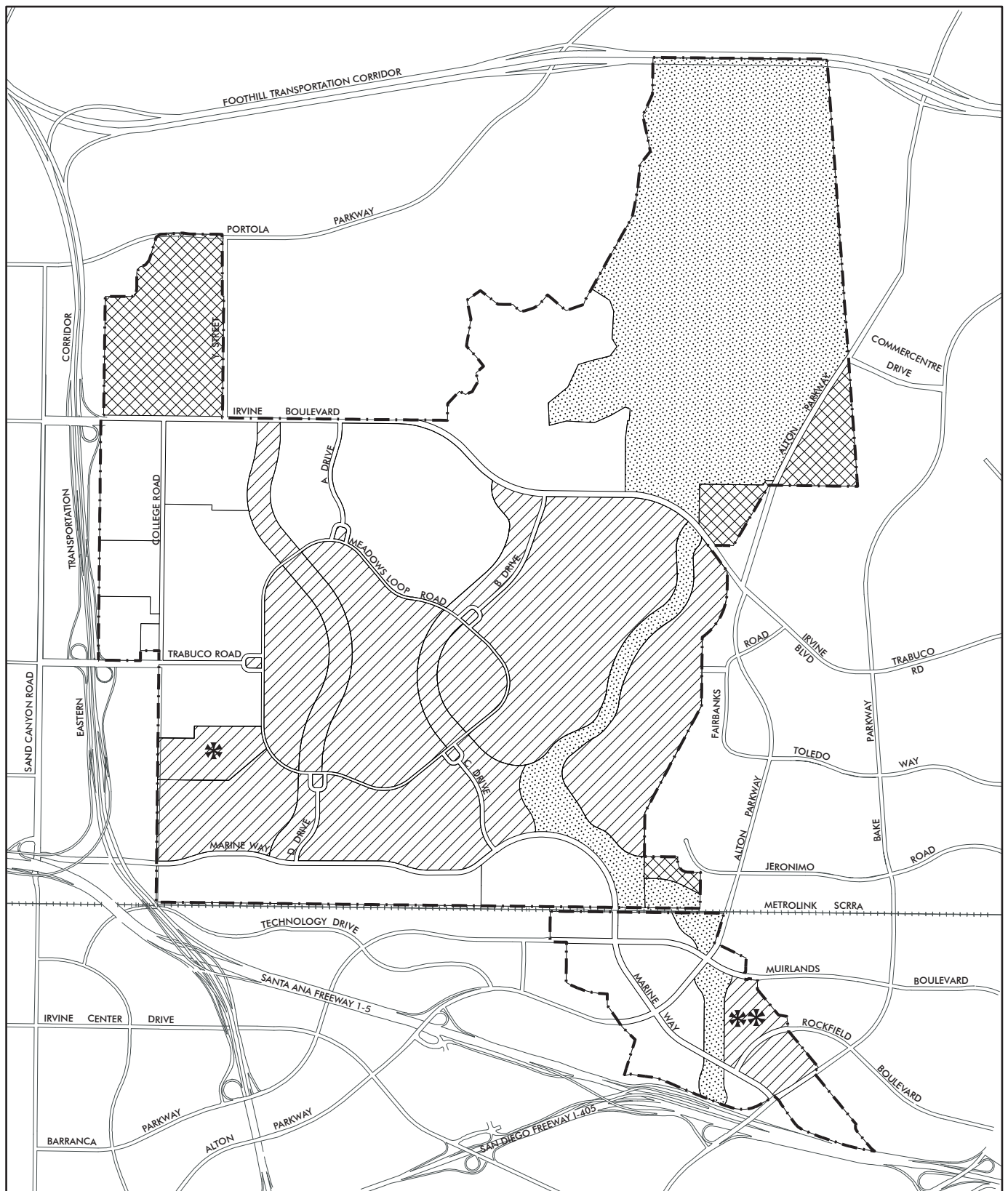







Figure 3-8
Proposed Irvine General Plan
Recreational Facilities Amendment



Source: Fuscoe Engineering, City of Irvine, 2002.

- Orange County Great Park Boundary
-  Recreational
-  Preservation
-  Agriculture
-  Recreational with Overlay Plan Only
-  Recreational with Base Plan Only

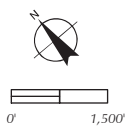


Figure 3-9
Proposed Irvine General Plan
Conservation and Open Space Amendment

- Objective M-6 “Balanced Growth” requires the City to consider the impact of any General Plan Amendment on the jobs/housing balance. Adoption of the project will create an improved jobs/housing balance for the project area over the job housing balance in the current general plan.

Implementation

The City of Irvine’s objective is to assure that the project is developed in an orderly fashion. The DON announced that the property will be disposed through a public auction and that the property will be sold in as many as four parcels. In response to the DON’s approach to sell the property, the City will allow the buyer(s) of the property to participate in a City (or its designee) coordinated approach to project wide permitting issues and construction of public infrastructure. This process will allow for a single point of responsibility to coordinate future project wide issues.

Development Agreement

The proposed project includes the approval of a Development Agreement. The Draft Development Agreement is provided in Appendix D of this Final Program EIR. The Development Agreement provides the link between the Base Plan and Overlay Plan. The Development Agreement will not allow any additional intensity than that identified for the proposed Overlay Plan.

The Development Agreement is strictly an agreement between the City and applicable property owner/developer that authorizes and vests development rights in accordance with the Overlay Plan in consideration for the property owners’ conveyance to the City of the Great Park, Sports Park, Drainage Corridor, Wildlife Corridor and other parcels, and pays to the City and participates in financing for the construction and maintenance of infrastructure and public improvements within the conveyed property. The proposed Development Agreement does not grant or approve any land use entitlements that are not otherwise allowed through the proposed General Plan amendment and zone change. Unless otherwise provided in the Development Agreement, the rules, regulations, and official policies governing permitted uses, density, design, improvements, and construction are those in effect when the agreement is executed. The environmental impacts of those proposed entitlement actions are addressed throughout this Final Program EIR.

Special Project Features

Wildlife Corridor

Presently there is no wildlife corridor within the project area. However, a major feature of the proposed project is the inclusion of a wildlife corridor land use which would allow for the creation of a wildlife corridor connecting the Lomas Ridge and the San Joaquin Hills. The proposed wildlife corridor alignment is depicted in Figure 3-3 (General Plan land use “Wildlife Corridor” – Subareas 22a and 22b). The wildlife corridor provides connection to the 995-acre habitat preserve, as well as the Limestone-Whiting Wilderness Park. To the

south, the corridor will connect to the Laguna Coast Wilderness Park through existing and future major open space linkages.

Drainage Corridors

The proposed project includes a land use category for the creation of drainage corridors through the project site (see Figure 3-3). The proposed drainage plan for the project is based on an earthen open channel and landscaped drainage corridor (corridor) method. A typical “corridor” consists of a trapezoidal channel cross-section that is 4 feet to 6 feet deep and up to 500 feet wide with side slopes climbing at a rate of five to ten percent depending on the location. A “strip” approximately 100 feet in width containing the streamline and the lowest portion of the side slopes is proposed to be protected by natural riparian plant types. Adjacent to the riparian strip, the corridor is proposed to be planted to the edges with a conventional landscaping palette. These drainage corridors offer an opportunity to control surface water flow, improve surface water quality, and create wetland/riparian habitats where none currently exist in the project area.

Runway Removal

Existing runways, parking aprons, and associated aviation facilities are located in a substantial portion of the former MCAS El Toro planned for urban use. In order to use the former MCAS El Toro for the purposes proposed by the Orange County Great Park, the runways must be removed. This requires the runways to be broken up into pieces suitable to fit into a crushing machine and crushed to a size for use as aggregate base for roadways and other potential uses both on-site and off-site. The runways can be removed in a sequential manner with stockpiling of material onsite as required to permit maximum economy of scale in the operation. The crushing and recycling operation will occur on the property in areas that later will become park and open space. The City will be responsible for managing the removal of runway materials within the portions of the property to be conveyed to the City. Those portions of the property in private ownership may participate in the City’s crush and recycle program for the runway removal.

Development Schedule

Total development of the project is expected to occur by 2025. Development sequencing will be linked to the availability of infrastructure, the completion of hazardous materials cleanup on MCAS El Toro, and the removal of the runways.

Statement of Objectives

The City has a substantial interest in the conversion of the former MCAS El Toro site from military use to civilian use since 440 acres are within the City’s boundaries and the balance of the site is within the City’s Sphere of Influence. This project is a part of the action by the City to initiate annexation proceedings and General Plan amendments and Zone Changes implementing the non-aviation uses for the former MCAS El Toro.

This statement of objectives serves as a benchmark to ascertain the environmental impacts and other purposes of a proposed project and associated alternatives. These objectives will

be used to evaluate the significance of the environmental impacts of the proposed project with the impacts of other alternatives for the former MCAS El Toro discussed in this document.

The City of Irvine's objectives are as follows:

1. Annex the former MCAS El Toro site and adjacent lands within the City's Sphere of Influence.
2. Convert the former MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
3. Amend the Irvine General Plan and Zoning Ordinance to implement proposed Orange County Great Park land use designations.
4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.
5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.
6. Respond positively and effectively to the DON's decision to sell the property to private interests by allowing private development of some land while ensuring the implementation of park and open space amenities.

Discretionary Actions

City of Irvine

The discretionary actions to be taken by the City of Irvine at (or as part of) the completion of the Final Program EIR may include, but are not limited to the following:

- CEQA related actions and approvals;
- Annexation related approvals;
- General Plan amendments (including amendments made to conform to actions by other agencies related to the project);
- Approval of Development Agreements and Covenants, Conditions and Restrictions (CC&Rs) governing the property;
- Ordinance actions, including zone changes and zoning code amendment;
- Actions to approve interim use activities;
- Approval of master plan for development;
- Actions related to real and personal property acquisition, leases, management and other approvals;
- Regulatory or other actions implementing mitigation measures or actions;
- Approval of master plans and subdivisions for development; and
- Approval of community facilities districts or other assessment districts.

Actions and Approvals of other Agencies

State and local agencies in addition to the City of Irvine may use the EIR in connection with any discretionary actions required to implement or otherwise assure development of the Great Park Plan including, but not limited to actions of the following types. Federal agencies may also use the document as a basis for providing environmental review and clearance in accord with the National Environmental Policy Act.

The agencies which may use this Program EIR and types of actions that these agencies may take in connection with the EIR include, but are not limited to the following:

- Local Agency Formation Commission Orange County (LAFCO) – Approval of annexation
- The United States Department of Defense/Department of the Navy (DOD/DON) and the General Services Administration –Sale and conveyance of property
- Airport Land Use Commission (ALUC) for Orange County – Amendment of the Airport Environs Land Use Plan (AELUP), dated 1995
- County of Orange – Revision of the County's General Plan
- Southern California Association of Governments (SCAG) – Revisions to regional models related to growth, development and airport plans.
- Transportation Corridor Agency (TCA)
- South Coast Air Quality Management District (SCAQMD)
- Regional Water Quality Control Board (RWQCB) – National Pollutant Discharge Elimination System (NPDES) Permit
- Army Corps of Engineers (Corps) – Section 404 (Dredge and Fill) Permit
- California Department of Transportation (Caltrans)
- California Department of Fish and Game – Approvals related to wildlife corridor and habitat areas
- Federal Department of the Interior (DOI) Fish and Wildlife Agency
- Southern California Regional Rail Authority (SCRRA)
- Orange County Transportation Authority (OCTA) – Revisions to the County Master Plan of Arterial Highways (MPAH)
- Irvine Unified School District
- Saddleback Unified School District
- California Public Utilities Commission – Highway Rail Crossings
- California Department of Toxic Substances Control (DTSC) – Approval of acquisition and/or development of property for public schools based on hazardous materials evaluation.

4.0 Environmental Setting

Physical Context

The proposed project area (which consists of City of Irvine Planning Areas (PA) 51, 30, and a portion of 35) is located in the central portion of Orange County, approximately 45 miles southeast of Los Angeles. Figure 4-1 depicts the location of the project area as shown on the El Toro and Tustin USGS quadrangles. Figure 1-4 (see Section 1.0 Introduction) provides an aerial photograph of the project area and surrounding land uses. The project area is generally bounded by the cities of Irvine and Lake Forest on the south and east, and unincorporated area in the County of Orange on the north. Other nearby local jurisdictions include the cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo, and Tustin.

The project area is located north of the Santa Ana (I-5) Freeway, east of the Eastern Transportation Corridor (SR-133), and south of the Foothill Transportation Corridor (SR-241). Major roadways bordering the project area include Barranca Parkway to the south, Sand Canyon Avenue to the west, Portola Parkway and Irvine Boulevard to the north, and Alton Parkway to the east.

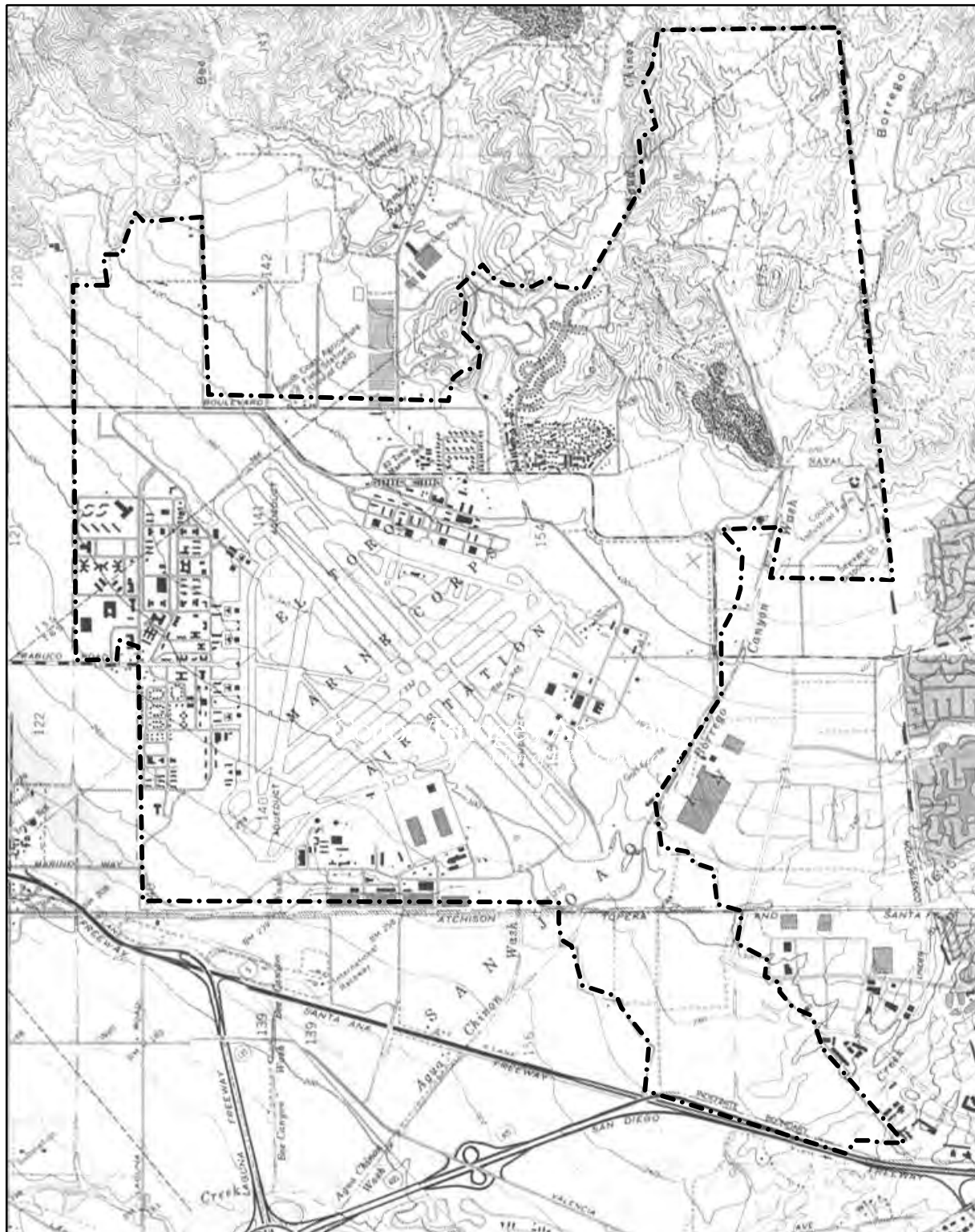
The Irvine Transportation Center, a major multimodal transit center linking Orange County Transportation Authority (OCTA) bus, Metrolink commuter rail, and Amtrak rail services, is adjacent to the Southern California Regional Rail Authority (SCRRA) tracks, which bisects the project area

Former MCAS El Toro (PA 51)

PA 51 encompasses approximately 4,295 acres. With the exception of 16 acres in the City of Irvine, PA 51 is unincorporated County jurisdiction, but within the City of Irvine's Sphere of Influence. The portion of the former MCAS El Toro north of the railroad is PA 51. A golf course occupies the southeastern portion of the PA 51. The northeastern portion of PA 51 is largely undisturbed and is designated as a habitat preserve. Former military buildings/facilities occupy the northeastern and northwestern portions of PA 51. Agricultural areas abut the east, north, and northwest boundary of PA 51. I-5 and urban areas of the City of Irvine abut the southwest boundary of PA 51. The southwestern boundary abuts the SCRRA, PA 32, and PA 30.

Former MCAS El Toro (PA 30)

PA 30 consists of approximately 398 acres within the City of Irvine. PA 30 is currently being utilized for agricultural production. The Irvine Spectrum is located east of PA 30. I-5 is south and southwest of PA 30. Urban areas of the City of Irvine are north and west of the site and PA 51 is north of PA 30.



Source: USGS 7.5-minute series, El Toro and Tustin quadrangles, photorevised 1982 and 1981.

--- Project Boundary

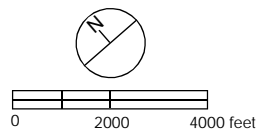


Figure 4-1
USGS Map of El Toro Area

James A. Musick Branch Jail (Portion of PA 35)

The James A. Musick Jail Facility is located on a 105-acre site within a portion of PA 35. The facility is northwest of existing Bake Parkway and easterly of the future extension of Alton Parkway. The northern boundary of the Musick Jail site abuts PA 51. The existing buildings of Irvine Spectrum abut the Musick Jail site to the west/southwest. Residential uses in the City of Lake Forest are, at the closest point to the Musick Jail site, approximately 700 feet to the southeast of the present jail fence.

IRWD Parcel (Portion of PA 35)

The eight acre IRWD parcel is also located in a portion of PA 35. The parcel contains the IRWD East Irvine Zone IV Pumping Station and Zone III 5.0 million gallon potable water reservoir and 7.0 million gallon potable water reservoir. This parcel is northwest of the Musick Jail facility. The northern portion of this parcel abuts PA 51. Agricultural fields are southwest of the parcel.

Project Area Conditions

Regulation of land use in PA 51 and 30 (the former MCAS El Toro) is currently the responsibility of the Department of Defense (DOD), while the James A. Musick Jail facility is owned and operated by the County of Orange and the IRWD parcel is owned by the Irvine Ranch Water District.

The project area is located within the South Coast Air Basin (SCAB). The SCAB is generally dominated by high-pressure systems over the Pacific Ocean and is arid, with little rainfall and plentiful sunshine. Moderate temperatures and comfortably low humidity are the predominant weather patterns in the region. Precipitation is limited, normally occurring from late November to April.

Noise heard on-site is primarily generated by traffic from surrounding roadways and freeways, including the Santa Ana (I-5) Freeway, the Eastern Transportation Corridor (SR-133), and the Foothill Transportation Corridor (SR-241).

The project area contains hazardous materials contamination associated with operations from former military activities (the majority of which are located in PA 51). These hazardous materials consist of petroleum-based products such as aviation and vehicular fuels, engine and lubricating oils, solvents, cleaners, paints, thinners, pesticides and herbicides; chlorinated/halogenated compounds, including polychlorinated biphenyls (PCB); some radioactive materials; ordinance munitions and propellants. Cleanup and remediation of hazardous materials on-site is currently underway under the Base Realignment and Closure Cleanup Plan (BCP).

The project area extends from the southern margin of the foothills of the Santa Ana Mountains to the southeastern edge of the alluvial Tustin Plain. The Santa Ana foothills are underlain by a tilted sequence of stratified sedimentary bedrock units which make up the hills and ridges. The Tustin Plain is a gently sloping alluvial plain underlain by alluvial fan sediments consisting of sand, silt, and clayey silty sand. There is no known active or potentially active fault crossing or projecting into the project area. Portions of PA 51 lie

within the San Diego Creek drainage basin and the remaining portion of the project area (PA 30 and a portion of PA 35) lie within the Borrego Canyon drainage system and drain into the Borrego Canyon Wash.

Notes and References

None.

5.0 Environmental Impacts and Mitigation Measures

This section of the Final Program EIR addresses the environmental setting for each impact area, the threshold for determining significance of environmental impacts, identification of environmental impacts, mitigation measures for those environmental impacts, which are deemed significant, and the environmental impact remaining after implementation of mitigation measures. Notes and references are also listed.

Each impact is discussed and analyzed in the sections that follow. Each environmental impact issue area is addressed according to the format identified below. For impacts where there is no material difference between those associated with the Base Plan and those associated with the Overlay Plan, a single discussion applicable to both plans is provided. For impacts where there are differences between the two plans, separate discussions are provided. Similarly, the attendant discussion of mitigation measures is either combined for both plans if there is no difference in impacts, or separated if they are particular to each plan.

Environmental Setting: A discussion of the existing conditions, services, and physical environment of the project area.

Threshold for Determining Significance: The amount or type of impact which contributes a substantial or potentially substantial adverse change in the environment, based on the thresholds contained in the Environmental Checklist contained in Appendix G of the CEQA Guidelines. Based on this criterion, project impacts can be classified as: significant and unavoidable; significant, but can be mitigated, avoided, or substantially lessened; or less than significant.

Environmental Impact: A discussion of the impacts of the proposed project according to the land use distribution and intensity as identified for the Base Plan and Overlay Plan, in quantitative and/or qualitative terms, based on the uses of land identified in the project description.

Mitigation Measures: A discussion of the measures required by the City of Irvine to avoid, mitigate or substantially lessen significant impacts associated with implementation of the Base Plan and Overlay Plan.

Impact After Mitigation: A discussion of the level of impact of the project following the implementation of required or recommended mitigation measures.

Notes and References: A list of reference sources indicating the document, person or data source for information contained within the section. A complete listing of references can be found in Section 8.0 – References of this Final Program EIR.

Areas of Potential Environmental Impact

1. Land Use
2. Traffic/Circulation
3. Air Quality
4. Noise
5. Public Health and Safety
6. Geology and Seismicity
7. Hydrology and Water Quality
8. Agricultural Resources
9. Biological Resources
10. Paleontological Resources
11. Cultural Resources
12. Aesthetics
13. Population/Housing
14. Public Services and Facilities
15. Utilities

Detailed discussions of these impacts are found in the following sections. Other long-term environmental issues, including cumulative environmental impacts caused by the project, growth inducing impacts, unavoidable significant environmental impacts, and areas of no significant impact are discussed in Section 7.0 – Analysis of Long-Term Effects of this Final Program EIR.

5.1 Land Use

5.1.1 Environmental Setting

Regional Setting

The project area (which consists of the City of Irvine Planning Areas (PAs) 51, 30, and a portion of 35) is located in the central portion of the County of Orange as shown in Figure 1-1 in the *Introduction* of this EIR. The former MCAS El Toro property (PAs 51 and 30) encompasses approximately 4,693 acres or 7.3 square miles. Approximately 4,279 acres of the former MCAS El Toro property are in unincorporated County territory within the Sphere of Influence of the City of Irvine. The remaining 414 acres are within Irvine city limits. The proposed project includes the annexation of approximately 4,392 acres which includes the James A. Musick Jail facility and the Irvine Ranch Water District parcel.

The project area is generally bounded by the City of Lake Forest on the south and southeast, the City of Irvine on the west and southeast, and the County of Orange on the north. Other nearby local jurisdictions include the cities of Laguna Hills, Laguna Niguel, Laguna Woods, Aliso Viejo, Mission Viejo and Tustin.

The project area is located northeast of the Santa Ana (I-5) Freeway, east of the Eastern Transportation Corridor (SR-133), and south of the Foothill Transportation Corridor (SR-241). Major roadways bordering the project area include Barranca Parkway to the south, Sand Canyon Avenue to the west, Portola Parkway and Irvine Boulevard to the north, and Alton Parkway to the east as shown in Figure 1-1, Vicinity Map (Section 1.0 – Introduction of this Final Program EIR).

The Irvine Transportation Center, a major multi-modal transit center linking Orange County Transportation Authority (OCTA) bus, Metrolink commuter rail, and Amtrak rail services, is adjacent to the Southern California Regional Rail Authority (SCRRA) tracks, which bisect a portion of the project area.

Existing Land Uses

Former MCAS El Toro (PAs 51 and 30)

The former MCAS El Toro base (PAs 51 and 30) was developed in 1942 on land purchased from The Irvine Company. The former base operated continuously as a military air facility from that time until it was closed in July 1999, as part of the federal 1993 Base Realignment and Closure (BRAC) process. The DON provides caretaker responsibilities for the former MCAS El Toro. Since closure, existing buildings, structures, ancillary facilities, runways, etc. have been left on-site by the DON. Portions of the site are also currently used for agricultural operations. The DON is leasing some of the existing facilities for various interim activities, such as the golf course and equestrian facilities and the Cal State University, Fullerton Extension Campus, agricultural operations, and recreational vehicle storage.

The former MCAS El Toro base generally consists of approximately 500 existing structures with approximately 4.6 million square feet of space. There are approximately 1,100 existing military housing units. Development includes the MCAS and COMCABWEST headquarters building and the officers club, unoccupied residential housing, maintenance, operation, and storage uses, the airfield operations building, an equestrian center, golf course and industrial uses, with predominantly hangers and warehouses.

The former base airfield includes five runways. There are two 10,000-foot long north-south parallel runways (Runways 16L/34R and 16R/34L). There are two 8,000-foot east-west runways (Runways 7L/25R and 7R/25L). There is also a 3,900-foot long limited-use runway (Runway 3-71), taxiways, and aircraft parking aprons.

Land uses within PA 51 northeast of Irvine Boulevard include unoccupied residential housing areas and an approximately 995-acre parcel of open space containing a pistol range, explosive ordnance disposal site, and archery area.

The northern boundary of PA 51 is adjacent to large open spaces in unincorporated Orange County, within the City's Sphere of Influence. The City of Irvine General Plan designates this "Northern Sphere" area for a mix of residential, industrial, commercial, recreational, institutional, and open space uses. PAs 51 and 30 abut portions of the Irvine Spectrum to the east and west (Irvine Industrial Complex East B (PA 35) and Irvine Technology Center B (PA 32). Existing and planned residential uses are north and east of the former base. The Irvine Transportation Center is on the southern boundary of PA 51 and on the eastern side of Barranca Parkway. An existing rail line crosses the southern part of PA 51 and is used for Metrolink commuter rail and Amtrak passenger and freight services. The James A. Musick Jail facility is adjacent to the eastern boundary of the base, as is the eight-acre IRWD parcel. There are some existing agricultural uses to the north and west of the project area.

James A. Musick Jail Facility (Portion of PA 35)

The James A. Musick Jail facility (portion of PA 35) is currently a minimum-security detention and corrections facility housing approximately 1,250 inmates. The inmate housing and detention facilities are located in the northeast corner of the site. The remainder of the site is used for agricultural activities associated with inmate detention.

IRWD Parcel (Portion of PA 35)

The IRWD parcel (portion of PA 35) is an eight-acre facility providing water storage and pumping. The parcel contains the East Irvine Zone 4 Pumping Station, and the East Irvine Zone 5.0 million gallon and 7.0 million gallon potable water reservoirs.

Local and Regional Plans

City of Irvine General Plan and Zoning Ordinance

The City of Irvine's General Plan represents the long-range vision of the City. It is a comprehensive statement of Irvine's development and preservation policies for all geographic areas of the City and its sphere of influence, and the relationships between

social, financial, environmental, and physical characteristics. The City's first General Plan was adopted in December 1973. According to the City's 1973 General Plan, after base closure, PAs 51 and 30 were planned for multi-use (non-aviation) development compatible with the City's and surrounding development patterns. The General Plan has been modified by City Council action over the years to address changing City priorities and planning goals.

In April 1993, the City initiated a multi-phased General Plan amendment (13309-GA) that proposed revisions to all elements of the General Plan to clarify and update the objectives, policies, supporting text, and diagrams consistent with current City policy, codes, and procedures. In August 1993, the City adopted General Plan Amendment (GPA) 13309-GA for the Phase I General Plan Update. In April 1995, the City adopted GPA 15032-GA for the Phase II General Plan Update. On March 9, 1999, the City adopted GPA 18930-GA for the Phase III General Plan Update. The Phase III Update revised the text and exhibits of the Land Use, Circulation, Seismic, Cultural Resources, Noise, Public Facilities and Services, Integrated Waste Management, Energy, Safety, Parks and Recreation, Conservation and Open Space, and Growth Management Elements. The General Plan was again amended in 2000 to reflect the changes in PAs 30 and 51 as a result of the previously approved Millennium Plan II for the El Toro Property (39399-GA, 39400-ZC). The General Plan Updates in March 1999 and February 2000 revised the General Plan to reflect the closure of MCAS El Toro. The General Plan was again updated in June 2002 to reflect the adoption of the General Plan Amendment for the Northern Sphere area as is described in more detail below.

The City has initiated two annexations to develop physical infrastructure in the vicinity of the project area. The 1972 annexation addressed most of what is now designated PA 30 (the southern portion of the former MCAS El Toro property). The 1984 annexation included what is now PA 32 (the Irvine Technology Center). The property owner at the time of annexation for both PA 30 and PA 32 was The Irvine Company. These annexations facilitated the development of local and regional circulation improvements such as Alton Parkway, Bake Parkway, and Barranca Parkway through PA 30. The federal government purchased the property in PA 30 from The Irvine Company in 1975 and added to it in 1988 for the clear zone for the flight approach for runways 34/R and 34/L.

In June 2002, the City adopted a General Plan Amendment and Zone Change for the Northern Sphere Area of the City, which consists of City of Irvine Planning Areas 3, 6, and 9, and a portion of Planning Areas 5 and 8. The Northern Sphere project amended the City's General Plan and Zoning Ordinance to permit development of a mix of residential, industrial, commercial, recreational, institutional uses, and open space dedications. Following adoption of the Northern Sphere project, the Irvine Company made a formal application to LAFCO for annexation of Planning Areas 8A and 9A.

The City's General Plan has thirteen elements, seven of which are mandated by State Law. The policy guidance in all of these elements will be applied to the future development of the project area consistent with the new land uses proposed as part of the OCGP GPA and Zone Change. The following discussion identifies the relationship of these elements to the project area.

Land Use Element. The goal of the Land Use Element is to "promote land use patterns that maintain safe residential neighborhoods, bolster economic prosperity, preserve open space, and enhance the overall quality of life in Irvine." The Land Use Element currently designates the unincorporated portion of the former MCAS El Toro property (PA 51) as Research and

Industrial, Community Commercial, Institutional, Multi-Use, Commercial Recreation, Low Density and Medium Low Density Residential, Recreation, and Preservation.

The portion of the former MCAS El Toro property within the City of Irvine (PA 30) is designated Community Commercial, Commercial Recreation, Research and Industrial, Institutional, Preservation, and Recreation in the General Plan. The zoning districts are: 4.3B Community Commercial; 4.4 Commercial Recreation; 5.5 Research and Industrial; 6.1 Institutional; 1.4 Preservation; and 1.5 Recreation.

Both the James A. Musick Jail facility and IRWD Parcel (portion of PA 35) are designated as Institutional in the adopted Irvine General Plan.

Circulation Element. The goal of the Circulation Element is to “provide a balanced transportation system.” The Circulation Element addresses four separate circulation systems: air, road, public transit, and trails.

Objective B-7, Air Transportation Program, Policy (c) states “oppose commercial use of El Toro MCAS and continue liaison with surrounding communities in organizing and supporting opposition to such use.” Policy (d) states:

“....Encourage use of Los Angeles and Ontario International Airports for continental and international flights. Explore commercial airport potential of existing and closing military facilities with Los Angeles, San Bernardino, Riverside and San Diego counties, as well as existing commercial airport and general aviation airports which have expansion potential in order to meet the growing passenger demand on a regional basis. Discourage the development or expansion of airfields which are not now operating as commercial airports, or the expansion of existing commercial airports which would adversely impact existing urban communities.”

Housing Element. The Housing Element’s goal is to “provide for safe and decent housing for all economic segments of the community.” A primary purpose of the Housing Element is to identify ways in which the City will encourage a variety of housing types to meet the City’s Regional Housing Needs as identified by SCAG. Objective C-7, Military Base Housing Reuse, Policy (c) states the City will “request release of MCAS El Toro base housing by the federal government, and pursue immediately civilian use.” Policy (c) further states the City will “pursue annexation of MCAS El Toro, and explore opportunities for maintenance of the housing stock.”

Seismic Element. The goal of the Seismic Element is to “minimize the loss of life, disruption of goods and services, and the destruction of property associated with an earthquake.” All areas of the City are classified as one of five Seismic Response Areas (SRA). Each SRA zone describes the magnitude and types of potential seismic hazards present. The majority of the site (flat elevations) is located within the SRA-2 zone. The hillside area north of Irvine Boulevard is SRA-3 and SRA-4 zones. The meaning of these zone classifications is as follows:

- SRA 1: Areas with soft or loose soils/high groundwater and a greater potential for ground failure in the form of liquefaction.
- SRA 2: Areas with denser soils/deeper ground water with ground failure posing the greatest seismic hazard.
- SRA 3: Areas with shallow alluvium over and abutting bedrock with ground motion posing the greatest seismic threat.

- SRA 4: Areas with highlands characteristically over 20 percent slope that are potentially less stable than SRA 3 areas due to the greater slope.
- SRA 5: Areas containing less stable geologic formations, such as mapped landslide areas.

Cultural Resources Element. The goal of the Cultural Resources Element is to “ensure the proper disposition of historical, archaeological, and paleontological resources to minimize adverse impacts, and to develop an increased understanding and appreciation for the community’s historic and prehistoric heritage, and that of the region.” The majority of the site (flat elevations) is identified as a low paleontological sensitivity zone. The hillside area north of Irvine Boulevard is identified as a high paleontological sensitivity zone.

Noise Element. The goal of this Element is to “contribute to a healthy and safe environment by minimizing noise impacts.” The Noise Element divides unwanted noise into two categories of noise sources - mobile and stationary. The Noise Element states:

“MCAS El Toro was closed in July 1999. In its place, the County of Orange has proposed a commercial airport, which will likely have an impact on aircraft noise as well as vehicular noise. The City of Irvine actively opposes a commercial airport.”

“The El Toro Reuse Planning Authority, which consists of the cities of Irvine, Mission Viejo, Laguna Hills, Lake Forest, Laguna Beach, Dana Point and Laguna Niguel, has prepared the Millennium Plan for the reuse of MCAS El Toro. The Millennium Plan consists of a mix of non-aviation land uses which may have different vehicular and stationary noise levels than currently associated with military activities at MCAS El Toro.”

Public Facilities and Services Element. The goal of the Public Facilities and Services Element is to “provide a full range of necessary public facilities and services that are convenient to users, economical, reinforce City and community identity, and reflect the participation of citizens.”

Integrated Waste Management Element. The Integrated Waste Management Element’s goal is to “encourage solid waste reduction and provide for the efficient recycling and disposal of refuse and solid waste material without deteriorating the environment.”

Energy Element. The Energy Element’s goal is to “promote energy conservation and the use of renewable energy sources throughout the City in a cost effective way.”

Safety Element. The goal of the Safety Element is to “minimize the danger to life and property from man made and natural hazards, including fire hazards, flood hazards, non-seismic geologic hazards and air hazards.” The portion of the project area north of Irvine Boulevard and east to Sand Canyon Avenue is designated a High Fire Severity Rating on Figure J-2, Fire Hazard Areas. Portions to the north of the project area are also identified as Flood Hazard Areas in Figure J-3. Policy J-1.d and Figure J-4, Clear and Accident Potential Zones, address hazards associated with aircraft operations. Policy J-1.d uses the most current available Airport Environs Land Use Plan as a planning resource for evaluating aircraft operations, land use compatibility, and land use intensity.

Parks and Recreation Element. The Parks and Recreation Element’s goal is to “provide park and recreation opportunities at a level that maximizes available funds and enables residents of all ages to utilize their leisure time in a rewarding, relaxing, and creative manner.”

Conservation and Open Space Element. The goal of the Conservation and Open Space Element is to “maintain and preserve the environmental systems as a major feature in the City.” This element locates the project area in the Northern Flatlands landform zone. The northeastern portion of PA 51 is also identified as NCCP Habitat Reserve.

Growth Management Element. The goal of this Element is “to ensure that growth and development are integrally planned with, and phased concurrently with, the City of Irvine’s ability to provide an adequate circulation system and public facilities.”

Orange County General Plan

The County General Plan shows the majority of PA 51, the James A. Musick Jail facility and IRWD parcel as Public Facilities. The northernmost arm of PA 51 is designated for Open Space. However, in 1994, the voters in Orange County approved Measure A. Measure A amended the County’s General Plan to designate the unincorporated portion of the former MCAS El Toro property (PA 51) for commercial aviation and related uses. Since that time, several plans for the reuse of the site have been prepared. In March of 2002, the voters of Orange County passed the “Orange County Central Park and Nature Preserve Initiative” (Measure W). This initiative amended the County General Plan north of the SCRRA Metrolink rail line (PA 51) to designate the unincorporated County land for park, open space, and other uses, effectively removing the designation of the site as a commercial airport from the General Plan. Following this initiative, the Board of Supervisors decided to cease further planning for El Toro and to support the annexation and land use planning of the property by the City of Irvine.

MCAS El Toro Land Use Compatibility Plans

The DOD established the Air Installations Compatible Use Zones (AICUZ) program to ensure compatible development in high-noise exposure areas, minimize public exposure to potential safety hazards associated with aircraft operations, and protect the operational capability of the air installation. In accordance with the Department of Navy’s instructions governing the AICUZ program, the AICUZ program recommends that communities adopt land use plans prohibiting land uses deemed incompatible with military air operations. The AICUZ itself does not impose any land use restrictions.

The Airport Land Use Commission (ALUC) for Orange County has Airport Environs Land Use Plans (AELUP) for John Wayne Airport (adopted 2002), Fullerton Municipal Airport (2002), Joint Forces Training Base Los Alamitos (2002), Heliports projects (2002), and for the former MCAS El Toro (1995). The purpose of the AELUP is to protect aviation facilities from encroachment by incompatible land uses. It establishes noise/land use acceptability criteria for sensitive land uses at 65 dB CNEL for outdoor areas and 45 dB CNEL for indoor areas of residential uses. The AELUP utilizes the AICUZ and Accident Potential Zones (APZ) for MCAS El Toro. Figures found in Appendix D of the 1995 AELUP depict the noise and safety zones for the former MCAS EL Toro. Figure 5.1-1 depicts the APZs for the former MCAS El Toro as shown in the 1995 AELUP.

The MCAS El Toro property is still owned by the federal government. The 1995 AELUP applicable to the property remains in effect and has not been amended. California Public Utilities Code Section 21670, et. seq. requires that local General Plans and Zoning be consistent

with the AELUP. The Public Utilities Code provides a method whereby a local jurisdiction may override an ALUC finding of inconsistency with the AELUP.

The County's Noise Element adopts the AELUP restrictions, including a Policy Implementation Line (PIL), which defines the area subject to land use development restrictions. Historically, this PIL has been the MCAS El Toro 1981 PIL 65 dB CNEL contour. The adopted PIL for the former MCAS El Toro is depicted in Figure 5.1-1. These land use, safety, and noise restricted areas as identified in the AICUZ, AELUP, and the PIL are still adopted by the ALUC, but no longer are impacted by aircraft noise from military air operations since the former base closed its operations in July 1999.

Contrary to the adopted Orange County General Plan (as amended by Measure W in March 2002), the adopted City of Irvine General Plan, the DON's Final Record of Decision (ROD) regarding the disposal and reuse of the former base property, and all current regional planning activities regarding air transportation resources in Southern California, the ALUC on December 16, 2002 continued to plan for an airport at the former MCAS El Toro site. The plan reflects the AELUP for the airbase adopted in November 1995. This plan is based on the 1981 AICUZ.

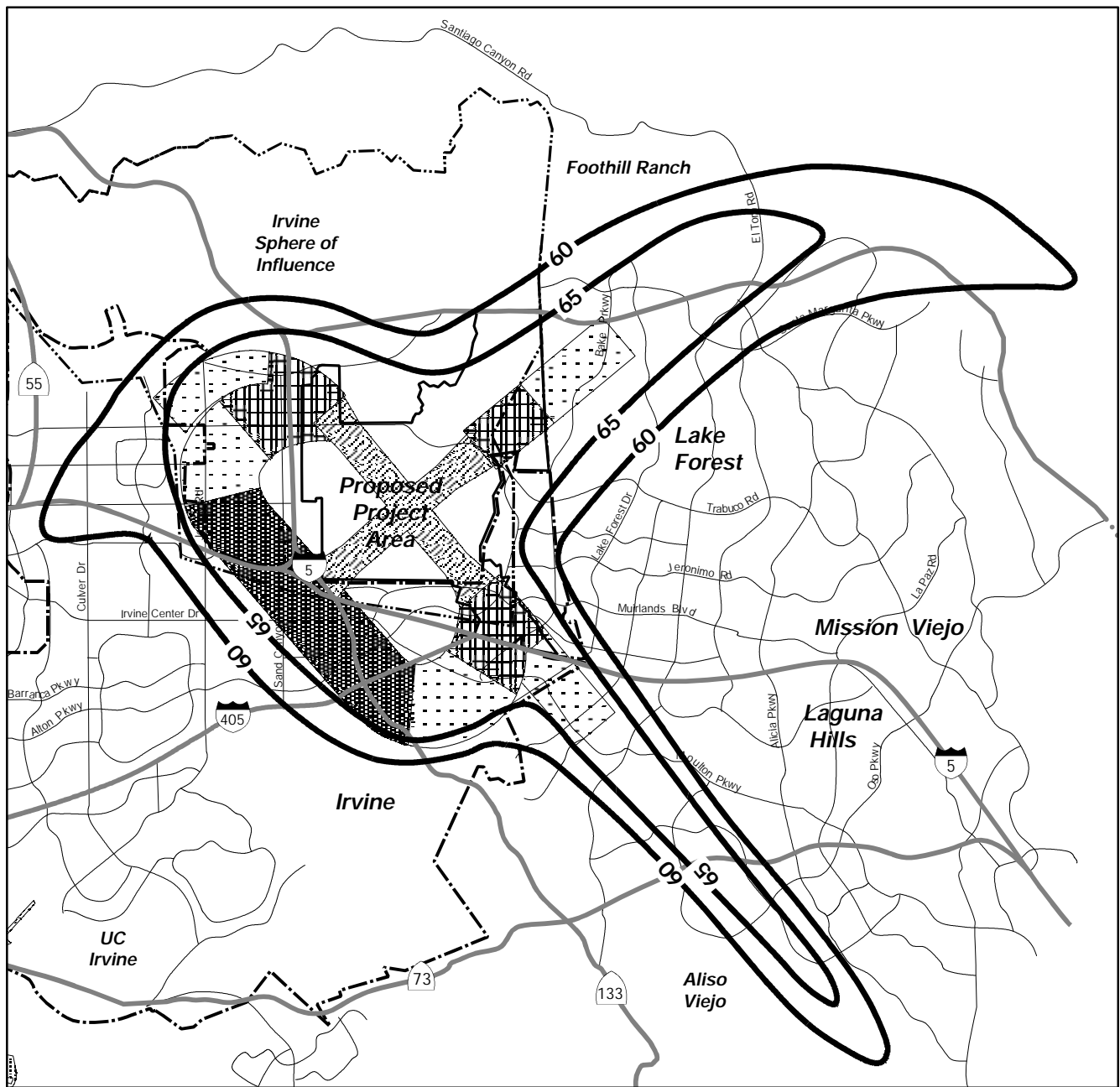
Specifically, all other federal and local agencies with jurisdiction over the site have concluded that MCAS El Toro will not be used as a military or commercial aviation facility. A letter dated October 9, 2002 from Deputy Assistant Secretary of the Navy Wayne Arny states, "the Navy has formally determined to close MCAS El Toro and has no plan to recommission the site as a military installation." Mr. Arny's letter continues, "the 1981 AICUZ is not applicable to the closed military facility and should not be used as a basis for any land use planning effort undertaken by the ALUC."

James A. Musick Jail Facility Expansion Plan





The County has approved the expansion of the Musick Jail facility to house 7,584 inmates in a minimum/medium/maximum security facility. This expansion would occur in three phases and include a Sheriff's Southeast Station, ancillary jail facilities (warehouse, central plant, food service, laundry, staff and visitor parking, etc.), and a relocated Interim Care Facility. However, construction has not yet commenced on the expansion.



Orange County Master Plan of Arterial Highways

The County of Orange Master Plan of Arterial Highways (MPAH) forms part of the Orange County General Plan and designates the arterial system in the circulation element of the General Plan. Defined according to specific arterial functional classifications, the MPAH serves to define the intended future roadway system for the County. Cities within the



Source: City of Irvine, General Plan,
P & D Consultants, Inc.

-  Clear Zone - Extreme Hazard
-  APZ-1 - Limited Hazard
-  APZ-2 - Minimal Hazard
-  Local Corridor - Minimal Hazard

-  Adopted Community Noise Equivalent Level (CNEL) Contours (1981) for the Former MCAS EI Toro
-  PIL (65 CNEL)

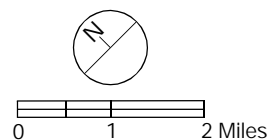


Figure 5.1-1
Former MCAS EI Toro AICUZ and PIL

County are expected to achieve consistency with the MPAH in individual General Plan circulation elements.

Southern California Association of Governments (SCAG)

Orange County and the City of Irvine are located at the western edge of a six-county metropolitan region composed of Orange, Los Angeles, Ventura, Riverside, San Bernardino and Imperial Counties. The Southern California Association of Governments (SCAG) serves as the federally recognized Metropolitan Planning Organization for this Southern California region. Orange County and its jurisdictions constitute the Orange County Subregion within the SCAG region. The Orange County Subregion is governed by the Orange County Council of Governments (OCCOG).

Regional Comprehensive Plan and Guide

SCAG has developed a Regional Comprehensive Plan and Guide (RCPG) to help coordinate transportation and infrastructure, open space and environmental planning with population, housing, and employment growth within the multi-county region. The RCPG adopted in 1995 presents policies addressing planning priorities for the region adopted by SCAG's governing board, the Regional Council. Some of these are "core" policies that implement state or federal mandates, while most of the policies are "ancillary" or advisory only guidance for local jurisdictions and public agencies.

SCAG's RCPG includes a package of policies related to growth and development that seek to coordinate infrastructure with projected population and housing growth. In general, SCAG policies encourage job and housing opportunities to be balanced at the County or Regional Statistical Area. SCAG policies also encourage job growth to be concentrated near transit services and transit nodes, and existing freeways, high occupancy vehicle (HOV) lanes, and toll roads. Given the scope and expansive nature of the RCPG, not all of the RCPG policies apply to every project.

Regional Transportation Plan (RTP)

SCAG has also adopted a Regional Transportation Plan (RTP) to help coordinate development of the region's transportation improvements. SCAG's 2001 RTP designates the El Toro property as a commercial airport. However, in response to a recent lawsuit settlement with ETRPA, the SCAG Regional Council passed a resolution that the 2004 RTP will not include an airport at El Toro.

County of Orange Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP)

The County's Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) is a program designed to provide long-term regional protection of the natural vegetation and wildlife diversity of the region while allowing compatible land use and appropriate development to occur. In April 1996, the Orange County Board of Supervisors adopted the Central-coastal Subregion NCCP/HCP program. The habitat preserve area located in the eastern portion of PA

51 is identified for incorporation into the NCCP/HCP. Figure 5.9-1 in Section 5.9 Biological Resources of this EIR depicts the project site in relation to the NCCP/HCP.

Special Area Management Plan (SAMP)

The Army Corps of Engineers Special Area Management Plan (SAMP) consists of identification and characterization of aquatic resources, evaluation of alternatives for proposed impacts to aquatic resources, and identification of an aquatic reserve program. Under Section 404 of the Clean Water Act, the Corps of Engineers is authorized to regulate discharge of dredge or fill material into waters of the United States. By implementing Special Area Management Plans (SAMPs), the Corps can analyze potential impacts to waters of the United States at the watershed scale in order to identify priority areas for preservation, identify potential restoration areas, and determine the least environmentally damaging locations for proposed projects. The SAMP process is designed to complement the California Department of Fish and Game's (CDFG's) Natural Communities Conservation Planning (NCCP) program, as well as the U.S. Fish and Wildlife's Habitat Conservation Plan (HCP). The Corps continues to work with other agencies such as the U.S. Environmental Protection Agency and the Regional Water Quality Control Board to implement the SAMP in Orange County.

5.1.2 Threshold For Determining Significance

Appendix G of the CEQA Guidelines outlines the threshold significance criteria that a project is measured against for land use and planning.

Would the project:

1. *Physically divide an established community?*
2. *Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigation an environmental effect?*
3. *Conflict with any applicable habitat conservation plan or natural community conservation plan?*

5.1.3 Environmental Impact

Proposed Land Use

The entire project area is within the City of Irvine or has been within the City of Irvine's Sphere of Influence since 1973. A portion of the former base, PA 51, is in the unincorporated territory of the County of Orange. Currently, these two jurisdictions are responsible for the planning of the former MCAS El Toro property. Both the City's and County's General Plans designate land uses for reuse of the former base now that it has closed. The County had previously prepared an aviation land use plan; however, Measure W, which was passed in March 2002, amended

the County General Plan north of the Southern SCRRRA Metrolink rail line to designate the unincorporated land within PA 51 for park, open space, and other uses.

Base Plan and Overlay Plan

The project proposes to change the existing designations within the project area to a variety of non-aviation uses. Implementation of the proposed General Plan Amendment (GPA) and Zone Change would result in a non-aviation reuse of the former MCAS El Toro property, consistent with goals and policies contained in the adopted Irvine General Plan and as mandated by the voters of Orange County with the passage of Measure W. Figure 3-3 and Tables 3-3 and 3-4, in Section 3.0 – Project Description of this Final Program EIR, depict and list the proposed land uses per the Base Plan and Overlay Plan.

As depicted in Table 3-3, buildout of the proposed Base Plan will result in approximately 225 dwelling units, a 272-acre sports park, and 3,856,500 square feet of non-residential land uses (including retail, education, research and development, cultural and institutional, transportation facilities, and other uses). Implementation of the Base Plan will result in over 62 percent of the project area being preserved for open space and recreational uses including a 974-acre habitat preserve consistent with the NCCP/HCP. Two golf courses providing 54 holes of golf, an outdoor sports complex, various neighborhood and community parks, and open space corridors and linkages will also be developed.

As depicted in Table 3-4, buildout of the Overlay Plan will result in approximately 3,625 dwelling units, a 165-acre sports park, and 6,585,594 square feet of non-residential land uses (including education, research and development, retail, fairgrounds/commercial recreation, cultural and institutional, transportation facilities, and other uses). Implementation of the Overlay Plan will result in the majority of the project area being preserved for open space and recreational uses including a 974-acre habitat preserve consistent with the NCCP/HCP. Two golf courses for public play providing 54 holes of golf, an outdoor sports complex, various neighborhood and community parks, fairgrounds/commercial recreation, a cemetery, and open space corridors and linkages will also be developed.

Under both the Base Plan and Overlay Plan, a wildlife corridor/natural area will be preserved along the southern portion of PA 51, crossing over to the northern side of PA 30. The golf courses and the wildlife corridor/natural area will be located adjacent to the NCCP/HCP preserve and will provide open space buffers between urban development and the habitat preserve.

Threshold 1: Would the project physically divide an established community?

Base Plan and Overlay Plan

All of the project area is located in the City of Irvine's Sphere of Influence, except for a portion that is already within City limits (PA 30 and a portion of PA 35). There are no residents living within the former MCAS El Toro site, nor on the IRWD parcel. While there are persons residing within the James A. Musick Jail facility, any community created within the facility is contained within the jail confines. In addition, no change is proposed for the James A. Musick Jail facility

under either the Base Plan or Overlay Plan. As a result, no significant impact to established communities is anticipated.

Threshold 2: *Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?*

Base Plan and Overlay Plan

City of Irvine General Plan and Zoning Ordinance

The site is currently planned and zoned for non-aviation uses. Several objectives, policies, and programs within the City's General Plan also oppose commercial aviation use of the former MCAS El Toro facility, and support continued liaison with surrounding communities in organizing and supporting opposition to such use.

The project proposes to amend the various Elements within the adopted Irvine General Plan to reflect the land use changes proposed for the former MCAS El Toro property as approved by the voters of Orange County with the passage of Measure W in March 2002 and ensure internal consistency within the General Plan. The following sections summarize the proposed changes to the General Plan Elements and a more detailed description is provided in Section 3.0 – Project Description of this Final Program EIR.

Land Use Element: The proposed project amends the Land Use Element to reflect a park oriented plan that implements a non-aviation plan for PAs 51 and 30. General Plan Figure A-3, Land Use, will be changed to reflect the proposed land uses designated in the GPA as shown on Figure 3-3. The General Plan's Figure A-4 Scenic Highways will be amended to remove Millennium Parkway. The General Plan's Table A-1, Maximum Intensity Standards by Planning Area, and Table A-2, Maximum Intensity Standards, will be revised to reflect the proposed land uses for Planning Areas 51 and 30.

The GPA will implement all of the Land Use Element objectives (i.e., promote land use patterns that maintain safe residential neighborhoods, bolster economic prosperity, preserve open space, and enhance the overall quality of life in Irvine) and implementing policies.

Circulation Element: Four General Plan circulation exhibits will be changed under the proposed GPA to reflect the proposed circulation system within PAs 51 and 30: General Plan Figure B-1, Master Plan of Arterial Highways as shown on Figure 3-5 of the Project Description; General Plan Figure B-2, Operational Characteristics as shown on Figure 3-6 of the Project Description; General Plan Figure B-3, Public Transit; and General Plan Figure B-4.

The General Plan Amendment will modify Policy B-1 (c) to add the following sentence:

In conjunction with individual subdivision map level traffic studies for development proposed in Planning Areas 30 and 51, a LOS "E" would be considered acceptable for application to intersections impacted in Planning Areas 13, 30, 31, 32, 34, 35, and 39.

The impact associated with the LOS “E” policy change is evaluated in Section 5.2 Traffic/Circulation of this EIR. Please refer to Section 5.2 for an analysis related to this issue.

The GPA will implement all of the adopted Circulation Element objectives (Roadway Development, Roadway Design, Pedestrian Circulation, Bicycle Circulation, Riding and Hiking Trail, Public Transit Program, Air Transportation Program, and Telecommunications Program) and implementing policies.

Housing Element: The GPA will not change the adopted Housing Element objectives (New Construction, Quality Design and Construction, Fair Housing, Housing Types, Existing Housing, Monitoring, Military Base Housing Reuse, and Balanced Employment/Residential Growth). All of the adopted objectives and implementing policies will be implemented as part of the proposed project. Policy (c) states the City will “pursue annexation of MCAS El Toro, and explore opportunities for maintenance of the housing stock.” The additional housing units that will be developed under either the Base Plan (225 dwelling units) or Overlay Plan (3,625 dwelling units) will help Irvine meet its Regional Housing Needs Assessment through 2025. Additionally, the project through the Development Agreement will convey 165 units to homeless providers.

Seismic Element: No objective (Potential Hazards, Response to Hazards, and Citizen Participation) or implementing policy of the Seismic Element will be changed by the proposed project. All of the adopted objectives and implementing policies will be implemented as part of the proposed project. Section 5.6 – Geology and Seismicity of this Final Program EIR analyze the potential impacts of the proposed project related to seismic issues.

Cultural Resources Element: No objective (Historical, Archaeological and Paleontological Surveys, and Hazard Occurrence) or implementing policy of the Cultural Resources Element will be changed by the proposed project. All of the adopted objectives and implementing policies will be implemented as part of the proposed project. Additionally, substantial land area is designated for cultural facilities in both the Base Plan and Overlay Plan.

Noise Element: No objective (Mobile Noise, Stationary Noise, and Noise Abatement) or implementing policy will be modified under the proposed GPA. All of the adopted objectives and implementing policies will be implemented as part of the proposed project.

Public Facilities and Services Element: The GPA will not change the adopted objectives (Public Facilities Development, Public Participation, City Services, and Maintenance and Rehabilitation) or implementing policies. All of the adopted objectives and implementing policies will be implemented as part of the proposed project. To implement the adopted objectives, the City of Irvine has involved the public in developing the proposed project. In addition, the City will prepare an Urban Service Plan for the project area to identify and plan for the future need for public facilities and services resulting from the implementation of the proposed project.

Integrated Waste Management Element: The GPA will not change the adopted objectives (Solid Waste, Waste, Wastewater, and Solid Waste Facility Siting Requirements) or implementing policies. All of the adopted objectives and implementing policies will be implemented as part of the proposed project.

Energy Element: The GPA will not change the adopted objectives (Energy Conservation, Retrofit Programs, and Municipal Conservation) or implementing policies. All of the adopted objectives and implementing policies will be implemented as part of the proposed project.

Safety Element: The GPA will not change the objectives (Hazard Occurrence, Disaster Response, and Insurance Programs) or the implementing policies. All of the adopted objectives and implementing policies will be implemented as part of the proposed project.

Parks and Recreation Element: The GPA will not change the objectives (Recreational Opportunities, Park Dedication, Park Location, and Park Maintenance and Rehabilitation) or implementing policies. The GPA amends the General Plan's Figure K-1 Recreational Facilities to add public golf courses, public and private exposition centers, and regional park as proposed for PAs 51 and 30.

Conservation and Open Space Element: The GPA will not change the objectives (Implementation Action Program, Biotic Resources, NCCP/HCP Implementation Areas, Geophysical Hazards, Geophysical Resources, Societal Hazards, Societal Resources, Preservation Areas, Recreation Areas, Permanent Agriculture, Landfill Overlay, Water) or implementing policies. Please refer to Section 5.8 – Agricultural Resources for a detailed discussion of how the project specifically implements Objective L-10 Permanent Agriculture. General Plan Figure L-2, Conservation and Open Space will be revised to reflect Preservation, Recreation, and Agriculture uses within PAs 51 and 30.

Growth Management Element: General Plan Figure B-1, Master Plan of Arterial Highways, as shown in Figure 3-5 of the Project Description, and General Plan Figure B-2 Operational Characteristics, as shown in Figure 3-6, will be modified as discussed above under the Circulation Element. The objectives (Cooperative Implementation, Integrate Land Use and Transportation Planning, Roadway Maintenance and Capacity Enhancement, Transportation Demand Management, Transit Systems and Service, Balanced Growth, Phased Growth, Monitoring, and Management of Funds) or implementing policies of the Growth Management Element will not be changed by the GPA.

The proposed project amends the various Elements within the adopted General Plan to reflect the land use changes proposed for the former MCAS El Toro property to ensure internal consistency within the General Plan. Implementation of the proposed Base Plan or Overlay Plan will not result in a significant adverse impact to the City's adopted General Plan. The amended General Plan will replace the currently adopted version of the City's General Plan.

No change is proposed to the General Plan designation of the Musick Jail facility, therefore, annexation of the jail will not result in a conflict with the adopted General Plan.

No change is proposed to the General Plan designation of the IRWD parcel, therefore, annexation of the parcel will not result in a conflict with the adopted General Plan.

Federal Property Conveyances

As part of the federal property disposal process, portions of closed military bases may be conveyed to other military departments; federal, State, and local agencies; federally-recognized Native American tribes; and homeless providers. The County of Orange, as the currently designated Local Redevelopment Agency (LRA), has made nine recommendations for conveyance to the DON. These proposed conveyances are provided in Appendix F of this EIR and include conveyances to the Salvation Army, Orange County Community, Community Housing Assistance Program, SBC Community Homeless Coalition, Council of Orange County Society of St. Vincent de Paul, Orange County Community Housing Corporation, Orange County Social Services Agency, Families Forward, and American Riding Club for the Handicapped. The City of Irvine supports the conveyance process and will incorporate any approved conveyances that are compatible with the City's proposed land uses for this area. The DON will sell the remaining portions of the base by means of a public auction managed by the General Services Administration.

The proposed project does not modify the designated land uses for the Musick Jail facility. Under the proposed jail expansion plan, the jail facility may be expanded to house 7,584 inmates in a minimum/medium/maximum security facility if all appropriate approvals and environmental analyses are completed in a legally valid manner.

The proposed project does not modify the designated land uses for the IRWD parcel.

Zoning Ordinance

The proposed project involves zone changes in PA 51 and 30 to implement the Orange County Great Park designations for the Base Plan and Overlay Plan. The project also involves the creation of new or expanded zoning categories and overlay zones to address the other components of the Great Park land use designations. Interim uses may occur within the project area consistent with these zoning designations. No conflict with the zoning ordinance is anticipated.

Orange County General Plan

Since passage of Measure W in March 2002, the portion of the planning area within the jurisdiction of the County (i.e., the area north of the SCRRRA Metrolink rail line) has been designated for park, education, open space, and other uses, effectively removing the previous County General Plan designation of the site as a commercial airport. Following this initiative on April 16, 2002, the Board of Supervisors decided to cease further planning for El Toro and to support the annexation and land use planning of the property by the City of Irvine.

Orange County Master Plan of Arterial Highways

As part of the proposed project, the City will amend both the Land Use Element and the Arterial Plan contained in the General Plan. This is a necessary part of the proposed project to ensure internal consistency of the Irvine General Plan and the proposed project. The amended Arterial Plan will not be consistent with the adopted Orange County Master Plan of Arterial Highways (MPAH). The Orange County MPAH will need to be amended to reflect the GPA and Zone

Change. This potential impact is addressed in Section 5.2 –Traffic/Circulation of this Final Program EIR.

MCAS El Toro Land Use Compatibility Plans

The land use, safety, and noise restricted areas as identified in the AELUP, AICUZ, and the PIL for the former MCAS El Toro facility are no longer impacted by aircraft noise from military air operations now that the base has closed for military use. The MCAS El Toro property is still owned by the federal government. The 1995 AELUP applicable to the property remains in effect and has not been amended. California Public Utilities Code Section 21670, et. seq. requires that local General Plans and Zoning be consistent with the AELUP. The Public Utilities Code provides a method whereby a local jurisdiction may override an ALUC finding of consistency with the AELUP. On December 16, 2002 the ALUC chose not to amend the AELUP to reflect the base closure and future non-aviation uses for the site as agreed upon by the voters of the County of Orange and agencies with jurisdiction over the land (Department of Navy, the County of Orange, and the City of Irvine). Since with base closure there are no actual noise or safety hazards generated by aircraft flight which would threaten the proposed development, implementation of the proposed project would not result in a significant land use compatibility impact, even though it would conflict with the adopted AELUP. Proposed land uses will remain in conflict with the AELUP until the AELUP is amended to reflect the non-aviation uses.

During operation of the former MCAS El Toro, communities in Orange County adopted and implemented land use plans that attempted to achieve compatibility with the noise and other hazards associated with the aircraft and other operations of the active base. In response to the passage of Measure W and the subsequent designation of the former base property for non-aviation uses, several jurisdictions within the area have begun reevaluating existing and planned land uses within areas that were formerly affected by noise and other hazards associated with aircraft overflight. For example, the City of Lake Forest is currently studying the potential to change land use designations on approximately 950 acres of vacant land within the City that were previously encumbered by the 65 CNEL contour as a result of that portion of the City's proximity to the former base. Implementation of the Base Plan or Overlay Plan would result in a non-aviation reuse of the former MCAS El Toro property; as such, the project would be consistent with these plans.

James A. Musick Jail Facility Expansion Plan

The proposed annexation of the Musick Jail will not conflict with the jail's proposed expansion plan since no change in the General Plan or zoning designation is proposed. EIR No. 564 does not identify any land use impacts for the jail expansion. The County has requested that 40 acres within PA 51 to the north and east of the jail facility be conveyed to the jail for agricultural use to off-set the agricultural land which will be lost with the expansion of the jail facility.

The areas proposed in EIR No. 564 for mitigation are located within land designated for agriculture in the proposed Orange County Great Park project. If the jail is expanded, the proposed project would allow for the loss of agricultural land resulting from the proposed jail expansion to be mitigated as identified in the recirculated sections of EIR No. 564. As such, there is no conflict between the proposed project and the jail expansion plan mitigation measure for loss of agriculture. No significant impact to this issue is anticipated.

Southern California Association of Governments

Consistency with SCAG RCPG Policies

The Growth Management Chapter of the Regional Comprehensive Plan and Guide (RCPG) contains a number of policies that are particularly applicable to the proposed project.

Core Regional Plan Policies

The population, housing and jobs forecasts, which are adopted by SCAG's Regional Council, and that reflect local plans and policies, shall be used by SCAG in all phases of implementation and review.

The project's consistency with SCAG's population, housing and jobs forecasts is analyzed in Section 5.13 – Population and Housing of this Final Program EIR. Please refer to Section 5.13 for this analysis.

- 3.01 The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies.

The Base Plan includes development of approximately 225 dwelling units, a 272-acre sports park, and 3,856,500 square feet of non-residential land uses (including retail, education, research and development, cultural and institutional, transportation facilities, and other uses). Under the Overlay Plan approximately 3,625 dwelling units, a 165-acre sports park, and 6,585,594 square feet of non-residential land uses (including education, research and development, retail, fairgrounds/commercial recreation, cultural and institutional, transportation facilities, and other uses) would be developed. These uses will be phased between 2007 and 2025.

Existing and planned public facilities, utility systems, and transportation systems consistent with SCAG's regional plans will be available to serve the site. A traffic study has been prepared for the project, which indicates that existing arterials can be improved to serve the project within acceptable levels of service or perform no worse than the level of service for the no project condition. Sections 5.14 – Public Services and Facilities and 5.15 – Utilities explain that the project will provide for the construction and operation of necessary services and facilities to serve the area. Property owners will also be required to enter into service agreements with utility and service providers prior to operation of any future new development. As part of the annexation application to LAFCO, the City will prepare an Urban Services Plan which demonstrates the City's ability to provide public services, facilities, and utilities to serve the unincorporated portion of the project site (PA 51 and PA 35) upon annexation into the City. These on-site improvements, extension of infrastructure, and required service agreements make the project consistent with this core policy.

The 1998 Regional Transportation Plan (RTP) also has policies, all of which are core, that pertain to this project. The RTP links the RCPG goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic, and commercial limitations. Among the relevant policies in the RTP are the following:

4.01 Transportation investments shall mitigate environmental impacts to an acceptable level.

SCAG has adopted the following Regional Performance Indicators and associated objectives in support of this policy:

Mobility – Transportation Systems should meet the public need for improved access, and for safe, comfortable, convenient, and economical movements of people and goods.

Accessibility – Transportation Systems should ensure the ease with which opportunities are reached. Transportation and land use measures should be employed to ensure minimal time and cost.

Environment – Transportation Systems should sustain development and preservation of the existing system and environment. (all trips)

Safety – Transportation Systems should provide minimal risk, accident, death, and injury. (all trips)

Livable Communities – Transportation Systems should facilitate Livable Communities in which all residents have access to all opportunities and travel times. (all trips)

Equity – The benefits of transportation investments should be equitably distributed among all ethnic, age, and income groups.

Cost effectiveness – Maximize return on transportation investment. (all trips)

The proposed project addresses this policy and SCAG's performance measures for Mobility, Accessibility, Environment, and Livable Communities in several ways. First, with proposed improvements and mitigation, all intersections in the project vicinity will operate at acceptable levels of service and perform no worse than levels of service for the no project condition. Second, the project is located adjacent to the Santa Ana Freeway and the Foothill and Eastern Transportation Corridor toll roads, all with available capacity. Third, the project is located near existing major employment centers including the Irvine Business Center and the Irvine Spectrum, which are major employment and activity centers. The uses proposed by the project maximizes the use of existing urbanized areas and increases alternatives to the single-occupant vehicle, both of which minimize emissions and congestion impacts. Fourth, the proposed project provides a wide range of housing opportunities that will be available to a variety of income groups. By providing additional housing near existing and proposed employment centers, the project will also increase opportunities to shorten or eliminate trips and the associated congestion and air quality impacts. In addition, the project is in proximity to rail service at the existing Metrolink stop in Irvine Spectrum.

4.02 Transportation investments shall mitigate environmental impacts to an acceptable level.

Section 5.2 – Traffic/Circulation of this Final Program EIR identifies various transportation impacts and details measures to mitigate these impacts. Roadway and intersection improvements adjacent to and in the vicinity of the proposed project are identified in Section 5.2, which mitigate the traffic impacts of the proposed project.

Project-specific transportation improvements will be constructed prior to operation of proposed development. The project is consistent with this core policy.

4.04 Transportation Control Measures shall be a priority.

Various Transportation Control Measures are set forth in the South Coast Air Quality Management District AQMP as set forth in the subsequent two year segment of the Regional Transportation Improvement Program), including:

- High Occupancy Vehicle projects and pricing alternatives, park and ride lots, and intermodal facilities.
- Transportation improvements, urban freeway system management improvements, smart corridors TSM programs, railroad consolidation programs, CMP-based demand management strategies, vanpool programs, and bicycle and pedestrian facilities.
- Marketing information services for employers and activity centers to encourage shared rides and transit use, and transit pass centers.

Transportation Control Measures (TCMs) consist of regionally significant transportation projects in the first two years of the Regional Transportation Improvement Program. The proposed project supports SCAG's policy by addressing two relevant categories of TCMs: 1) High Occupancy Vehicle projects and pricing alternatives, park and ride lots, and intermodal facilities; and 2) transit improvements, urban freeway system management improvements, smart corridors, TSM programs, railroad consolidation programs, CMP-based demand management strategies, vanpool programs, telecommunications facilities, demonstration programs, and bicycle and pedestrian facilities.

The project will increase densities around the Foothill and Eastern Transportation Corridor toll roads, thereby increasing the use of these priced alternatives to HOV lanes. The Foothill and Eastern Transportation Corridors are TCMs within SCAG's 2001 RTP and the applicable 1997 Air Quality Management Plan. Increase use of the toll roads will relieve congestion and related emissions.

Project components and mitigation measures identified throughout the EIR will enhance the provision of TCMs such as transit improvements and bicycle and pedestrian facilities, which will extend the local transit system and encourage its use. The proposed project supports TCMs and is consistent with this policy.

4.07 Projects proposed for the Regional Transportation Improvement Program that do not indicate a reasonable phasing of construction between segments will not be approved.

The proposed project does not interfere with the provision of any new transportation projects that are included in the RTIP. Consistent with the intent of this policy, project-specific transportation improvements will be constructed prior to occupancy of development.

The Air Quality Chapter core action that is generally applicable to the project is as follows:

5.11 Through the environmental document review process, ensure that plans at all levels of government (regional, air basin, county, subregional, and local) consider air quality, land

use, transportation, and economic relationships to ensure consistency and minimize conflicts.

Section 5.3 – Air Quality of this Final Program EIR addresses the matter of regional transportation and air quality modeling consistency. Regional transportation/air quality impacts are mitigated by traffic improvements, increased accessibility to priced transportation alternatives, energy conservation measures, transit improvements, housing opportunities within proximity to employment centers, required Transportation Control and Transportation Demand Management measures, and pedestrian and bicycle improvements.

The Water Quality Chapter core recommendations and policy options relate to the two water quality goals: to restore and maintain the chemical, physical, and biological integrity of the nation's water; and to achieve and maintain water quality objectives that are necessary to protect all beneficial uses of all waters. The core recommendations and policy options that are particularly applicable to the project include the following:

- 11.02 Encourage “watershed management” programs and strategies, recognizing the primary role of local government in such efforts.

Section 5.7 – Hydrology/Water Quality of this Final Program EIR addresses the subject of watershed management strategies and project components and mitigation measures that have been incorporated into the project. The project provides opportunities to enhance regional drainage and water quality facilities on the project site (PAZs 22a and 22b). The project is consistent with this core RCPG policy.

- 11.05 Support regional efforts to identify and cooperatively plan for wetlands to facilitate sustaining both the amount and quality of wetlands in the region.

Section 5.9 – Biological Resources of this Final Program EIR acknowledges the loss of some highly disturbed wetland/riparian habitat that can be mitigated to restore significant wetland resources. Additionally, wetland creation would occur within the proposed Wildlife Corridor (see PAZs 22a and 22b) on Figure 3-3. The establishment of the Wildlife Corridor and Drainage Corridor will sustain important wetland resources in the project area.

- 11.07 Encourage water reclamation throughout the region where it is cost effective, feasible, and appropriate to reduce reliance on imported water and wastewater discharges. Current administrative impediments to increased use of wastewater should be addressed.

Reclaimed water will be used for park area and landscaping. The project is consistent with this core policy.

Ancillary (Advisory Only) Regional Plan Policies

- 3.04 Encourage local jurisdictions' efforts to achieve a balance between the types of jobs they seek to attract and housing prices.

The Base Plan would provide 225 multi-family units while the Overlay Plan would provide 1,100 low density, 860 medium density, and 1,500 medium-high density residential dwelling units, as well as 165 multi-family units that will be ensured for homeless providers through the Development Agreement. These additional housing units will be developed for a variety of income levels, which will help achieve the workforce housing goals of the City of Irvine 2000-2005 Housing Element, which is designed to achieve the SCAG-prepared Regional Housing Needs Assessment targets. The project is consistent with the intent of this ancillary RCPG policy.

- 3.05 Encourage patterns of urban development and land use that reduce costs on infrastructure construction and make better use of existing facilities.

The proposed project redevelops a property that was previously developed and used for military operations. The project is located in and adjacent to an existing urban area, allowing the optimal use of existing facilities, and orderly expansion of facilities, when necessary. Sections 5.14 and 5.15 of this Final Program EIR include a discussion of utilities and service systems. Since existing infrastructure is used to the extent possible, the project is supportive of this ancillary RCPG policy.

- 3.09 Support local jurisdictions' efforts to minimize the cost of infrastructure and public service delivery, and efforts to seek new sources of funding for development and the provision of services.

As discussed in Sections 5.14 and 5.15 of this Final Program EIR, infrastructure and services necessary to serve the site are readily available on-site and adjacent to the project site. The proximity and available capacity minimizes the cost of extending infrastructure into the project area. Funding improvements have been and will be made to ensure that these improvements are accomplished in a cost effective manner. Therefore, the project is fully supportive of this ancillary policy.

- 3.10 Support local jurisdictions' actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.

The proposed project includes a General Plan Amendment and Zone Change for an approximately 4,400 acre project. Annexation of this area is anticipated by the end of 2003. This approach to processing the proposed project is consistent with this advisory policy.

- 3.11 Support provisions and incentives created by local jurisdictions to attract housing growth in job rich subregions and job growth in housing rich subregions.

The proposed Base Plan will allow for the creation of approximately 11,380 jobs on-site and 225 dwelling units. The 11,380 jobs are within the OCP 2000 projections for this area; however, the 225 housing units are additional units that are proposed in order to partially address that the project is located in a jobs rich subregion.

The Overlay Plan is expected to result in 1,100 low density, 860 medium density, and 1,500 medium-high density residential dwelling units as well as 165 multi-family units and 16,510 jobs on-site at buildout. The number of jobs does not exceed current OCP 2000 projections for the project area. Since the Orange County subregion is

considered to be jobs-rich and housing-poor, the provision of these housing units in terms of the subregional jobs/housing balance is considered beneficial.

Although the Subregion and City are expected to continue to be jobs rich in the future due to their attractive characteristics for business and economic forces in the region, the proposed project will provide housing in excess of OCP 2000 projections for the area.

- 3.12 Encourage existing or proposed local jurisdictions' programs aimed at designing land uses that encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike.

As shown and discussed in Section 3.0 – Project Description of this Final Program EIR, the Base Plan proposes 99 acres of Transportation and Transit related facilities and 20 acres of Transit Oriented Development in the southern portion of the project area. The Overlay Plan proposes 210 acres of Transit Oriented Development in the southern portion of the project area. These land use proposals take advantage of the existing commuter rail station (the Irvine Multimodal Transportation Center) located within the project vicinity and encourage the increased use of transit in this area. As is also shown in the Section 3.0, both the Base Plan and Overlay Plan provide Class 1 trail facilities that traverse the project area. Additionally, as mitigation for the project, the City will coordinate with the Orange County Transportation Authority to restructure transit service plans to provide effective service to the project area.

- 3.13 Encourage local jurisdictions' plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment.

The project is surrounded by existing development to the south, east and west and an existing rail line crosses the southern part of PA 51, which is used for Metrolink commuter rail and Amtrak passenger and freight services. By developing immediately adjacent to an existing urbanized area and in the vicinity of commuter rail and passenger facilities, the project enhances the options for non-motorized access throughout the larger area. The project proposes pedestrian sidewalks, bikeways and transit routes that will link to surrounding trails, land uses, and activity centers. Additionally, as mitigation for the project, the City will coordinate with the Orange County Transportation Authority to restructure transit service plans to provide effective service to the project area.

- 3.14 Support local plans to increase density of future development located at strategic points along the regional commuter rail, transit systems, and activity centers.

The proposed project is located in close proximity to the Irvine Multimodal Transportation Center, the I-5, the Foothill and Eastern Transportation Corridor toll facilities, and activity centers such as the Spectrum and Irvine Business Center. The proposed mix of land uses would create a major activity center at the project site, and would result in additional residents and businesses in proximity to these commuter rail, transit systems, and other major activity centers. The project is supportive of this ancillary policy.

- 3.15 Support local jurisdictions' strategies to establish mixed use clusters and other transit-oriented developments around transit stations and along transit corridors.

The proposed project is located in close proximity to the Irvine Multimodal Transportation Center, and the I-5, the Foothill and Eastern Transportation Corridor toll facilities. As shown in Section 3.0 – Project Description of this Final Program EIR, the Base Plan proposes 99 acres of Transportation and Transit related facilities and 20 acres of Transit Oriented Development in the southern portion of the project area. The Overlay Plan proposes 210 acres of Transit Oriented Development in the southern portion of the project area. These land use proposals take advantage of the existing commuter rail station (the Irvine Multimodal Transportation Center) located within the project vicinity, encouraging the increased use of transit in this area. The project is supportive of this ancillary policy.

- 3.16 Encourage developments in and around activity centers, transportation corridors, underutilized infrastructure systems, and areas needing recycling and redevelopment.

Per SCAG's policy, the proposed project is located in close proximity to the Irvine Multimodal Transportation Center, the Foothill and Eastern Transportation Corridor toll facilities, and activity centers such as the Spectrum and Irvine Business Center. Existing infrastructure serves the site, which was previously developed for military uses. Closure of the military base created a large area in the region that offered opportunity for recycling and redevelopment. The proposed project will redevelop the area, using some of the available capacity of the toll roads and the existing infrastructure on-site. Use of the existing toll roads will have benefits throughout the County, as the toll roads relieve congestion on competing free routes. SCAG's RTP supports the development of toll corridors as an innovative means of providing mobility and reducing congestion. Payment of fees and toll revenue provides additional funding sources for buildout of the transportation corridor system, while use of some of the existing infrastructure on-site provides for an economical and efficient use and extension of services and utilities in the subregion. The project is supportive of this ancillary policy.

- 3.17 Support and encourage settlement patterns that contain a range of urban densities.

As described in Section 3.0 – Project Description, the Base Plan will provide for the development of approximately 225 high density multi-family dwelling units on-site. The addition of multi-family units into this area will help provide a range of densities in a subregion that is largely developed with single-family homes. The Overlay Plan is expected to result in 1,100 low density, 860 medium density, and 1,500 medium-high density residential dwelling units, as well as 165 multi-family units, providing a range of urban densities within the project site. The project is supportive of this ancillary policy.

- 3.18 Encourage planned development in locations least likely to cause adverse environmental impact.

The project proposes redeveloping an area in which significant portions were previously disturbed by years of military use. The most environmentally and agriculturally significant areas of the project area will be preserved within the proposed Habitat Preserve, Open Space, Agriculture, Drainage/Riparian Corridor, and Wildlife Corridor

designations. Table 2-1 acknowledges that all biological impacts will be mitigated to a level less than significant. The project is supportive of this ancillary policy.

- 3.19 SCAG shall support policies and actions that preserve open space areas identified in local, state, and federal plans.

The Base Plan will preserve 716 acres within Open Space/Park, 438 acres of Agriculture, 974 acres of Habitat Preserve, 229 acres of Drainage/Riparian Corridor and 179 acres of Wildlife Corridor, which is consistent with the NCCP and City of Irvine agricultural preservation policies and programs. The Overlay Plan will preserve 382 acres within Open Space Park, 303 acres of Agriculture, 974 acres of Habitat Preserve, 229 acres of Drainage/Riparian Corridor, and 179 acres of Wildlife Corridor. The project is supportive of this ancillary policy.

- 3.20 Support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and lands containing unique and endangered plants and animals.

Section 5.9 – Biological Resources of this Final Program EIR acknowledges the loss of some biological resources. Impacts to biological resources will be mitigated to a level less than significant with proposed mitigation and project components. For example, under either the Base Plan or Overlay Plan, wetland creation would occur within the proposed Wildlife Corridor (see Subareas 22a and 22b) on Figure 3-3. The establishment of the Wildlife Corridor and Drainage Corridor will sustain important wetland resources in the project area. Additionally, under both projects, the most significant ecological and agricultural areas are preserved within the Habitat Preserve, Drainage/Riparian Corridor, Wildlife Corridor and Agricultural Areas. The project supports this ancillary policy.

- 3.21 SCAG shall encourage the implementation of measures aimed at preservation and protection of recorded and unrecorded cultural and archaeological sites.

Section 5.11 – Cultural Resources includes a discussion of potential impacts to cultural and archaeological sites and proposes mitigation measures appropriate to reduce these impacts to a level less than significant. The project supports this ancillary policy.

- 3.22 SCAG shall discourage development, or encourage the use of special design requirements in areas with steep slopes, high fire, flood, and seismic areas.

Section 5.6 – Geology and Seismicity addresses potential hazards associated with steep slopes and seismicity. Sections 5.5 – Public Health and Safety and 5.7 – Hydrology and Water Quality address high fire and flood hazards and propose mitigation to reduce these hazards to a level less than significant. The project supports this ancillary policy.

- 3.23 Encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to develop emergency response and recovery plans.

Various sections of this Final Program EIR (5.4 – Noise, 5.9 – Biological Resources, 5.6 – Geology and Seismicity, and 5.5 – Public Health and Safety) provide mitigation for potential impacts related to these environmental issue areas. The project supports this ancillary policy.

- 3.24 Encourage efforts of local jurisdictions in the implementation of programs that increase the supply and quality of housing and provide affordable housing as evaluated in the Regional Housing Needs Assessment.

The proposed project contributes to the City's Housing Element Goal of providing more housing for workers in the City. As described in Section 3.0 – Project Description, the Base Plan will provide for the development of approximately 225 high density multi-family dwelling units on-site. The addition of multi-family units into this area will help provide a range of densities in a subregion that is largely developed with single-family homes. The Overlay Plan is expected to result in 1,100 low density, 860 medium density, and 1,500 medium-high density residential dwelling units as well as 165 multi-family units, providing a range of urban densities within the project site. Each of the proposed project's will help meet the needs of different types of workers and will help meet the City's fair share allocation through 2025. The project supports this ancillary policy.

- 3.27 Support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement and fire protection.

Sections 5.14 – Public Services and Facilities and 5.15 – Utilities explain how the project will provide effective services to the project area. Section 5.13 – Population/Housing addresses how the Base Plan and Overlay Plan will provide a variety of additional housing opportunities for the City's workers. The project supports this ancillary policy.

- 9.01 Provide adequate land resources to meet the outdoor recreation needs of the present and future residents in the region and promote tourism in the region.

As described in Section 3.0 – Project Description of this Final Program EIR, the Base Plan will provide for 1,564 acres of Open Space/Park, Sports Park, and Golf Course uses as well as 478 acres of Cultural/Institutional and Exposition Center uses. The Overlay Plan will provide for 1,073 acres of Open Space/Park, Sports Park, and Golf Course uses as well as 156 acres of Cultural/Institutional uses. Each of the proposed projects is intended to help meet the City's and region's parks and recreational needs, as well as draw tourists to the area. The proposed project supports this ancillary policy.

- 9.02 Increase the accessibility to open space lands for outdoor recreation.

As described in Section 3.0 – Project Description of this Final Program EIR, the Base project will provide for 1,564 acres of Open Space/Park, Sports Park, and Golf Course uses as well as 478 acres of Cultural/Institutional and Exposition Center uses. The Overlay project will provide for 1,073 acres of Open Space/Park, Sports Park, and Golf Course uses as well as 156 acres of Cultural/Institutional uses. Bicycle and pedestrian

paths will also traverse the project site. The project's location and proximity to regional activity centers, transit, and regional corridors will increase accessibility to open space for outdoor recreation. The project supports this ancillary policy.

9.03 Promote self-sustaining regional recreation resources and facilities.

Discussions occur throughout the Final Program EIR regarding the project's recreation resources and facilities. The project is supportive of this ancillary policy.

9.04 Maintain open space for adequate protection of lives and properties against natural and man-made hazards.

Preservation of areas of permanent open space within the project area will protect lives and properties against natural and human-caused hazards by avoiding development within areas where developmental hazards occur. The project is supportive of this ancillary policy.

9.05 Minimize potentially hazardous development in hillsides, canyons, areas susceptible to flooding, earthquakes, wildfire, and other known hazards, and areas with limited access for emergency equipment.

Preservation of areas of permanent open space within the project area will protect lives and properties against natural and human-caused hazards by avoiding development within areas where developmental hazards occur. The project is supportive of this ancillary policy.

9.06 Minimize public expenditure for infrastructure and facilities to support urban type uses in areas where public health and safety could not be guaranteed.

Preservation of areas of permanent open space within the project area will protect lives and properties against natural and human-caused hazards by avoiding development within areas where developmental hazards occur. Retaining these areas as permanent open space will reduce the need for the extension of infrastructure and facilities into these areas. The project is supportive of this ancillary policy.

9.07 Maintain adequate viable resource production lands, particularly lands devoted to commercial agriculture and mining operations.

Both the Base Plan and Overlay Plan will impact land currently used for agricultural production. Section 5.8 – Agricultural Resources provides a detailed discussion of how the project will help protect and preserve remaining viable agricultural resources by helping to implement the Agricultural Legacy Program.

9.08 Develop well-managed viable ecosystems or known habitats of rare, threatened, and endangered species, including wetlands.

Section 5.9 – Biological Resources acknowledges that the Base Plan and Overlay Plan have the potential to impact the southern tarplant, which is a federal species of concern, disturbed wetland habitat, and a wide range of mature trees. However, under both the Base Plan and Overlay Plan, the most significant of these resources will be retained or

restored in the 974-acre Habitat Preserve area and within the Wildlife Corridor and Drainage/Riparian Corridor areas. Additional mitigation measures will reduce impacts to these ecosystems to a level less than significant. The project supports this ancillary policy.

Threshold 3. Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

Both the Base Plan and Overlay Plan incorporate the 974-acre NCCP Habitat Preserve into the project design. The Habitat Preserve has been conveyed to the Federal Aviation Administration, with the Department of the Interior managing the land as part of the NCCP/HCP. Since inclusion of the Habitat Preserve in the NCCP/HCP is consistent with the adopted NCCP/HCP, the proposed project will not result in an impact to any applicable conservation plan or natural community conservation plan.

Special Area Management Plan (SAMP)

The SAMP process is designed to complement the California Department of Fish and Game's (CDFG's) Natural Communities Conservation Planning (NCCP) program, as well as the U.S. Fish and Wildlife's Habitat Conservation Plan (HCP). Both the Base Plan and Overlay Plan incorporate the 974-acre NCCP/HCP Habitat Preserve into the project design. Additionally, under both the Base Plan and Overlay Plan, wetland creation would occur within the proposed Wildlife Corridor (see Subareas 22a and 22b) on Figure 3-3. The establishment of the Wildlife Corridor and Drainage Corridor will sustain important wetland resources in the project area. Additionally, all future projects developed in the project area will be required to meet federal, state, regional and local requirements regarding potential impacts to sensitive resources, which includes waters of the U.S., riparian and wetland areas, and streambeds. No impact associated with the SAMP will occur.

5.1.4 Significant Impacts

Base Plan and Overlay Plan

No significant land use impact has been identified.

5.1.5 Mitigation Measures

Base Plan and Overlay Plan

No significant land use impact has been identified. As a result, no mitigation measure is proposed.

5.1.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Not applicable.

Notes and References

1. City of Irvine. *General Plan*. March 1999.
2. County of Orange. *EIR No. 564: James A Musick Jail Expansion and Operation, Relocation of Interim Care Facility, Southeast Sheriff's Station*. August 1996.
3. County of Orange. *EIR No. 564: James A. Musick Jail Expansion and Operation - Recirculated Sections*. September 1998.
4. County of Orange. *General Plan*. 1987-1996.
5. Naval Facilities Engineering Command. *Air Installations Compatible Use Zones Study, MCAS El Toro*. March 1981.
6. Airport Land Use Commission for Orange County. *Airport Environs Land Use Plan, adopted November 1995*.

5.2 Traffic/Circulation

5.2.1 Environmental Setting

The following section is based on the following technical reports: Orange County Great Park Traffic Impact Analysis and the Orange County Great Park General Plan Amendment and Zone Change Traffic Impact Analysis, City of Irvine, California prepared by Urban Crossroads, Inc. (December 2002). These studies are contained in Volume II Appendix G and Volume III Appendices K, L, and M of this Final Program EIR.

Study Area

For analysis purposes, a traffic study area has been identified with respect to the potential traffic impacts of the proposed project. The study area and corresponding intersection analysis locations is the same for each of the time frames analyzed; however, the number of intersections studied varies. The analysis time frames include existing conditions, Year 2007, Year 2025, and Post 2025. Figure 5.2-1 depicts the 2007 study area and 145 intersection analysis locations. Figure 5.2-2 depicts the 2025 study area and 147 intersection analysis locations. Figure 5.2-3 depicts the Post 2025 study area and 156 intersection analysis locations. In addition to the City of Irvine, the analysis study area encompasses portions of several adjacent jurisdictions, including the City of Lake Forest, the City of Mission Viejo, the City of Laguna Hills, the City of Laguna Woods, the City of Aliso Viejo, the City of Laguna Beach, and areas located within the unincorporated County of Orange.

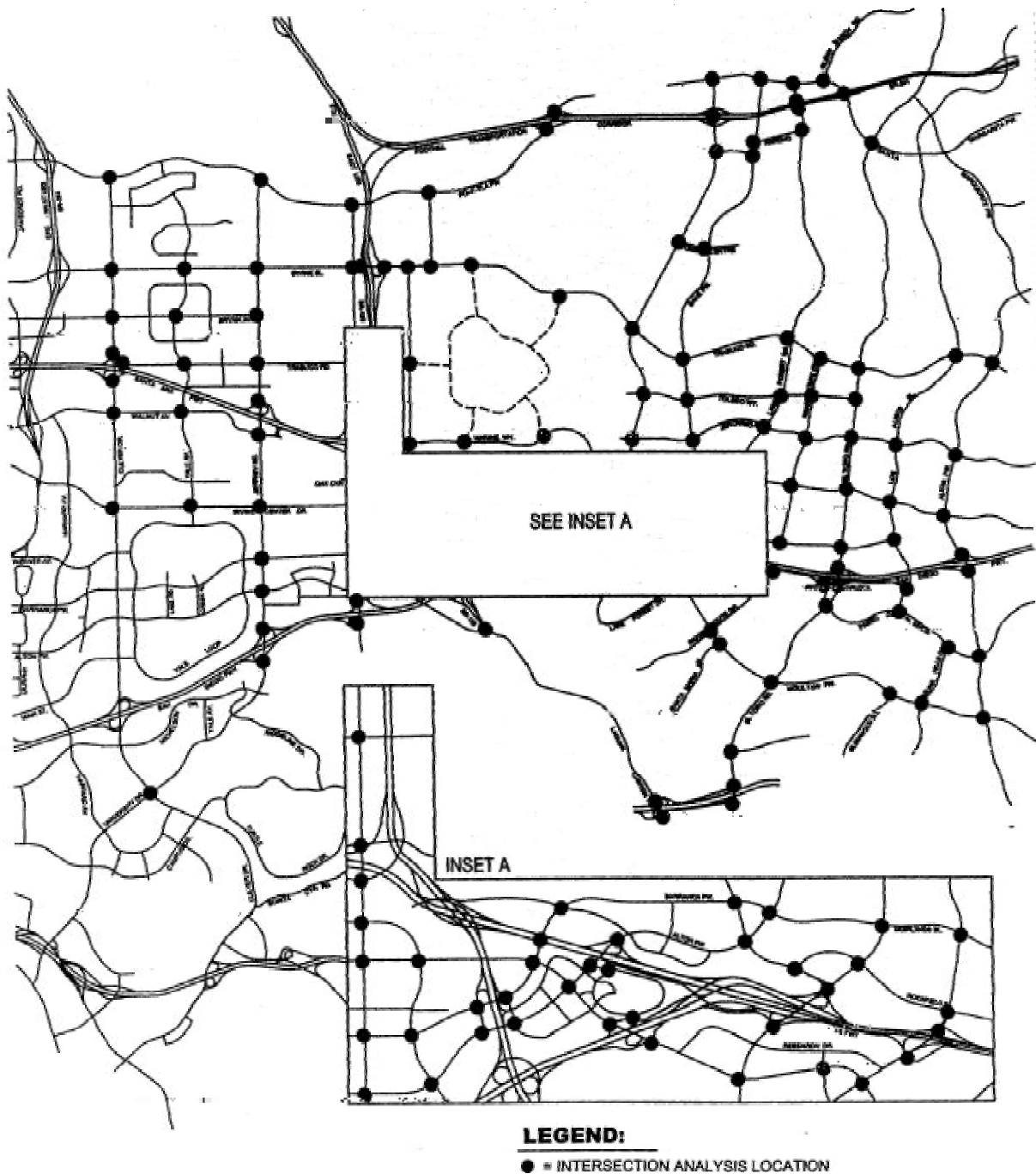
City of Irvine Traffic Performance Criteria

Roadway system performance is generally described in terms of level of service (LOS). LOS "A" represents the highest or best LOS, while LOS "F" represents the lowest or worst LOS. During peak hours, levels of service "A" to "D" are acceptable (at a minimum). Each LOS is briefly summarized in Table 5.2-1.

The performance criteria contained in the adopted City of Irvine General Plan state that roadway segments and intersections outside of the Irvine Business Complex (City of Irvine Planning Area 36) and the Irvine Center (City of Irvine Planning Area 33) should operate at LOS "D" or better for peak hour conditions except the intersection of Bake Parkway and the I-5 Northbound Ramps. However, as per current City criteria within PAs 33 and 36, roadway segments and intersections could operate at LOS "E" or better for peak hour conditions.¹ The City of Lake Forest has a similar rule that allows LOS E for roadways designated as Commercial Streets on the City of Lake Forest General Plan Arterial Highway Plan. The County of Orange Congestion Management Program (CMP) also allows LOS E on the CMP roadway system.

Figure 5.2-1

¹ Exhibit 2-1 of the traffic study, which is contained in Appendix K of this EIR, depicts the areas where LOS E is acceptable. Additionally, as part of the proposed General Plan Amendment, City of Irvine General Plan Amendment Policy B-1(C) will be amended to add that LOS "E" would be considered acceptable for application to intersections impacted in PAs 13, 31, 32, 34, 35, and 39.

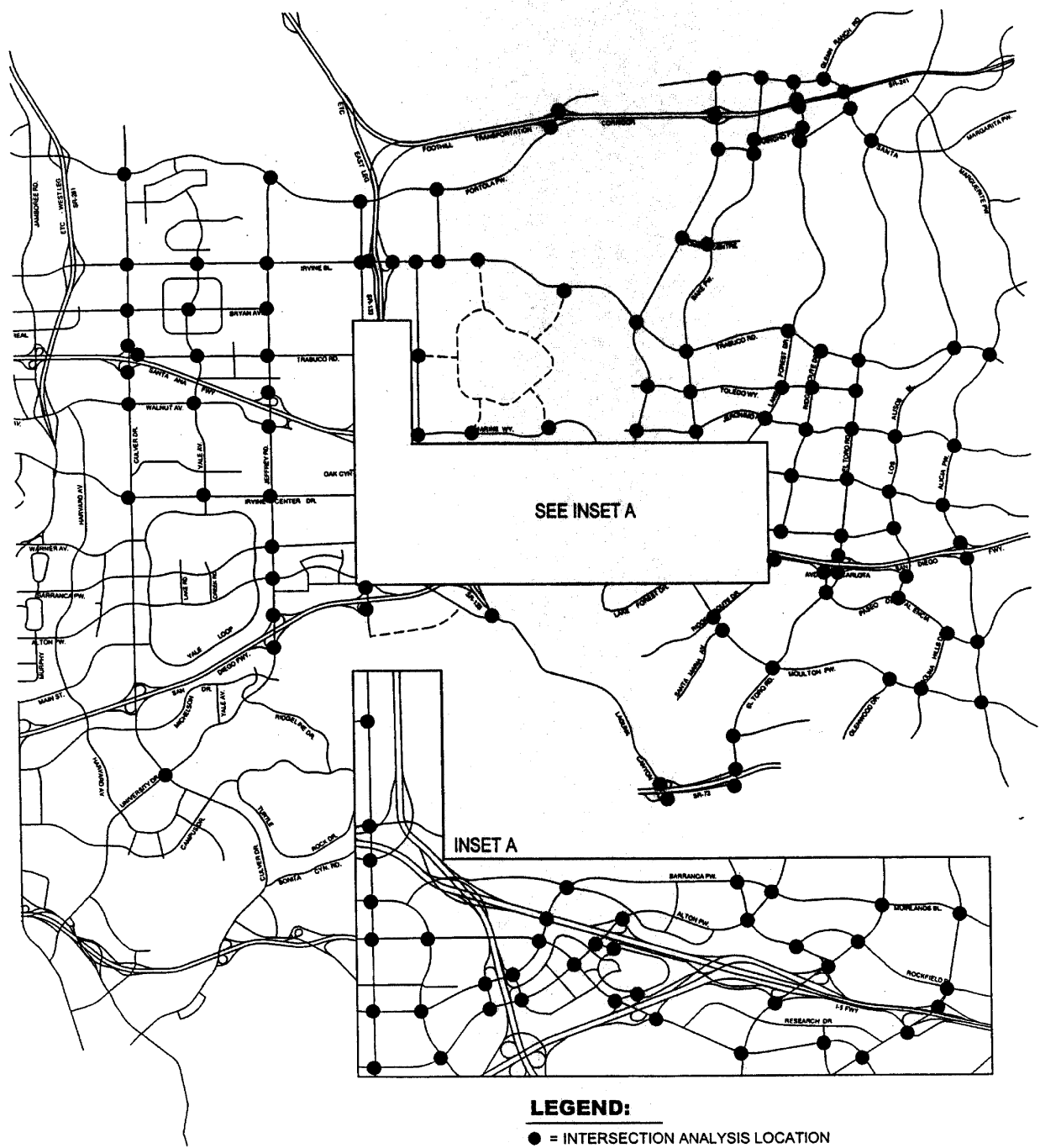


Source: Urban Crossroads, 2002.

Not to Scale

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Figure 5.2-1
2007 Intersection Analysis Locations
City of Irvine



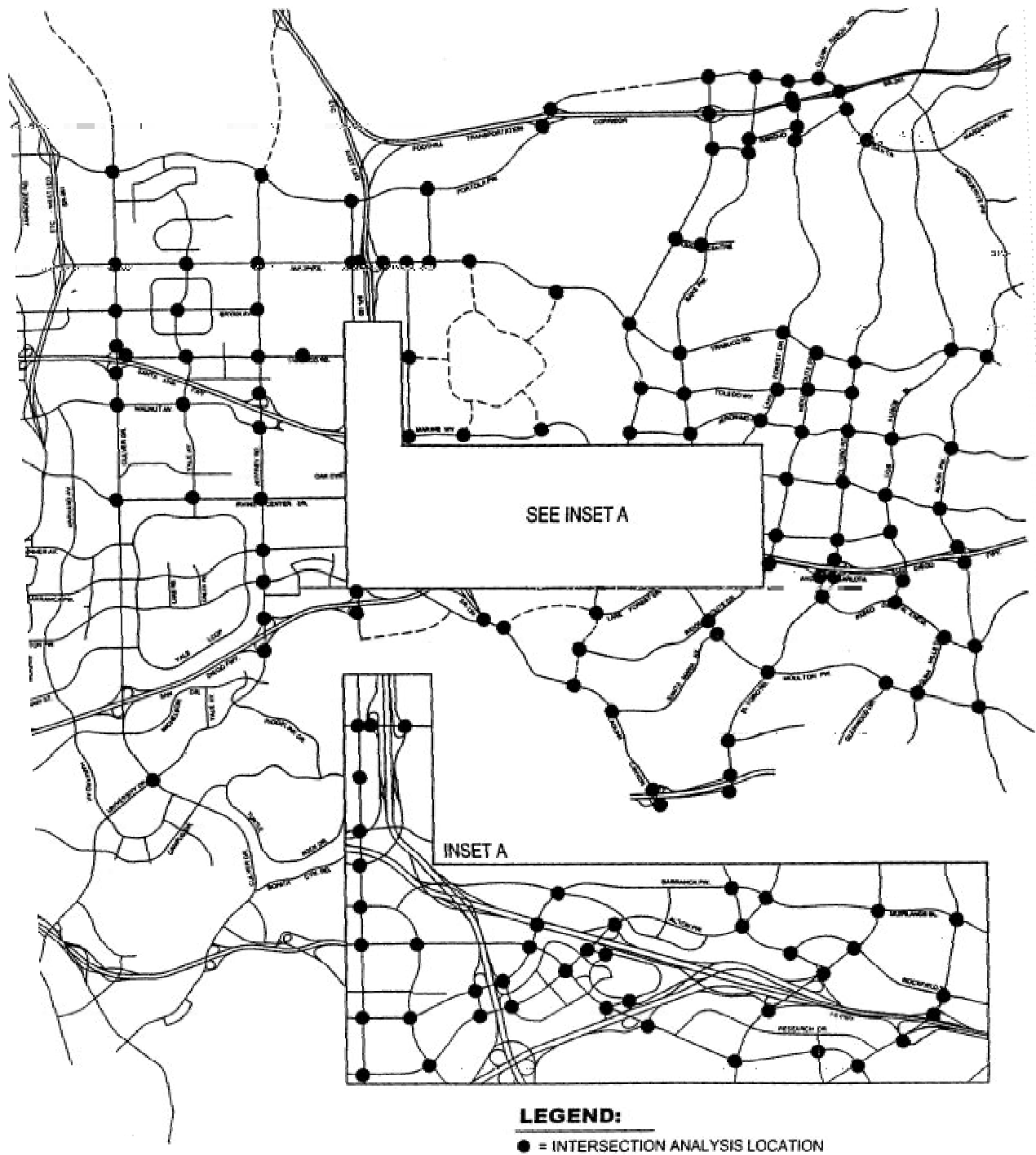
Source: Urban Crossroads, 2002.

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Figure 5.2-2
2025 Intersection Analysis Locations

City of Irvine



Source: Urban Crossroads, 2002.

Not to Scale

Orange County Great Park
Final EIR

Figure 5.2-3
Year Post 2025 Intersection Analysis Locations
City of Irvine

**TABLE 5.2-1
ROADWAY AND INTERSECTION LOS CRITERIA**

LOS	Description	V/C or ICU
LOS A	LOS "A" conditions are characterized by free flow operations. Vehicles are unimpeded in their ability to maneuver within the traffic stream, and stopped delay at intersections is minimal.	0-0.6
LOS B	LOS "B" conditions are characterized by travel speeds which are within 70% of free flow operational speeds. Vehicles are slightly restricted in their ability to maneuver within the traffic stream, and stopped delay at intersections is not bothersome to most drivers.	0.61-0.7
LOS C	LOS "C" conditions are characterized as stable operations. The ability to maneuver and change lanes may be somewhat restricted, and travel speeds may drop to 50% of free flow speeds. Some queuing typically occurs at signalized intersections, however all vehicles clear the intersection on all or nearly all cycles.	0.71-0.8
LOS D	LOS "D" conditions are characterized by high density traffic flows. Travel speeds may range as low as 40% of free flow operational speeds. Vehicles are restricted in their ability to maneuver within the traffic stream, and one or more vehicles may not clear the intersection within a single signal cycle on a regular basis.	0.81-0.9
LOS E	LOS "E" conditions are characterized as operations at or near capacity. There is little or no freedom to maneuver within the traffic stream. Comfort and convenience levels are low, and driver frustration is generally high. Operations at this level are generally unstable, with even minor disturbances or disruptions resulting in the breakdown of operations and substantially increased delays. The failure of vehicles to clear an intersection in a single cycle is a regular occurrence.	0.91-1.00
LOS F	LOS "F" conditions represent forced or breakdown flow. The traffic volume approaching location exceeds the capacity of the system at that location. Intersections often become the focal point for roadway system failure. Operations are characterized by extensive queues and long delays. Some or all vehicles fail to clear the intersection during every signal cycle.	> 1.00

Source: Urban Crossroads, December 2002.

The CMP criteria for deficiency (LOS F or worse) has also been accepted by Caltrans District 12 for freeway mainlines and ramps.

The City of Irvine traffic analysis performance criteria specify the same standards for daily roadway segments described previously for peak hour conditions. However, if a roadway does not meet the performance standard on a daily basis, a number of steps may be required to demonstrate acceptable conditions on such a roadway. These steps include the analysis of peak hour roadway segment operations and peak hour intersection operations as necessary to demonstrate acceptable traffic conditions during peak traffic conditions.

The City of Irvine performance criteria also include standards related to determining the significance of project impacts on the roadway system. For both roadways and intersections, improvements addressing deficiencies are required if the project causes an increase of 0.02 in either the roadway volume to capacity (V/C) ratio or the intersection capacity utilization (ICU). This criteria is consistent with the standards of the adjacent cities of Lake Forest, Mission Viejo, Laguna Hills, and Laguna Woods.

The City of Aliso Viejo does not have an adopted standard; therefore, this traffic analysis uses the 0.02 standard. Freeways/tollways (mainline segments) and CMP roadways and intersections (i.e., the adopted CMP roadway system) have been evaluated using the greater than 0.03 criteria specified in the CMP.

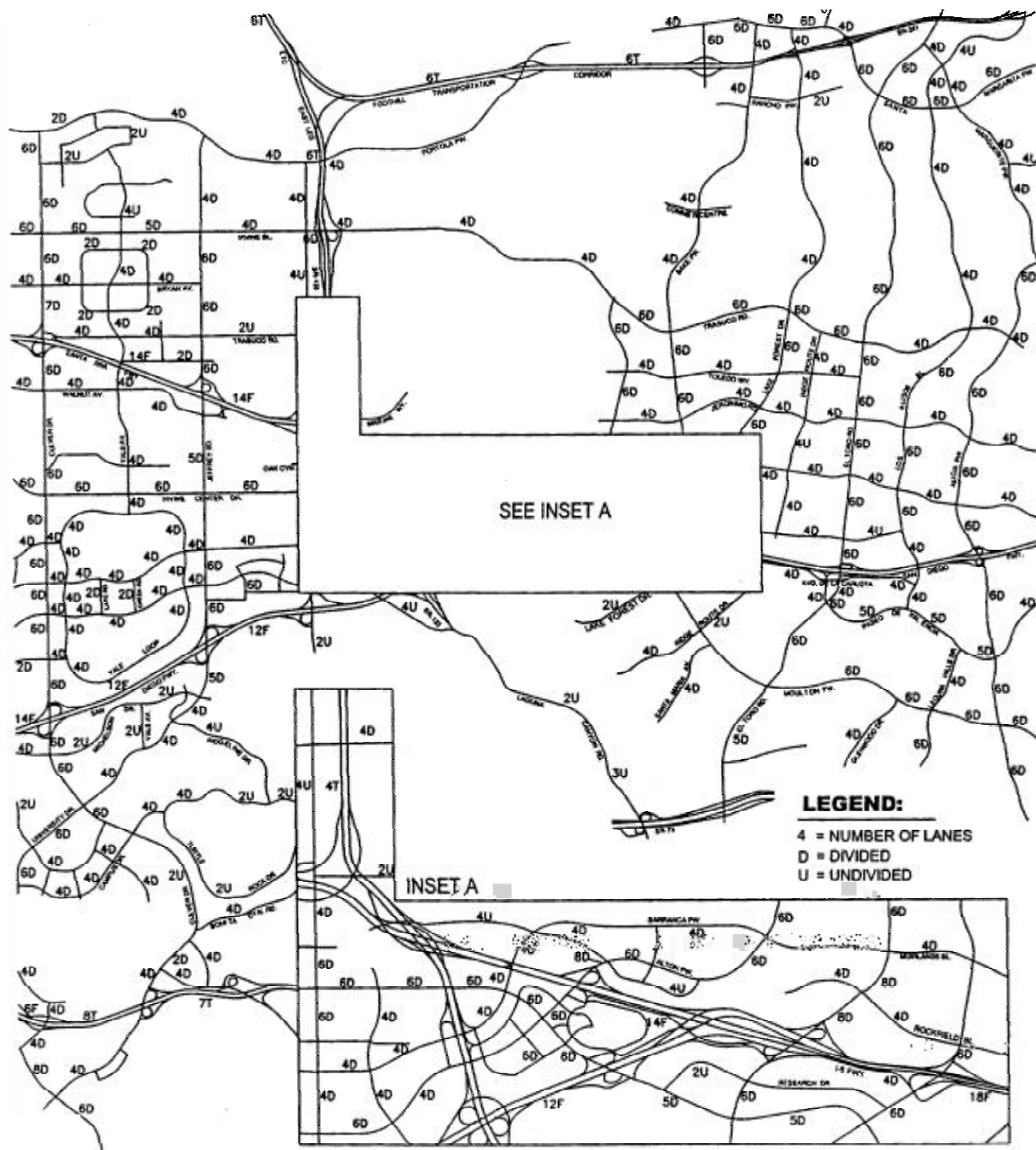
Analysis Methodologies

The overall approach to the traffic impact analysis is based on the evaluation of traffic conditions for existing conditions, 2007 conditions, 2025 conditions, and Post 2025 conditions. The specific roadway segment and intersection traffic operations analysis methodologies are discussed in further detail in Section 2.0 of Volume II Appendix G. The future traffic volume analysis for 2007, 2025 and Post 2025 is based on the Irvine Transportation Analysis Model (ITAM).

Existing and Planned Circulation System

Figure 5.2-4 depicts the existing number of through lanes for the traffic study area. As depicted, roadway cross-sections range from two lane undivided roadways up to eight lane divided arterials (such as Bake Parkway north of the I-5 Freeway).

The planned circulation system includes the planned system in accordance with both City of Irvine and Countywide planning efforts. The adopted City of Irvine Arterial Highway Designations are presented on Figure 5.2-5. Figure 5.2-6 depicts the overall study area planned system per the Orange County Master Plan of Arterial Highways (MPAH). The countywide MPAH is the responsibility of the Orange County Transportation Authority (OCTA). All local jurisdictions are required to maintain consistency with the MPAH. Several other cities are included within the overall study area. Their roadway infrastructure plans are generally consistent with the Orange County MPAH. The City of Aliso Viejo is newly incorporated and does not yet have an independent circulation plan. The City of Lake Forest Arterial Highway Plan is presented on Figure 5.2-7. The City of Laguna Hills General Plan Circulation Map is depicted on Figure 5.2-8.

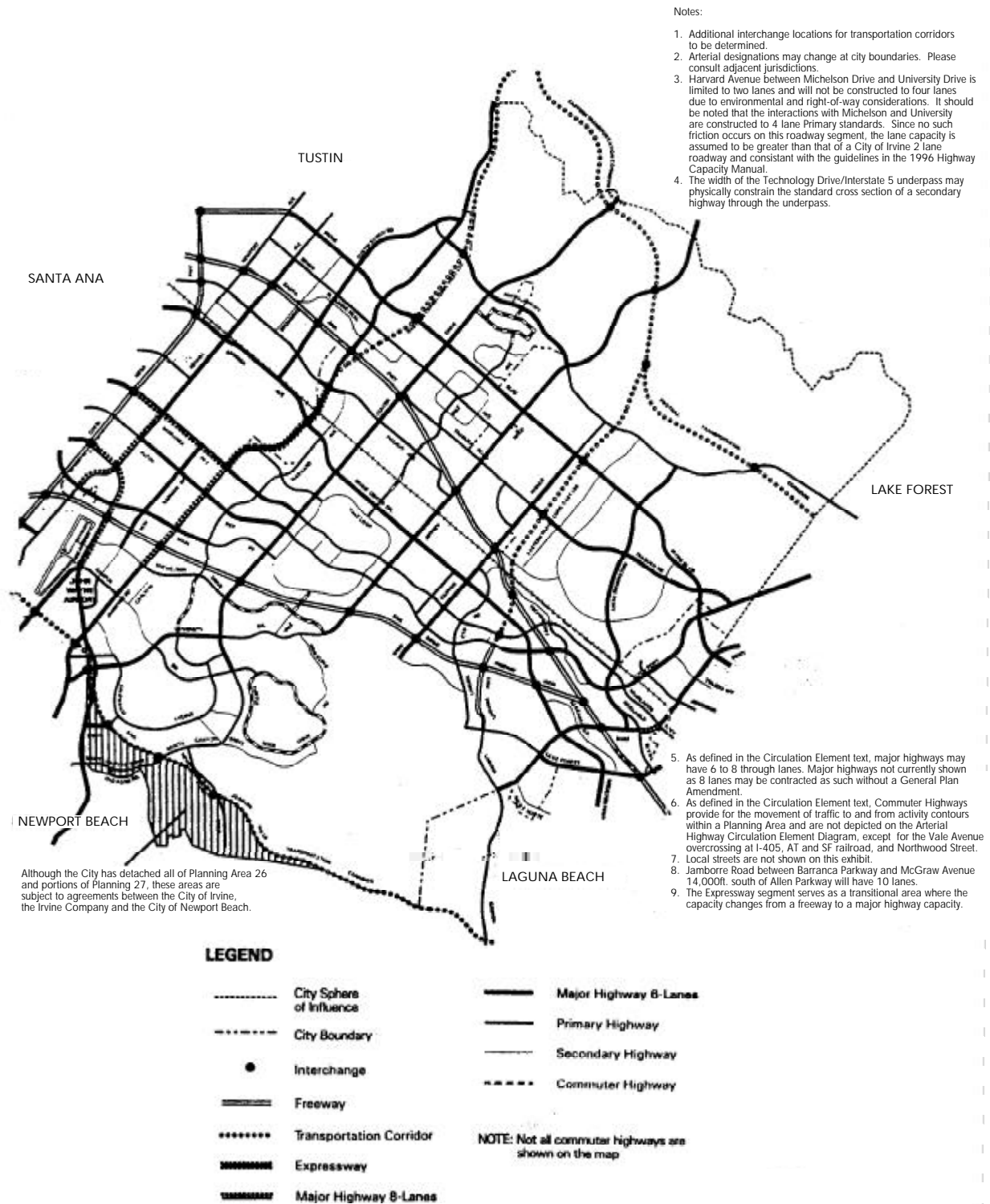


Source: Urban Crossroads, 2002.

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Figure 5.2-4
Existing Number of Through Lanes
City of Irvine

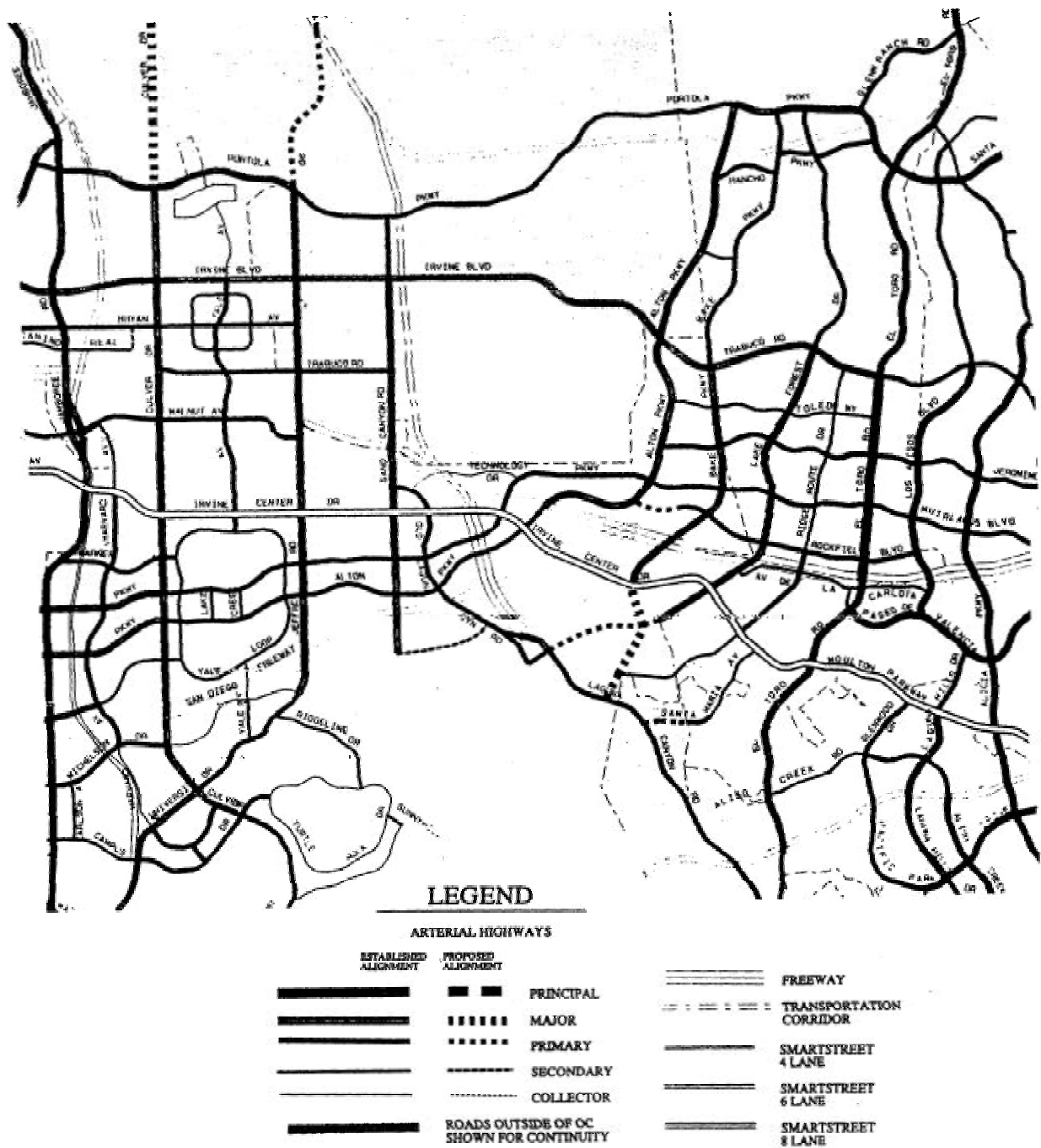


Source: City of Irvine

Not to Scale

Orange County Great Park
Final EIR

Figure 5.2-5
City of Irvine Arterial Highway Designations
City of Irvine



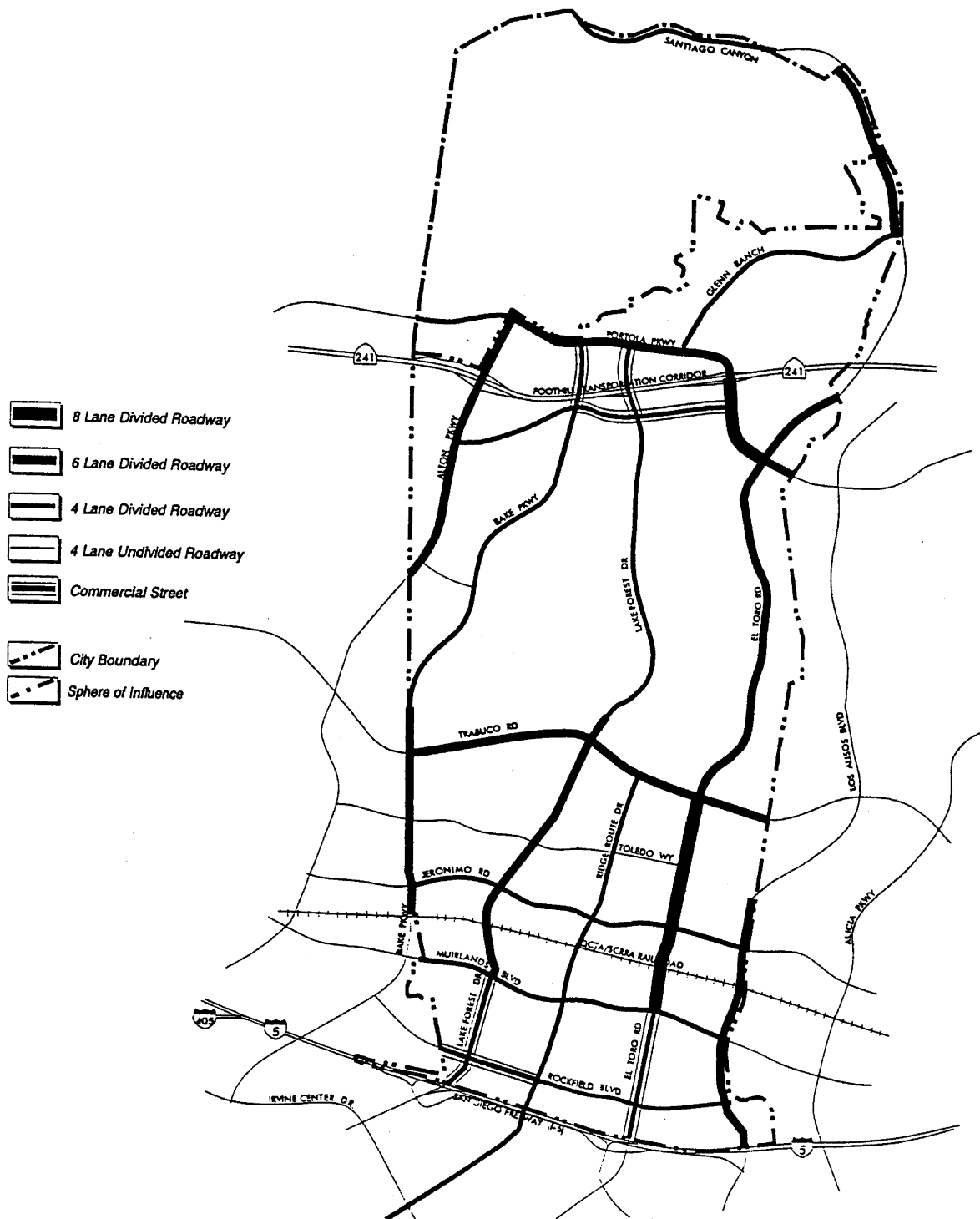
Source: Urban Crossroads, 2002.

Not to Scale

Orange County Great Park
Final EIR

Figure 5.2-6
Orange County Master Plan of Arterial Highways

City of Irvine



Source: City of Lake Forest.

Not to Scale

Orange County Great Park
Final EIR

Figure 5.2-7
Lake Forest Arterial Highway Plan

City of Irvine

Existing Roadway Segment Traffic

The existing average daily traffic (ADT) volumes are summarized on Figure 5.2-9. Existing ADT volumes range from less than 10,000 vehicles per day on some roadways to upwards of 65,000 vehicles per day (VPD) on some major arterials. The highest volume roadways under existing conditions include:

1. Bake Parkway (73,000 VPD north of I-5)
2. Alicia Parkway (65,000 VPD north of I-5)
3. Lake Forest Drive (57,000 VPD north of I-5)
4. El Toro Road (53,000 VPD north of I-5)
5. Culver Drive (45,000 VPD south of I-5)

Bake Parkway, in addition to carrying the highest overall daily traffic volume of any arterial in the study area, also carries volumes in excess of 46,000 VPD from the I-5 Freeway north of Trabuco Road.

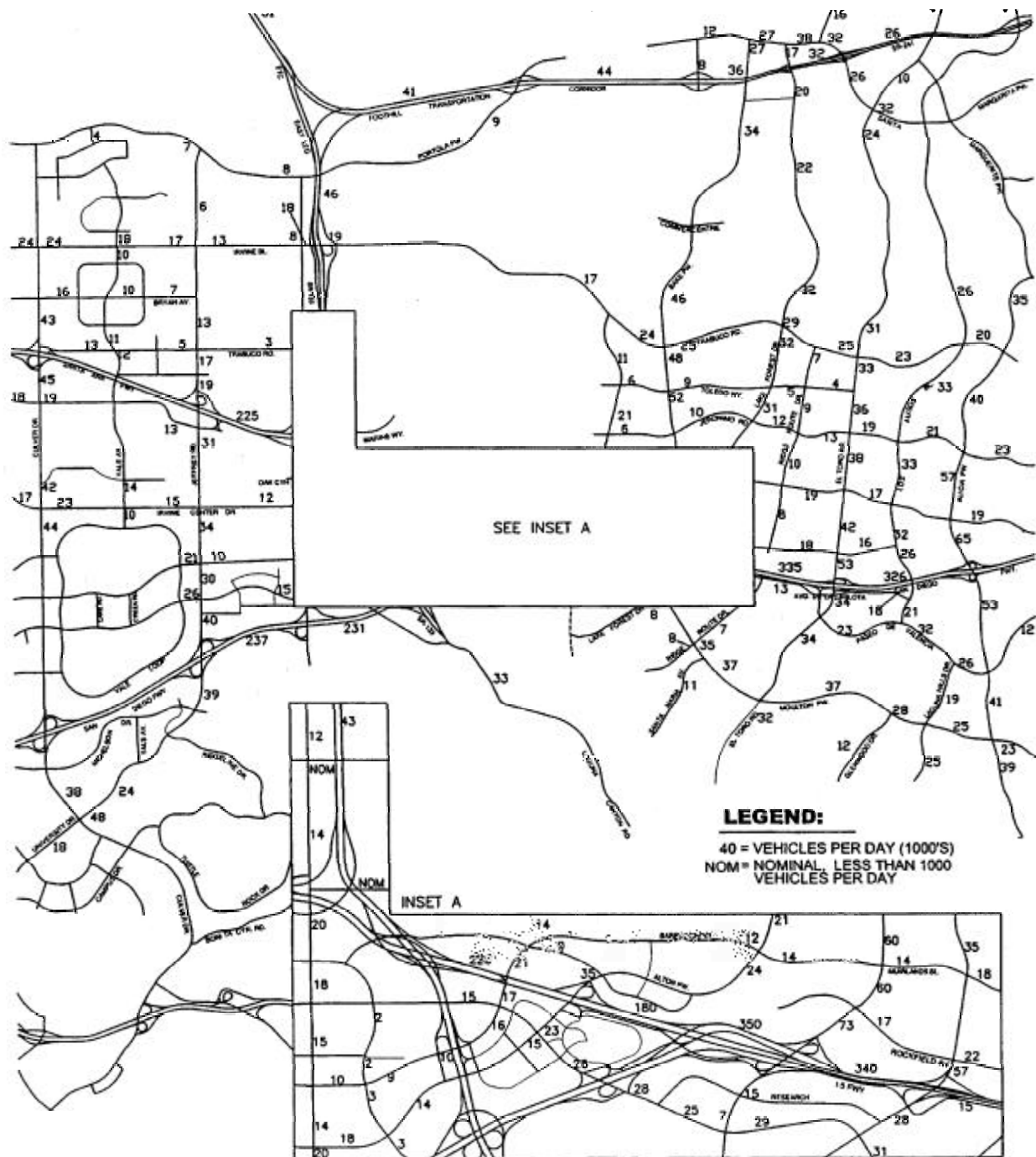
Existing Daily Roadway/Freeway Segment Volume/Capacity Ratios

The existing roadway and freeway/tollway geometrics and the daily traffic volumes have been used to calculate existing daily roadway segment and freeway/tollway volume/capacity (V/C) ratios. Fifteen roadway segments and six freeway segments carry daily traffic volumes resulting in daily V/C ratios that indicate the need for further analysis of peak hour conditions.

Existing Peak Hour Roadway Segment Volume/Capacity Ratios

The peak hour roadway segment V/C ratio analysis indicates that no roadway segment within the study area experiences peak hour roadway segment deficiencies under existing conditions, except for freeway segments.

Existing conditions peak hour analysis has also been completed for the freeway ramps within the study area. Table 3-2 of the traffic report (Volume II Appendix G) summarizes the results of the freeway ramp peak hour analysis. The only freeway/tollway ramp experiencing deficient peak hour operations under existing conditions is the northbound direct on ramp at the I-5 Freeway/Bake Parkway interchange. At this location, the ramp currently experiences a V/C ratio in excess of 1.0.



Source: Urban Crossroads, 2002.

Not to Scale

Orange County Great Park
Final EIR

Figure 5.2-9
Existing Average Daily Traffic (ADT)

City of Irvine

Existing Peak Hour Intersection Operations Analysis

Existing peak hour intersection traffic conditions have been analyzed for all of the analysis locations (intersections) that currently exist in the study area. The vast majority of the intersections analyzed operate at acceptable levels of service. However, there are a number of intersections currently operating at LOS "E" or LOS "F". The following ten intersections currently experience deficient peak hour traffic operations:

1. Culver Drive and Walnut Avenue
2. Culver Drive and University Drive
3. Jeffrey Road and Alton Parkway
4. Jeffrey Road and I-405 Northbound Ramps
5. Bake Parkway and Irvine Boulevard
6. Bake Parkway and Jeronimo Road
7. El Toro Road and Aliso Creek Road
8. Los Alisos Boulevard and Jeronimo Road
9. Muirlands Boulevard and Los Alisos Boulevard
10. Trabuco Road and Alicia Parkway

Future Traffic Conditions without the Proposed Project

The following subsections identify the baseline traffic conditions expected in the future scenarios (Years 2007, 2025, and Post 2025) without the proposed project. These conditions are identified in order to illustrate the anticipated circulation system upon which traffic will be assigned and to provide a baseline for comparing the effects of the proposed project.

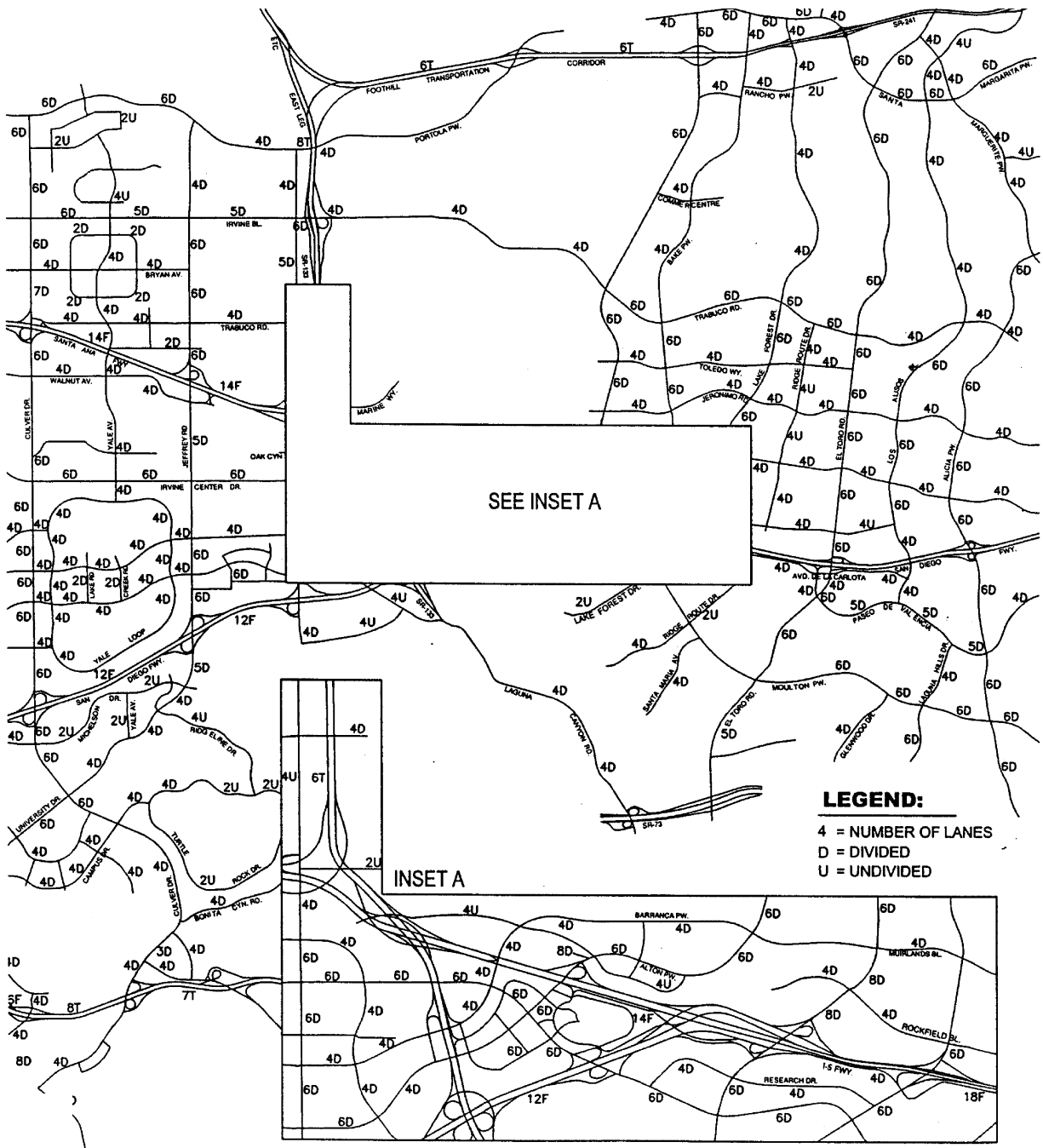
Year 2007

2007 Without Project Anticipated Roadway Improvements

Figure 5.2-10 depicts the number of lanes and median treatment for all of the roadways within the 2007 study area. Table 5.2-2 summarizes the anticipated roadway improvements that are already funded and are expected to be constructed by 2007.

2007 Without Project Traffic Volumes

The ITAM 2007 daily traffic volume conditions, including all of the updated input data, are summarized on Figure 5.2-11. Daily traffic volumes are generally expected to increase throughout the study area by 2007. Alton Parkway and Irvine Center Drive are the arterial roadways expected to experience the largest daily traffic increases in the study area under no project conditions. Peak hour (AM and PM) traffic volumes have also been estimated using the ITAM output. Volume II Appendix G of this Final Program EIR contains the peak hour intersection turning movement forecasts for 2007 without project conditions.



Source: Urban Crossroads, 2002.

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Final EIR

Figure 5.2-10
Year 2007 Number of Through Lanes

City of Irvine

**Table 5.2-2
Funded 2007 Roadway Improvements**

ROADWAY	SEGMENT LIMITS	LANES		SOURCE
		2000	2007	
Alton Pkwy.	Irvine Bl. to SR-241	0	6D	FCPP
Alton Pkwy.	Jeffrey Rd. to Royal Oak	4D	4D-A	PA 12 ¹
Bake Pkwy.	Irvine Center Dr. to Research Dr.	5D	6D	PA-34
Bonita Canyon Dr.	Culver Dr. to Newport Coast Dr.	2D	3D	PA 27
Carlson Av.	Campus Dr. to Michelson Dr.	2U	4U	Complete by 2002
Chapman Av.	Canyon View Av. To Crawford Canyon Rd.	4D	6D	City of Orange
Chapman Av.	Jamboree Rd. to SR-241/SR-261	4U	6D	Santiago Hills II
Culver Dr.	Campus Dr. to Bonita Canyon Dr.	2U	4D	PA 27/UCI
Edinger Av.	e/o Red Hill Av. To w/o Jamboree Av.	4U	6D	Complete by 2002
Edinger Av.	SR-55 Fwy. to e/o Red Hill Av.	5D	6D	City of Tustin
El Toro Rd.	Marguerite Pkwy. to Glenn Ranch Rd.	2U	5D	City of Mission Viejo/Shea Homes
I-5 Fwy.	SR-22 Fwy. To SR-91	6F+2H	10F+2H	OCTA
I-5 Off Ramp at Culver Dr.	SB I-5 off ramp to Culver Dr.	1R	2R	OCTA
Irvine Av.	Bristol St. to Del Mar Av.	4D	6D	Orange Co./Newport Beach
Irvine Bl.	Jeffrey Rd. to Sand Canyon Av.	4D	5D	South Side of Road(EB) PA 9a(North Sphere)
Irvine Center Dr.	I-405 Fwy. To Lake Forest Dr.	5D	6D	PA 34
Irvine Center Dr.	Jeffrey Rd. to Orange Tree	5D	6D	PA 12
Jeffrey Rd.	Alton Pkwy. to Irvine Center Dr.	5D	6D	Complete by 2002
Jeffrey Rd.	I-405 SB Ramps to I-405 NB Ramps	4D	6D	Irvine 2002 CIP
Jeffrey Rd.	Irvine Center Drive to Walnut Av.	5D	6D	PA 12 / City of Irvine
Laguna Canyon Rd.	s/o I-405 Fwy. to SR-133 Fwy.	2U	4D	PA 17 ²
Laguna Canyon Rd.	Sand Canyon Av. to Irvine Center Dr.	0	4D	PA 31/PA 12
Laguna Canyon Rd.	SR-133 Fwy. to SR-73 Fwy.	3D	4D	County
Laguna Canyon Rd.	SR-73 Fwy. to El Toro Rd.	2U	4D	County
Laguna Hills Rd.	Aliso Creek Rd. to Pacific Park Dr.	0	6D	County
Newport Av.	Sycamore Av. to Edinger Av.	0	4U	City of Tustin
Newport Coast Dr.	SR-73 Fwy. to San Joaquin Hills Rd.	4D	6D	Newport Coast A.D.
On-Site MCAST Roads	Contract to 2007 conditions			MCAS Tustin(Refer to exhibits for specific roads)
PA 4 Roads	Planned PA 4 improvements			PA 4
Portola Pkwy.	Culver Dr. to Yale Av.	2D	6D	PA 5
Portola Pkwy.	SR-261 to Culver Dr.	2U	6D	PA 5 / LPC
Portola Pkwy.	Yale Av. to Jeffrey Rd.	4D	6D	PA 5
Quail Hill Pkwy.	Shady Canyon Av. To Laguna Canyon Rd.	0	4U	PA 17
Rancho Pkwy.	Alton Pkwy. to Lake Forest Dr.	0	4D	Baker Ranch
Red Hill Av.	Walnut Av. to Edinger Av.	4D	6D	City of Tustin
Research Dr.	Bake Pkwy. to Muller	0	4D	PA 34
Research Dr.	Irvine Center Dr. to Bake Pkwy.	2U	4D	PA 34
Sand Canyon Av.	Trabuco Rd. to Irvine Bl.	4U	5D	West Side of Road(SB) PA 9a(North Sphere)
Sand Canyon Av.	Barranca to Oak Cyn	4D	6D	Complete by 2002
Sand Canyon Av.	I-405 NB Ramps to Alton Pkwy	4D	6D	Kaiser
Santiago Canyon Rd.	Extend from Jamboree Rd. to w/o SR-241	0	2U	Santiago Hills II(Access)
Scientific Wy.	Irvine Center Dr. to Lake Forest Dr.	2U	4U	PA 34
Scientific Wy.	Irvine Center Dr. to Research Dr.	0	4U	PA 34

Table 5.2-2
Funded 2007 Roadway Improvement
(Continued)

ROADWAY	SEGMENT LIMITS	LANES		SOURCE
		2000	2007	
Serrano Av.	Cannon St. to Nohl Ranch Rd.	0	4U	City of Orange
Shady Canyon Dr.	I-405 Fwy. to Quail Hill	2U	4D	PA 17
SR-133	Irvine Bl. to I-5 Fwy.	4T	6T	TCA CIP
SR-133	Irvine Bl. to SR-241	6T	8T	TCA CIP
SR-241	Lake Forest Dr. to Oso Pkwy.	4T	6T	TCA CIP
SR-241	SR-133 to SR-261	5T	6T	TCA CIP
SR-55 Fwy.	17th St. to SR-91	6F+2H	8F+2H	OCTA
SR-55/I-405 Fwy.	HOV lchg. (NB 405-NB 55, SB 55-SB 405, SB 55-NB 405, SB 405-NB 55)			OCTA
SR-73 Ramps	Construct Glenwood Dr. interchanges, NB On, and SB Off Ramps			TCA CIP
Tesla	Irvine Center Dr. to n/o Research Dr.	0	2U	PA 34
Trabuco Rd.	Jeffrey Rd. to Sand Canyon Av.	2U	4D	PA 9a Northern Sphere
Turtle Ridge	Newport Coast Dr. to Bonita Canyon Dr.	0	4D	PA 27
University Dr.	MacArthur Bl. to Jamboree Rd.	5D	6D	Newport Beach
Valencia Av.	Newport Av. to Red Hill Av.	0	4U	City of Tustin
Valley Oak	Oak Canyon to s/o Barranca Pkwy.	0	4U	PA 12

¹ = Lanes assumed to be the same as existing street

² = Overcrossing at I-405 to remain 2 lanes

-A = Augmented

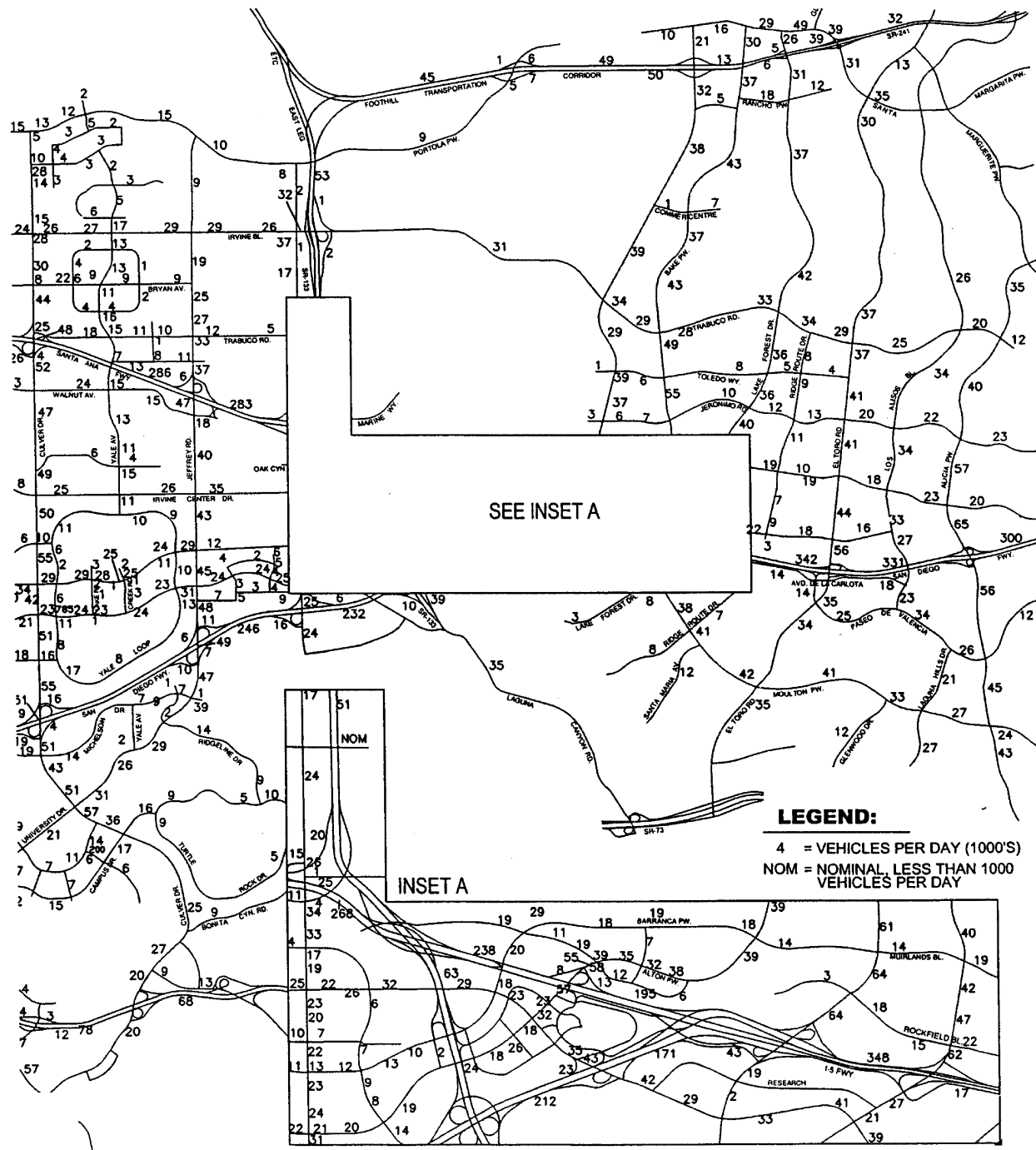
D = Divided

U = Undivided

F = Freeway

T = Toll Road

R = Ramp



Source: Urban Crossroads, 2002.



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Orange County Great Park
 Final EIR

Figure 5.2-11
 2007 Without Project
 Average Daily Traffic Volumes

City of Irvine

Year 2025

2025 Without Project Anticipated Roadway Improvements

Figure 5.2-12 depicts the number of through lanes for all the roadways within the 2025 study area. The funding cycle for roadway improvements generally encompasses a much shorter time frame than the 2025 horizon year studied. Most programmed/funded roadway improvements were identified as part of the 2007 improvements. The funded improvements anticipated to be completed by 2025 are identified in Table 5.2-3.

2025 Without Project Traffic Volumes

The ITAM 2025 daily traffic volume conditions, including all of the updated input data, are summarized on Figure 5.2-13. Daily traffic volumes are generally expected to increase throughout the study area from 2007 to 2025. Daily traffic volumes on I-5 north of the "Y" increase substantially. Irvine Center Drive, El Toro Road, Bake Parkway, Lake Forest Drive, and Culver Drive are expected to carry traffic volumes in excess of 50,000 vehicles per day (VPD). Peak hour (AM and PM) traffic volumes have also been estimated. Volume III of this EIR contains the peak hour intersection turning movement forecasts for 2025 without project conditions.

Buildout (Post 2025)

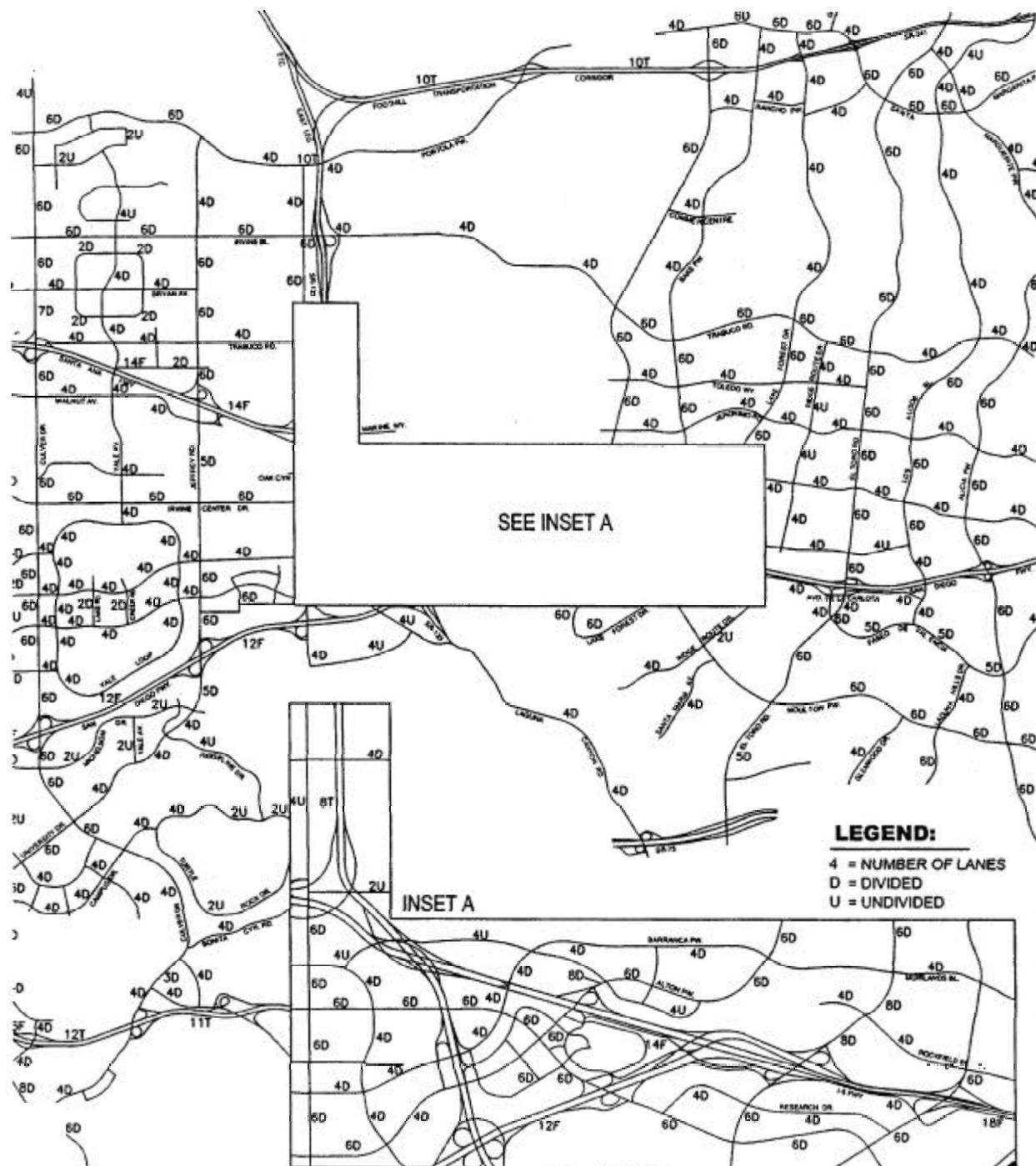
In accordance with City of Irvine General Plan policy, a General Plan buildout analysis has been completed as part of the traffic analysis contained in Volume III of this Final Program EIR. The City of Irvine General Plan Buildout study area and off-site analysis locations are similar to the 2007 analysis.

Post 2025 Without Project Anticipated Roadway Improvements

Figure 5.2-14 depicts the Year Post 2025 number of through lanes. This condition assumes planned roadways per the City of Irvine or MPAH. As discussed previously, the funding cycle for roadway improvements resulted in most funded improvements occurring within the first phase of development (by 2007). However, some additional improvements were identified for 2025 conditions. These unfunded buildout roadway segment improvements are summarized in Table 4-3 of Volume II Appendix G.

Post 2025 Without Project Traffic Volumes

Figure 5.2-15 depicts the Year Post 2025 daily traffic volume conditions. The ITAM General Plan buildout conditions daily traffic volumes including all of the updated input data are summarized in Volume III Appendix K. Daily traffic volumes generally increase only slightly beyond 2025. General Plan buildout peak hour (AM and PM) traffic volumes have also been estimated by the ITAM. Volume III of this EIR contains the peak hour intersection turning movement forecasts for City of Irvine General Plan buildout without project conditions.



Source: Urban Crossroads, 2002.

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Orange County Great Park
Final EIR

Figure 5.2-12
Year 2025 Number of Through Lanes

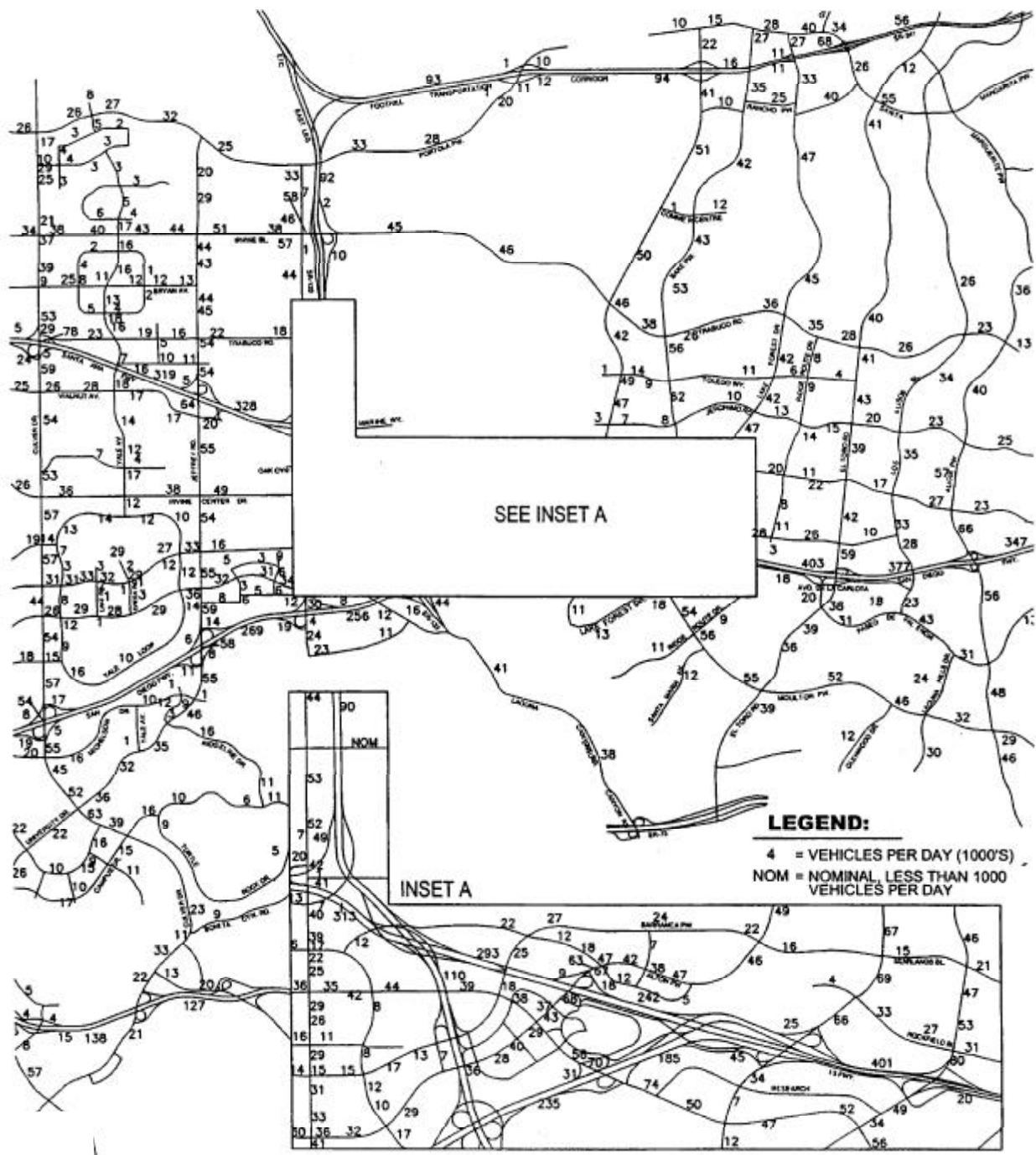
City of Irvine

**Table 5.2-3
Funded 2007-2025 Roadway Improvements**

ROADWAY	SEGMENT LIMITS	LANES		SOURCE
		2007	2025	
"C" St.	Santiago Canyon Rd to North Lake	0	4U	E. Orange G.P.
Bake Pkwy.	Lake Forest Dr. to Irvine Center Dr.	0	6D	PA-34
Barranca Pkwy.	Jamboree Rd. to SR-55 Fwy.	6D	8D	IBC
California Av.	Bison Av. to Academy Dr.	2U	4D	PA 25/UCI
Culver Dr.	SR-241 to Santiago Canyon Rd.	0	6D	E. Orange G.P.
Culver Drive	Portola Pkwy. to PA1/PA2 Collector Loop	0	4U	PA 1/2
East Peltason Dr.	Bison Av. to Pereira Dr.	2U	4D	UCI
Southern Radial	California Av. to Bonita Canyon Dr.	0	4D	UCI
Handy Creek Rd.	Jamboree Rd. to SR-241	0	4U	E. Orange G.P.
Irvine Bl.	SR-133 to Research Pkwy.	5D	6D	MP II ¹
Irvine Bl.	Research Pkwy. to Alton Pkwy.	4D	6D	MP II ¹
Irvine Bl.	Holt Av. to Browning Av.	4D	6D	Tustin/County
Irvine Blvd.	Jeffrey Rd. to Sand Canyon Ave.	5D	6D	Northern Sphere
Irvine Blvd.	Yale Ave. to Jeffrey Rd.	5D	6D	Northern Sphere
Jeffrey Rd.	SR-241 to Santiago Canyon Rd.	0	4D	E. Orange G.P.
Jeffrey Rd.	Santiago Canyon Rd. to North Lake Rd.	0	4U	E. Orange G.P.
Lake Forest Dr.	Irvine Center Dr. to Tesla	2U	6D	PA-34
Lake Forest Dr.	Tesla to Bake Pkwy.	0	6D	PA-34
On-site MCAST Roads	Construct to 2025 conditions			MCAST
On-Site MP II Roads	Construct to 2025 conditions			MP II ¹
PA1/PA2 Collector Loop	n/o Portola Parkway	0	2U	PA 1/2
Rancho Pkwy.	Lake Forest Dr. to Portola Pkwy.	0	4D	BAKER RANCH
Red Hill Av.	MacArthur Bl. to Main St.	4D	6D	IBC
Sand Canyon Av.	Oak Cyn to I-5 Fwy.	4D	6D	Irvine CIP
Sand Canyon Ave.	Trabuco Rd. to Irvine Blvd.	5D	6D	Northern Sphere
Santiago Canyon Rd.	"B" St. to Jeffrey Rd. Ext.	2U	6D	E. Orange G.P.
Santiago Canyon Rd.	Jamboree Rd. to w/o SR-241	2U	6D	Santiago Hills II
Santiago Canyon Rd.	w/o SR-241 to Old Santiago Canyon Rd.	0	6D	East Orange G.P.
SR-133	I-5 Fwy. to Irvine Bl.	6T	6T+2H	TCA CIP
SR-133	Irvine Bl. to SR-241	8T	8T+2H	TCA CIP
SR-133	Construct Trabuco Rd. Interchange			MP II ¹
SR-241	SR-261 to SR-91	7T	7T+2H	TCA CIP
SR-241	Portola Pkwy. (West) to Oso Pkwy.	6T	8T+2H	TCA CIP
SR-241	Portola Pkwy. to SR-133	8T	8T+2H	TCA CIP
SR-241	Oso Pkwy. To Ortega Hwy.	0	6T+2H	TCA CIP
SR-241	Ortega Hwy. to I-5 Fwy.	0	4T+2H	TCA CIP
SR-241	SR-133 TO SR-261	6T	6T+2H	TCA CIP
SR-261	Walnut Av. to Irvine Bl.	4T	6T+2H	TCA CIP
SR-261	Irvine Bl. to Portola Pkwy.	6T	6T+2H	TCA CIP
SR-261	Portola Pkwy. to SR-241	5T	7T+2H	TCA CIP
SR-73	Bison Av. to Laguna Canyon Rd.	7T	9T+2H	TCA CIP
SR-73 Fwy.	Bison Av. to I-405 Fwy.	6F	8F+2H	OCTA/TCP CIP
SR-73	Bison Av. to Newport Coast Dr.	8T	10T+2H	TCA CIP
SR-73	Laguna Canyon Rd. to I-5 Fwy.	7T	8T+2H	TCA CIP
SR-73 Ramps	Aliso Creek Rd. realign and construct NB Off and SB On Ramps			TCA CIP
Technology Dr.	Ext. to Laguna Canyon Rd.	0	4U	PA 31
Von Karman Av.	Barranca Pkwy. to Michelson Dr.	4D	6D	IBC
Wanda Rd.	Katella Av. to 1/4 mile s/o Katella	2U	4U	City of Orange

¹ = Will apply to PA 40 study only for scenarios with MP II

D = Divided
U = Undivided
F = Freeway
T = Toll Road
H = HOV Lanes



Source: Urban Crossroads, 2002.

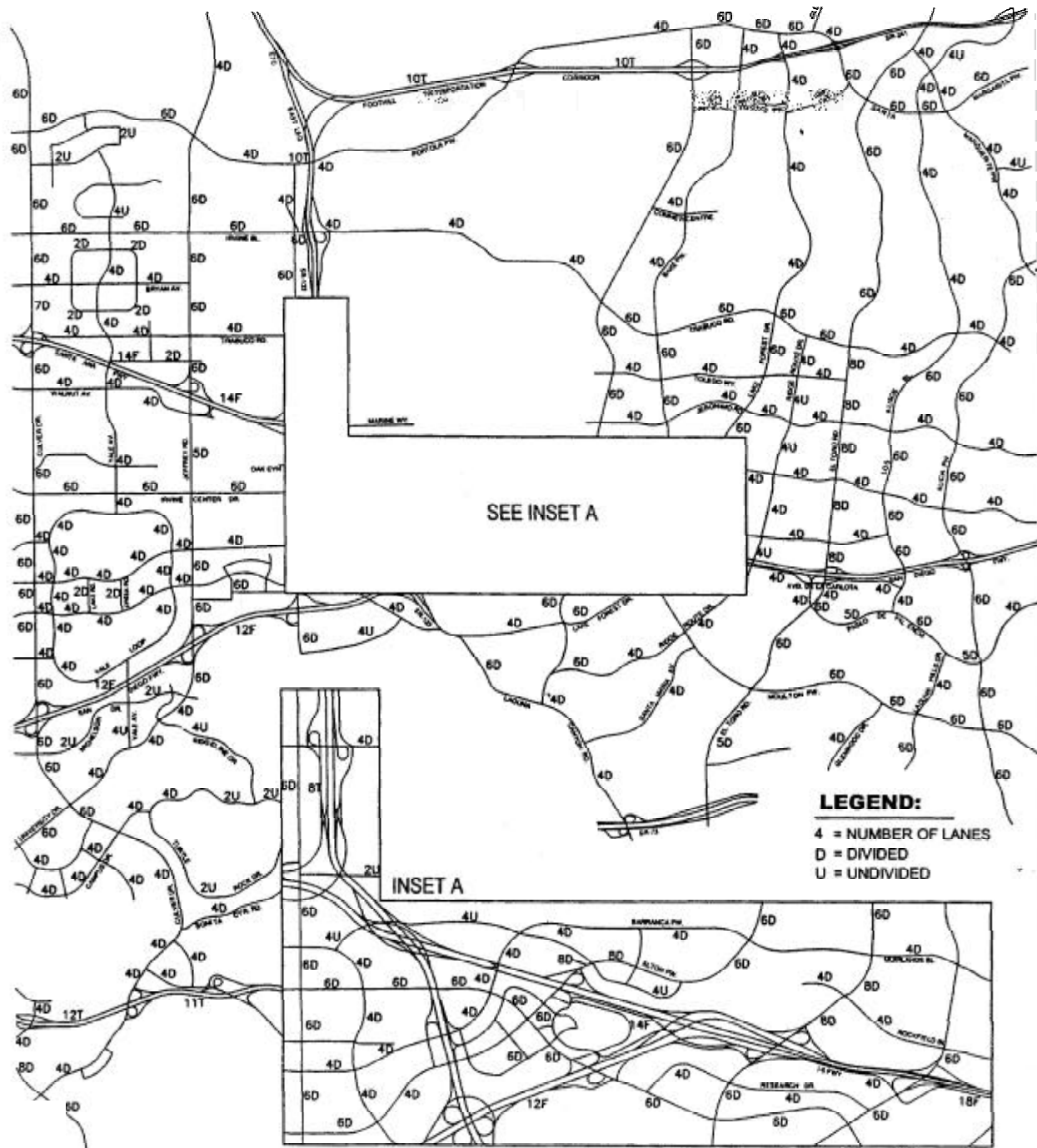


Not to Scale

Orange County Great Park
 Final EIR

Figure 5.2-13
 2025 Without Project
 Average Daily Traffic (ADT)

City of Irvine

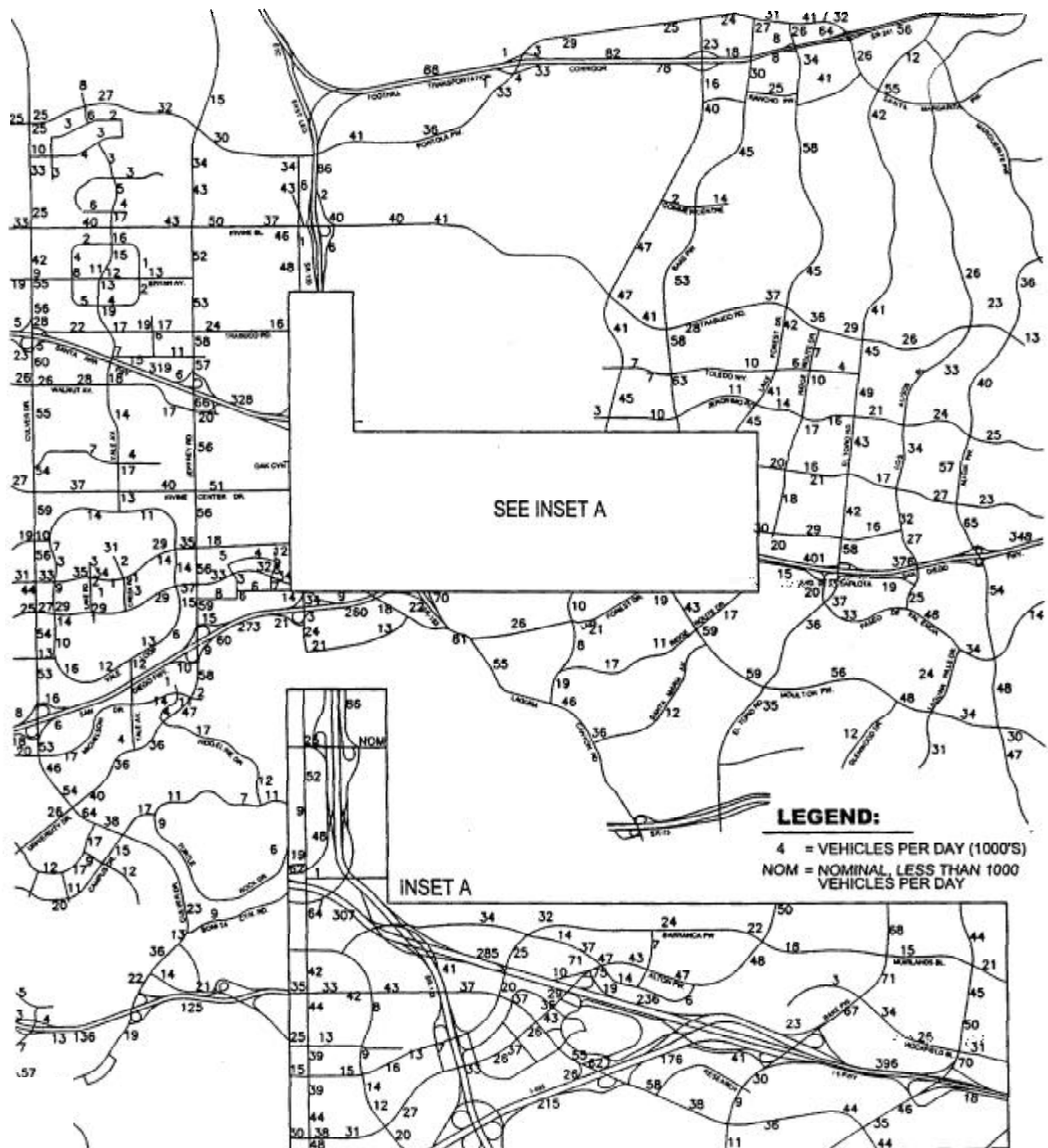


Not to Scale

Orange County Great Park
Final EIR

Figure 5.2-14
Year Post 2025 Number of Through Lanes

City of Irvine



Source: Urban Crossroads, 2002.



Not to Scale

Orange County Great Park
Final EIR

Figure 5.2-15
Year Post 2025
Without Project
Average Daily Trips

City of Irvine

5.2.2 Threshold For Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for traffic.

1. *Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestion at intersections)?*
2. *Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?*
3. *Result in a change in air traffic patterns, including either an increase in traffic level or a change in location that results in substantial safety risks?*
4. *Substantially increase hazards due to design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*
5. *Result in inadequate emergency access?*
6. *Result in inadequate parking capacity?*

The specific criteria for evaluation of project impacts to traffic circulation are discussed under "City of Irvine Traffic Performance Criteria" at the beginning of this section.

5.2.3 Environmental Impact

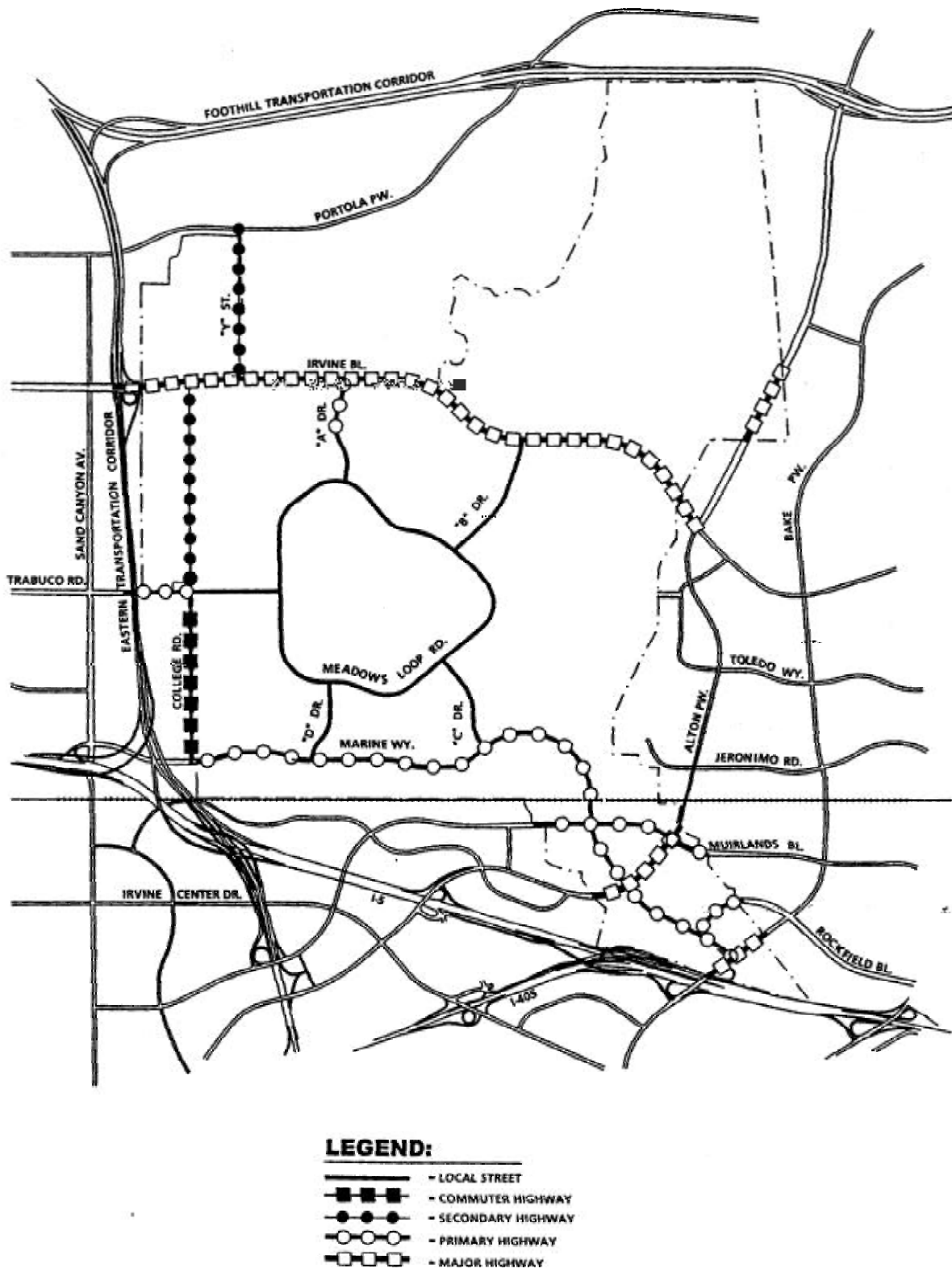
The following analysis focuses on the potential traffic and circulation impacts associated with implementation of the Base Plan and the Overlay Plan for the Former MCAS El Toro (PAs 51 and 30). The Musick Branch Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. As a result, implementation of the proposed project will not result in a significant traffic and circulation impact associated with the annexation of the James A. Musick Jail Facility and the IRWD Parcel.

Threshold 1. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestion at intersections)?

Base Plan

Project Roadway System

The proposed circulation system for the project will be constructed in conjunction with short range (2007) development. The 2007 project roadway system will include all of the proposed on-site roadway infrastructure. Figure 5.2-16 depicts the proposed 2007 on-site circulation system. A number of new roadways will be constructed in conjunction with project development. Marine Way will be constructed and realigned from the Bake Parkway/I-5.



Source: Urban Crossroads, 2002.



Not to Scale

Orange County Great Park
Final EIR

Figure 5.2-16
Year 2007 Project Circulation System

City of Irvine

Northbound Ramp through the project site until it joins with Sand Canyon Avenue at the I-5 Northbound Ramps. Trabuco Road will be extended from its current terminus east of the Eastern Transportation Corridor (ETC) across to Meadows Loop Road. "A" Drive and "B" Drive will be connected with Irvine Boulevard on-site to provide access to the central park loop road. "C" and "D" Drives will provide access between the central park area and Marine Way.

Interim Year 2007

2007 Base Project Land Use

The 2007 project land use associated with the Base Plan is summarized on Table 3-5 of the Project Description. Approximately 410 project dwelling units are anticipated for 2007 conditions under the Base Plan project. The most prevalent type of on-site development for 2007 conditions is open space/park. Other uses include warehousing, golf courses, community facilities and auto center uses, along with some research and development, transportation, sports park, and cultural/institutional uses.

2007 Base Project Trip Generation

Project trip generation estimates have been developed for 2007, 2025, and Post-2025 conditions based on currently adopted ITAM procedures. Land use is converted into socio-economic data (SED); the SED is used to generate trips using trip generation rates. The 2007 project trip generation by planning analysis zone (PAZ) and traffic analysis zone (TAZ) is summarized on Table 5.2-4. As shown on Table 5.2-4, the Base Plan project is expected to generate more than 45,000 daily vehicle trips in 2007. Table 5-11 of Volume II Appendix G depicts trip generation by land use type.

2007 Base Project Trip Distribution and Daily Traffic

The 2007 Base project trip distribution is presented in Volume II Appendix G. The roadways carrying the highest proportion of project traffic include Marine Way (20 percent) and Irvine Boulevard (20 percent). These percentages occur on-site. Off-site, Sand Canyon Avenue, Bake Parkway, and I-5 carry approximately ten percent or more of project traffic.

2007 With Base Project Traffic Projections

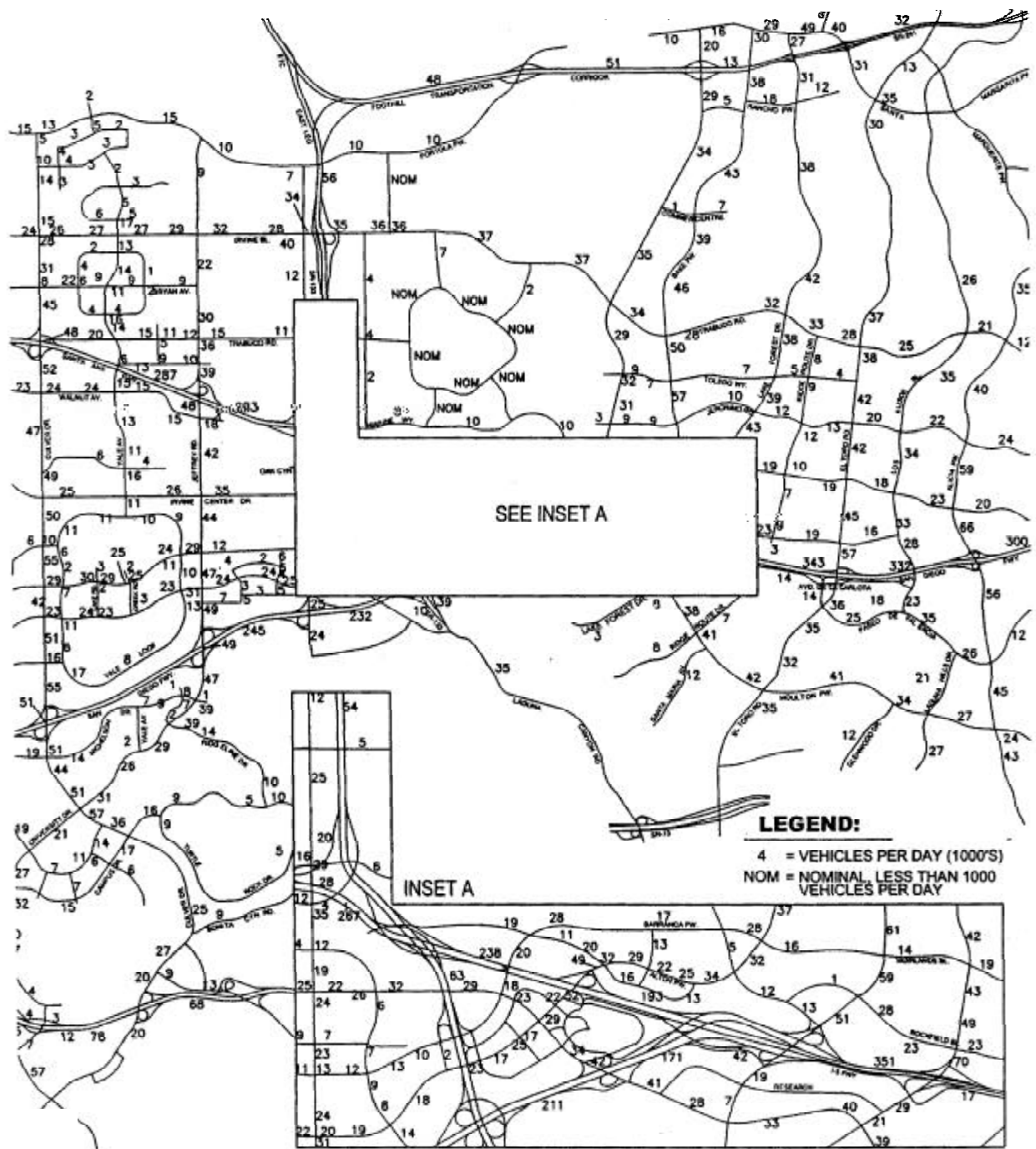
The ITAM 2007 with Base project conditions daily traffic volumes are summarized on Figure 5.2-17. Daily traffic volumes are generally similar to the 2007 no project scenario. There are minor daily volume increases in the area of the project, but no significant increases.

2007 with project peak hour (AM and PM) traffic volumes have also been estimated using the ITAM output. Volume III of this Final Program EIR contains the peak hour roadway segment and intersection turning movement forecasts.

**TABLE 5.2-4
2007 BASE PROJECT
DAILY TRIP GENERATION SUMMARY**

PAZ	TAZ	SED Daily Trip Generation	Land Use Daily Trip Generation
1.	586	402	402
2.	594	1,950	3,350
3.	591	164	164
4.	614	181	181
5.	588	157	641
6.	589	161	161
7.	587	0	0
8.	597	7,930	4,620
9.	596	0	0
10.	600	429	1,531
11.	593	0	0
12.	603	7,919	7,235
13.	610	2,509	7,909
14.	602	208	208
15.	598	419	419
16.	599	114	114
17.	590	7,071	7,071
18.	611	2,257	695
19.	613	1,273	643
20.	601	20	20
21.	612	20	20
22.	616	30	30
23.	609	3,961	2,115
24.	615	164	164
25.	917	0	0
26.	322	27	27
27.	918	37	37
28.	919	77	77
29.	321	67	67
30.	921	13	13
31.	323	77	77
32.	920	2,046	1,694
33.	922	1,458	1,462
34.	923	464	459
35.	924	1,298	1,295
36.	324	2,134	1,875
TOTAL		45,037	45,046

Source: Urban Crossroads, December 2002.



Source: Urban Crossroads, 2002.



Not to Scale

Orange County Great Park
Final EIR

Figure 5.2-17
2007 With Base Project
Average Daily Trips

City of Irvine

Year 2025

2025 Base Project Land Use

The 2025 Base project land uses are summarized in Table 3-3 of the Project Description. Under the Base Plan, 225 project dwelling units are anticipated for 2025 conditions. Land use is predominately open space. Developed uses include commercial, golf courses, community facilities, and auto center uses, along with office park and educational uses. The proposed development also includes active Sports Park uses.

2025 Base Project Trip Generation

The proposed 2025 Base project includes a number of unique land uses, including a proposed sports park, educational uses, etc. Table 5.2-5 summarizes the 2025 Base project vehicle trip generation per PAZ and TAZ. As shown on Table 5.2-5, the project is expected to generate about 91,000 daily vehicle trips.

2025 Base Project Trip Distribution and Daily Traffic

The 2025 Base project trip distribution is presented in Volume II Appendix G. The roadways carrying the highest proportion of project traffic are Irvine Boulevard (22 percent) and Marine Way (19 percent). Other roadways expected to carry 10% or more of project traffic include Trabuco Road, College Drive, and Barranca Parkway.

2025 With Base Project Traffic Projections

The 2025 with Base project conditions daily traffic volumes are illustrated on Figure 5.2-18. Daily traffic volumes exhibit increases primarily on roadways near the project site, notably on Irvine Boulevard, the I-5 Freeway, and the SR-133 Tollway. Marine Way is projected to carry daily traffic volumes ranging from 8,000 vehicles per day (VPD) north of Alton Parkway to 21,000 VPD north of Barranca Parkway. Peak hour (AM and PM) traffic volumes have also been estimated by the ITAM. Volume III contains the 2025 peak hour intersection turning movement forecasts for 2025 with Base Plan conditions.

**TABLE 5.2-5
2025/(BUILDOUT) POST 2025 BASE PROJECT
DAILY TRIP GENERATION SUMMARY**

PAZ	TAZ	SED Daily Trip Generation	Land Use Daily Trip Generation
1.	586	416	416
2.	594	1,004	1,004
3.	591	170	170
4.	614	187	187
5.	588	292	292
6.	589	298	3,341
7.	587	3,000	1,697
8.	597	12,799	7,233
9.	596	391	223
10.	600	2,446	1,531
11.	593	2,608	1,474
12.	603	8,200	7,235
13.	610	11,196	25,272
14.	602	384	384
15.	598	776	776
16.	599	211	221
17.	590	24,159	24,159
18.	611	2,337	1,287
19.	613	1,343	643
20.	601	21	21
21.	612	21	21
22.	616	31	31
23.	609	9,732	4,730
24.	615	971	971
25.	917	0	0
26.	322	28	28
27.	918	38	38
28.	919	80	80
29.	321	69	69
30.	921	13	13
31.	323	80	80
32.	920	2,118	1,694
33.	922	1,510	1,462
34.	923	480	459
35.	924	1,344	1,295
36.	324	2,210	1,875
TOTAL		90,963	90,412

Source: Urban Crossroads, 2002.

(Buildout) Post 2025

Post 2025 Base Project Land Use

The Post 2025 Base project land uses are summarized in Table 3-3 of the Project Description. Under the Base Plan, 225 project dwelling units are anticipated for Post 2025 conditions. Land use is predominately open space. Developed uses include commercial, golf courses, community facilities, and auto center uses, along with office park and educational uses. The proposed development also includes active Sports Park uses.

Post 2025 Base Project Trip Generation

Because buildout of the Base project is expected by 2025, the Post 2025 project trip generation is the same as the 2025 condition. Table 5.2-5 above summarizes the Post 2025 Base project vehicle trip generation by PAZ and TAZ. As shown on Table 5.2-5, the project is anticipated to generate approximately 91,000 daily vehicle trips by 2025.

Post 2025 Base Project Trip Distribution and Daily Traffic

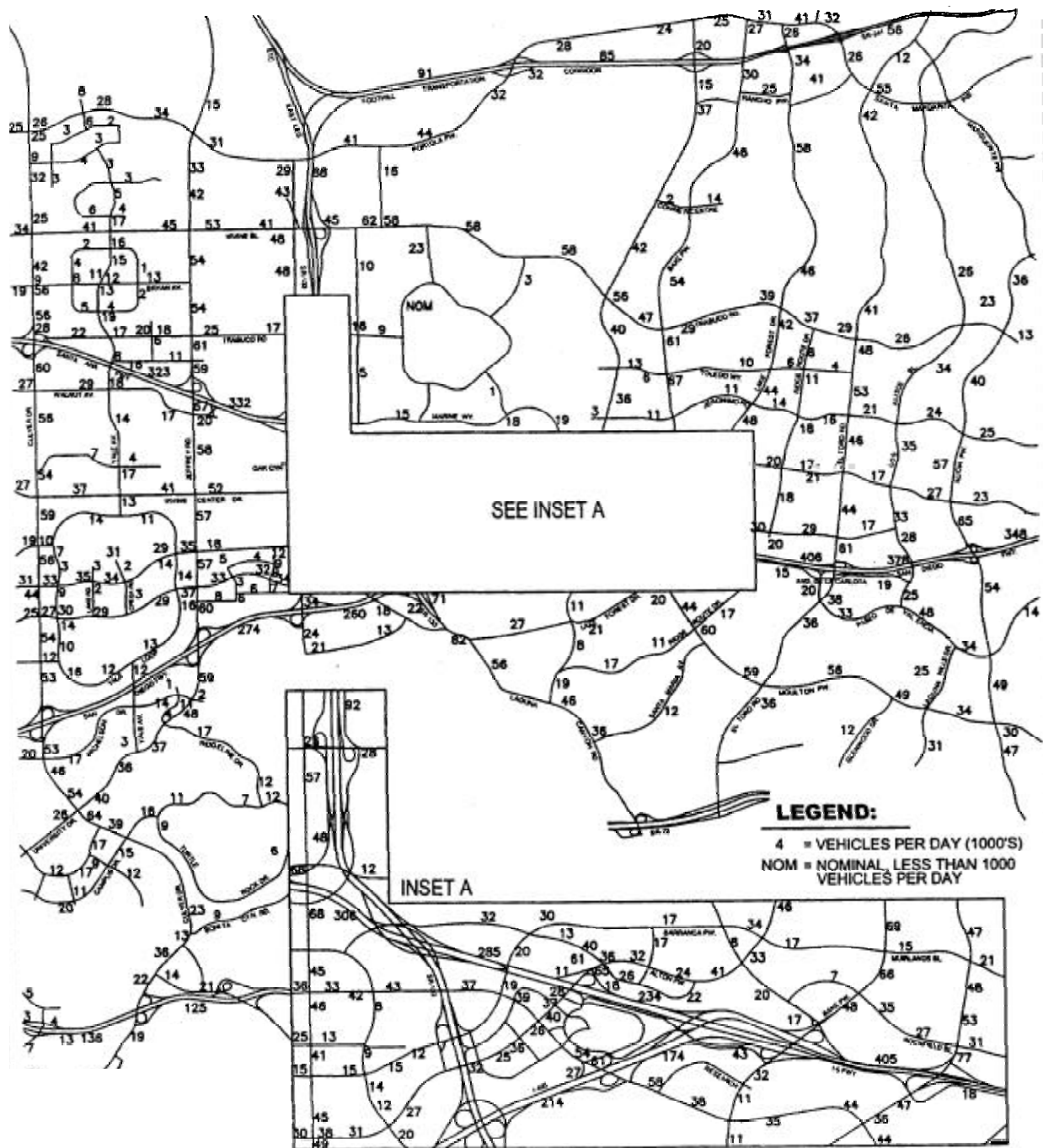
The Post 2025 Base project trip distribution is presented in Volume II Appendix G. The primary trip distribution pattern changes are attributed to the addition of the ETC East Leg interchange with Trabuco Road. Roadways projected to carry more than ten percent of the project traffic include Trabuco Road, Marine Way, ETC East Leg, and Irvine Boulevard.

Post 2025 With Base Project Traffic Projections

The Post 2025 with Base project conditions daily traffic volumes are summarized in Figure 5.2-19. Daily traffic volumes generally differ from the no project scenario near the project site. Differences from the 2025 volume with the Base project reflect network changes as well as additional growth. Peak hour (AM and PM) traffic volumes have also been estimated by the ITAM. Volume III Appendix L contains the Post 2025 peak hour intersection turning movement forecasts for Post 2025 with project conditions.

Base Plan Daily Roadway Segment Analysis

Table 7-1 contained in Volume II Appendix G presents the 2007 without project daily roadway segment analysis. Table 7-2 of Volume II Appendix G depicts the results of the 2007 with Base Plan daily roadway segment analysis. Table 7-4 of Volume II Appendix G presents the 2025 without project daily roadway segment analysis. The 2025 with Base Plan daily roadway segment analysis results are presented on Table 7-5 of Volume II Appendix G. The Post 2025 without project daily roadway segment analysis results are presented on Table 7-7 of Volume II Appendix G. The Post 2025 with Base Plan daily roadway segment analysis results are presented on Table 7-8 of Volume II Appendix G. The daily roadway segment volume/capacity ratio calculations have been used to determine where peak hour roadway segment analysis is required.



Source: Urban Crossroads, 2002.



Not to Scale

Orange County Great Park
 Final EIR

Figure 5.2-19
 Post Year 2025
 With Base Project
 Average Daily Traffic (ADT)

City of Irvine

Year 2007 - Based on these calculations, six roadway segments experience daily deficiencies and meet the project impact significance threshold of exceeding 0.02 for all roadways except CMP roadways where the CMP criteria of an increase exceeding 0.03 has been applied in the 2007 with Base Plan condition. The roadway segments that require further peak hour analysis are:

1. Sand Canyon Avenue between the I-5 Freeway and Oak Canyon
2. Bake Parkway between Commercentre and Muirlands Boulevard
3. Lake Forest Drive between Trabuco Road and SR-241 Tollway
4. Lake Forest Drive between I-5 Freeway and Rockfield Boulevard
5. Alicia Parkway between I-5 Freeway and Jeronimo Road
6. Avenida de la Carlota between El Toro Road and Paseo de Valencia

Year 2025 – Based on the calculation presented in Table 7-5 of Volume II Appendix G, 60 roadway segments require the need for further analysis of peak hour conditions in the 2025 with Base Plan condition. Please refer to Table 7-5 for a complete list of these roadway segments.

Post 2025 - Based on the calculation presented in Table 7-8 of Volume II Appendix G, 57 roadway segments require the need for further analysis of peak hour conditions in the Post 2025 with Base Plan condition. Please refer to Table 7-8 for a complete list of these roadway segments.

Base Plan Peak Hour Roadway Segment Analysis

Peak hour roadway segment analysis has been performed wherever a daily roadway segment V/C ratio identified the need for such analysis with project conditions. Only if a peak hour deficiency is identified has further analysis been performed and possible mitigation required. For these cases (peak hour deficiency has been identified with project conditions), “no project” conditions peak hour analysis has also been performed. If a significant impact is identified (project contributes .02 or greater to the V/C ratios), then necessary improvements to provide acceptable peak hour operations have been determined.

Year 2007 – Table 7-10 of Volume II Appendix G summarizes the peak hour roadway segment analysis for the Year 2007 with Base Plan condition. No roadway segment deficiency has been identified for the Year 2007 with Base Plan conditions.

Table 7-13 of Volume II Appendix G summarizes the peak hour freeway/tollway mainline segment analysis for the Year 2007 with Base Plan condition. Although five freeway/tollway mainline segments are projected to experience deficient operations under these conditions, the Base Plan will not have a significant impact (increase in V/C ratio of greater than 0.03) on the mainline freeway/tollway system.

Table 7-16 summarizes the peak hour freeway/tollway ramp segment analysis for the Year 2007 with Base Plan conditions. Of the three ramps that experience deficient operations under these conditions, the Base Plan will have a significant impact (increase in V/C ratio of greater than 0.03) at the I-5 Freeway Southbound off ramp at Alton Parkway.

Year 2025 – Table 7-18 of Volume II Appendix G summarizes the 2025 with Base Plan peak hour roadway segment analysis. No 2025 peak hour roadway segment deficiencies have been identified.

Table 7-21 of Volume II Appendix G summarizes the peak hour freeway/tollway mainline segment analysis for the Year 2025 with Base Plan condition. Of the 11 freeway/tollway mainline segments anticipated to experience deficient operations under these conditions, the Base project will not have a significant impact at any location.

Table 7-24 of Volume II Appendix G summarizes the peak hour freeway/tollway ramp segment analysis for the Year 2025 with Base Plan conditions. Of the 16 ramp segments anticipated to experience deficient operations under these conditions, the project will have a significant impact at the following locations:

1. I-5 Freeway at Jeffrey Road – southbound on ramp (AM/PM)
2. I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM)
3. I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM)
4. I-5 Freeway at Bake Parkway – southbound off ramp (AM)
5. I-405 Freeway at Jeffrey Road – northbound off ramp (PM)
6. I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM)
7. I-405 Freeway at Sand Canyon Avenue – southbound off ramp (AM)
8. SR-241 Tollway at Lake Forest Drive – southbound off ramp (AM)

Post 2025 – Table 7-26 of Volume II Appendix G summarizes the peak hour roadway segment analysis for the Post 2025 with Base Plan condition. Based on the analysis, no peak hour roadway segment deficiency has been identified.

Table 7-29 of Volume II Appendix G summarizes the peak hour freeway/tollway mainline segment analysis for the Post 2025 with Base Plan condition. Of the eleven segments anticipated to experience deficient operations under these conditions, the project will have a significant impact at the following locations:

1. I-5 Freeway from Jeffrey Road to Sand Canyon Avenue- southbound (AM)
2. I-405 Freeway from Jeffrey Road to Sand Canyon Avenue- southbound (AM)

Table 7-32 of Volume II Appendix G summarizes the Post 2025 with Base Plan conditions peak hour freeway/tollway ramp segment analysis. Based upon the review of the increase in freeway/tollway ramp volume to capacity ratios, the Base Plan will have a significant impact under Post 2025 conditions at the following locations:

1. I-5 Freeway at Jeffrey Road – south bound on ramp (AM/ PM)
2. I-5 Freeway at Sand Canyon Avenue - north bound on ramp (PM)
3. I-5 Freeway at Sand Canyon Avenue - south bound off ramp (AM)
4. I-5 Freeway at Bake Parkway - south bound off ramp (AM)
5. I-405 Freeway at Sand Canyon Avenue - north bound direct on ramp (PM)
6. I-405 Freeway at Sand Canyon Avenue - south bound off ramp (AM)

Base Plan Peak Hour Intersection Operation Analysis

All of the peak hour intersection analysis which has been conducted as part of this analysis is based on the intersection geometric summarized in Volume III Appendix K of this EIR. Appendix K provides a summary of the geometric configuration for each analysis time frame at every intersection where analysis was performed for the time frame in question. This makes it possible for the reader to fully understand the phasing and nature of all baseline improvements prior to mitigation. At a minimum, mitigation analysis has been conducted wherever the project causes a 0.02 increase in intersection capacity utilization (ICU), and the "with project" ICU is deficient.

Year 2007 – Tables 7-34, 7-35, and 7-36 of Volume II Appendix G summarize the 2007 with project (both the Base Plan and Overlay Plan) intersection operation analysis. Of the 17 deficient intersections in 2007, the proposed Base Plan will impact the four intersections identified in Table 5.2-6. Table 5.2-6 summarizes the improvements needed to mitigate project impacts for 2007 conditions.

Year 2025 - Tables 7-37, 7-38, and 7-39 of Volume II Appendix G summarize the 2025 with project (both the Base Plan and Overlay Plan) intersection operation analysis. Of the 47 deficient intersections in 2025, the proposed Base Plan will impact the 16 intersections identified in Table 5.2-7. Table 5.2-7 summarizes the improvements needed to mitigate project impacts for 2025 conditions.

Post 2025 - Tables 7-40, 7-41, and 7-42 of Volume II Appendix G summarize the Post 2025 with project (both the Base Plan and Overlay Plan) intersection operation analysis. Of the 45 deficient intersections in Post-2025, the proposed Base Plan will impact the 18 intersections identified in Table 5.2-8. Table 5.2-8 summarizes the improvements needed to mitigate project impacts for Post-2025 conditions.

**TABLE 5.2-6
YEAR 2007 BASE PLAN INTERSECTION IMPACTS AND SUMMARY OF MITIGATION REQUIRED**

Intersection	2007 No Project				2007 with Base Plan						Mitigation
	ICU		Deficient		ICU		Change		Impact		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
Irvine											
Alton Pkwy./Irvine Blvd.	0.79	0.87			0.74	0.94	-0.05	0.07		****	Convert SB right turn lane to a SB free right turn lane
Irvine/Laguna Hills											
Lake Forest Dr./Avenida de la Carlota	0.810	0.881			0.799	0.934	-0.011	0.053		****	Construct second WB left turn lane and provide WB right turn overlap phase and NB right turn lane
El Toro Road/Avenida de la Carlota	0.834	1.150		****	0.837	1.170	0.003	0.020		****	Restripe WB to one shared left through land and two right turn lanes
Lake Forest											
El Toro Rd./Jeronimo Rd.	0.72	0.93		****	0.73	0.96	0.01	0.03		****	Construct second SB left turn lane
Mission Viejo											
Alicia Pkwy./Muirlands Blvd.	0.89	0.95		****	0.91	0.97	0.02	0.02	****	****	Construct second SB left turn lane and convert EB right turn lane to EB free right turn lane

**TABLE 5.2-7
YEAR 2025 BASE PLAN INTERSECTION IMPACTS AND SUMMARY OF MITIGATION REQUIRED**

Intersection	2025 No Project				2025 with Base Plan						Mitigation
	ICU		Deficient		ICU		Change		Impact		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
Irvine											
Jeffrey Rd./Irvine Center Dr.	0.89	0.93		****	0.89	0.95	0.00	0.02		****	Construct fourth WB through lane
Laguna Canyon Road/Old Laguna Canyon Road	0.89	0.82	****		0.91	0.82	0.02	0.00	****		Construct third NB through lane (approach improvements only)
Alton Pkwy./Irvine Blvd.	1.09	1.20	****	****	0.98	1.32	-0.11	0.12		****	Convert SB right turn lane into SB free right turn lane
Irvine/Lake Forest											
Bake Pkwy./Irvine Blvd.	0.94	0.87	****		1.17	0.85	0.23	-0.02	****		Construct third NB left turn lane or construct a fourth WB through lane
Bake Pkwy./Jeronimo Road	1.06	0.88	****		1.17	0.90	0.11	0.02	****		Construct second NB left turn lane
Lake Forest Dr./Irvine Center Dr.	0.878	0.902		****	0.888	0.927	0.001	0.025		****	Restripe EB defacto right turn lane into shared right through lane
Irvine/Laguna Hills											
Lake Forest Dr./Irvine Center Dr.	0.878	0.902		*****	0.888	0.927	0.010	0.025		*****	Restripe EB defacto right turn lane into shared right through lane
Lake Forest											
Lake Forest Dr./Trabuco Rd.	0.84	0.86			0.87	0.91	0.03	0.05		****	Construct SB right turn lane
Lake Forest Dr./Jeronimo Rd.	0.92	0.91	****	****	0.97	0.94	0.05	0.03	****	****	Construct EB and WB right turn lanes
Lake Forest Dr./Muirlands Blvd.	0.78	0.88			0.80	0.91	0.02	0.03		****	Reconstruct second NB and SB left turn lanes to NB and SB through lanes, respectively
Lake Forest Dr./Rockfield Blvd.	0.90	1.06		****	0.94	1.08	0.04	0.02		****	Construct third WB left turn lane or convert a SB left turn lane into a SB through lane or ATMS
El Toro Rd. /Jeronimo Rd.	0.80	0.98		****	0.81	1.02	0.01	0.04		****	Construct second SB left turn lane
Lake Forest/Mission Viejo											
Muirlands Blvd./Los Alisos Blvd.	0.97	1.20	****	****	0.99	1.21	0.02	0.01	****		Construct second WB left turn lane
Laguna Hills											
El Toro Rd./Avenida de la Carlota	1.005	1.402	****	****	1.052	1.421	0.047	0.019	****	****	Restripe WB approach to provide one shared left turn/through lane and two right turn lanes
Laguna Hills/Laguna Woods											
Pas. de Valencia/Ave. de la Carlota	0.801	0.992		****	0.801	1.012	0.000	0.020		****	Construct third SB left turn lane, including receiving lane
Laguna Hills Dr./Pas. De Valencia	0.816	1.066		****	0.838	1.079	0.02	0.02		****	Provide EB right turn overlap phase
Santa Maria Ave./Moulton Pkwy.	0.884	0.922		****	0.897	0.936	0.013	0.014		****	Construct EB right turn lane
Mission Viejo											
Los Alisos Blvd./Trabuco Rd.	0.93	0.80	****		0.95	0.80	0.02	0.00	****		Construct second NB left turn lane
Alicia Pkwy./Muirlands Blvd.	0.92	1.00	****	****	0.94	1.00	0.02	0.00	****		Restripe SB right turn lane to shared (fourth) through/right turn lane

TABLE 5.2-8
POST 2025 BASE PLAN INTERSECTION IMPACTS AND SUMMARY OF MITIGATION REQUIRED

Intersection	Post 2025 No Project				Post 2025 with Base Plan						Mitigation
	ICU		Deficient		ICU		Change		Impact		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
Aliso Viejo/Laguna Hills											
Moulton Pkwy./Laguna Hills Dr.	0.893	0.951		****	0.908	0.957	0.015	0.006	****	****	Construct third WB through lane and provide WB right turn overlap phase
Moulton Pkwy./Glenwood Dr.	0.981	0.814	****		0.989	0.824	0.008	0.010	****		Construct fourth NB through lane
Irvine											
Jeffrey Rd./Irvine Ctr. Dr.	0.90	0.93		****	0.92	0.96	0.02	0.03	****	****	Construct fourth SB through lane and fourth WB through lane
Sand Cyn. Ave./Alton Pkwy.	1.07	0.71	****		1.10	0.71	0.03	0.00	****		Provide NB right turn overlap
Alton Pkwy./Irvine Blvd.	1.10	0.89	****		0.89	0.94	-0.21	0.05		****	Provide fourth WB through lane (in addition to SB free right turn lane)
Laguna Cyn. Rd./Bake Pkwy.	1.44	1.11	****	****	1.45	1.13	0.01	0.02		****	Construct second SB left turn lane
Sand Cyn. Ave./Collector St.	1.09	1.20	****	****	1.19	1.28	0.10	0.08	****	****	Construct second EB through lane
Irvine/Laguna Hills											
Lake Forest Dr./Ave. de la Carlota	1.135	1.123	****	****	1.134	1.130	0.001	0.007	****	****	Convert EB right turn lane into free right turn lane
Irvine/Lake Forest											
Bake Pkwy./Irvine Blvd.	1.03	0.81	****		1.00	0.99	-0.03	0.18		****	Construct third NB left turn lane and second EB right turn lane or convert EB right turn lane to free right turn lane
Bake Pkwy./Jeronimo Rd.	1.13	0.93	****	****	1.20	0.94	0.07	0.01	****		Construct second NB left turn lane
Lake Forest											
Lake Forest Drive/SR 241 SB Ramps	0.93	0.73	****		0.95	0.74	0.02	0.01	****		Construct second EB right turn lane
Lake Forest Dr./Jeronimo Rd.	0.90	0.88			0.95	0.90	0.05	0.02	****		Construct EB and WB right turn lanes
Lake Forest Dr./Rockfield Blvd.	0.84	0.94		****	0.88	1.01	0.04	0.07		****	Construct third WB left turn lane or construct a SB through lane
Ridge Route Dr./Rockfield Blvd.	0.79	0.93		****	0.82	0.95	0.03	0.02		****	Construct second WB left turn lane
El Toro Rd. /Jeronimo Rd.	0.83	1.00		****	0.87	1.03	0.04	0.03		****	Construct second SB left turn lane
Lake Forest Dr./Rancho Pkwy. N	1.10	1.01	****	****	1.12	0.99	0.02	0.02	****	****	Construct second NB left lane and second EB right turn lane
Lake Forest/Mission Viejo											
Los Alisos Blvd./Jeronimo Rd.	0.88	0.95		****	0.91	0.96	0.03	0.01	****		Construct second WB left turn lane
Muirlands Blvd./Los Alisos Blvd.	0.98	1.16	****	****	1.01	1.19	0.03	0.03	****	****	Construct second WB left turn lane
Laguna Hills/Laguna Woods											
Pas. de Valencia/Ave. de la Carlota	0.774	0.915		****	0.782	0.938	0.008	0.023		****	Construct third SB left turn lane, including receiving lane or construct third EB and third NB through lane
Santa Maria Ave./Moulton Pkwy.	0.97	0.96	****	****	0.97	0.98	0.00	0.02		****	Construct second NB left turn lane
Laguna Hills Dr./Pas. de Valencia	0.845	1.130		****	0.850	1.137	0.005	0.007		****	Provide EB right turn overlap phase
Laguna Hills											
El Toro Rd./Ave. de al Carlota	0.666	0.985	****	****	0.690	1.010	0.024	0.025	****	****	Construct fourth NB through lane

Master Plan of Arterial Highways Amendment

The MPAH establishes a countywide roadway network intended to ensure coordinated transportation system development among local jurisdictions in Orange County. The main purpose of the MPAH is to describe an arterial system that effectively serves existing and adopted future land uses in both incorporated and unincorporated areas of Orange County. Extensive coordination with the transportation and land use planning and implementation process carried on by the cities of Orange County, the County of Orange, and adjacent jurisdictions is essential for the MPAH to provide its intended service to County motorists.

Marine Way should be included on the MPAH. This is consistent with the character and role of Marine Way in the regional roadway system. Marine Way will be designated as a primary or secondary arterial per the City of Irvine and Orange County Transportation Authority (OCTA) adopted standards. It will also provide a logical terminus for the realigned Rockfield Boulevard. The preference of OCTA is for arterial roadways to end only at other arterial roadways (e.g., no “stub” links). This is another reason to recommend including Marine Way on the MPAH. Marine Way may also be impacted by regional through traffic, particularly if an accident should occur that affects operations on parallel segments of the I-5 Freeway.

“Y” Street should be designated as a Secondary Highway from Portola Parkway to Irvine Boulevard and Trabuco Road should be designated as a Primary Highway from the SR-133 Tollway to College Road.

Rockfield Boulevard is currently shown on the MPAH as extending from its current terminus west to connect to Alton Parkway between the I-5 Freeway and Barranca Parkway. The proposed amendment will extend Rockfield Boulevard from its current terminus to the southwest to connect to the proposed alignment of Marine Way. Rockfield Boulevard will be designated as a primary arterial per the City of Irvine and Orange County Transportation Authority (OCTA) adopted standards.

As part of the General Plan Amendment for the Orange County Great Park, the City of Irvine will amend both the Land Use Element and the Circulation Element contained in its General Plan. This is a necessary part of the development process. However, following City of Irvine annexation of the Orange County Great Park has been approved, the City will submit a request to the OCTA to initiate a cooperative study, involving the OCTA and other affected agencies, for the purpose of bringing the City’s Master Plan of Arterial Highways into conformity with the Orange County Master Plan of Arterial Highways.

The City understands that the cooperative study would typically occur prior to the City amending its General Plan circulation element. However, because OCTA cannot recognize the City jurisdiction within portions of the Orange County Great Park until the annexation occurs, and the annexation cannot occur without the City first adopting a General Plan Amendment that demonstrates consistency between the Land Use and Circulation Elements, the City intends to enter into the cooperative agreement with the OCTA as soon as possible once the annexation is complete.

Threshold 2. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

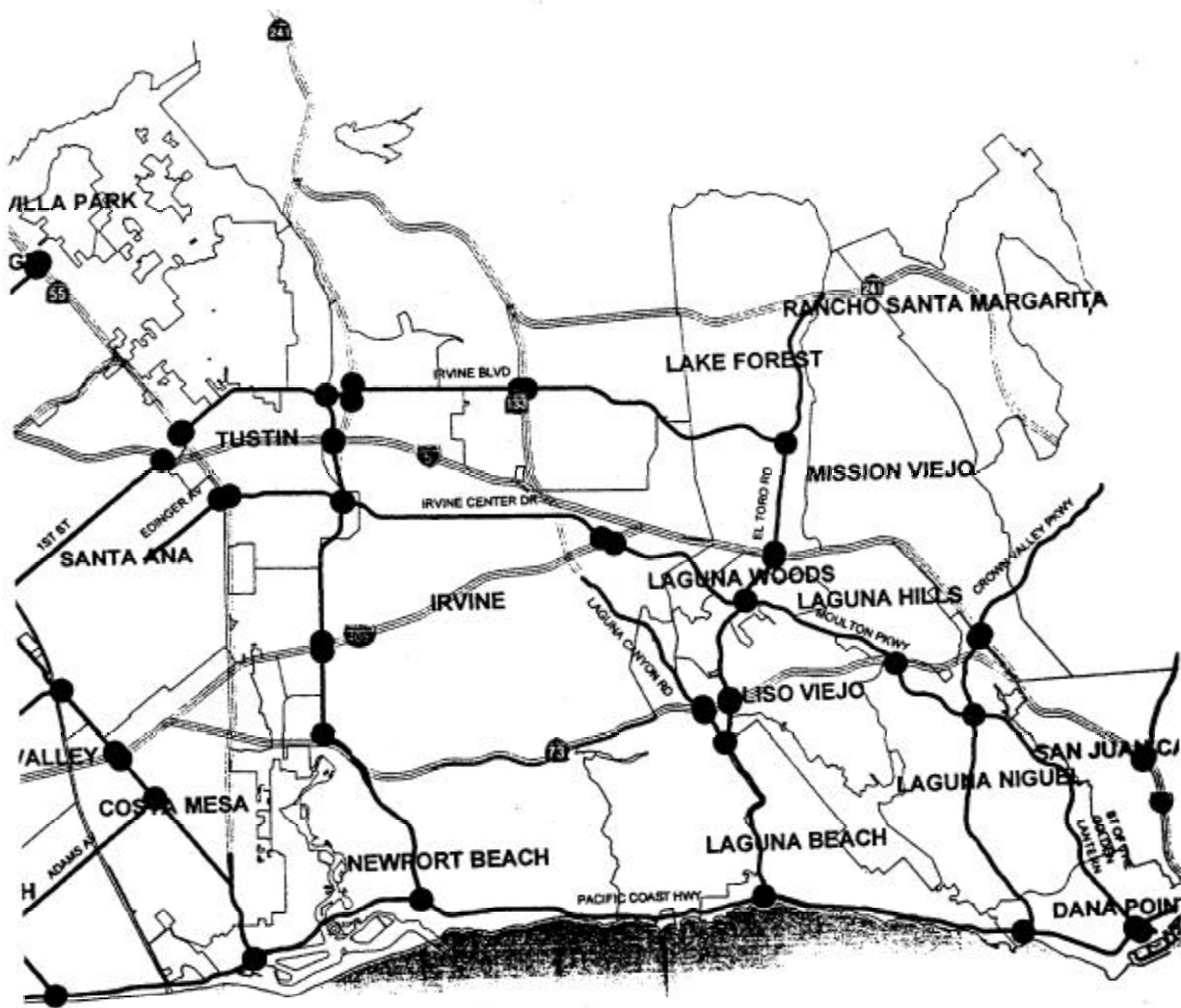
Congestion Management Program (CMP) Consistency/Requirements

The Congestion Management Program (CMP) requires that potential impacts of project traffic on roadway facilities included in the CMP network be identified. Roadway facilities within the study area that are included in the CMP network are listed below. Figure 5.2-20 illustrates the CMP network components. Table 5.2-9 summarizes the roadway facilities included in the CMP network.

**TABLE 5.2-9
CMP FACILITIES**

Roadway Facility	Limits
Freeways and Transportation Corridors	
Interstate 5 (I-5)	Culver Drive to Alicia Parkway
Interstate 405 (I-405)	Culver Drive to I-5
State Route 133	I-5 to I-405
Foothill Transportation Corridor (FTC)	ETC to Los Alisos Boulevard
Eastern Transportation Corridor (ETC)	Northern study area boundary to I-5
Freeway Interchanges	
I-5 at El Toro Road	
I-405 at Irvine Center Drive	
Arterials	
Irvine Center Drive/Moulton Parkway	Culver Drive to Alicia Parkway
Irvine Boulevard/Trabuco Road	ETC West Leg to El Toro Road
Laguna Canyon Road	I-405 to south study area boundary
El Toro Road	FTC to Laguna Canyon Road
Intersections	
SR-133 Southbound Ramps at Irvine Boulevard	
SR-133 Northbound Ramps at Irvine Boulevard	
Enterprise (I-405 Northbound Ramps) at Irvine Center Drive	
I-405 Southbound Ramps at Irvine Center Drive	
SR-73 Southbound Ramps at Laguna Canyon Road	
SR-73 Northbound Ramps at Laguna Canyon Road	
Trabuco Road (Irvine Boulevard) at EL Toro Road	
I-5 Northbound Ramps/Bridger Road at EL Toro Road	
Avenida de la Carlota 9I-5 Southbound Ramps) at El Toro Road	
Moulton Parkway at El Toro Road	
SR-73 Southbound Ramps at El Toro Road	
SR-73 Northbound Ramps at El Toro Road	

Source: Urban Crossroads, December 2002.



LEGEND:

- = CMP INTERSECTIONS
- = CMP HIGHWAY SYSTEM
- = FREEWAYS

Source: OCTA rev. 10/30/2001.

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Figure 5.2-20
Study Area Congestion
Management Program Roadway System

City of Irvine

Using both daily and peak hour traffic volumes forecasts developed with the ITAM, conditions along CMP roadways within the study area were evaluated for 2007 and 2025 conditions with and without the proposed project. Chapters 7 and 9 of Appendix G show the results of the peak hour capacity review for arterial roadways, freeway segments, and freeway interchanges.

The following summarizes the detailed CMP analysis contained in Volume II Appendix G of the EIR:

Year 2007 – No freeway/tollway segment or ramp location is significantly impacted by the Base Plan project in 2007. No deficient CMP intersection is significantly impacted by the Base Plan in 2007.

Year 2025 - For 2025 conditions, the Base Plan will not have a significant impact on the deficient freeway/tollway locations.

The Base Plan will have a significant impact at the intersection of El Toro Road and Avenida de la Carlota.

In accordance with CMP requirements, it is necessary to determine the improvements needed to provide LOS E or better traffic operations. The needed improvements are identified on Tables 5.2-6 through 5.2-8.

Threshold 1. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestion at intersections)?

Overlay Plan

Project Roadway System

The proposed circulation system for the project will be constructed in conjunction with short range (2007) development. The 2007 project roadway system will include all of the proposed on-site roadway infrastructure. Figure 5.2-16 provided earlier in this section depicts the proposed 2007 on-site circulation system. A number of new roadways will be constructed in conjunction with project development. Marine Way will be constructed and realigned from the Bake Parkway/I-5 Northbound Ramp through the project site until it joins with Sand Canyon Avenue at the I-5 Northbound Ramps. Trabuco Road will be extended from its current terminus east of the Eastern Transportation Corridor (ETC) across to Meadows Loop Road. "A" Drive and "B" Drive will be connected with Irvine Boulevard on-site to provide access to the central park loop road. "C" and "D" Drives will provide access between the central park area and Marine Way.

Interim Year 2007

2007 Overlay Project Land Use

The 2007 Overlay project land use is summarized on Table 3-5 of the Project Description. Approximately 2,260 project dwelling units are anticipated for 2007 conditions under the Overlay Plan project. The most prevalent type of on-site development for 2007 conditions is open space/park. Other uses include an elementary school, cemetery, and transit oriented development (TOD) retail uses. There will also be a substantial amount of research and development.

2007 Overlay Project Trip Generation

The 2007 Overlay project trip generation by planning analysis zone (PAZ) and traffic analysis zone (TAZ) is summarized on Table 5.2-10. As shown on Table 5.2-10, the Overlay Plan project is expected to generate almost 68,000 daily vehicle trips in 2007. Table 5-11 of Volume II Appendix G depicts trip generation by land use type.

2007 Overlay Project Trip Distribution and Daily Traffic

The 2007 Overlay project trip distribution is presented in Volume II Appendix G. The roadways carrying the highest proportion of project traffic include Irvine Boulevard (24 percent) and Marine Way (19 percent). Other roadways expected to carry ten percent or more of project traffic include Trabuco Road, College Drive, and Barranca Parkway.

2007 With Overlay Project Traffic Projections

The ITAM 2007 with project conditions daily traffic volumes are summarized on Figure 5.2-21. Daily traffic volumes are generally similar to the 2007 no project scenario. Additional traffic is projected, primarily on Irvine Boulevard and Marine Way.

2007 with Overlay project peak hour (AM and PM) traffic volumes have also been estimated using the ITAM output. Volume III of this EIR contains the peak hour roadway segment and intersection turning movement forecasts.

Year 2025

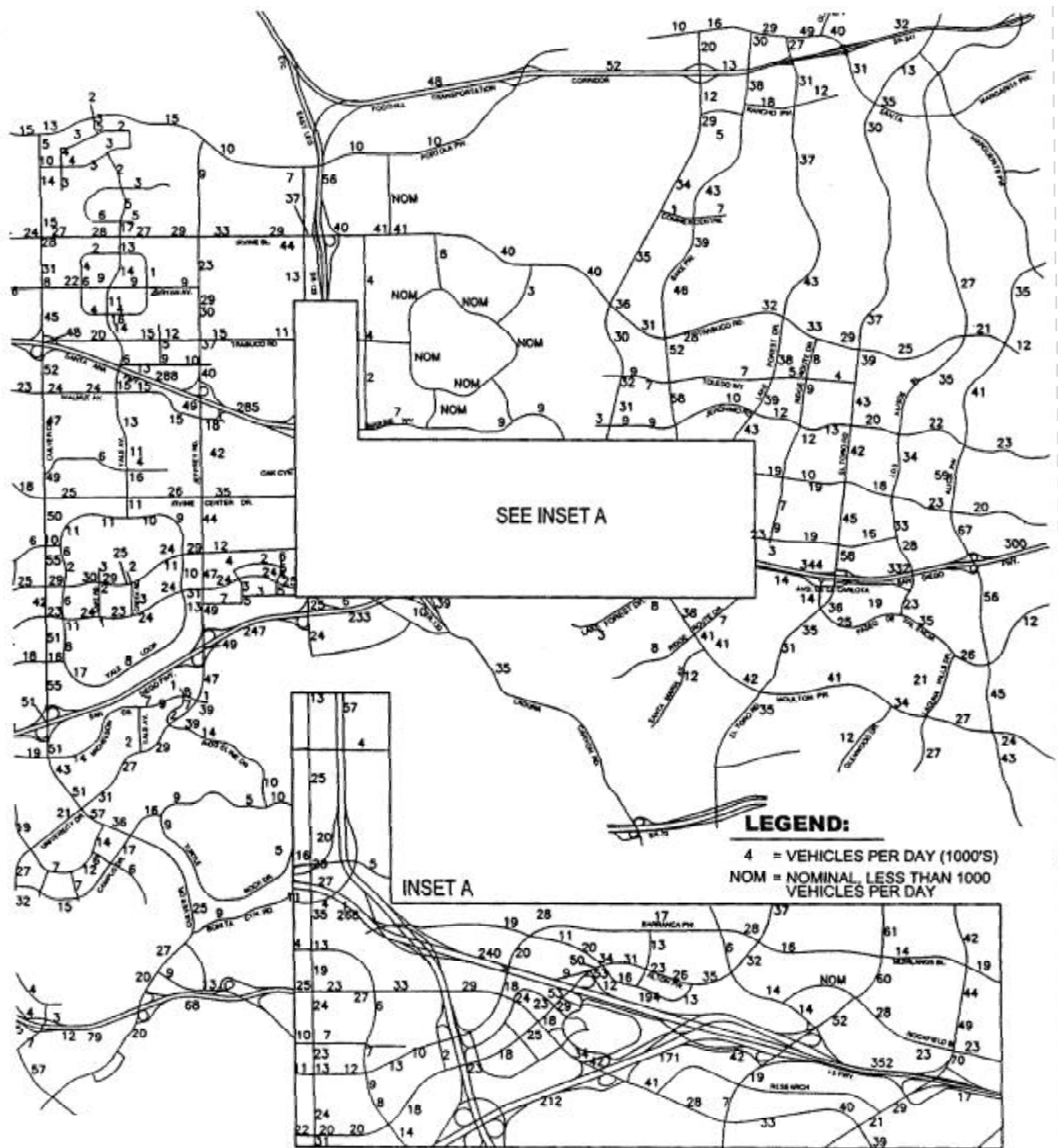
2025 Overlay Project Land Use

The 2025 Overlay project land uses are summarized in Table 3-4 of the Project Description. Land use is predominately open space. Other uses include: 3,625 project dwelling units; 2.6 million square feet of research and development; a 7,800 student college/university campus; and 375,000 square feet of retail and office uses. Other uses include natural and institutional, transportation facilities, and auto center.

**TABLE 5.2-10
2007 OVERLAY PROJECT
DAILY TRIP GENERATION SUMMARY**

PAZ	TAZ	SED Daily Trip Generation	Land Use Daily Trip Generation
1.	586	402	402
2.	594	6,590	7,178
3.	591	164	164
4.	614	181	181
5.	588	5,208	4,055
6.	589	3,064	3,064
7.	587	0	0
8.	597	7,930	4,620
9.	596	0	0
10.	600	429	398
11.	593	0	0
12.	603	4,895	4,802
13.	610	2,509	7,909
14.	602	208	208
15.	598	419	419
16.	599	114	114
17.	590	8,158	8,158
18.	611	2,828	1,922
19.	613	1,273	643
20.	601	20	20
21.	612	20	20
22.	616	30	30
23.	609	3,961	2,115
24.	615	164	164
25.	917	0	0
26.	322	27	27
27.	918	37	37
28.	919	3,671	2,652
29.	321	3,333	2,321
30.	921	13	13
31.	323	1,979	1,541
32.	920	2,046	1,694
33.	922	70	70
34.	923	1,562	1,217
35.	924	4,271	3,325
36.	324	2,134	1,875
TOTAL		67,710	61,358

Source: Urban Crossroads, December 2002.



Source: Urban Crossroads, 2002.



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Figure 5.2-21
2007 With Overlay Plan
Daily Traffic Volumes

City of Irvine

2025 Overlay Project Trip Generation

Since the Overlay project is proposed to be built out by 2025, trip generation for 2025 and Post 2025 are the same. Table 5.2-11 shows that by 2025 the Overlay Plan is anticipated to generate about 149,000 daily vehicle trips.

2025 Overlay Project Trip Distribution and Daily Traffic

The 2025 Overlay project trip distribution is presented in Appendix G. The roadways carrying the highest proportion of project traffic are Irvine Boulevard (22 percent) and Marine Way (19%). Other roadways expected to carry ten percent or more of project traffic include Trabuco Road and Barranca Parkway.

2025 With Overlay Project Traffic Projections

The 2025 with Overlay project conditions daily traffic volumes are illustrated on Figure 5.2-22. Additional traffic is present on Irvine Boulevard, with other minor increases in traffic on roadways near the project site.

(Buildout) Post 2025

Post 2025 Overlay Project Land Use

Because the project is anticipated to be fully developed by 2025, the Post 2025 land uses are the same as the 2025 land uses summarized above.

Post 2025 Overlay Project Trip Generation

Because buildout of the project is expected by 2025, the Post 2025 Overlay project trip generation is the same as the 2025 condition. Table 5.2-11 above summarizes the Post 2025 Overlay project vehicle trip generation by PAZ and TAZ. As shown on Table 5.2-11, the Overlay project is anticipated to generate approximately 149,000 daily vehicle trips by 2025.

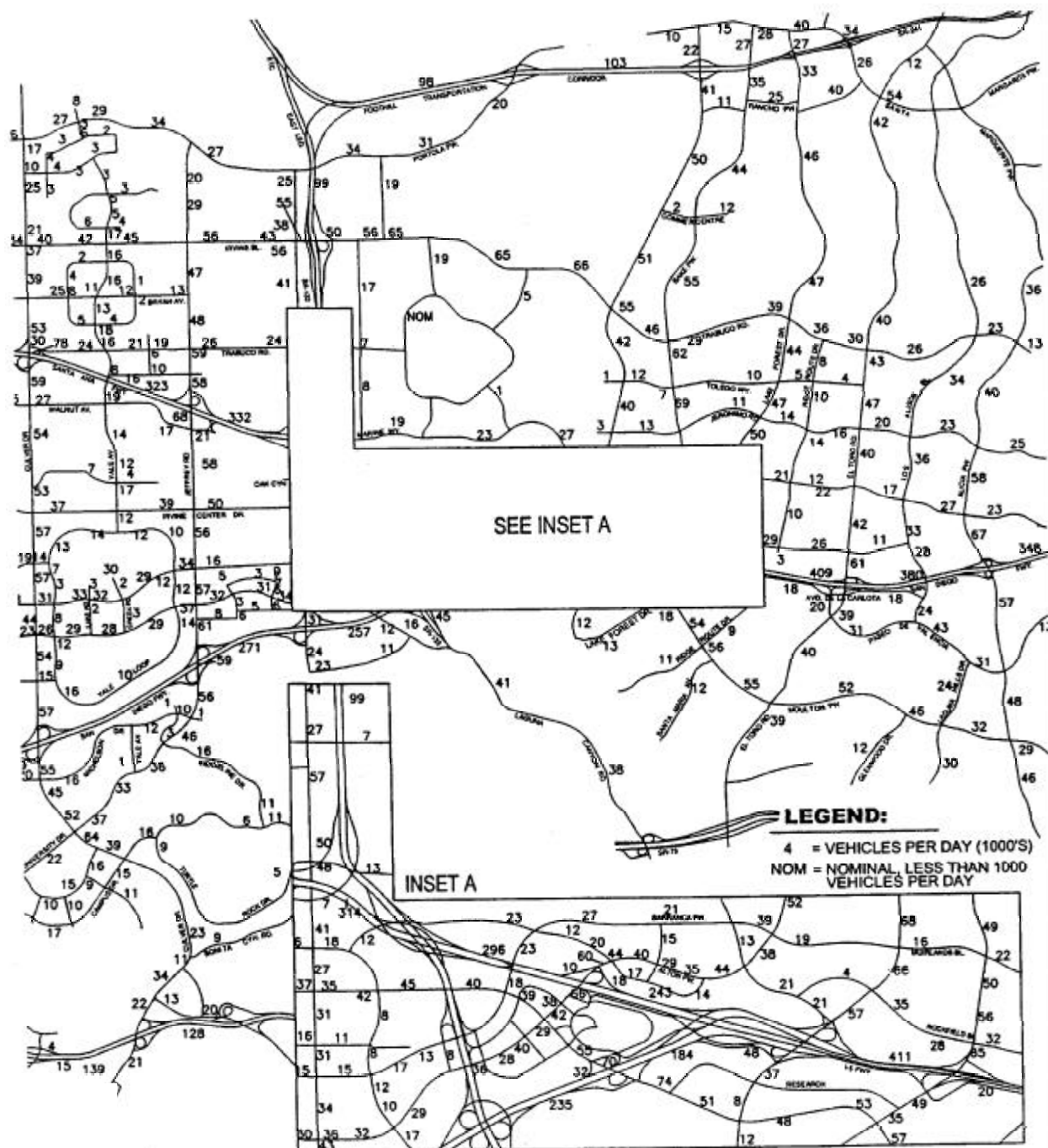
Post 2025 Overlay Project Trip Distribution and Daily Traffic

The Post 2025 Overlay project trip distribution is presented in Volume II Appendix G. The primary trip distribution pattern changes are attributed to the addition of the ETC East Leg interchange with Trabuco Road. Roadways project to carry more than ten percent of the project traffic include Trabuco Road, Marine Way, ETC East Leg, and Irvine Boulevard.

**TABLE 5.2-11
2025/(BUILDOUT) POST 2025 OVERLAY PLAN
TRIP GENERATION SUMMARY**

PAZ	TAZ	SED Daily Trip Generation	Land Use Daily Trip Generation
1.	586	402	402
2.	594	7,469	8,135
3.	591	164	164
4.	614	181	181
5.	588	10,416	8,110
6.	589	4,086	4,086
7.	587	3,438	2,011
8.	597	14,650	8,578
9.	596	456	265
10.	600	2,405	1,556
11.	593	12,326	11,482
12.	603	6,883	6,890
13.	610	10,812	25,272
14.	602	371	371
15.	598	743	743
16.	599	204	204
17.	590	19,154	19,154
18.	611	4,146	3,358
19.	613	1,297	643
20.	601	20	20
21.	612	20	20
22.	616	30	30
23.	609	9,732	4,730
24.	615	7,950	13,440
25.	917	1,314	2,857
26.	322	27	27
27.	918	1,214	2,341
28.	919	3,272	7,572
29.	321	2,976	4,002
30.	921	833	649
31.	323	5,208	4,055
32.	920	2,045	1,694
33.	922	4,791	3,731
34.	923	1,562	1,217
35.	924	4,271	3,325
36.	324	4,350	3,825
TOTAL		148,884	155,140

Source: Urban Crossroads, December 2002.



Source: Urban Crossroads, 2002.



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Figure 5.2-22
2025 With Overlay Plan
Average Daily Traffic (ADT)

City of Irvine

Post 2025 With Overlay Project Traffic Projections

The Post 2025 with Overlay project conditions daily traffic volumes are summarized in Figure 5.2-23. Additional traffic is present primarily on Irvine Boulevard and Marine Way. Volume III contains the Post 2025 peak hour intersection turning movement forecasts for Post 2025 with Overlay project conditions.

Overlay Plan Daily Roadway Segment Analysis

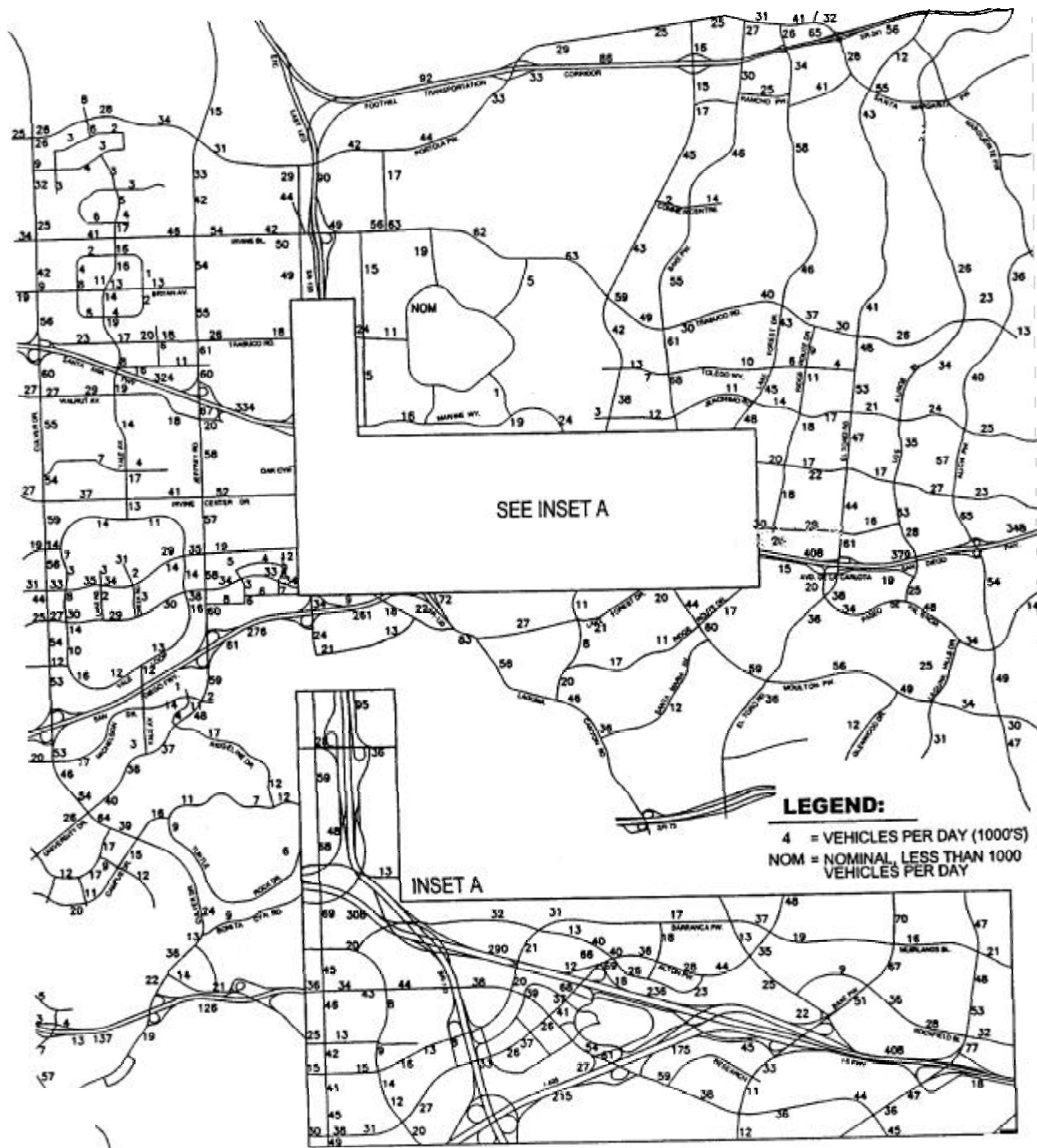
Table 7-1 contained in Volume II Appendix G presents the 2007 without project daily roadway segment analysis. Table 7-3 of Volume II Appendix G depicts the results of the 2007 with Overlay Plan daily roadway segment analysis. Table 7-4 of Volume II Appendix G presents the 2025 without project daily roadway segment analysis. The 2025 with Overlay Plan daily roadway segment analysis results are presented on Table 7-6 of Volume II Appendix G. The Post 2025 without project daily roadway segment analysis results are presented on Table 7-7 of Volume II Appendix G. The Post 2025 with Overlay Plan daily roadway segment analysis results are presented on Table 7-9 of Volume II Appendix G. The daily roadway segment volume/capacity ratio calculations have been used to determine where peak hour roadway segment analysis is required.

Year 2007 - Based on these calculations, six roadway segments experience daily deficiencies and meet the project impact significance threshold of exceeding 0.02 for all City of Irvine roadways except CMP roadways, where the CMP criteria of an impact exceeding 0.03 has been applied in the 2007 with Overlay Plan condition. The roadway segments that require further peak hour analysis are:

1. Sand Canyon Avenue between the I-5 and Oak Canyon
2. Bake Parkway between Commercentre and Muirlands Boulevard
3. Lake Forest Drive between Trabuco Road and SR-241 Tollway
4. Lake Forest Drive between I-5 and Rockfield Boulevard
5. Alicia Parkway between I-5 and Jeronimo Road
6. Avenida de la Carlota between El Toro Road and Paseo de Valencia

Year 2025 – Based on the calculation presented in Table 7-6 of Volume II Appendix G, 63 roadway segments require the need for further analysis of peak hour conditions in the 2025 with Base Plan condition. Please refer to Table 7-6 of Volume II Appendix G for a complete list of these roadway segments.

Post 2025 - Based on the calculation presented in Table 7-9 of Volume II Appendix G, 60 roadway segments require the need for further analysis of peak hour conditions in the Post 2025 with Base Plan condition. Please refer to Table 7-9 of Volume II Appendix G for a complete list of these roadway segments.



Source: Urban Crossroads, 2002.



Not to Scale

Orange County Great Park
 Final EIR

Figure 5.2-23
 Post Year 2025
 With Overlay Plan
 Average Daily Traffic (ADT)

City of Irvine

Overlay Plan Peak Hour Roadway Segment Analysis

Peak hour roadway segment analysis has been performed wherever a daily roadway segment V/C ratio identified the need for such analysis with project conditions. Only if a peak hour deficiency is identified has further analysis been performed and possible mitigation required. For these cases (peak hour deficiency has been identified with project conditions), "no project" conditions peak hour analysis has also been performed. If a significant impact is identified (project contributes .02 or greater to the V/C ratios), then necessary improvements to provide acceptable peak hour operations have been determined.

Year 2007 – Table 7-11 of Volume II Appendix G summarizes the peak hour roadway segment analysis for the Year 2007 with Overlay Plan condition. No roadway segment deficiency has been identified for the Year 2007 with Overlay Plan conditions.

Table 7-14 of Volume II Appendix G summarizes the peak hour freeway/tollway mainline segment analysis for the Year 2007 with Overlay Plan condition. Although four freeway/tollway mainline segments are projected to experience deficient operations under these conditions, the Overlay Plan will not have a significant impact (increase in V/C ratio of greater than 0.03) on the mainline freeway/tollway system.

Table 7-17 summarizes the peak hour freeway/tollway ramp segment analysis for the Year 2007 with Overlay Plan conditions. The Overlay Plan will have a significant impact at two of the three ramps that experience deficient operations, I-5 at Alton Parkway – southbound offramp (AM) and I-405 at Irvine Center Drive – southbound offramp (AM).

Year 2025 – Table 7-19 of Volume II Appendix G summarizes the 2025 with Overlay Plan peak hour roadway segment analysis. One 2025 peak hour roadway segment deficiency has been identified at University Drive from the I-405 Freeway to Michelson Drive. Improvements at this location would include widening of University Drive southbound from 2 to 3 lanes between I-405 southbound ramps and Michelson Drive.

Table 7-22 of Volume II Appendix G summarizes the peak hour freeway/tollway mainline segment analysis for the Year 2025 with Overlay Plan condition. Of the 12 freeway/tollway mainline segments anticipated to experience deficient operations under these conditions, the project will have a significant impact at the following locations:

1. I-5 Freeway from Sand Canyon Avenue to Jeffrey Road – northbound (PM)
2. I-5 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)
3. I-405 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)

Table 7-25 of Volume II Appendix G summarizes the peak hour freeway/tollway ramp segment analysis for the Year 2025 with Overlay Plan condition. Of the 13 ramp segments anticipated to experience deficient operations under these conditions, the project will have a significant impact at the following locations:

1. I-5 Freeway at Jeffrey Road – southbound on ramp (AM/PM)
2. I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM)
3. I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM)
4. I-5 Freeway at Alton Parkway - southbound off ramp (AM)
5. I-5 Freeway at Bake Parkway – southbound off ramp (AM)

6. I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM)
7. I-405 Freeway at Sand Canyon Avenue - southbound off ramp (AM)
8. I-405 Freeway at Irvine Center Drive - southbound off ramp (AM)
9. SR-241 Tollway at Lake Forest Drive – southbound off ramp (AM)

Post 2025 – Table 7-27 of Volume II Appendix G summarizes the peak hour roadway segment analysis for the Post 2025 with Overlay Plan condition. Based on the analysis, no peak hour roadway segment deficiency has been identified.

Table 7-30 of Volume II Appendix G summarizes the peak hour freeway/tollway mainline segment analysis for the Post 2025 with Overlay Plan condition. Of the 11 segments anticipated to experience deficient operations under these conditions, the project will have a significant impact at the following locations:

1. I-5 Freeway from Sand Canyon Avenue to Jeffrey Road – northbound (PM)
2. I-5 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)
3. I-405 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)

Table 7-33 of Volume II Appendix G summarizes the Post 2025 with Overlay Plan conditions peak hour freeway/tollway ramp segment analysis. Based upon the review of the increase in freeway/tollway ramp volume to capacity ratios, the Overlay Plan will have a significant impact under Post 2025 conditions at the following locations:

1. I-5 Freeway at Jeffrey Road – southbound on ramp (AM)
2. I-5 Freeway at Sand Canyon Avenue - northbound on ramp (PM)
3. I-5 Freeway at Sand Canyon Avenue - southbound off ramp (AM)
4. I-5 Freeway at Alton Parkway - southbound off ramp (AM)
5. I-5 Freeway at Bake Parkway - southbound off ramp (AM)
6. I-5 Freeway at El Toro Road – southbound off ramp (PM)
7. I-405 Freeway at Jeffrey Road – northbound off ramp (PM)
8. I-405 Freeway at Sand Canyon Avenue - northbound direct on ramp (AM/PM)
9. I-405 Freeway at Sand Canyon Avenue - southbound off ramp (AM)
10. I-405 Freeway at Irvine Center Drive – southbound off ramp (AM)

Overlay Plan Peak Hour Intersection Operation Analysis

All of the peak hour intersection analysis which has been conducted as part of this analysis is based on the intersection geometries summarized in the traffic report located in Volume II Appendix G and Volume III Appendix K of this Final Program EIR. Volume II Appendix G provides a summary of the geometric configuration for each analysis time frame at every intersection where analysis was performed for the time frame in question. This makes it possible for the reader to fully understand the phasing and nature of all baseline improvements prior to mitigation. At a minimum, mitigation analysis has been conducted wherever the project causes a 0.02 increase in intersection capacity utilization (ICU), and the “with project” ICU is deficient.

Year 2007 – Tables 7-34, 7-35, and 7-36 of Volume II Appendix G summarize the 2007 with project (both the Base Plan and Overlay Plan) intersection operation analysis. Of the 17 deficient intersections in 2007, the proposed Overlay Plan will impact the seven intersections

identified in Table 5.2-12. Table 5.2-12 summarizes the improvements needed to mitigate project impacts for 2007 conditions.

Year 2025 - Tables 7-37, 7-38, and 7-39 of Volume II Appendix G summarize the 2025 with project (both the Base Plan and Overlay Plan) intersection operation analysis. Of the 52 deficient intersections in 2025, the proposed Overlay Plan will impact the 25 intersections identified in Table 5.2-13. Table 5.2-13 summarizes the improvements needed to mitigate project impacts for 2025 conditions.

Post 2025 - Tables 7-40, 7-41, and 7-42 of Volume II Appendix G summarize the Post 2025 with project (both the Base Plan and Overlay Plan) intersection operation analysis. Of the 45 deficient intersections in 2025, the proposed Overlay Plan will impact the 22 intersections identified in Table 5.2-14. Table 5.2-14 summarizes the improvements needed to mitigate project impacts for 2025 conditions.

Master Plan of Arterial Highways Amendment

Refer to discussion under Base Plan.

Spectrum LOS "E" Level of Service Policy Analysis

An LOS "E" policy change would only result through participation in the City's Advanced Transportation Management System/Traffic Operations Systems. The effects of a change in acceptable Level of Service (LOS) from "D" to "E" have been evaluated in the Irvine Spectrum. Intersections in Planning Areas 13, 31, 32, 34, 35, 39, and the I-5 Freeway at Sand Canyon Avenue have been included in this analysis. Table 5.2-14 summarizes the results of this analysis for intersections identified as impacted in Volume II Appendix G that would be affected by the changed policy. All impacted intersections not included in the table below already experience LOS "F" for without project conditions and would therefore have no change in impact or mitigation with the policy change.

Intersections identified as affected by the potential policy change fall into 2 categories. Locations experiencing LOS "E" operations or "With Project" (whichever plan) conditions would no longer be considered deficient and no impact would be identified. Intersections that are no longer deficient if the LOS "E" policy is applied are:

- Laguna Canyon Road at Old Laguna Canyon Road
- Alton Parkway at Irvine Boulevard
- Lake Forest Drive at Avenida De La Carlota

**TABLE 5.2-12
YEAR 2007 OVERLAY PLAN INTERSECTION IMPACTS AND SUMMARY OF MITIGATION REQUIRED**

Intersection	2007 No Project				2007 with Overlay Plan						Mitigation
	ICU		Deficient		ICU		Change		Impact		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
<i>Irvine</i>											
Alton Pkwy./Irvine Blvd.	0.79	0.87			0.75	0.98	-0.04	0.11		*****	Convert SB right turn lane to SB free right turn lane
<i>Irvine/Laguna Hills</i>											
Lake Forest Dr./Ave. de la Carlota	0.810	0.881			0.799	0.936	0.011	0.055		*****	Construct second WB left turn lane and provide WB right turn overlap phase and NB right turn lane
<i>Lake Forest</i>											
El Toro Rd./Jeronimo Rd.	0.72	0.93		*****	0.73	0.95	0.01	0.02		*****	Construct second SB left turn lane
Los Alisos Blvd./Rockfield Blvd./Fordview St.	0.88	0.97		*****	0.91	0.98	0.03	0.01	*****	****	Construct SB right turn lane
<i>Lake Forest/Mission Viejo</i>											
Los Alisos Blvd../Jeronimo Rd.	0.82	0.90			0.81	0.92	-0.01	0.02		*****	Construct second EB left turn lane
<i>Laguna Hills</i>											
El Toro Rd./Ave. de la Carlota	0.834	1.150		*****	0.838	1.185	0.004	0.035		*****	Restripe WB approach to provide one shared left turn/through lane and two right turn lanes
<i>Mission Viejo</i>											
Alicia Pkwy./Muirlands Blvd.	0.89	0.95		*****	0.91	0.97	0.02	0.02	*****	*****	Construct second SB left turn lane and convert EB right turn lane to EB free right turn lane

TABLE 5.2-13
YEAR 2025 OVERLAY PLAN INTERSECTION IMPACTS AND SUMMARY OF MITIGATION REQUIRED

Intersection	2025 No Project				2025 with Overlay Plan						Mitigation
	ICU		Deficient		ICU		Change		Impact		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
Irvine											
Jeffrey Rd./Irvine Ctr. Dr.	0.89	0.93		****	0.90	0.96	0.01	0.03		****	Construct fourth WB through lane
Sand Canyon Ave./Alton Pkwy.	1.09	0.66	****		1.11	0.68	0.02	0.02	****		Provide NB right turn overlap
SR-133 SB Ramps/Irvine Blvd.	0.83	0.69			0.91	0.63	0.08	-0.06	****		Construct 2 nd WB left turn lane
Laguna Cyn. Rd./Old Laguna Cyn. Rd	0.89	0.82			0.91	0.82	0.02	0.00	****		Construct third NB through lane (approach improvements only)
Alton Pkwy./Irvine Blvd.	1.09	1.20	****	****	1.02	1.45	-0.07	0.25	****	****	Convert SB right turn lane to SB free right turn lane
Alton Pkwy./Muirlands Blvd.	0.81	0.88			0.89	0.91	0.08	0.03		****	Construct WB right turn lane
Alton Pkwy./I-5 NB Ramps	1.02	0.62	****		1.05	0.59	0.03	-0.03	****		Restripe WB approach to provide 2.5 left turn lanes and 0.5 right turn lane
SR 133 SB Ramps/Irvine Blvd.	0.83	0.69	****		0.91	0.63	0.08	0.06	****		Construct second WB left turn lane
Irvine/Laguna Hills											
Lake Forest Dr./Irvine Center Dr.	0.878	0.902		****	0.891	0.931	0.013	0.029		****	Construct second WB left turn lane
Lake Forest Dr./Ave. de la Carlota	1.207	1.232	****	****	1.212	1.181	0.005	0.051	****	****	Convert EB right turn lane into free right turn lane
Irvine/Lake Forest											
Bake Pkwy./Irvine Blvd.	0.94	0.87	****		1.17	0.85	0.23	-0.02	****		Construct fourth WB through lane
Bake Pkwy./Jeronimo Rd.	1.06	0.88	****		1.19	0.89	0.13	0.01	****		Convert SB defacto right turn lane into fourth SB through lane and construct second NB left turn lane
Lake Forest											
Lake Forest Dr./Trabuco Rd.	0.84	0.86			0.88	0.93	0.04	0.07		****	Construct SB right turn lane
Lake Forest Dr./Jeronimo Rd.	0.92	0.91	****	****	0.97	0.96	0.05	0.05	****	****	Construct EB and WB right turn lanes and SB left turn lane
Lake Forest Dr./Muirlands Blvd.	0.78	0.88			0.81	0.93	0.03	0.05		****	Construct fourth NB through lane
El Toro Rd./Rockfield Blvd.	0.79	0.89			0.81	0.91	0.02	0.02		****	Construct EB right turn lane with overlap phase
El Toro Rd. /Jeronimo Rd.	0.80	0.98		****	0.83	1.03	0.03	0.05		****	Construct second SB left turn lane
Los Alisos Blvd./Rockfield Blvd./Fordview St.	0.95	0.96	****	****	0.95	0.98	0.00	0.02		****	Construct second NB left turn lane
Lake Forest/Mission Viejo											
Muirlands Blvd./Los Alisos Blvd.	0.97	1.20	****	****	0.99	1.21	0.02	0.01	****	****	Construct second WB left turn lane
Laguna Hills											
El Toro Rd./Ave. de la Carlota	1.005	1.402	****	****	1.055	1.432	0.050	0.030	****	****	Restripe WB approach to provide one shared left turn/through lane and two right turn lanes
Laguna Hills/Laguna Woods											
Pas. de Valencia/Ave. de la Carlota	0.801	0.992		****	0.808	1.020	0.007	0.028		****	Construct third SB left turn lane, including receiving lane
Santa Maria Ave./Moulton Pkwy.	0.887	0.922		****	0.897	0.941	0.013	0.019		****	Construct EB right turn lane
Mission Viejo											
Los Alisos Blvd./Trabuco Rd.	0.93	0.80	****		0.95	0.80	0.02	0.00	****		Construct second NB left turn lane

Table 5.2-14
Intersections Affected By Potential Level of Service “E” Policy Change

#	Intersection (NS) & (EW)	2007 with Base Plan	2007 with Overlay Plan	2025 with Base Plan	2025 with Overlay Plan	Post- 2025 with Base Plan	Post-2025 with Overlay Plan
321	Laguna Cyn. Rd. & Old Laguna Cyn. Rd.			X	X		
338	Alton Pkwy. & Irvine Bl.	X	X			X	X
341	Alton Pkwy. & Muirlands Bl. ¹				X		
362	Bake Pkwy. & Irvine Bl.			E	E		
366	Bake Pkwy. & Rockfield Bl.	E	E				
383	Lake Forest Dr. & Avenida de la Carlota	X	X				

Notes:

X = Impacted intersection would not be deficient/impacted with LOS “E” policy change.

E = Impacted intersection could be evaluated for less mitigation with LOS “E” policy change.

1 = If the LOS “E” policy includes PA30, then this intersection would no longer require mitigation.

In addition, if the LOS “E” Policy was extended to include PA30 (the southern portion of the project), then the intersection of Alton Parkway at Muirlands Boulevard would also be considered to operate at an acceptable level of service (LOS “E”) and would no longer require mitigation.

Two intersections (Bake Parkway at Irvine Boulevard and Bake Parkway at Rockfield Boulevard) are at LOS “E” for No Project conditions and LOS “F” for (certain) With Project Condition Conditions. Reduced mitigation may be possible at these two locations, however a review of the mitigation analysis indicates that no reduced physical mitigation is available. The Base Plan impacts at Bake Parkway and Rockfield Boulevard could be mitigated on the basis of ATMS credits. If the LOS “E” policy includes PA30, then this intersection would no longer require mitigation.

Threshold 2. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Congestion Management Program (CMP) Consistency/Requirements

The Congestion Management Program (CMP) requires that potential impacts of project traffic on roadway facilities included in the CMP network be identified. Roadway facilities within the study area that are included in the CMP network are listed below. Figure 5.2-21 illustrates the CMP network components. Table 5.2-9 summarizes the roadway facilities included in the CMP network.

Using both daily and peak hour traffic volumes forecasts developed with the ITAM, conditions along CMP roadways within the study area were evaluated for 2007 and 2025 conditions with

and without the proposed project. Volume II Appendix G show the results of the peak hour capacity review for arterial roadways, freeway segments, and freeway interchanges.

The following summarizes the detailed CMP analysis contained in Appendix K of the EIR:

Year 2007 – No freeway/tollway segment or ramp location is significantly impacted by the Overlay Plan project in 2007. Of the six deficient CMP intersections in 2007, the Overlay Plan will significantly impact El Toro Road/Avenida de Carlota. The mitigation identified in Table 5.2-15 for this intersection will reduce the impact to this intersection to a level less than significant.

Year 2025 - For 2025 conditions, the Overlay Plan will have a significant impact at the following freeway/tollway locations:

1. I-5 from Sand Canyon Avenue to Jeffrey Road – northbound (PM)
2. I-5 from Jeffrey Road to Sand Canyon Avenue – southbound (AM)
3. I-405 from Sand Canyon Avenue to Jeffrey Road - southbound (AM)

The Overlay Plan will also have a significant impact at the intersection of El Toro Road and Avenida de la Carlota. In accordance with CMP requirements, it is necessary to determine the improvements needed to provide LOS “E” or better traffic operations. The needed improvements are identified on Tables 5.2-12, 5.2-13 and 5.2-15.

Threshold 3. Result in a change in air traffic patterns, including either an increase in traffic level or a change in location that results in substantial safety risks?

Base Plan and Overlay Plan

The proposed project will not result in an impact to air traffic patterns associated with increased air traffic or the location of development. No impact associated with air traffic will occur.

Threshold 4. Substantially increase hazards due to design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Base Plan and Overlay Plan

The proposed project is intended to reduce incompatible uses and improve the street system in the area in accordance with local, regional, and State agency engineering requirements. No impact associated with increased hazards due to design features will occur.

Threshold 5. Result in inadequate emergency access?

Base Plan and Overlay Plan

The existing and proposed roadway system will provide adequate emergency access to all uses on-site during all phases of the project, and will not affect off-site emergency access.

Threshold 6. Result in inadequate parking capacity?

**TABLE 5.2-15
POST 2025 OVERLAY PLAN INTERSECTION IMPACTS AND SUMMARY OF MITIGATION REQUIRED**

Intersection	Post 2025 No Project				Post 2025 with Overlay Plan						Mitigation
	ICU		Deficient		ICU		Change		Impact		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
Aliso Viejo/Laguna Hills											
Moulton Pkwy./Glenwood Dr./Indian Creek Ln.	0.981	0.814	****		0.991	0.826	0.010	0.012	****		Construct fourth NB through lane
Moulton Pkwy./Laguna Hills Dr.	0.893	0.951		****	0.911	0.961	0.018	0.010	****	****	Construct third EB left turn lane
Irvine											
Culver Dr./Walnut Ave.	0.91	0.88	****		0.93	0.89	0.02	0.01	****		Construct third WB left turn lane
Jeffrey Rd./Irvine Center Dr.	0.90	0.93		****	0.92	0.96	0.02	0.03	****	****	Construct fourth SB through lane and fourth WB through lane
Jeffrey Rd./Alton Pkwy.	0.94	0.81	****		0.96	0.84	0.02	0.03	****		Convert EB default right turn lane to dedicated right turn lane with overlap
Sand Cyn. Ave./Alton Pkwy.	1.07	0.71	****		1.10	0.71	0.03	0.00	****		Provide NB right turn overlap phase
Alton Pkwy./Irvine Blvd.	1.10	0.89	****		0.91	0.97	-0.19	0.08		****	Provide fourth WB through lane (in addition to SB free right turn lane)
Bake Pkwy./Rockfield Blvd.	0.71	0.91		****	0.59	0.97	-0.12	0.06		****	Restripe WB approach to provide 2.5 left turn lanes, 1.5 through lanes (retain WB free right turn lane)
Laguna Cyn. Rd./Bake Pkwy.	1.44	1.11	****	****	1.45	1.15	0.01	0.04		****	Construct second SB left turn lane
Sand Cyn. Ave./Collector St.	1.09	1.20	****	****	1.22	1.34	0.13	0.14	****	****	Construct second EB through lane
Irvine/Laguna Hills											
Lake Forest Dr./Ave. de la Carlota	1.135	1.123	****	****	1.138	1.125	0.003	0.002	****		Convert EB right turn lane into free right turn lane
Irvine/Lake Forest											
Bake Pkwy./Irvine Blvd.	1.03	0.81	****		1.01	1.01	-0.02	0.20		****	Construct third NB left turn lane and second EB right turn lane or convert EB right turn lane into free right turn lane
Bake Pkwy./Jeronimo Rd.	1.13	0.93	****	****	1.20	0.94	0.07	0.01	****		Convert SB defacto right turn lane into fourth SB through lane
Lake Forest											
Lake Forest Dr./Trabuco Rd.	0.84	0.88			0.86	0.91	0.02	0.03		****	Construct SB right turn lane
Lake Forest Dr./Jeronimo Rd.	0.90	0.88			0.95	0.91	0.05	0.03	****	****	Construct EB and WB right turn lanes
Ridge Route Dr./Rockfield Blvd.	0.79	0.93		****	0.82	0.95	0.03	0.02		****	Construct second WB left turn lane
El Toro Rd. /Jeronimo Rd.	0.83	1.00		****	0.86	1.03	0.03	0.03		****	Construct second SB left turn lane
Lake Forest Dr./Rockfield Blvd.	0.84	0.94			0.89	1.00	0.05	0.06		****	Construct third WB left turn lane
Lake Forest/Mission Viejo											
Los Alisos Blvd./Jeronimo Rd.	0.88	0.95		****	0.91	0.97	0.03	0.02	****	****	Construct second WB left turn lane
Muirlands Blvd./Los Alisos Blvd.	0.98	1.16	****	****	1.01	1.20	0.03	0.04	****	****	Construct second WB left turn lane

**TABLE 5.2-15
POST 2025 OVERLAY PLAN INTERSECTION IMPACTS AND SUMMARY OF MITIGATION REQUIRED**

	Post 2025 No Project				Post 2025 with Overlay Plan						
Laguna Hills											
Ridge Route Dr./Moulton Pkwy.	0.566	1.000		****	0.568	1.012	0.002	0.012		****	Convert one NB through lane into a NB right turn lane
El Toro Rd./Ave. de la Carlota	0.666	0.985		****	0.695	1.024	0.029	0.039		****	Construct fourth NB through lane
Laguna Hills/Laguna Woods											
Pas. de Valencia/Ave. de la Carlota	0.774	0.915		****	0.784	0.949	0.010	0.034		****	Construct third SB left turn lane, including receiving lane or construct third EB and third NB through lanes
Santa Maria Ave./Moulton Pkwy.	0.964	0.965	****	****	0.973	0.983	0.009	0.018	****	****	Construct second NB left turn lane and fourth EB through lane
Laguna Hills Dr./Pas. de Valencia	0.845	1.130		****	0.847	1.140	0.002	0.010		****	Provide EB right turn overlap phase

Base Plan and Overlay Plan

The Great Park Plan will not result in inadequate parking capacity as all new development will be required to provide parking in accordance with the City's parking requirements and standards.

Other special project issues have been analyzed in the traffic report provided in Volume II Appendix G of this EIR. These issues include analysis of probable future projects, year 2025 with SR-133 Freeway/Trabuco interchange, project site access and internal circulation analysis, pedestrian and bicycle circulation, and circulation phasing hot spots discussions.

The traffic analysis summarized in this EIR includes consideration of probable future projects. The probable future projects analysis provided in Section 8.0 of the traffic report (Volume II Appendix G) depicts the contribution of the probable future projects to impacted roadways. The results of the probable future projects analysis is summarized on Tables 8-2 through 8-10 of the traffic analysis provided in Volume II Appendix G of this EIR.

Additional analysis has also been performed for 2025 with the Overlay Plan conditions to evaluate the effects of a new interchange of Trabuco Road and the SR-133 Freeway being in place earlier than Buildout (Post 2025). Based on the analysis, project mitigation can be reduced if the interchange is completed by 2025.

Project site access and internal circulation analysis has also been performed and are included in preceding sections. Traffic signal warrants have been prepared for project intersections under the Base Plan and Overlay Plan for the 2007 and 2025 conditions. Under 2007 conditions traffic signals are warranted for the following:

1. Barranca Parkway at Marine Way
2. Alton Parkway at Marine Way
3. Irvine Boulevard at College Road
4. Irvine Boulevard at "A" Drive
5. Irvine Boulevard at "B" Drive

Under 2025 conditions traffic signals are warranted for the following:

1. Marine Way at Rockfield Boulevard
2. Marine Way at College Road
3. Trabuco Road at College Road
4. Portola Parkway at "Y" Street
5. Irvine Boulevard at "Y" Street

The project design has been developed in a manner that discourages through traffic through residential neighborhoods, pursuant to the city of Irvine General Plan Circulation Element Objective B-2, Policy (e). In some cases this is accomplished by the simple fact that there is no logical through connection from one arterial to another through the neighborhood. An example is the neighborhood located north of Irvine Boulevard. All access to the neighborhood is provided via Irvine Boulevard, resulting in no potential for through traffic. The residential uses located along the golf courses will also fall into this category.

The thruways, parkways, and community collectors are all being designed in accordance with City of Irvine standards and will therefore prohibit parking, consistent with General Plan Circulation Element Objective B-2, Policy (e). Similarly, the project roadway is being designed in accordance with City standards and will therefore serve to appropriately limit the routes, speeds, and operation types of buses and trucks.

The project should also comply with Objective B-2, Policy (h). This policy states that traffic signals should be properly spaced and interconnected to minimize the number of traffic signals, and the acceleration/deceleration that produces significantly higher levels of vehicular emissions and noise levels. The spacing of the project intersections with the arterial system have been designed with appropriate traffic signal spacing in mind. Specific examples include relocating Marine Way at Sand Canyon Avenue to reduce the number of signalized intersections as well as connecting Marine Way to Bake Parkway at the existing intersection of the I-5 Freeway Northbound Ramps.

Trails and Bikeways

Transit, bicycles, and pedestrian modes of transportation are important alternatives to the automobile. The design of the project, with a mix of complementary uses, lends itself to supporting Policies (a), (b), and (c) of Objective B-3 of the General Plan Circulation Element.

The public transit system is designed to serve regional and local travel needs. The Irvine Transportation Center is located adjacent to the project site and provides an excellent opportunity to encourage transit usage. The project accomplishes this by providing land designated for use in expanding the Irvine Transportation Center.

The project also encourages transit usage through the designation of transit oriented development areas nearby the Irvine Transportation Center. These areas consist of mixed use development opportunities located in close proximity to the primary transit center in the vicinity of the project.

Another on-site destination that is likely to attract high densities of transit users includes the educational area in the northwest part of the project. This area will include a high density of college students, a traditionally transit friendly group.

Pedestrian access will be provided as part of the project circulation system. Sidewalks and/or walking trails will be provided along all project roadways. Pedestrian access will be particularly important within and between areas designated as transit oriented development and the Irvine Transportation Center.

Policy B-4 of the General Plan Circulation Element deals with bicycle trails. The Great Park Plan (both alternatives) incorporates a trails system directly into the plan. The project will include internal Class II bicycle trails on the (non-local) roadway elements of the project. The project will also include Class I bicycle trails along the SCRRA right of way and within other areas of the Great Park. The trail system will be designed to accommodate cyclists of all levels of experience and provide for both recreation and transportation.

The trail system will provide opportunities for trail connections to the City of Irvine Trails Network. Connections should be considered to Portola Parkway and along Irvine Boulevard. These are all trails designated on the City of Irvine Trail Network.

Another policy that is particularly relevant to this project is Policy (f) of Objective B-4. This policy requires that all bicycle trip destinations should be equipped with bicycle facilities that include the provision of bike racks and showers. This policy should be considered in particular during design of the educational facilities (showers and racks) and the transit facilities (additional bike racks).

Additional trail opportunities for trails in areas identified as permanent open space, scenic highway corridors, agricultural edges, public utility rights of way and easement, flood control channels, and areas designated for rural and estate density residential development will also be encouraged, consistent with Objectives B-5, Policy (b). At the same time, such trails will be designed to minimize impacts on existing or planned development and wildlife preservation areas.

The phasing of the system will be consistent with the project's growth and development.

The traffic analysis specifically addresses project impacts to intersections identified in the Circulation Phasing Report (1998). Table 8-18 provided in the traffic report (Final Program EIR Appendix G) lists low, medium, and high priority intersections and shows project impacts. No impacts to Circulation Phasing "Hot Spot" locations are identified for 2007 conditions. Some locations are impacted for 2025 and/or Build (Post-2025) conditions. All impacts are fully mitigated.

5.2.4 Significant Impacts

Base Plan

Tran B1. Implementation of the Base Plan will cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestion at intersections) in the 2007, 2025, and Post 2025 scenarios as follows:

ROADWAY/FREEWAY/TOLLWAY/RAMP SEGMENTS

Year 2007

I-5 Freeway Southbound off ramp at Alton Parkway

Year 2025

I-5 Freeway at Jeffrey Road – southbound on ramp (AM/PM)
 I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM)
 I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM)
 I-5 Freeway at Bake Parkway – southbound off ramp (AM)
 I-405 Freeway at Jeffrey Road – northbound off ramp (PM)
 I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM)
 I-405 Freeway at Sand Canyon Avenue – southbound off ramp (AM)

Post 2025

I-5 Freeway from Jeffrey Road to Sand Canyon Avenue- southbound (AM)
 I-405 Freeway from Jeffrey Road to Sand Canyon Avenue- southbound (AM)

I-5 Freeway at Jeffrey Road – southbound on ramp (AM/PM)
 I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM)
 I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM)
 I-5 Freeway at Bake Parkway – southbound off ramp (AM)
 I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM)
 I-405 Freeway at Sand Canyon Avenue – southbound off ramp (AM)

INTERSECTIONS**Year 2007**

Please refer to Table 5.2-6.

Year 2025

Please refer to Table 5.2-7.

Post 2025

Please refer to Table 5.2-8.

- Tran B2.** Implementation of the Base Plan will result in inconsistencies with the adopted Orange County Master Plan of Arterial Highways (MPAH). These inconsistencies are associated with Marine Way and Rockfield Boulevard.
- Tran B3.** Implementation of the Base Plan will exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways in the 2025 scenario. The Base Plan will impact the following:

INTERSECTION**Year 2025**

El Toro Road/Avenida de la Carlota

Overlay Plan

- Tran O1.** Implementation of the Overlay Plan will cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestion at intersections) in the 2007, 2025, and Post 2025 scenarios as follows:

ROADWAY/FREEWAY/TOLLWAY/RAMP SEGMENTS

Year 2007

I-5 at Alton Parkway – southbound offramp (AM)
I-405 at Irvine Center Drive – southbound offramp (AM)

Year 2025

University Drive from the I-405 Freeway to Michelson Drive (AM)

I-5 Freeway from Sand Canyon Avenue to Jeffrey Road – northbound (PM)
I-5 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)
I-405 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)

I-5 Freeway at Jeffrey Road – southbound on ramp (AM)
I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM)
I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM)
I-5 Freeway at Alton Parkway – southbound off ramp (AM)
I-5 Freeway at Bake Parkway – southbound off ramp (AM)
I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM)
I-405 Freeway at Sand Canyon Avenue – southbound off ramp (AM)
I-405 Freeway at Irvine Center Drive – southbound off ramp (AM)
SR-241 Tollway at Lake Forest Drive – southbound off ramp (AM)
SR-133 Freeway at Barranca Parkway – northbound direct on ramp (PM)

Post 2025

I-5 Freeway from Sand Canyon Avenue to Jeffrey Road – northbound (PM)
I-5 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)
I-405 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)

I-5 Freeway at Jeffrey Road – southbound on ramp (AM)
I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM)
I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM)
I-5 Freeway at Alton Parkway – southbound off ramp (AM)
I-5 Freeway at Bake Parkway – southbound off ramp (AM)
I-5 Freeway at El Toro Road – southbound off ramp (PM)
I-405 Freeway at Jeffrey Road – northbound off ramp (PM)
I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (AM/PM)
I-405 Freeway at Sand Canyon Avenue – southbound off ramp (AM)
I-405 Freeway at Irvine Center Drive – southbound off ramp (AM)

INTERSECTIONS

Year 2007

Please refer to Table 5.2-12.

Year 2025

Please refer to Table 5.2-13.

Post 2025

Please refer to Table 5.2-15.

Tran O2. Implementation of the Overlay Plan will result in inconsistencies with the adopted Orange County Master Plan of Arterial Highways (MPAH). These inconsistencies are associated with Marine Way and Rockfield Boulevard.

Tran O3. Implementation of the Overlay Plan will exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways in the 2007 and 2025 scenarios. The Overlay Plan will impact the following:

FREEWAY/TOLLWAY LOCATIONS**Year 2025**

I-5 from Sand Canyon Avenue to Jeffrey Road – northbound (PM)
 I-5 from Jeffrey Road to Sand Canyon Avenue – southbound (AM)
 I-405 from Jeffrey Road to Sand Canyon Avenue – southbound (AM)

INTERSECTIONS**Year 2007**

El Toro Road/Avenida de la Carlota

Year 2025

El Toro Road/Avenida de la Carlota

5.2.5 Mitigation Measures

Locations experiencing peak hour deficiencies and significantly impacted by the project have been evaluated to determine what improvements are necessary to provide acceptable levels of service in accordance with City of Irvine and adjacent jurisdiction standards. Project mitigation in the form of (1) constructing new on-site arterial highways, (2) constructing new off-site roadway improvements, and (3) participating on a fair share basis to needed off-site freeway/tollway ramp improvements, have all been determined as part of the traffic analysis.

The traffic impact study has presented a multi-phase analysis of the potential traffic related impacts that would be anticipated to occur under the Orange County Great Park proposed network and land use concepts. The following identifies the measures needed to mitigate the impacts that have been identified. As the planning process for the project proceeds, and the land use plan becomes more defined and refined, additional analyses will be required to determine the cost, assign responsibility and refine the phasing of mitigation measures.

Base Plan and Overlay Plan

Tran 1. Prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs. The primary purpose of this mitigation measure is to reduce traffic, air quality and noise impacts. Should annexation into Spectrumotion not be approved, the landowner or subsequent project applicant shall develop and implement a similar transportation management plan containing the elements and meeting the criteria described below:

Transportation Management Plan (TMP)

The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for the Great Park Project. This document summarizes the key elements of the TMP.

1.0 Introduction

The purpose of this document is to provide an outline for a comprehensive TMP for the Great Park. This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.

It is the intent to annex Planning Area 51 and a portion of Planning Area 35 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.

In the event that annexation of PAs 51 and 35 into Spectrumotion is not approved, a TMP similar to that provided by Spectrumotion will be implemented. This document sets forth the components of the TMP should it be necessary.

2.0 Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

New Hire Orientation: Inform newly hired employees of commuting services available to them.

Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services ((i.e., OCTA buses, Metrolink, Amtrak, etc.).

Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.

On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.

Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.

Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.

Website: Maintain a website with all of their program information available.

Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.

Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.

Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.

3.0 Transportation Management Plan Implementation

As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Great Park. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.

Tran 2. Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of this Final Program EIR.

Tran 3. Prior to issuance of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the project traffic study (Urban Crossroads, December 2002) to maintain satisfactory levels of service as defined by the City's General Plan, based on thresholds of significance, performance standards, and methodologies used in this Final Program EIR, Orange County Congestion Management Program, and

Table 5.2-16
Base Plan Mitigation Summary
ICU Summary

INTERSECTION	YEAR	EXISTING		NO PROJECT		BASE PLAN		MITIGATED		MITIGATION DESCRIPTION
		AM	PM	AM	PM	AM	PM	AM	PM	
289 Jeffrey Rd. & Irvine Center Dr.	2002	0.50	0.65							
	2025			0.89	0.93	0.89	0.95	0.89	0.86	Construct 4th WB Through Lane
	BO			0.90	0.93	0.92	0.96	0.84	0.86	Construct 4th SB Through Lane and 4th WB Through Lane
310 Sand Cyn. Av. & Alton Pkwy.	2002	0.43	0.49							
	BO			1.07	0.71	1.10	0.71	1.07	0.71	Provide NB Right Turn Overlap
321 Laguna Cyn. Rd. & Old Laguna Cyn. Rd.	2002									
	2025			0.89	0.82	0.91	0.82	0.66	0.82	Construct 3rd NB Through Lane (Approach Improvements Only)
338 Alton Pkwy. & Irvine Bl.	2002	0.43	0.41							
	2007			0.79	0.87	0.74	0.94	0.74	0.73	Convert SB Right Turn Lane to a SB Free Right Turn Lane
	2025			1.09	1.20	0.98	1.32	0.98	0.96	Convert SB Right Turn Lane to a SB Free Right Turn Lane
	BO			1.10	0.89	0.89	0.94	0.89	0.86	Provide 4th WB Through Lane (in addition to SB Free RT Lane)
362 Bake Pkwy. & Irvine Bl.	2002	0.98	0.90							
	2025			0.94	0.87	1.17	0.85	0.94	0.89	Construct 3rd NB Left Turn Lane
	2025			0.94	0.87	1.17	0.85	0.94	0.89	Alternative Mitigation: Construct a 4th WB Through Lane
	BO			1.03	0.81	1.00	0.99	0.94	0.87	Construct a 3rd NB Left Turn Lane and a 2nd EB Right Turn Lane
	BO			1.03	0.81	1.00	0.99	1.00	0.79	Alternative Mitigation: Convert EB Right Turn Lane to Free Right Turn Lane
364 Bake Pkwy. & Jeronimo Rd.	2002	1.03	0.86							
	2025			1.06	0.88	1.17	0.90	1.02	0.89	Construct 2nd NB Left Turn Lane
	BO			1.13	0.93	1.20	0.94	1.03	0.93	Construct 2nd NB Left Turn Lane
375 Lake Forest Dr. & SR-241 SB Ramps	2002	0.43	0.43							
	BO			0.93	0.73	0.95	0.74	0.69	0.74	Construct a 2nd EB Right Turn Lane
376 Lake Forest Dr. & Trabuco Rd.	2002	0.64	0.62							
	2025			0.84	0.86	0.87	0.91	0.80	0.86	Construct SB Right Turn Lane
378 Lake Forest Dr. & Jeronimo Rd.	2002	0.66	0.69							
	2025			0.92	0.91	0.97	0.94	0.87	0.91	Construct EB and WB Right Turn Lanes
	BO			0.90	0.88	0.95	0.90	0.86	0.87	Construct EB and WB Right Turn Lanes
379 Lake Forest Dr. & Muirlands Bl.	2002	0.62	0.74							
	2025			0.78	0.88	0.80	0.91	0.72	0.88	Reconstruct 2nd NB and SB Left Turn Lanes to NB and SB Through Lanes, respectively
380 Lake Forest Dr. & Rockfield Bl.	2002	0.69	0.89							
	2025			0.90	1.06	0.94	1.08	0.87	1.01	Construct 3rd WB Left Turn Lane
	2025			0.90	1.06	0.94	1.08	0.89	1.03	Alternative Mitigation: ATMS
	2025			0.90	1.06	0.94	1.08	0.79	0.96	Alternative Mitigation: Convert a SB Left Turn Lane into a SB Through Lane
	BO			0.84	0.94	0.88	1.01	0.85	0.94	Construct 3rd WB Left Turn Lane
	BO			0.84	0.94	0.88	1.01	0.80	0.94	Alternative Mitigation: Construct a SB Through Lane
383 Lake Forest Dr. & Avenida de la Carlota	2002	0.55	0.70							
	2007			0.80	0.88	0.80	0.94	0.75	0.90	Construct 2nd WB Left Turn Lane and Provide WB Right Turn Lane Overlap
387 Ridge Route Dr. & Rockfield Bl.	2002	0.49	0.62							
	BO			0.79	0.93	0.82	0.95	0.82	0.87	Construct 2nd WB Left Turn Lane

Table 5.2-16
Base Plan Mitigation Summary
ICU Summary (Continued)

INTERSECTION	YEAR	EXISTING		NO PROJECT		BASE PLAN		MITIGATED		MITIGATION DESCRIPTION
		AM	PM	AM	PM	AM	PM	AM	PM	
390 Paseo de Valencia & Avenida de la Carlota	2002	0.55	0.62							
	2025			0.79	0.98	0.81	1.00	0.81	0.80	Construct 3rd SB Left Turn Lane, including receiving lane
	BO			0.79	0.98	0.81	1.00	0.81	0.80	Alternative Mitigation: Construct a 3rd EB Through Lane
	BO			0.78	0.91	0.79	0.93	0.79	0.74	Construct 3rd SB Left Turn Lane, including receiving lane
	BO			0.78	0.91	0.79	0.93	0.79	0.88	Alternative Mitigation: Construct a 3rd EB and 3rd NB Through Lane
391 Santa Maria Av. & Moulton Pkwy.	2002	0.54	0.82							
	BO			0.97	0.96	0.97	0.98	0.97	0.92	Construct 2nd WB Left Turn Lane
396 El Toro Rd. & Avenida de la Carlota	2002	0.76	1.41							
	2025			1.00	1.39	1.05	1.42	0.92	1.31	Restripe WB approach to provide 1 Shared Left Turn/Through Lane and 2 Right Turn Lanes
407 Laguna Cyn. Rd & Bake Pkwy.	2002	-	-							
	BO			1.44	1.11	1.45	1.13	1.29	0.95	Construct 2nd SB Left Turn Lane
420 El Toro Rd. & Jeronimo Rd.	2002	0.65	0.88							
	2007			0.72	0.93	0.73	0.96	0.73	0.86	Construct 2nd SB Left Turn Lane
	2025			0.80	0.98	0.81	1.02	0.81	0.89	Construct 2nd SB Left Turn Lane
	BO			0.83	1.00	0.87	1.03	0.82	0.90	Construct 2nd SB Left Turn Lane
421 Los Alisos Bl. & Trabuco Rd.	2002	0.83	0.78							
	2025			0.93	0.80	0.95	0.80	0.85	0.78	Construct 2nd NB Left Turn Lane
422 Los Alisos Bl. & Jeronimo Rd.	2002	0.83	0.93							
	BO			0.88	0.95	0.91	0.96	0.88	0.93	Construct 2nd WB Left Turn Lane
423 Muirlands Bl. & Los Alisos Bl.	2002	0.69	1.22							
	2025			0.97	1.20	0.99	1.21	0.97	1.13	Construct 2nd WB Left Turn Lane
	BO			0.98	1.16	1.00	1.19	0.90	1.11	Construct 2nd WB Left Turn Lane
428 Laguna Hills Dr. & Paseo de Valencia	2002	0.67	0.65							
	2025			0.82	1.06	0.84	1.08	0.72	1.06	Construct 2nd NB Left Turn Lane
429 Moulton Pkwy. & Laguna Hills Dr.	2002	0.66	0.85							
	BO			0.89	0.95	0.91	0.95	0.89	0.95	Provide WB Right Turn Overlap
432 Alicia Pkwy. & Muirlands Bl.	2002	0.65	0.88							
	2007			0.89	0.95	0.91	0.97	0.83	0.84	Construct 2nd SB Left Turn Lane & Convert EB Right Turn Lane to EB Free Right Turn Lane
	2025			0.92	1.00	0.94	1.00	0.85	1.00	Restripe SB Right Turn Lane to Shared (4th) Through/Right Turn Lane
485 Sand Cyn. Av. & Collector St.	2002									
	BO			1.09	1.20	1.19	1.28	1.00	1.11	Construct 2nd EB Through Lane
516 Lake Forest Dr. & Rancho Pkwy. North	2002	-	-							
	BO			1.10	1.01	1.12	0.99	1.11	0.98	Construct 2nd North Bound Left Lane and 2nd EB Right Turn Lane

Table 5.2-17
Base Plan Mitigation Summary
ICU Summary

INTERSECTION	YEAR	EXISTING		NO PROJECT		OVERLAY PLAN		MITIGATED		MITIGATION DESCRIPTION
		AM	PM	AM	PM	AM	PM	AM	PM	
224 Culver Dr. & Walnut Av.	2002	0.68	0.96							
	BO			0.91	0.88	0.93	0.89	0.88	0.85	Construct 3rd WB Left Turn Lane
	BO			0.91	0.88	0.93	0.89	0.86	0.89	Alternative Mitigation: Construct 4th SB Through Lane
288 Jeffrey Rd. & Walnut Ave.	2002	0.64	0.68							
	2025			0.86	0.81	0.97	0.90	0.94	0.85	Convert WB Through to Shared WB Left Turn/Through Lane
289 Jeffrey Rd. & Irvine Center Dr.	2002	0.50	0.65							
	2025			0.89	0.93	0.90	0.96	0.90	0.87	Construct 4th WB Through Lane
	BO			0.90	0.93	0.92	0.96	0.84	0.86	Construct 4th SB Through Lane and 4th WB Through Lane
291 Jeffrey Rd. & Alton Pkwy.	2002	0.84	0.91							
	BO			0.94	0.81	0.96	0.84	0.93	0.84	Construct EB Right Turn Lane w/ Overlap
310 Sand Cyn. Av. & Alton Pkwy.	2002	0.43	0.49							
	2025			1.09	0.66	1.11	0.68	1.08	0.68	Provide NB Right Turn Overlap
316 ETC E. Leg SB Ramps & Irvine Bl.	2002	0.36	0.31							
	2025			0.83	0.69	0.91	0.63	0.84	0.68	Provide NB Right Turn Overlap
321 Laguna Cyn. Rd. & Old Laguna Cyn. Rd.	2002									
	2025			0.89	0.82	0.91	0.82	0.66	0.82	Construct 3rd NB Through Lane (Approach improvements Only)
338 Alton Pkwy. & Irvine Bl.	2002	0.43	0.41							
	2007			0.79	0.87	0.75	0.98	0.75	0.74	Convert SB Right Turn Lane to SB Free Right Turn Lane
	2025			1.09	1.20	1.02	1.45	1.02	1.01	Convert SB Right Turn Lane to SB Free Right Turn Lane
	BO			1.10	0.89	0.91	0.97	0.91	0.89	Provide 4th WB Through Lane (in addition to SB Free RT Lane)
341 Alton Pkwy. & Muirlands Bl.	2002	0.43	0.47							
	2025			0.81	0.88	0.89	0.91	0.87	0.89	Construct WB Right Turn Lane
345 Alton Pkwy. & I-5 NB Ramps	2002	0.61	0.42							
	2025			1.02	0.62	1.05	0.59	0.99	0.58	Restripe WB approach to provide 2.5 Left Turn Lanes and 0.5 Right Turn Lanes
362 Bake Pkwy. & Irvine Bl.	2002	0.98	0.90							
	2025			0.94	0.87	1.17	0.85	0.94	0.89	Construct a 4th WB Through Lane
	BO			1.03	0.81	1.01	1.01	0.94	0.81	Construct 3rd NB Left Turn Lane & 2nd EB Right Turn Lane
	BO			1.03	0.81	1.01	1.01	1.01	0.81	Alternative Mitigation: Convert EB Right Turn Lane into Free Right Turn Lane
364 Bake Pkwy. & Jeronimo Rd.	2002	1.03	0.86							
	2025			1.06	0.88	1.10	0.89	0.94	0.83	Convert SB Defacto Right Turn Lane into 4th SB Through Lane and Construct 2nd NB Left Turn Lane
	BO			1.13	0.93	1.20	0.94	1.07	0.83	Convert SB Defacto Right Turn Lane into 4th SB Through Lane
368 Bake Pkwy. & Rockfield Bl.	2002	0.67	0.94							
	BO			0.71	0.91	0.59	0.97	0.59	0.88	Restripe WB approach to provide 2.5 Left Turn Lanes and 1.5 Through Lanes (Retain WB Free Right Turn Lane).
376 Lake Forest Dr. & Trabuco Rd.	2002	0.64	0.62							
	2025			0.84	0.86	0.88	0.93	0.81	0.88	Construct SB Right Turn Lane
	BO			0.84	0.88	0.86	0.91	0.79	0.85	Construct SB Right Turn Lane
378 Lake Forest Dr. & Jeronimo Rd.	2002	0.66	0.69							
	2025			0.92	0.91	0.97	0.96	0.87	0.89	Construct EB and WB Right Turn Lanes and SB Left Turn Lane
	BO			0.90	0.88	0.95	0.91	0.86	0.88	Construct EB and WB Right Turn Lanes
379 Lake Forest Dr. & Muirlands Bl.	2002	0.62	0.74							
	2025			0.78	0.88	0.81	0.93	0.81	0.82	Construct 4th NB Through Lane
380 Lake Forest Dr. & Rockfield Bl.	2002	0.69	0.89							
	BO			0.84	0.94	0.89	1.00	0.86	0.94	Construct 3rd WB Left Turn Lane
	BO			0.84	0.94	0.89	1.00	0.81	0.93	Alternative Mitigation: Construct 5th SB Through Lane
383 Lake Forest Dr. & Avenida de la Carlota	2002	0.55	0.70							
	2007			0.80	0.88	0.79	0.93	0.74	0.90	Construct 2nd WB Left Turn Lane and Provide WB Right Turn Lane Overlap

Table 5.2-17
Base Plan Mitigation Summary
ICU Summary (Continued)

INTERSECTION	YEAR	EXISTING		NO PROJECT		OVERLAY PLAN		MITIGATED		MITIGATION DESCRIPTION
		AM	PM	AM	PM	AM	PM	AM	PM	
387 Ridge Route Dr. & Rockfield Bl.	2002	0.49	0.62							
	BO			0.79	0.93	0.82	0.95	0.82	0.87	Construct 2nd WB Left Turn Lane
389 Ridge Route & Moulton Pkwy.	2002	0.62	0.89							
				0.56	0.99	0.56	1.02	0.59	0.89	Restripe 1 NB Through Lane to NB Right Turn Lane
390 Paseo de Valencia & Avenida de la Carlota	2002	0.55	0.62							
	2025			0.79	0.98	0.82	1.03	0.82	0.83	Construct 3rd SB Left Turn Lane, including receiving lane
				0.79	0.98	0.82	1.03	0.82	0.95	Alternative Mitigation: Construct a 3rd EB Through Lane
	BO			0.78	0.91	0.78	0.95	0.78	0.75	Construct 3rd SB Left Turn Lane, including receiving lane
	BO			0.78	0.91	0.78	0.95	0.78	0.89	Alternative Mitigation: Construct a 3rd EB and 3rd NB Through Lane
391 Santa Maria Av. & Moulton Pkwy.	2002	0.54	0.82							
	2025			0.88	0.92	0.90	0.94	0.90	0.91	Construct EB Right Turn Lane
	BO			0.97	0.96	0.97	0.98	0.97	0.92	Construct 2nd WB Left Turn Lane
393 El Toro Rd. & Rockfield Bl.	2002	0.68	0.86							
	2025			0.79	0.89	0.81	0.91	0.78	0.78	Construct EB Right Turn Lane w/ Overlap Phase
396 El Toro Rd. & Avenida de la Carlota	2002	0.76	1.41							
	2007			0.84	1.15	0.85	1.19	0.71	1.04	Restripe WB approach to provide 1 Shared Left Turn/Through Lane and 2 Right Turn Lanes
	2025			1.00	1.39	1.05	1.43	0.92	1.32	Restripe WB approach to provide 1 Shared Left Turn/Through Lane and 2 Right Turn Lanes
	BO			0.66	0.98	0.70	1.02	0.64	0.94	Construct 4th NB Through Lane
407 Laguna Cyn. Rd & Bake Pkwy.	2002	-	-							
	BO			1.44	1.11	1.45	1.15	1.29	0.95	Construct 2nd SB Left Turn Lane
420 El Toro Rd. & Jeronimo Rd.	2002	0.65	0.88							
	2007			0.72	0.93	0.73	0.95	0.73	0.85	Construct 2nd SB Left Turn Lane
	2025			0.80	0.98	0.83	1.03	0.81	0.91	Construct 2nd SB Left Turn Lane
	BO			0.83	1.00	0.86	1.03	0.82	0.91	Construct 2nd SB Left Turn Lane
421 Los Alisos Bl. & Trabuco Rd.	2002	0.83	0.78							
	2025			0.93	0.80	0.95	0.80	0.85	0.76	Construct 2nd NB Left Turn Lane
422 Los Alisos Bl. & Jeronimo Rd.	2002	0.83	0.93							
	2007			0.82	0.90	0.81	0.92	0.81	0.90	Construct 2nd EB Left Turn Lane
	BO			0.88	0.95	0.91	0.97	0.88	0.93	Construct 2nd WB Left Turn Lane
423 Muirlands Bl. & Los Alisos Bl.	2002	0.69	1.22							
	2025			0.97	1.20	0.99	1.21	0.97	1.13	Construct 2nd WB Left Turn Lane
	BO			0.98	1.16	1.01	1.20	0.98	1.12	Construct 2nd WB Left Turn Lane
424 Los Alisos Bl. & Rockfield Bl.	2002	0.77	0.73							
	2007			0.88	0.97	0.91	0.98	0.75	0.83	Construct SB Right Turn Lane
	2025			0.95	0.96	0.95	0.98	0.86	0.94	Construct 2nd NB Left Turn Lane
427 Moulton Pkwy. & Glenwood	2002	0.73	0.55							
	BO			0.98	0.82	1.00	0.83	0.84	0.83	Add 4th NB Through Lane
429 Moulton Pkwy. & Laguna Hills Dr.	2002	0.66	0.65							
	BO			0.89	0.95	0.92	0.95	0.84	0.89	Construct 3rd EB Left Turn Lane
	BO			0.89	0.95	0.92	0.95	0.84	0.95	Alternate Mitigation: Convert SB Defacto Right Turn Lane into SB Through Lane
432 Alicia Pkwy. & Muirlands Bl.	2002	0.65	0.88							
	2007			0.89	0.95	0.91	0.97	0.83	0.94	Construct 2nd SB Left Turn Lane & Convert EB Right Turn Lane to EB Free Right Turn Lane
485 Sand Cyn. Av. & Collector St.	2002									
	BO			1.09	1.20	1.22	1.34	1.03	1.15	Construct 2nd EB Through Lane

established in the transportation system/infrastructure fee program described in Mitigation Measure Tran 2 above.

Tran 4. Prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated traffic forecasts. The updated traffic study will evaluate the cumulative impact of the subject map and all previously approved or concurrently submitted maps. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City approved traffic study scope of work. The landowner or subsequent project applicant shall construct, bond for, or enter into a funding agreement for necessary improvements identified in the updated traffic study and/or participate in the City fee program (Tran 2 above) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of this Final Program EIR.

Traffic signals that are on-site or directly related to the Great Park development will be installed as warranted through the mitigation implementation plan process.

Tran 5. In conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the following actions:

1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-tollway ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in this EIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines.
2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency.
3. The landowner or subsequent project applicant shall enter into an agreement with the City prior to recordation of the first final map for each Master Tentative Map or equivalent to establish the method and timing of payment of the identified percentage responsibility.
4. The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic

flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or funding participation in a regional transportation improvement fee program, if adopted.

- Tran 6.** The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.
- Tran 7.** Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-compete clause or any similar agreement restricting a public agency's authority to construct improvement.
- Tran 8.** Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of any building permits within the base property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdiction to amend the Orange County Master Plan of Arterial Highways. Marine Way, Trabuco Road from the SR-133 tollway to College Road, and Y Street should be included on the MPAH.

5.2.6 Significance of Impacts After Mitigation

While potential impacts to the freeway/tollway mainline segments and ramps have been evaluated, this analysis and mitigation assumes that implementation of freeway and ramp improvements, except for ramp intersections with arterial streets, will be the responsibility of the existing regional transportation agencies. A number of programs are in place in Orange County to improve and upgrade the regional transportation system. These include the Transportation Corridor Agencies (TCA) Corridor program, the State Transportation Improvement Program (STIP), Caltrans Traffic Operations Strategies (TOPS), and the Orange County Transportation Authority (OCTA) Measure M program.

The TCA has adopted a Major Thoroughfare and Bridge Fee Program in which new development is required to pay a corridor fee at issuance of building permits. The purpose of the fee program is to assure that new development pays its fair share cost toward construction of the ultimate Corridor improvements. The corridor fee revenue can be used to construct additional improvements to the existing transportation corridor system. Both the Base project and Overlay project would contribute Corridor fees. In addition, project traffic would increase the amount of toll revenue that the TCA obtains from operation of the Corridors.

The STIP is a four-year expenditure plan that defines how state transportation funds will be allocated. The source of these funds is primarily from state and federal gas taxes. The STIP funds are used for different projects ranging from road maintenance to new freeway construction. Each county is guaranteed a minimum amount of STIP funds.

Traffic Operations Strategies (TOPS) is a program recently implemented by Caltrans to maximize utilization of the existing freeway and tollway system through performance-based investment strategies. The Caltrans' April 2002 TOPS report defines different implementation strategies within the TOPS program including implementation of "intelligent infrastructure" improvements such as system-wide adaptive ramp metering, advanced traveler information systems and real-time performance measurement systems, and implementation of physical operational improvements such as the construction of freeway auxiliary lanes (merge lanes provided before and after on ramps), the modification of ramp/city street access and the addition of short passing lanes and truck climbing lanes.

Orange County has supplemented their transportation programs by implementing a county sales tax for transportation improvements through the Measure M program. Funds from this program are available for improvements to regional interchanges and arterial highways. The ramps on the I-5 and I-405 identified as impacted would be eligible for improvement and funding through the Measure M program.

To the extent that the non-compete clause interferes with implementation of mitigation measures proposed in this Final Program EIR, cumulative impacts would not be mitigated and thus remain significant and unavoidable. The conclusions below assume that the impact of project traffic along with other regional growth at the identified ramp locations will be mitigated through a combination of the above programs. However, if these programs are not implemented by the agencies with the responsibility to do so, the cumulative impacts would remain significant and unavoidable.

Base Plan

Tran B1. Less than significant.

Tran B2. Less than significant.

Tran B3. Less than significant.

Overlay Plan

Tran O1. Less than significant.

Tran O2. Less than significant.

Tran O3. Less than significant.

Notes and References

None.

5.3 Air Quality

An air quality analysis to determine the potential air quality impacts of the proposed project, is incorporated into the following discussion. The Air Quality technical report prepared by Black & Veatch is provided in the Volume II Appendix I of this Final Program EIR. Guidance for this section is provided by the South Coast Air Quality Management District's *CEQA Air Quality Handbook and Update*.

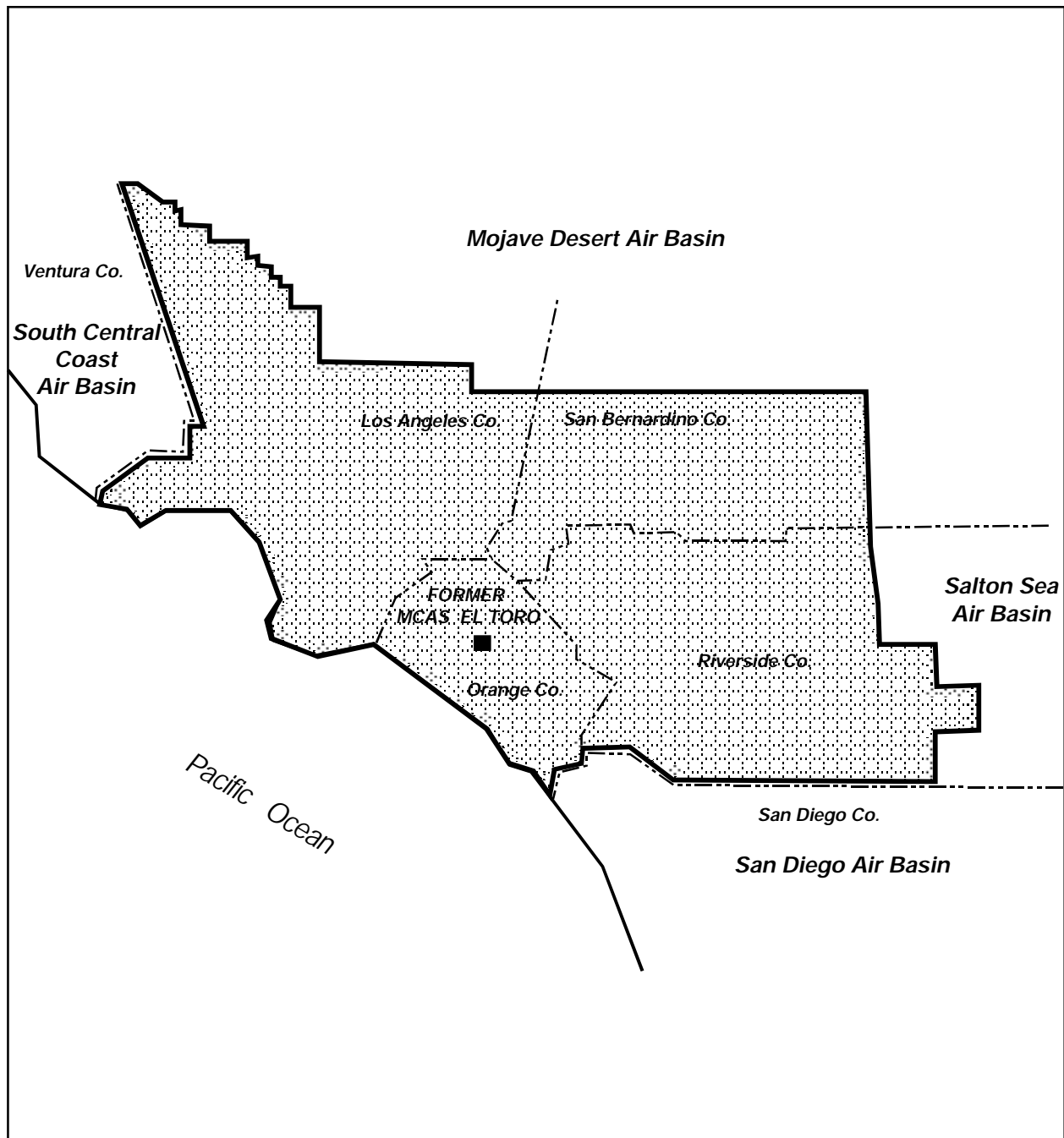
5.3.1 Environmental Setting

The proposed project site is located in the South Coast Air Basin (SCAB). The boundaries of the SCAB are shown in Figure 5.3-1. Air quality within the SCAB is monitored by the South Coast Air Quality Management District (SCAQMD). In general terms, air quality in the SCAB is considered one of the poorest in the United States.

Climate and Meteorological Conditions

The climate in Southern California is generally dominated by high-pressure systems over the Pacific Ocean. Moderate temperatures and comfortably low humidity are the predominant weather patterns in the region. Mild temperatures persist, except during summer months, when temperatures sometimes exceed 100 °F. The average summer and winter temperatures are approximately 75 °F and 50 °F, respectively. Heavy precipitation is limited to a few storms occurring normally from late November to April. The climate in Southern California is also frequented by temperature inversions that result in either ground based or elevated inversions that ultimately inhibit the dispersion of pollutants. Elevated inversions generally occur during the summer months where vertical mixing of pollutants is restricted, thereby resulting in accumulation of pollutants.

The climate in the SCAB is controlled largely by high-pressure systems over the Pacific Ocean, and is arid, with little rainfall and plentiful sunshine. During the summer months, light winds, high temperatures, and limited vertical mixing result in poor pollutant dispersion and in conjunction with abundant sunshine favor the formation of photochemical smog or ozone. Dominant wind patterns within the SCAB include the land/sea circulation system. On-shore breeze dominates daytime regional winds and the direction is usually reversed during nighttime. As such, calm winds (less than two miles per hour) usually occur less than ten percent of the time during the year. Based on the data available from the AQMD website [<http://www.aqmd.gov/metdata/>], the average wind speed measured at the MCAS El Toro meteorological station in 1981 is 1.57 meters per second (m/sec). However, the frequency of calm winds for 1981 measured at the site is 19.58 percent.



Source: SCAQMD CEQA Manual, 1993

- South Coast Air Basin Boundary
- County Boundaries



Not to Scale

Figure 5.3-1
South Coast Air Basin

Effects of Pollutants on Health

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in the prevalent air quality.

The following pollutants are regulated by the EPA and therefore are subject to emission reduction measures adopted by federal, state and other regulatory agencies.

Ozone (O₃)

Ozone is a secondary pollutant formed by the chemical reaction of volatile organic compounds and nitrogen oxides (NO_x) under favorable meteorological conditions such as high temperature and stagnation episodes. An elevated level of ozone irritates the lungs and breathing passages, causing coughing, and pain in the chest and throat thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower the lung efficiency.

Carbon Monoxide (CO)

Carbon monoxide is primarily emitted from combustion processes and motor vehicles because of incomplete combustion of fuel. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of moderate levels of carbon monoxide can cause nausea, dizziness, and headaches, and can be fatal at high concentrations.

Particulate Matter (PM₁₀)

The human body naturally prevents the entry of larger particles into the body. However, small particles, with an aerodynamic diameter equal to or less than ten microns (PM₁₀), are trapped in the nose, throat, and upper respiratory tract. These small particulates enter the body and could potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM₁₀. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulate could become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids.

Nitrogen Oxides (NO_x)

Major sources of NO_x include power plants, large industrial facilities, and motor vehicles. Nitrogen oxides are emitted from combustion processes and irritate the nose and throat. It increases susceptibility to respiratory infections, especially in people with asthma. The principal concern of NO_x is as a precursor to the formation of ozone.

Sulfur Dioxide (SO₂)

Major sources of SO₂ include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of sulfur dioxide aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. Sulfur dioxide potentially causes wheezing, shortness of breath, and coughing. High levels of particulate appear to worsen the effect of sulfur dioxide, and long-term exposures to both pollutants leads to higher rates of respiratory illness.

Lead (Pb)

Lead is emitted from industrial facilities and from the sanding or removal of old lead-based paint. Smelting or processing the metal is the primary source of lead emissions, which is primarily a regional pollutant. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

Volatile Organic Compounds (VOC)

Though VOCs are not directly a health hazard and are not considered a criteria pollutant, they react with NO_x in the presence of sunlight to produce ozone. Hence, VOC emissions are regulated as a precursor of ozone. However, some state and local agencies regulate VOCs as Reactive Organic Gases (ROGs) which possess similar characteristics as VOCs.

Air Quality Management

The project area is located in the SCAB and air emissions emanating from the project area are under the authority of the SCAQMD and the California Air Resources Board (CARB). The SCAQMD is primarily responsible for enforcing regulations for new and existing stationary sources within the SCAB and implementing appropriate transportation control measures. The CARB regulates and monitors mobile source emissions in conjunction with the SCAQMD. Other responsible agencies include the EPA and the Southern California Association of Governments (SCAG). The EPA is responsible for implementing the provisions of the federal Clean Air Act (CAA), the corresponding National Ambient Air Quality Standards (NAAQS), and ensuring the development of plans that are designed to meet the appropriate air quality standards. The SCAQMD and the SCAG are responsible for the development and implementation of the Air Quality Management Plan (AQMP) for the SCAB. The California Clean Air Act (CCAA) mandates implementation of a program that will achieve the California Ambient Air Quality Standards (CAAQS) and any new air quality performance standards. A listing of NAAQS and CAAQS is presented in Table 5.3-1. The most recent AQMP for the SCAB was developed in 1997. Preparation of a 2003 AQMP is underway and a draft is scheduled for release in early 2003.

Table 5.3-1
Applicable Federal and State Ambient Air Quality Standards

Air Pollutant	State Standard	Federal Primary Standard	Most Relevant Effects
	Concentration/ Averaging Time	Concentration/ Averaging Time	
Ozone	0.09 ppm, 1-hr. avg. >	0.12 ppm, 1-hr avg.> 0.08 ppm, 8-hr avg>	(a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema in humans and animals. (2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (c) Vegetation damage; (d) Property damage
Carbon Monoxide	9.0 ppm, 8-hr avg. > 20 ppm, 1-hr avg. >	9 ppm, 8-hr avg.> 35 ppm, 1-hr avg.>	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses
Nitrogen Dioxide	0.25 ppm, 1-hr avg. >	0.053 ppm, ann. avg.>	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration
Sulfur Dioxide	0.04 ppm, 24-hr avg.> 0.25 ppm, 1-hr. avg. >	0.03 ppm, ann. avg.> 0.14 ppm, 24-hr avg.>	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma
Suspended Particulate Matter (PM ₁₀)	30 µg/m ³ , ann. geometric mean > 50 µg/m ³ , 24-hr average>	50 µg/m ³ , annual arithmetic mean > 150 µg/m ³ , 24-hr avg.>	(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; (b) Excess seasonal declines in pulmonary function, especially in children
Sulfates	25 µg/m ³ , 24-hr avg. >=		(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage
Lead	1.5 µg/m ³ , 30-day avg. >=	1.5 µg/m ³ , calendar quarter>	(a) Increased body burden; (b) Impairment of blood formation and nerve conduction
Visibility-Reducing Particles	In sufficient amount to reduce the visual range to less than 10 miles at relative humidity less than 70%, 8-hour average (10am - 6pm)		Visibility impairment on days when relative humidity is less than 70 percent

Source: AQMP 1997 available at <http://www.aqmd.gov/aqmp/97aqmp/chapters/m-chap2.html>.

On January 12, 1999, the EPA proposed partial approval/disapproval of the 1997 AQMP revisions to the 1994 California Ozone State Implementation Plan (SIP) (64 FR 1770). To address the issues raised by the EPA, the SCAQMD Governing Board adopted the 1999 amendment to the 1997 ozone SIP revision for the SCAB. The 1999 amendment provides additional short-term stationary source control measures that implement portions of the 1997 Ozone SIP's long-term stationary source control measures. In addition, the amendment revises the adoption and implementation schedule for the remaining 1997 ozone SIP short-term stationary source control measures that AQMD is responsible for implementing.

Federal Clean Air Act (CAA) Requirements

In November 1990, Congress enacted a series of amendments to the CAA intended to intensify air pollution control efforts across the nation. One of the primary goals of the 1990 CAA amendments was an overhaul of the planning provisions for those areas not currently meeting NAAQS. The CAA identifies specific emission reduction goals, requires both a demonstration of reasonable further progress and an attainment demonstration, and incorporates more stringent sanctions for failure to attain, or to meet interim milestones.

National Ambient Air Quality Standards (NAAQS)

The CAA established the NAAQS for six criteria pollutants. The NAAQS are divided into primary and secondary standards. These are risk-based, national ambient standards established to regulate, protect, and improve the overall quality of air. Primary NAAQS are intended to protect human health, while the secondary NAAQS protect against other adverse effects to the environment. Compliance with the NAAQS is measured at certain locations within each designated air basin. The NAAQS are not directly enforceable against an emitting source. Rather, the source's emission limitations (which are directly enforceable) are set at levels calculated to support attainment of the NAAQS either statewide or basinwide.

The EPA does not necessarily consider economic feasibility of meeting the NAAQS in setting these standards. The NAAQS are technology forcing standards, since the regulated industries are required to implement pollution control technologies to attain emission limitations based upon the NAAQS, or limit or cease operations. NAAQS are implemented by the states, through enforceable source-specific emission standards developed and adopted through the SIP. The SIPs are revised periodically to comply with federal regulatory changes and local air quality conditions.

The CAA identifies two types of sources; namely, stationary sources and mobile sources. Stationary sources are regulated for all of the criteria and non-criteria pollutants, including hazardous air pollutants. Pollutants that are directly emitted into the atmosphere are known as primary pollutants, while secondary pollutants are those that are formed by the reaction of other precursor pollutants.

In general, the CAA does not necessitate significant changes in attainment planning for the SCAB in 1997, except requiring an attainment plan for PM₁₀. The CAA requires plans to provide for the implementation of all reasonably available control measures, as expeditiously as practicable, including the adoption of reasonably available control technologies for

reducing emissions from existing sources. Emission control innovations in the form of market-based approaches are explicitly encouraged by the CAA. The SCAQMD is the first local agency in the country to adopt a market-based approach for controlling stationary source emissions of oxides of nitrogen and sulfur. The CAA also requires plans to include demonstrations for reasonable further progress, which is defined as annual incremental reductions in emissions of relevant air pollutants needed to ensure attainment of the NAAQS by the applicable date. A similar demonstration of progress was instituted in California with the passage of the CCAA in 1988.

On July 17, 1997, the EPA announced new national ambient air quality standards for ground-level ozone and particulate matter. Specifically, the EPA plans to phase out and replace the existing 1-hour ozone standard with a new eight-hour standard, specifically the fourth highest eight hour average concentration not to exceed 0.08 parts per million (ppm) more than three times in three years. Additionally, the EPA had also revised the particulate matter standard by the promulgating a new standard for fine particulate matter, which is defined as particulate matter less than 2.5 microns in diameter.

In the year 2000, the EPA planned to designate areas that do not meet the eight-hour ozone standard based on the most recent three years of ozone data available at that time (e.g., 1997-1999). In order to implement the PM_{2.5} standards, the EPA established a comprehensive monitoring network to determine ambient PM_{2.5} concentrations. The CAA requires that the EPA make designation determinations (i.e., attainment, nonattainment, or unclassifiable) within two to three years of revising a standard. However, due to litigation, the EPA has delayed designation determinations and the implementation of PM_{2.5} standards until further notice. The EPA is scheduled to promulgate air quality designations for the new eight-hour ozone standard by April 15, 2004. Currently, it is unknown when the EPA plans to begin implementation of the new PM_{2.5} standards.

California Clean Air Act (CCAA)

The CCAA established a legal mandate to achieve health-based state air quality standards at the earliest practicable date. The Lewis Presley Act provides that the plan must also contain deadlines for compliance with all state ambient air quality standards and the federally mandated primary ambient air quality standards [Health and Safety Code (H&SC) 40462(a)]. Through its many requirements, the CCAA serves as an important consideration in the SCAB's attainment planning efforts. Essential CCAA requirements include the application of best available retrofit control technology; and reduction of nonattainment pollutants and their precursors at a rate of five percent per year. If these measures cannot be implemented, each basin is required to include other feasible measures of emission reduction with an expeditious implementation schedule; reduction in population exposure to severe nonattainment pollutants (i.e., ozone, CO, and NO_x for the SCAB) according to the prescribed schedule; and ranking control measures by cost-effectiveness and implementation priority. Finally, state law requires the plan to provide for attainment of the federal and state ambient air quality standards at the earliest practicable date.

The CCAA serves as the centerpiece of the SCAB's attainment planning efforts, since it is generally more stringent than the CAA. Based on pollutant levels, the CCAA divides nonattainment areas into categories with progressively more stringent requirements. The state nonattainment designations are on a county basis. The entire SCAB is an extreme nonattainment area for ozone. Although PM₁₀ is not explicitly addressed in the CCAA, it is

governed by the Lewis Presley Act. The plan therefore provides achieving all federal ambient air quality standards by their applicable date and state ambient air quality standards as early as possible.

1997 Air Quality Management Plan (AQMP)

The 1997 AQMP focuses on PM_{10} , since this is the first plan required by federal law to demonstrate attainment of the federal PM_{10} ambient air quality standards. The AQMP also updates the demonstration of attainment for ozone and CO, and includes a maintenance plan for nitrogen dioxide (NO_2).

The 1997 AQMP proposes policies and measures to achieve federal and state standards for healthful air quality in the SCAB and those portions of the Mojave Desert and Salton Sea Air Basins (formerly named the Southeast Desert Air Basin) that are under SCAQMD jurisdiction (namely, Antelope Valley and Coachella Valley). The expected compliance deadlines with state and federal standards for four criteria pollutants within SCAB are presented in Table 5.3-2. The Plan also addresses several state and federal planning requirements and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, and new models. The 1997 AQMP is consistent with the approaches taken in the 1994 AQMP for the attainment of the federal ozone air quality standard, and shows that with refinements to the 1994 AQMP control strategy, sufficient emission reductions are achieved to meet all federal criteria pollutant standards within the time frames allowed under the CAA. The new or amended rules which have been adopted since the release of the 1994 AQMP include the implementation of Phase II reformulated fuels (California Cleaner Burning Gasoline) in 1996; the replacement of the Regulation XV rideshare program with an equivalent emission reduction program under Rule 2202; and new incentive programs for generating emission credits.

Various measures are incorporated as overall control strategies within the AQMP to meet applicable state and federal standards. These measures include short and intermediate term measures, and long term measures. Short and intermediate measures include application of known, essential and available technologies and good management practices between 1995 and 2005. Long-term measures rely on future development of low to zero-emission control technology for all sources, and development of alternative technological solutions.

Sensitive Receptors

SCAQMD identifies sensitive receptors as populations that are more susceptible to the effects for air pollution than is the general population. Sensitive receptors located in or near the vicinity of known air emissions sources, including freeways and intersections, are of particular concern. Sensitive receptors include the following:

- health care facilities
- rehabilitation centers
- convalescent centers
- residences
- schools
- playgrounds
- child care centers
- athletic facilities

Table 5.3-2
Expected Year of Compliance with State and Federal Standards for Four
Criteria Pollutants (SCAB)

Pollutant	Standard	Threshold Concentration Level	Expected Compliance Year
Ozone	NAAQS 1-hour	12 pphm	2010
	CAAQS 1-hour	9 pphm	beyond 2010
PM ₁₀	NAAQS Annual	50 ug/m ³	2006
	NAAQS 24-hour	150 ug/m ³	2000 ¹
	CAAQS Annual	30 ug/m ³	beyond 2010
	CAAQS 24-hour	50 ug/m ³	beyond 2010
CO	NAAQS 8-hour	9 ppm	2000 ²
	NAAQS 1-hour	35 ppm	Achieved
	CAAQS 8-hour	9 ppm	2000 ²
	CAAQS 1-hour	20 ppm	Achieved
NO ₂	NAAQS Annual	5.34 pphm	Achieved
	CAAQS 1-hour	25 pphm	Achieved

pphm = Parts per hundred million parts of air, by volume

ug/m³ = micrograms per cubic meter

ppm = parts per million parts of air, by volume

¹Exceedances of the PM₁₀ 24-hour NAAQS were recorded in 2001

²No exceedances of the CO 8-hour NAAQS or CAAQS were recorded in 2001

Source: AQMP 1997 available at: [<http://www.aqmd.gov/aqmp/97aqmp/m-exec.html>]

Existing Environmental Conditions

In 2001, the annual maximum concentrations of ozone, and PM₁₀ exceeded both federal and state standards in some or all areas in the SCAB. However, standards for CO, NO₂, SO₂, lead and sulfate were not exceeded. Monitored data for the year 2001 is available for the monitoring locations in Orange County, but no official version of the trends incorporating the 2002 data is currently available. Therefore, air quality trends including 2001 are presented in the following section.

Maximum Pollutant Concentrations

Maximum recorded one-hour average and eight-hour average ozone concentrations in the SCAB for 2001 were 0.19 parts per million (ppm) and 0.144 ppm, which were 158 percent and 180 percent of the federal one-hour and eight-hour standards. Maximum recorded averages of 24-hour and annual PM₁₀ concentrations were 219 micrograms per cubic meter (ug/m³) and 63.1 ug/m³ and these values were 146 percent and 126 percent of the federal

24-hour and annual standards. A summary of measured pollutant concentrations within Orange County for the year 2001 is presented in Tables 5.3-3 to 5.3-8. The Saddleback Valley Site is the nearest to the project area.

In 2001, the federal NO₂ standard was not exceeded, with a maximum concentration of 0.0419 ppm, which was 79 percent of the standard. However, the one-hour average nitrogen dioxide concentration of 0.25 ppm was equal to the more stringent state standard. The highest eight-hour average CO concentration of the year was 7.71 ppm, which was less than both the federal and state standards. The maximum 24-hour concentration of sulfate was 20.6 µg/m³ and did not exceed the state standard. Sulfur dioxide and lead concentrations continued to remain well below the federal and state standards.

Air Quality Trends Through 2000

Historically, the SCAB has the highest number of exceedances of the federal air quality standards in the US. In 2001 alone, there were 36 days on which one or more federal standards were exceeded somewhere in the SCAB. However, air quality trends through 2001 reveal a continuation of a downward trend in concentrations and the number of exceedances in relation to preceding years. In the past few years, ozone levels in the SCAB have been markedly improving in terms of maximum concentration, the number of days exceeding the standards, and the severity of episode levels. In a continuing trend of improving air quality, the SCAB made it through a summer without experiencing a stage one episode for the third year in a row. While 1999 and 2000 were the first years in the history of ambient air monitoring that the SCAB was not the location of the highest recorded ozone concentration in the nation, once again in 2001 the highest one-hour ozone concentration in the nation was reported in the SCAB (SCAQMD website: [<http://www.aqmd.gov/smog/o3trend.html>]).

The SCAB's exceedances of the maximum three-year mean of the eight-hour average O₃ concentration decreased 48 percent between 1976-1978 and 1999-2001. The number of exceedances of the maximum one-hour O₃ concentration decreased 81 percent between 1976 and 2001. The SCAB is currently designated by the EPA as a non-attainment area for O₃, CO, and PM₁₀. Once an area has been designated as nonattainment, then the EPA requires the regulating authority to put in place a plan for planning and implementing a control strategy to achieve attainment. Some of the control strategies could include addressing emissions from existing sources and requiring more prescriptive control technology requirements and emission offsets for any new sources. According to the 1997 AQMP, attainment of all federal PM₁₀ standards is to occur no later than December 31, 2006, and O₃ standards are to be achieved by November 15, 2010. The eight-hour federal CO standard was to be attained no later than December 31, 2000; however, two exceedances were measured in the SCAB during 2000. There were no exceedances of the eight-hour federal CO standard in 2001 (AQMD website: [<http://ozone.aqmd.gov/smog/#aqdata>]).

**Table 5.3-3
Measured Ozone Concentrations in Orange County in 2001**

Monitoring Location	Station No.	Days of Data	1-hour Max (ppm)	8-hour Max (ppm)	Number of Days Standard Exceeded		
					Federal		State
					1-hr	8-hr	1-hr
N. Orange Co.	3177	360	0.11	0.09	0	2	4
Central Orange Co.	3176	274	0.11	0.07	0	0	2
N. Coast Orange	3195	365	0.07	0.07	0	0	1
Saddleback Valley*	3812	365	0.10	0.10	1	2	10

ppm - Parts per million parts of air, by volume

*Monitoring location nearest to the project area

Source: South Coast Air Quality Management District Air Data at:

[<http://www.aqmd.gov/smog/docs/aq01card.pdf>]

**Table 5.3-4
Measured CO Concentrations in Orange County in 2001**

Monitoring Location	Station No.	Days of Data	1-hour Max (ppm)	8-hour Max (ppm)	Number of Days Standard Exceeded ¹		
					Federal	State	
					8-hr.	8-hr.	1-hr.
N. Orange Co.	3177	363	11	4.7	0	0	0
Central Orange Co.	3176	274	8	4.7	0	0	0
N. Coast Orange	3195	363	6	4.6	0	0	0
Saddleback Valley*	3812	365	3	2.4	0	0	0

ppm - Parts per million parts of air, by volume

¹ The federal 1-hour standard (1-hour average CO > 35 ppm) was not exceeded

*Monitoring location nearest to the project area

Source: South Coast Air Quality Management District Air Data at:

[<http://www.aqmd.gov/smog/docs/aq01card.pdf>]

**Table 5.3-5
Measured NO₂ Concentrations in Orange County in 2001**

Monitoring Location	Station No.	Days of Data	1-hour Max (ppm)	AAM ¹ (ppm)	Number of Days State Standard Exceeded
					1-hour
N. Orange Co.	3177	363	0.13	0.0275	0
Central Orange Co.	3176	274	0.12	0.0293	0
N. Coast Orange	3195	365	0.08	0.0182	0
Saddleback Valley*	3812	--	--	--	--

ppm = Parts per million parts of air, by volume.

AAM = Annual Arithmetic Mean

¹ The federal standard is AAM NO₂ greater than 0.0534 ppm. No exceedance recorded.

*Monitoring location nearest to the project area.

-- = Pollutant not monitored.

Source: South Coast Air Quality Management District Air Data at

<http://www.aqmd.gov/smog/docs/aq01card.pdf>.

**Table 5.3-6
Measured PM₁₀ Concentrations in Orange County in 2001**

Monitoring Location	Station No.	Days of Data	24-hour Max (µg/m ³)	Number of Samples Exceeding Standard		AAM (µg/m ³)	AGM (µg/m ³)
				Federal 24-hour	State 24-hour		
N. Orange Co.	3177	--	--	--	--	--	--
Central Orange Co.	3176	46	93	0	9	36.0	33.7
N. Coast Orange	3195	--	--	--	--	--	--
Saddleback Valley*	3812	57	60	0	3	26.4	24.0

µg/m³ = microgram per cubic meter

AAM = Annual Arithmetic Mean

AGM = Annual Geometric Mean

Federal PM₁₀ standard is AAM > 50 µg/m³; state standard is AGM > 30 µg/m³

-- = Pollutant not monitored

* Monitoring location nearest to the project area

Source: South Coast Air Quality Management District Air Data at:

<http://www.aqmd.gov/smog/docs/aq01card.pdf>

Table 5.3-7
Measured Sulfate Concentrations in Orange County in 2001

Monitoring Location	Station No.	24-hour Max ($\mu\text{g}/\text{m}^3$)	No. (%) Samples Exceeding Standard
			State 24-hour
N. Orange Co.	3177	–	–
Central Orange Co.	3176	–	–
N. Coast Orange	3195	–	–
Saddleback Valley*	3812	–	–

¹Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media. Federal TSP standard superseded by PM_{10} standard, July 1, 1987

– = Pollutant not monitored

* Monitoring location nearest to the project area

Source: South Coast Air Quality Management District Air Data at:

<http://www.aqmd.gov/smog/docs/aq01card.pdf>.

Table 5.3-8
Measured SO_2 Concentrations in Orange County in 2001

Monitoring Location	Station No.	Days of Data	1-hour Max (ppm) ¹	24-hour Max (ppm) ¹
N Orange Co	3177	–	–	–
Central Orange Co.	3176	–	–	–
N. Coast Orange	3195	363	0.02	0.008
Saddleback Valley*	3812	–	–	–

ppm= Parts per million parts of air, by volume

¹ The state standards are 1-hour average > 0.25 ppm and 24-hour average > 0.045 ppm. No exceedances of the state standards were recorded

The federal standards are annual arithmetic mean SO_2 > 0.03 ppm, 3-hour average > 0.50 ppm, and 24-hour average > 0.14 ppm. No exceedances of these standards were recorded

– = Pollutant not measured

* Monitoring location nearest to the project area

Source: Air Quality South Coast Air Quality Management District. 2001

The SCAB's exceedances of the maximum three-year mean of the eight-hour average ozone concentration decreased 48 percent between 1976-1978 and 1999-2001. The number of exceedances of the maximum one-hour ozone concentration decreased 81 percent between 1976 and 2001. The SCAB is currently designated by the EPA as a non-attainment area for ozone, CO, and PM_{10} . In 2000, the annual maximum concentrations of ozone (O_3), carbon monoxide (CO), particulate matter (PM_{10}), and sulfates (SO_x) exceeded both federal and state standards in some or all areas in the SCAB. However, standards for nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (Pb) were not exceeded. A summary of measured criteria pollutant concentrations at the Saddleback air quality monitoring station (located at the former MCAS El Toro) for selected years between 1995 and 2000 are shown

in Table 5.3-9. NO₂ concentrations are not measured at this station; however, no station in Orange County has recorded an exceedance of NO₂ standards since at least 1990. Although air quality tends to vary year to year due primarily to meteorological conditions, air quality at the Saddleback monitoring station appears to be improving (which generally has been the case throughout the SCAB).

Table 5.3-9
Measured Criteria Pollutant Concentrations at Saddleback Monitoring Station
for 1995, 1997, 1998, and 2000

Year	Carbon Monoxide (CO) ¹		Ozone (O ₃) ²		Suspended Particulate Matter (PM ₁₀) ³	
	Maximum 8-hour Concentration (ppm)	Days State Standard Exceeded	Maximum 1-hour Concentration (ppm)	Days State Standard Exceeded	Maximum 24-hour Concentration (ug/m ³)	Days (% of Samples) State Standard Exceeded
2000	2.3	0	0.13	3	60	1(3)
1998	3.1	0	0.16	15	70	6(10.2)
1997	3.6	0	0.13	8	86	4(7.1)
1995	4.0	0	0.15	18	122	11 (18.3)

Abbreviations: ppm = parts per million; ug/m³ = micrograms per cubic meter

1. State standard for carbon monoxide: 20 ppm 1-Hour; 9.0 ppm 8-Hour. Less than 12 months of data for some years.
 2. State standard for ozone: 0.09 ppm 1-Hour.
 3. State standard for PM₁₀: .50 ug/m³, 24 hour. Collected approximately every 6 days.
- * Less than twelve full months of data.

Note: Levels of nitrogen dioxide (NO₂) are not measured at the Saddleback station. For other nearby stations in Orange County, NO₂ levels have not exceeded the State standard since at least 1990.

Source: South Coast Air Quality Management District. *Air Quality Data*. 1995-2000.

According to the 1997 AQMP, attainment of all federal PM₁₀ standards is to occur no later than December 31, 2006, and ozone standards are to be achieved by November 15, 2010. The eight-hour federal CO standard was to be attained no later than December 31, 2000; however, two exceedances were measured in the SCAB during 2000. There were no exceedances of the eight-hour federal CO standard in 2001. A summary of the attainment/nonattainment status of the SCAB and attainment deadlines is presented in Table 5.3-2.

5.3.2 Threshold For Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for air quality.

Would the project:

1. *Conflict with or obstruct implementation of any applicable air quality plan?*
2. *Violate any air quality standard or contributes substantially to an existing or projected air quality violation?*
3. *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*
4. *Expose sensitive receptors to substantial pollutant concentrations?*
5. *Create objectionable odors affecting a substantial number of people?*

The significance of the air quality impacts is determined by the criteria set forth in the SCAQMD's 1993 *CEQA Handbook and Update*. Air quality impacts are considered significant if operational emissions exceed the threshold criteria shown in Table 5.3-10.

Table 5.3-10
SCAQMD Thresholds for Significant Contribution to Regional Air Pollution

Pollutant	Threshold of Significant Effect	
	Operation Emissions	Construction Emissions
Reactive Organic Gases (ROG)	55 lbs/day, 0.03 tons/day	75 lbs/day, 0.03 tons/day, 2.5 tons/quarter
Oxides of Nitrogen (NO _x)	55 lbs/day, 0.03 tons/day	100 lbs/day, 0.03 tons/day, 2.5 tons/quarter
Carbon Monoxide (CO)	550 lbs/day, 0.28 tons/day	550 lbs/day, 0.28 tons/day 24.75 tons/quarter
Fine Particulate Matter (PM ₁₀)	150 lbs/day, 0.08 tons/day	150 lbs/day, 0.08 tons/day, 6.75 tons/quarter

Source: *CEQA Air Quality Handbook*. South Coast Air Quality Management District.

5.3.3 Environmental Impact

Musick Jail and IRWD Parcels

No land use change is proposed for these parcels as part of the proposed project. As such, the air quality impact is less than significant. The following analysis addresses Thresholds 2, 3 and 4, as identified below. Thresholds 1 and 5 are addressed later in this section.

Threshold 2: *Violate any air quality standard or contributes substantially to an existing or projected air quality violation?*

Threshold 3: *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*

Threshold 4: Expose sensitive receptors to substantial pollutant concentrations?**Base Plan and Overlay Plan**

The implementation of either the Base Plan or Overlay Plan for the development of the project area will result in additional amounts of air emissions. The overall air quality impacts due to the emissions generated by the project are classified into construction and post-construction impacts based on duration. In addition, based on the area of influence, they are divided into local and regional impacts. Construction-related impacts include impacts due to air emissions generated from activities such as grading and excavation. Post-construction impacts are predicted based on general operational emissions for the life of the project. The operational emissions include emissions due to energy consumption and motor vehicle trips.

The significance of the air quality impacts is determined by the criteria set forth in the SCAQMD's 1993 CEQA Handbook. Impacts are considered significant if net project emissions exceed the following threshold criteria:

<u>Pollutant</u>	<u>Emission Threshold</u>
ROG	55 lbs/day (0.0275 tons/day)
CO	550 lbs/day (0.275 tons/day)
PM ₁₀	150 lbs/day (0.075 tons/day)
NO _x	55 lbs/day (0.0275 tons/day)
SO _x	150 lbs/day (0.075 tons/day)

Other indicators that the project could be considered significant include interference with attainment of a national or state ambient air quality standard, or the generation of vehicle trips that create a CO hotspot.

Emission Estimation Procedure

Emissions from the Base Plan and Overlay Plan are estimated using the Urban Emissions (URBEMIS) 2001 Model developed and tested by CARB and approved for use by SCAQMD. The URBEMIS 2001 model is an emissions estimation tool for land use development projects, such as the reuse of the project area. The model has been modified and enhanced to estimate construction and area source emissions for various air districts in California. Specific emission factors for each air basin, including the SCAB, have been incorporated into the model that account for compliance with air basin specific requirements. Various default parameters specific to each region have been verified and approved by local regulatory agencies and are also included in the model. Additionally, the model includes the ability to selectively identify and account for various mitigation measures.

The URBEMIS 2001 model has been modified to estimate motor vehicle emissions using EMFAC7G, a motor vehicle emission factor model. Another significant feature of the model includes the ability to selectively identify and account for various mitigation measures.

Construction Emissions

Base Plan and Overlay Plan

Both the Base Plan and Overlay Plan propose the development of the entire 4,693-acre base within a 19-year (2007-2025) time frame. For estimation of air emissions, it was assumed that either plan is subdivided into two phases based on utility and extent of the development. For each of the two plans, the first phase is expected to last ten years (2007-2016) and the second phase will last the remaining nine years (2017-2025). For the estimation of air quality emissions from construction of the various facilities, construction activity is assumed to last for a period of three years during each phase. This assumption conservatively accounts for both demolition and grading/excavation activities as major sources of construction related emissions. The URBEMIS 2001 model is used for estimating construction emissions for all stages of development. Estimates of land use and acreage absorbed are obtained from the plan proposal and modification for the development.

According to the URBEMIS 2001 User's Guide, site grading emissions consist of two components: site grading equipment exhaust and grading-related fugitive PM₁₀ emissions. The procedure used to estimate site grading equipment exhaust emissions is based on emission factors developed by the EPA. The mobile construction equipment equations proposed for URBEMIS 2001 are based on the following equation:

$$\text{Emissions (pound per day)} = (\text{pounds of pollutant emitted per hour}) \times (\text{hours each equipment type operated})$$

URBEMIS 2001 estimates default acreage graded per day based on land use size specified by the user. The basis for site grading PM₁₀ fugitive emissions is the emission factor prepared by the CARB for construction activities:

$$\text{PM}_{10} \text{ (pounds per day)} = (220 \text{ pounds of PM}_{10} / \text{acre month}) \times (\text{month}/22 \text{ days}) \times \text{Acres graded per day}$$

The PM₁₀ emission factor of 220 pounds per acre-month is based on a report prepared for the SCAQMD (Midwest Research Institute 1996). A review of the report, entitled Improvement of Specific Emission Factors (BASCM Project No.1), indicates that this emission factor is an average emission factor for construction activities and was recommended by the Midwest Research Institute as a substitute for the EPA's AP-42 emission factor for construction activities. This average emission factor was based on construction activities (at four construction sites) for the following elements: limited-to-heavy trenching activities; limited-to-heavy earth moving activities by scrapers; road preparing activities; paving activities; road grading; scraper excavations; general construction (pads, framing, landscaping, etc.); drilling; blasting; compaction; and trucking of excavated and fill material.

Previous air quality analysis performed for the public release (draft) EIR for the Great Park Plan did not specifically estimate demolition emissions in the URBEMIS 2001 construction model. However, the air quality analysis did assume that fugitive particulate emissions would occur from land disturbance (i.e., site grading). Runway demolition will only occur in the first phase of construction; approximately 31.2 million cubic feet of concrete from

existing runways will be demolished. Table 5.3-11 provides emission estimates for the unmitigated phase one Base Plan scenario both with and without runway demolition. As shown in the table, the difference between the unmitigated PM₁₀ emissions for both scenarios is less than 6.6 tons per year; this figure is statistically insignificant.

**Table 5.3-11
Initial URBEMIS 2001 Model Run (Without Runway Demolition)**

Emission Source	Unmitigated PM₁₀ Emissions (Tons per Year)	Total Construction Emissions (Percent)
Demolition	0.00	0.00
Site Grading	445.69	98.76
Construction Worker Trips	3.47	0.77
Stationary Equipment	0.01	<0.01
Mobile Equipment (Diesel)	2.12	0.47
Total	451.29	100

Secondary URBEMIS 2001 Model Run (With Runway Demolition)

Emission Source	Unmitigated PM₁₀ Emissions (Tons per Year)	Total Construction Emissions (Percent)
Demolition	6.55	1.43
Site Grading	445.69	97.35
Construction Worker Trips	3.47	0.76
Stationary Equipment	0.01	<0.01
Mobile Equipment (Diesel)	2.12	0.46
Total	457.84	100

Source: Black and Veatch 2003

Other sources of construction related emissions include construction worker travel and asphaltting operations. A commonly accepted practice for reducing and suppressing dust emissions from construction activity is watering prior to and during the activity. Water application accounts for one of the mitigation measures assumed for estimating mitigated construction emissions. Probable mitigation measures and reduced impacts from their implementation are discussed in later in this report.

Unmitigated Construction Emission Estimates

Base Plan and Overlay Plan

Emissions from construction related activities for each phase are presented in Table 5.3-12 for both the Base Plan and Overlay Plan. These emissions are a result of unmitigated construction activity for the development in the project site. Emissions are presented in tons per day. It should be emphasized the emissions presented in the Table 5.3-12 are unmitigated emissions only. Once mitigation measures are implemented, a reduction in construction related emissions is anticipated. The estimates are based on URBEMIS 2001

defaults, as exact construction schedule and equipment specifications are currently not available.

Table 5.3-12
Unmitigated Construction Emissions for the Development of the Project Area

Construction Emission Estimates (tons/day)					
	ROG	NO_x	CO	PM₁₀	SO_x
Phase 1 (Base)	2.35	0.36	0.14	1.81	0.03
Phase 2 (Base)	0.23	0.31	0.01	0.18	0.03
Phase 1 (Overlay)	2.09	0.35	0.12	1.71	0.03
Phase 2 (Overlay)	0.32	0.34	0.01	0.28	0.03
CEQA Significance Thresholds	0.03	0.03	0.28	0.08	0.08
Base Case Exceeded Significant Thresholds	Yes	Yes	No	Yes	No
Overlay Case Exceeded Significant Thresholds	Yes	Yes	No	Yes	No

Source: Black and Veatch 2002

Mitigated Construction Emission Estimates

Base Plan and Overlay Plan

Mitigation measures are implemented to minimize emissions and thereby reduce impacts of construction activity associated with the project. Various levels of mitigation measures can be adopted. The most common form of mitigation method applied to minimize fugitive dust emissions from construction activity is the application of water. This form of mitigation is effective, resulting in a reduction of fugitive dust emissions. The following are some of the mitigation measures assumed for estimating mitigated emissions due to construction activity.

- ◆ Replace ground cover in disturbed areas quickly.
- ◆ Maintain construction and mobile equipment properly.
- ◆ Apply water to haul roads and unpaved areas twice a day.
- ◆ Reduce speeds on unpaved roads.
- ◆ Use low emission fuel.
- ◆ Use low VOC asphalt for paving.
- ◆ Reduce equipment idling time.
- ◆ Use non-diesel equipment, wherever possible.
- ◆ Stagger use of equipment near sensitive receptors.

All the above measures result in a substantial reduction of total PM₁₀ emissions from construction related activities, but NO_x emissions are increased. Specific mitigation measures that will be implemented is varied; certain measures may not be feasible once actual development gets underway and selection of certain measures may not be desirable

due to NO_x emission increases. The probable implementation of these measures may be further modified based on future demand. The mitigated construction emissions for the Base Plan and the Overlay Plan are presented in Table 5.3-13. All construction related emissions from the project are considered temporary and therefore not expected to significantly contribute to post-construction air quality impacts. As shown in the Tables 5.3-12 and 5.3-13, the project is expected to exceed the SCAB significant emission thresholds for ROG, NO_x and PM₁₀. The project impact is, therefore, considered significant since the estimated potential construction emissions are expected to exceed the emission thresholds.

**Table 5.3-13
Mitigated Construction Emissions for the Development of the Project Area**

Construction Emission Estimates (tons/day)					
	ROG	NO_x	CO	PM₁₀	SO_x
Phase 1 (Base)	2.23	0.42	0.14	0.72	0.02
Phase 2 (Base)	0.21	0.43	0.01	0.08	0.02
Phase 1 (Overlay)	1.98	0.41	0.12	0.69	0.03
Phase 2 (Overlay)	0.29	0.46	0.01	0.12	0.02
CEQA Significance Thresholds	0.03	0.03	0.28	0.08	0.08
Base Case Exceeded Significant Thresholds	Yes	Yes	No	Yes	No
Overlay Case Exceeded Significant Thresholds	Yes	Yes	No	Yes	No

Source: Black and Veatch 2002

Operational Emissions

Base Plan and Overlay Plan

Operational emissions resulting from the implementation of either the Base Plan or Overlay Plan are divided into (i) area source emissions that include emissions from natural gas combustion, residential fireplaces, landscaping, consumer products, and (ii) motor vehicle operation emissions. The number of motor vehicles that will result from the either plan were estimated using the land use type and trip generation rates presented in the transportation study performed by Urban Crossroads, Inc. Area source emissions resulting from natural gas combustion for heating/cooling purposes, fireplaces and consumer products are estimated based on the area and size of various proposed land uses in the project area. Operational emissions estimates are based on the assumption that operational emissions begin in the third year of each phase, that emissions are 50 percent of full phase operational emissions in years three and four, and that full operational emissions begin by the 5th year of each phase. Table 5.3-14 summarizes this approach.

Area source and motor vehicular emissions are estimated using the URBEMIS 2001 model. The description of the model is presented in earlier in this section.

Table 5.3-14
Operational Levels by Year for the Development of the Project Area

Year	Operational Level (Phase 1)	Operational Level (Phase 2)
Initiation of Phase 1		
2007	0%	0%
2008	0%	0%
2009	50%	0%
2010	50%	0%
2011-2016	100%	0%
Initiation of Phase 2		
2017	100%	0%
2018	100%	0%
2019	100%	50%
2020	100%	50%
2021	100%	100%
2022	100%	100%
2023	100%	100%
2024	100%	100%
2025	100%	100%
Post-2025	100%	100%

Source: Black and Veatch 2002

Unmitigated Area Source Emissions Estimation

Base Plan and Overlay Plan

The emissions from area sources are estimated depending on the land uses presented in the Air Quality technical report (Appendix I of this Final Program EIR). The significant area sources of air emissions result from combustion of natural gas (space and water heating) and electrical usage, residential fireplaces, and consumer products. Emissions from water and space heating are measured using default emission factors built into the URBEMIS 2001 model for the SCAB. These emission factors estimate the amount of emissions based on the square footage and/or acreage of various land uses in the plan. Similarly, air emissions from residential fireplaces and consumer products are also measured using emission factors built into the model based on number and type of residential units within the plan. Air emissions from each of the sources are estimated for the two stages of development of the project area for the Base Plan and Overlay Plan. Area source emissions are estimated for the median year for each stage of development. For example, the Phase 1 development will occur between the years 2007 and 2016. Therefore, emissions for this stage are estimated for the median year of 2010. These estimates conservatively account for potential emissions resulting from the project area. Potential unmitigated air emissions from area sources for the development of the project area for the Base Plan and the Overlay Plan are presented in Table 5.3-15.

Table 5.3-15
Unmitigated Area Source Emissions for the Development of the Project Area

Area Source Emission Estimates (tons/day)					
	ROG	NO_x	CO	PM₁₀	SO_x
Phase 1 (Base)	0.08	0.02	0.16	0.02	0.00
Phase 2 (Base)	0.03	0.01	0.07	0.01	0.00
Phase 1 (Overlay)	0.41	0.04	0.86	0.13	0.00
Phase 2 (Overlay)	0.25	0.02	0.52	0.08	0.00
CEQA Significance Thresholds	0.03	0.03	0.28	0.08	0.08
Base Case Exceeded Significant Thresholds	Yes	No	No	No	No
Overlay Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No

Source: Black and Veatch 2002

Mitigated Area Source Emissions Estimation

Base Plan and Overlay Plan

The mitigation of area source emissions cannot be completely quantified, as some of the applicable measures cannot be imposed on the proposed development at this time; but may be suggested for implementation later. The actual implementation of the mitigation measures depends on the type and degree of development activity, and the appropriate mitigation measures may not be proposed until the detailed planning of the various stages of development. However, for emission estimation, certain measures (defined below) have been assumed as mitigation measures that may be implemented during the planning and execution stages of the project. The implementation of the emission mitigation measures cannot be guaranteed at this stage of the project, because they may not be technically or economically feasible once actual development begins.

The mitigation measures that could be implemented for residential and commercial development include the siting of structures such that they orient either north or south to reduce the amount of energy consumed for heating and cooling purposes. Other assumed measures for residential and commercial development include the use of solar energy, and central heating and cooling systems. The mitigated emission estimates for the project area are presented in Table 5.3-16. As shown in Tables 5.3-15 and 5.3-16, the potential emissions resulting from the project are, whether unmitigated or mitigated, expected to be at or above the SCAB significant emission thresholds for all the pollutants for the Overlay Plan, except for SO_x. Only emissions of ROG are over the CEQA significant emission threshold for the Base Plan. The project area is, therefore, considered significant since the estimated potential emissions are expected to exceed the CEQA significant emission thresholds.

Table 5.3-16
Mitigated Area Source Emissions for the Development of the Project Area

Area Source Emission Estimates (tons/day)					
	ROG	NOx	CO	PM10	SOx
Phase 1 (Base)	0.07	0.02	0.14	0.02	0.00
Phase 2 (Base)	0.03	0.01	0.06	0.01	0.00
Phase 1 (Overlay)	0.39	0.03	0.77	0.12	0.00
Phase 2 (Overlay)	0.24	0.02	0.46	0.07	0.00
CEQA Significance Thresholds	0.03	0.03	0.28	0.08	0.08
Base Case Exceeded Significant Thresholds	Yes	No	No	No	No
Overlay Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No

Source: Black and Veatch 2002

Unmitigated Motor Vehicle Emission Estimation

Base Plan and Overlay Plan

Motor vehicle emissions or mobile source emissions constitute a significant portion of the total emissions from the development of the Base Plan or Overlay Plan. According to the data provided by Urban Crossroads, Inc, the total estimated number of average daily trips (ADT) generated by the Base Plan and the Overlay Plan are 90,965 and 148,455, respectively. Motor vehicle emissions are estimated for each phase based on the type of development activity and projected number of ADTs for that phase. It should be noted however that the actual number of ADTs during each phase might be less than projected since the increase depends upon the gradual progress of the development. The unmitigated emission estimates based on the projected number of ADTs for the Base Plan and Overlay Plan in the project area are presented in Table 5.3-17.

Table 5.3-17
Unmitigated Mobile Source Emissions for the Development of the Project Area

Mobile Source Emission Estimates (tons/day)				
	ROG	NO_x	CO	PM₁₀
Phase 1 (Base)	0.22	0.22	2.07	0.14
Phase 2 (Base)	0.14	0.15	1.66	0.16
Phase 1 (Overlay)	0.35	0.37	3.49	0.24
Phase 2 (Overlay)	0.24	0.27	2.97	0.28
CEQA Significance Thresholds	0.03	0.03	0.28	0.08
Base Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes
Overlay Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes

Source: Black and Veatch 2002

Mitigated Motor Vehicle Emission Estimation

Base Plan and Overlay Plan

The most common suggested mitigation measures for mobile source emissions include proper design of roadway systems that include sidewalks, street lighting, traffic shelters, synchronization of traffic lights and providing bicycle trails. Certain measures specific to the commercial development include parking preference for carpools and vanpools, using low emission vehicle fleets, and programs such as satellite offices, home based telecommuting programs, and providing onsite facilities such as banks and cafeterias. However, these measures are not guaranteed for implementation, as they are specific to the businesses and residences that will be developed in the project area. The mitigated emission estimates for motor vehicle emissions are presented in Table 5.3-18.

Table 5.3-18
Mitigated Mobile Source Emissions for the Development
of the Project Area Standards

Mobile Source Emission Estimates (tons/day)				
	ROG	NO_x	CO	PM₁₀
Phase 1 (Base)	0.19	0.19	1.77	0.12
Phase 2 (Base)	0.13	0.13	1.43	0.13
Phase 1 (Overlay)	0.31	0.32	3.05	0.21
Phase 2 (Overlay)	0.21	0.23	2.57	0.24
CEQA Significance Thresholds	0.03	0.03	0.28	0.08
Base Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes
Overlay Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes

Source: Black and Veatch 2002

Summary of Operational Emissions

Base Plan and Overlay Plan

Operational emissions last for the life of the project and consist of emissions from area sources and the operation of motor vehicles. As seen in Tables 5.3-15 through 5.3-19, the project area is expected to exceed the significance thresholds for one or more pollutants. The project is, therefore, considered significant since the estimated potential emissions are expected to exceed the significant emission thresholds for ROG, NO_x, CO and PM₁₀. Thus, a detailed assessment will be required to quantify the significance of the impacts from each of the pollutants. In the year 2025, after the project is completely implemented, only operational emissions (post-construction) will exist and the estimated average operational emissions resulting from the plan development are presented in Table 5.3-19. These estimates include all developed area sources and motor vehicle operations that occur during the two phases of the project area. A comparison of these estimates with the 1997 AQMP total projected SCAB emissions is presented later in this section.

Table 5.3-19
Average Operational Emissions (Area plus Mobile) in the Year 2025 for
the Project Area

Unmitigated Emissions (tons/day)					
	ROG	NO_x	CO	PM₁₀	SO_x
Tons/day (Base)	0.47	0.40	3.96	0.33	0.01
Tons/day (Overlay)	1.25	0.70	7.84	0.73	0.01
CEQA Significance Thresholds	0.03	0.03	0.28	0.08	0.08
Base Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No
Overlay Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No
Mitigated Emissions(tons/day)					
Tons/day (Base)	0.42	0.35	3.40	0.28	0.00
Tons/day (Overlay)	1.15	0.60	6.85	0.64	0.01
CEQA Significance Thresholds	0.03	0.03	0.28	0.08	0.08
Base Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No
Overlay Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No

Source: Black and Veatch 2002

Summary of Construction and Operation Emission Estimates

Base Plan and Overlay Plan

The total emission estimates from both construction and post-construction of the project are presented in Tables 5.3-20 and 5.3-21. The estimates are presented in tons per day. (These emissions are compared to projected total emissions in the SCAB later in this section). The projected SCAB emissions were extrapolated from the 1997 AQMP emission estimates for the years 2007 and 2025. As compared to the total projected emissions for the SCAB, the mitigated emissions after the Base Plan is completed constitutes from only 0.05 percent (for ROG) to 0.20 percent (for CO) of the total SCAB emissions. Similarly, the mitigated emissions after the Overlay Plan is completed constitutes from only 0.09 percent (for NO_x) to 0.39 percent (for CO) of the total SCAB emissions.

Table 5.3-20
Summary of Unmitigated Construction and Operation Emission Totals
for the Development of the Project

Average Emission Estimates (tons/ day)					
	ROG	NO_x	CO	PM₁₀	SO_x
Phase 1 (Base)	2.65	0.60	2.37	1.97	0.03
Phase 2 (Base)	0.40	0.48	1.74	0.34	0.03
Phase 1 (Overlay)	2.85	0.76	4.47	2.08	0.03
Phase 2 (Overlay)	0.81	0.63	3.50	0.64	0.03
CEQA Significance Thresholds	0.03	0.03	0.28	0.08	0.08
Base Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No
Overlay Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No

Source: Black and Veatch 2002

Table 5.3-21
Summary of Mitigated Construction and Operation Emission Totals for
the Development of the Project

Average Emission Estimates (tons/ day)					
	ROG	NO_x	CO	PM₁₀	SO_x
Phase 1 (Base)	2.50	0.63	2.05	0.86	0.03
Phase 2 (Base)	0.36	0.57	1.50	0.22	0.03
Phase 1 (Overlay)	2.69	0.76	3.93	1.02	0.03
Phase 2 (Overlay)	0.74	0.71	3.05	0.44	0.03
CEQA Significance Thresholds	0.03	0.03	0.28	0.08	0.08
Base Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No
Overlay Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No

Source: Black and Veatch 2002

Extent of Change in Regional Emissions

The primary post-construction air quality impacts from the development of the project result from operational emissions from area sources and motor vehicles. A comparison of the projected emission estimates for the SCAB in the 1997 AQMP and the emission estimates from the development of the project help determine the extent of the air quality impacts that the project will have on the surrounding environment and existing air quality. Projected SCAB emission estimates for the year 2007 and 2025 are currently unavailable, but have been determined based on the 1997 AQMP estimates for years 2000, 2006, and 2010. Projected emissions for each pollutant in year 2007 were extrapolated from the 1997 AQMP based on the trend of each pollutant from 2000 to 2006. Projected emissions for each pollutant in year 2025 were extrapolated from the 1997 AQMP based on the trend of each pollutant from 2000 to 2010. The projected SCAB emission estimates for the years 2007 and 2025 and the estimated average unmitigated and mitigated operation emissions for the project for the same years are presented in Table 5.3-22. This information is also presented graphically in Figure 5.3-2. Tables 5.3-23 and 5.3-24 list the percent comparison of the project estimates with the projected SCAB estimates. From the estimates presented, it is evident that emissions from the project are less than one-half (0.5) percent of the total projected SCAB emissions. Therefore, though the development of the project will have a negligible impact on the overall air quality within the SCAB.

Table 5.3-22
Projected Emission Estimates for SCAB from the 1997 AQMP Compared to
Emission Estimates for the Project Area

Emission Estimates (tons/day)						
Pollutant	Projected 1997 AQMP Emissions		Base Plan (2025)		Overlay Plan (2025)	
	Year 2007*	Year 2025**	Unmitigated Emissions	Mitigated Emissions	Unmitigated Emissions	Mitigated Emissions
ROG	786	591	0.47	0.42	1.25	1.15
NO_x	714	419.5	0.40	0.35	0.70	0.60
CO	3,530	1,745	3.96	3.40	7.84	6.85
PM₁₀	456	496	0.33	0.28	0.73	0.64

* 2007 Emission estimates are linearly extrapolated based on 2000 to 2006 emission trends in 1997 AQMP

**2025 Emission estimates are linearly extrapolated based on 2000 to 2010 emission trends in 1997 AQMP

Source: [<http://www.aqmd.gov/aqmp/97aqmp/chapters/m-chap3>]

Table 5.3-23
Percent Comparison of Projected SCAB Emissions to
Project Area Unmitigated Emission Estimates

Pollutant	Base Plan		Overlay Plan	
	Year 2007* (percent)	Year 2025** (percent)	Year 2007* (percent)	Year 2025** (percent)
ROG	0.06	0.08	0.16	0.21
NO_x	0.06	0.10	0.10	0.17
CO	0.11	0.23	0.22	0.45
PM₁₀	0.07	0.07	0.16	0.15

* 2007 Emission estimates are linearly extrapolated based on 2000 to 2006 emission trends in 1997 AQMP

**2025 Emission estimates are linearly extrapolated based on 2000 to 2010 emission trends in 1997 AQMP

Source: [<http://www.aqmd.gov/aqmp/97aqmp/chapters/m-chap3>]

Table 5.3-24
Percent Comparison of Projected SCAB Emissions to
Project Area Mitigated Emission Estimates

Pollutant	Base Plan		Overlay Plan	
	Year 2007* (percent)	Year 2025** (percent)	Year 2007* (percent)	Year 2025** (percent)
ROG	0.05	0.07	0.15	0.19
NO_x	0.05	0.08	0.08	0.14
CO	0.10	0.20	0.19	0.39
PM₁₀	0.06	0.06	0.14	0.13

* 2007 Emission estimates are linearly extrapolated based on 2000 to 2006 emission trends in 1997 AQMP

**2025 Emission estimates are linearly extrapolated based on 2000 to 2010 emission trends in 1997 AQMP

Source: [<http://www.aqmd.gov/aqmp/97aqmp/chapters/m-chap3>]

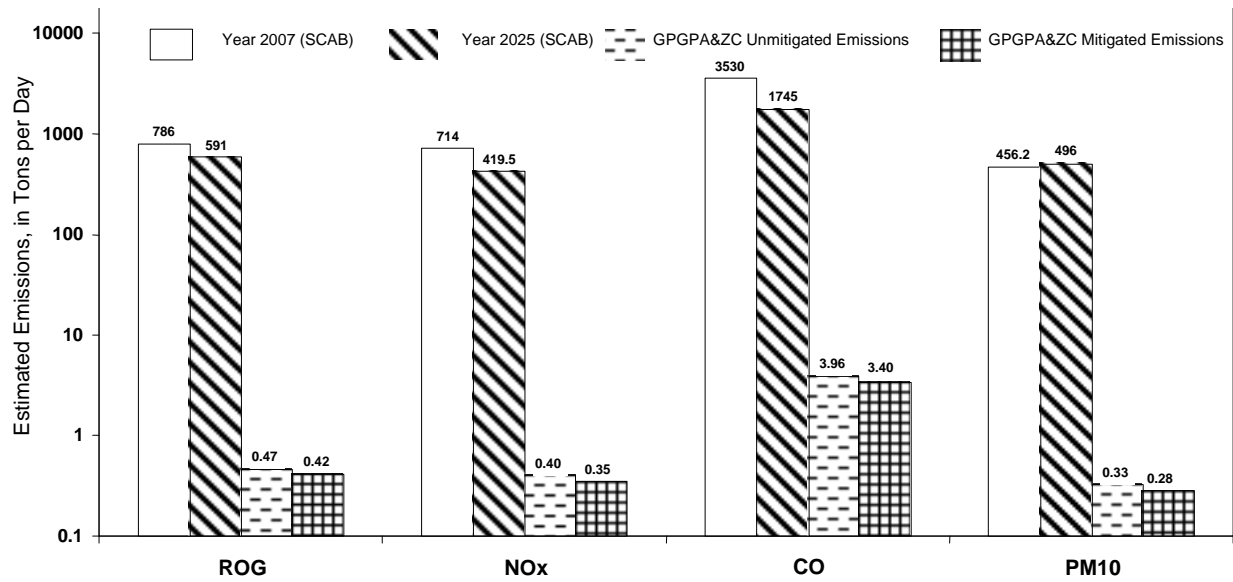


Figure 2-1: Comparison of SCAB Emissions to GPGPA&ZC Average Operational Emission Estimates (Base Plan)

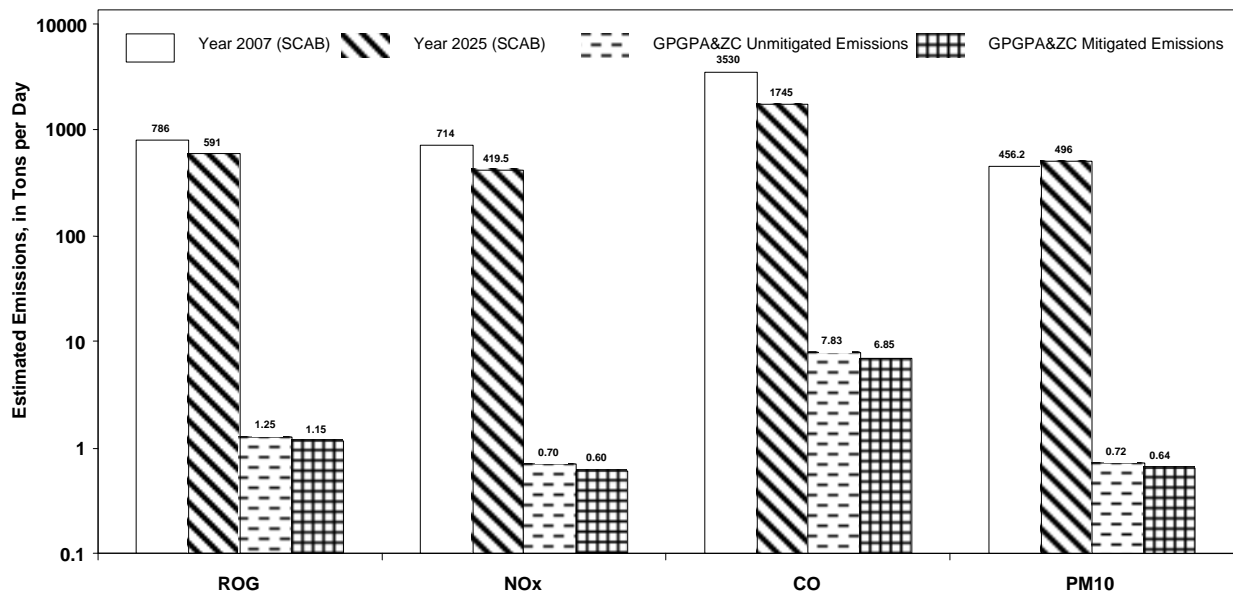


Figure 2-2: Comparison of SCAB Emissions to GPGPA&ZC Average Operational Emission Estimates (Overlay Plan)

*Figure 5.3-2
Comparison of SCAB Emmissions to Project*

Local Air Quality Impacts

The air quality impacts of the development of the project area and the immediate vicinity are addressed in this section. Significant sources of air emissions quantified in the previous section will cause air quality impacts on the nearby area. The following sections examine the effect of such air emissions on the vicinity of the project qualitatively and/or quantitatively where sufficient data is available.

Local Air Quality Impacts Due to Construction

Construction activity associated with the project area will not cause long-term impacts on the surrounding environment or the air quality within the region. However, due to the extent and schedule of construction activities, short-term impacts will occur. The major emissions associated with construction activity are particulates and fugitive dust emissions. These emissions can be considerably reduced through the implementation of appropriate mitigation measures and proper planning of construction activity as discussed previously.

Local Air Quality Impacts Due to Motor Vehicles

The major impact of motor vehicle emissions is the potential increase in CO concentrations. The CO concentrations were predicted using the CALINE 4.0 model. The model is a line source air quality model developed by the CALTRANS and it is used to predict air quality impacts due to motor vehicles. The region identified for estimating emissions encompasses major intersections around the proposed project area. With representative site geometry, receptor location, and source characteristics, the model can reliably and conservatively predict pollutant concentrations.

Default options for the model are specified in the Air Quality technical report, Appendix I of this EIR of the CO protocol that is acceptable for project-level conformity analysis in the SCAB. The protocol was approved by the EPA in December 1998. The CALINE 4.0 model requires input of motor vehicle emission factors obtained from the EMFAC7F model. Emission factors for each scenario were generated using the EMFAC7F model. According to CALTRANS, the later version of the model EMFAC7G is not used for micro-scale analysis such as intersections. Default motor vehicle distribution values for the SCAB were obtained from the default assumptions in the URBEMIS 2001 model. Cold start percentages of 20 percent were assumed against a suggested default of 15 percent for the model. The emission factors thus obtained were input into the CALINE 4.0 model. The input assumptions and model outputs for the EMFAC7F modeling are presented in the Air Quality technical report, located in Appendix I of this Final Program EIR.

Worst-case meteorology with a wind speed of 1 mile per hour and a stability class G was used in the CALINE 4.0 modeling, as recommended in the CALTRANS air quality technical analysis notes (AQTAN) protocol. Default worst-case wind direction option was used. The fluctuation in wind direction is measured in terms of standard deviation (σ theta), and it was assigned a default value of ten degrees. A mixing height of 1,000 meters and surface roughness of 100 centimeters were used based on the AQTAN.

Existing and projected hourly peak traffic volumes were extracted from the Traffic Impact Analysis provided by Urban Crossroads. Default vehicle type distributions specific to the

SCAB specified in the URBEMIS 2001 model were used in the CALINE 4.0 modeling. The input assumptions and model outputs for the CALINE 4.0 modeling are presented in the Air Quality technical report, located in Appendix I of this Final Program EIR.

The link option was used within the CALINE 4.0 model as specific data regarding delay times at intersections and other required intersection-specific input data are not currently available. Link coordinates in terms of directional splits (separate links for opposite directions on each route) were used for each intersection. Receptors were placed at a distance of three meters (m) from the edge of each roadway and at a height of 1.8 m to reflect the concentration in the mixing zone as recommended by the CALINE 4.0 manual. Four years were analyzed: 2002 (existing), 2007, 2025 and post-2025. Because CO impacts are higher when traffic congestion exists, intersections with a Level of Service (LOS) "D" or higher at AM or PM peak hours, with available data and representative of traffic patterns, were identified for analysis. Average vehicular speeds of 40 mph, 30 mph and 20 mph were used for intersections with LOS designations D, E, and F, respectively.

One-hour concentrations of CO at each intersection with projected traffic volumes were assessed using the CALINE 4.0 model. Eight-hour concentrations were estimated using the procedure described in the AQTAN. A persistence factor of 0.83 was used which was calculated as the highest ratio of the highest eight hour maximum (2.38 ppm) to the highest one hour maximum (3.0 ppm) CO concentration measured during at the Saddleback Valley monitoring site in the SCAB in each of the past three years (1999, 2000, 2001). The monitored maximums at the monitoring location nearest to the MCAS El Toro (Saddleback Valley) for 2001 were used as the one-hour and the 8-hour background levels. These concentrations were added to the predicted concentrations obtained from the CALINE 4.0 modeling to determine projected total CO impacts. The model output and results are summarized in Table 5.3-25 through Table 5.3-30.

The 1993 CEQA Handbook defines a measurable increase as one ppm for one-hour concentration and 0.45 ppm for eight-hour concentration. For the Base Plan or Overlay Plan, impacts predicted by the model indicate a range of one-hour CO concentrations between 0.4 ppm and 2.9 ppm and an approximate maximum increase of 0.8 ppm. For either plan, predicted eight-hour concentrations ranged between 0.33 ppm and 2.41 ppm with an estimated maximum increase of 0.7 ppm. As shown in Table 5.3-25 through Table 5.3-30, the predicted air quality impacts from the CALINE 4.0 modeling demonstrate that no intersections in the traffic study area result in one-hour and eight-hour CO concentrations above the applicable state air quality standards of 20 ppm for one-hour concentrations and nine ppm for eight-hour concentrations. This is believed to be due to the interconnection of roadways through the project area and other traffic improvement programs planned for the area.

Local Air Quality Impacts Due to Area Sources (Operation)

The air quality impacts due to area sources such as commercial establishments and residential neighborhoods are not individually significant but cumulatively contribute to increased emissions within the region. Given the predominant use of natural gas as the primary fuel source for most combustion-related local sources, emission concentrations of pollutants should be very low. The development of new emerging technologies and the refinement of existing technologies may help mitigate a significant portion of these and

other emissions resulting from local sources. Considering this, local source emissions should have a negligible impact on local air quality

Threshold 5: Create objectionable odors affecting a substantial number of people.

Base Plan and Overlay Plan

No land used that handles large amounts of solid waste, chemicals associated with heavy industry, or other uses that may generate objectionable odors are known under the proposed project. Thus, no significant adverse impacts associated with odors are expected.

Consistency with Air Quality Planning Measures

The CEQA guidelines provide direction to determine consistency of any proposed development projects with the AQMP and other applicable regional plans. Any inconsistency of the development projects with the AQMP results from the increase in the severity or frequency of air quality standard exceedances and/or changing the assumptions in the AQMP.

Consistency with AQMP

Threshold 1: Conflicts with or obstructs implementation of any applicable air quality plan.

Base Plan and Overlay Plan

The most recent AQMP for the SCAB was developed by the SCAQMD in 1997 with the 1999 Ozone amendment and incorporates most of the provisions included in the 1994 AQMP. The overall control strategy for this plan, designed to meet applicable state and federal requirements, including attainment of ambient air quality standards, proposes two tiers of emission reduction measures. Short-term and intermediate-term measures propose the application of available technologies and management practices until the year 2005. Long-term additional emission reductions rely on the advancement of technologies and control methods that can reasonably be expected to occur between 2000 and 2010. These long-term measures rely on further development and refinement of currently available low- and zero-emission control technologies in addition to technological breakthroughs. The primary goal of these measures is to bring the area into attainment of the federal and state air quality standards, and the reduction in total vehicle miles traveled consistent with the AQMP. Another goal includes the mitigation of all possible emissions for overall reduction in potential emissions without prohibiting future growth within the region. The important criteria for determining consistency with the AQMP are jobs and housing balance, reduction in motor vehicle trips and improvement in overall air quality in the region.

Table 5.3-25
CALINE 4.0 1-hour Carbon Monoxide Modeling Results 2007

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3.0 ppm) (ppm)			
	2002 Existing Conditions	2007 No Project	2007 Base Plan	2007 Overlay Plan	2002 Existing Conditions	2007 No Project	2007 Base Plan	2007 Overlay Plan
Alicia Pkwy. & Muirlands Bl.	1.70	1.70	1.70	1.70	4.70	4.70	4.70	4.70
Alton Pkwy. & Enterprise Dr.	N/A	1.00	1.00	1.00	3.00	4.00	4.00	4.00
Alton Pkwy. & I-5 NB Ramps	N/A	1.50	1.10	1.10	3.00	4.50	4.10	4.10
Alton Pkwy. & Irvine Bl.	N/A	0.90	1.30	1.30	3.00	3.90	4.30	4.30
Alton Pkwy. & Irvine Center Dr.	N/A	1.30	1.20	1.20	3.00	4.30	4.20	4.20
Bake Pkwy. & I-5 NB Ramps	N/A	1.20	N/A	N/A	3.00	4.20	3.00	3.00
Bake Pkwy. & Irvine Bl.	2.30	2.20	2.30	2.30	5.30	5.20	5.30	5.30
Bake Pkwy. & Jeronimo Rd.	2.80	2.00	2.10	2.10	5.80	5.00	5.10	5.10
Bake Pkwy. & Rockfield Bl.	1.90	1.40	2.10	2.10	4.90	4.40	5.10	5.10
Bake Pkwy. At Commercentre Dr.	1.30	N/A	N/A	N/A	4.30	3.00	3.00	3.00
Bake Pkwy. At I-5 SB Ramps	2.00	N/A	N/A	N/A	5.00	3.00	3.00	3.00
Bake Pkwy. at Toledo Wy.	1.30	N/A	N/A	N/A	4.30	3.00	3.00	3.00
Barranca Pkwy. & Technology Dr.	N/A	0.90	0.80	0.90	3.00	3.90	3.80	3.90
Culver Dr. & I-5 SB Ramps	1.80	2.00	2.00	2.00	4.80	5.00	5.00	5.00
Culver Dr. & Trabuco Rd.	1.60	2.90	2.90	2.90	4.60	5.90	5.90	5.90
Culver Dr. & University Dr.	1.90	2.20	2.20	2.20	4.90	5.20	5.20	5.20
Culver Dr. at Walnut Av.	2.20	N/A	N/A	N/A	5.20	3.00	3.00	3.00
El Toro Rd. & Aliso Creek Rd.	1.40	1.20	1.20	1.20	4.40	4.20	4.20	4.20
El Toro Rd. & Avenida de la Carlota	4.00	2.30	2.30	2.30	7.00	5.30	5.30	5.30
El Toro Rd. & I-5 NB Ramps	N/A	1.20	1.20	1.20	3.00	4.20	4.20	4.20
El Toro Rd. & Jeronimo Rd.	1.30	1.30	1.30	1.30	4.30	4.30	4.30	4.30
El Toro Rd. & Moulton Pkwy.	1.90	1.40	1.40	1.40	4.90	4.40	4.40	4.40
El Toro Rd. & Rockfield Bl.	1.50	1.00	1.00	1.00	4.50	4.00	4.00	4.00
El Toro Rd. & Trabuco Rd.	N/A	1.10	1.10	1.10	3.00	4.10	4.10	4.10
El Toro Rd. at Muirlands Bl.	1.50	N/A	N/A	N/A	4.50	3.00	3.00	3.00
I-5 SB Ramps & Alicia Pkwy.	1.80	1.30	1.30	1.20	4.80	4.30	4.30	4.20
Irvine Center Dr. & Enterprise Dr.	N/A	1.30	1.20	1.20	3.00	4.30	4.20	4.20
Irvine Center Dr. & I-405 SB Ramps	N/A	1.10	1.10	1.10	3.00	4.10	4.10	4.10
Jeffrey Rd. & Alton Pkwy.	2.20	1.00	1.00	1.00	5.20	4.00	4.00	4.00

**Table 5.3-25
CALINE 4.0 1-hour Carbon Monoxide Modeling Results 2007**

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3.0 ppm) (ppm)			
	2002 Existing Conditions	2007 No Project	2007 Base Plan	2007 Overlay Plan	2002 Existing Conditions	2007 No Project	2007 Base Plan	2007 Overlay Plan
Jeffrey Rd. & Irvine Center Dr.	N/A	1.10	1.10	1.10	3.00	4.10	4.10	4.10
Jeffrey Rd. at I-405 NB Ramps	3.10	N/A	N/A	N/A	6.10	3.00	3.00	3.00
Laguna Cyn. Rd. & SR-73 NB Ramps	N/A	0.90	0.90	0.90	3.00	3.90	3.90	3.90
Laguna Hills Dr. & Paseo de Valencia	N/A	0.90	0.90	0.90	3.00	3.90	3.90	3.90
Lake Forest Dr. & Avenida de la Carlota	N/A	1.30	1.70	1.70	3.00	4.30	4.70	4.70
Lake Forest Dr. & I-5 NB Ramps	N/A	1.10	1.20	1.20	3.00	4.10	4.20	4.20
Lake Forest Dr. & Jeronimo Rd.	N/A	0.90	1.00	1.00	3.00	3.90	4.00	4.00
Lake Forest Dr. & Muirlands Bl.	N/A	1.00	1.00	1.00	3.00	4.00	4.00	4.00
Lake Forest Dr. & Portola Pkwy.	N/A	2.00	2.00	2.00	3.00	5.00	5.00	5.00
Lake Forest Dr. & Rockfield Bl.	1.70	1.30	1.40	1.40	4.70	4.30	4.40	4.40
Los Alisos Bl. & Jeromino Rd.	2.00	1.00	1.30	1.30	5.00	4.00	4.30	4.30
Los Alisos Bl. & Rockfield Bl./Fordview St.	N/A	1.30	1.20	1.30	3.00	4.30	4.20	4.30
Los Alisos Bl. & Trabuco Rd.	1.20	1.10	0.90	0.90	4.20	4.10	3.90	3.90
Muirlands Bl. & Los Alisos Bl.	3.10	1.90	1.90	1.90	6.10	4.90	4.90	4.90
Portola Pkwy .East & SR-241 Ramps	1.40	2.20	2.20	2.20	4.40	5.20	5.20	5.20
Ridge Route at Moulton Pkwy.	1.30	N/A	N/A	N/A	4.30	3.00	3.00	3.00
Santa Maria Av. & Moulton Pkwy.	1.20	N/A	0.90	N/A	4.20	3.00	3.90	3.00
Trabuco Rd. & Alicia Pkwy.	1.80	1.00	1.00	1.00	4.80	4.00	4.00	4.00
University Dr. at I-405 SB Ramps	1.40	N/A	N/A	N/A	4.40	3.00	3.00	3.00
University Dr. at Michelson Dr.	1.30	N/A	N/A	N/A	4.30	3.00	3.00	3.00
Number of Intersections above 1-hr state standard of 20 ppm					0	0	0	0

Table 5.3-26
CALINE 4.0 8-hour Carbon Monoxide Modeling Results 2007

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	2007 No Project	2007 Base Plan	2007 Overlay Plan	2002 Existing Conditions	2007 No Project	2007 Base Plan	2007 Overlay Plan
Alicia Pkwy. & Muirlands Bl.	1.41	1.41	1.41	1.41	3.79	3.79	3.79	3.79
Alton Pkwy. & Enterprise Dr.	N/A	0.83	0.83	0.83	2.38	3.21	3.21	3.21
Alton Pkwy. & I-5 NB Ramps	N/A	1.25	0.91	0.91	2.38	3.63	3.29	3.29
Alton Pkwy. & Irvine Bl.	N/A	0.75	1.08	1.08	2.38	3.13	3.46	3.46
Alton Pkwy. & Irvine Center Dr.	N/A	1.08	1.00	1.00	2.38	3.46	3.38	3.38
Bake Pkwy. & I-5 NB Ramps	N/A	1.00	N/A	N/A	2.38	3.38	2.38	2.38
Bake Pkwy. & Irvine Bl.	1.91	1.83	1.91	1.91	4.29	4.21	4.29	4.29
Bake Pkwy. & Jeronimo Rd.	2.32	1.66	1.74	1.74	4.70	4.04	4.12	4.12
Bake Pkwy. & Rockfield Bl.	1.58	1.16	1.74	1.74	3.96	3.54	4.12	4.12
Bake Pkwy. At Commercentre Dr.	1.08	N/A	N/A	N/A	3.46	2.38	2.38	2.38
Bake Pkwy. At I-5 SB Ramps	1.66	N/A	N/A	N/A	4.04	2.38	2.38	2.38
Bake Pkwy. at Toledo Wy.	1.08	N/A	N/A	N/A	3.46	2.38	2.38	2.38
Barranca Pkwy. & Technology Dr.	N/A	0.75	0.66	0.75	2.38	3.13	3.04	3.13
Culver Dr. & I-5 SB Ramps	1.49	1.66	1.66	1.66	3.87	4.04	4.04	4.04
Culver Dr. & Trabuco Rd.	1.33	2.41	2.41	2.41	3.71	4.79	4.79	4.79
Culver Dr. & University Dr.	1.58	1.83	1.83	1.83	3.96	4.21	4.21	4.21
Culver Dr. at Walnut Av.	1.83	N/A	N/A	N/A	4.21	2.38	2.38	2.38
El Toro Rd. & Aliso Creek Rd.	1.16	1.00	1.00	1.00	3.54	3.38	3.38	3.38
El Toro Rd. & Avenida de la Carlota	3.32	1.91	1.91	1.91	5.70	4.29	4.29	4.29
El Toro Rd. & I-5 NB Ramps	N/A	1.00	1.00	1.00	2.38	3.38	3.38	3.38
El Toro Rd. & Jeronimo Rd.	1.08	1.08	1.08	1.08	3.46	3.46	3.46	3.46
El Toro Rd. & Moulton Pkwy.	1.58	1.16	1.16	1.16	3.96	3.54	3.54	3.54
El Toro Rd. & Rockfield Bl.	1.25	0.83	0.83	0.83	3.63	3.21	3.21	3.21
El Toro Rd. & Trabuco Rd.	N/A	0.91	0.91	0.91	2.38	3.29	3.29	3.29
El Toro Rd. at Muirlands Bl.	1.25	N/A	N/A	N/A	3.63	2.38	2.38	2.38
I-5 SB Ramps & Alicia Pkwy.	1.49	1.08	1.08	1.00	3.87	3.46	3.46	3.38
Irvine Center Dr. & Enterprise Dr.	N/A	1.08	1.00	1.00	2.38	3.46	3.38	3.38
Irvine Center Dr. & I-405 SB Ramps	N/A	0.91	0.91	0.91	2.38	3.29	3.29	3.29
Jeffrey Rd. & Alton Pkwy.	1.83	0.83	0.83	0.83	4.21	3.21	3.21	3.21

Table 5.3-26
CALINE 4.0 8-hour Carbon Monoxide Modeling Results 2007

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	2007 No Project	2007 Base Plan	2007 Overlay Plan	2002 Existing Conditions	2007 No Project	2007 Base Plan	2007 Overlay Plan
Jeffrey Rd. & Irvine Center Dr.	N/A	0.91	0.91	0.91	2.38	3.29	3.29	3.29
Jeffrey Rd. at I-405 NB Ramps	2.57	N/A	N/A	N/A	4.95	2.38	2.38	2.38
Laguna Cyn. Rd. & SR-73 NB Ramps	N/A	0.75	0.75	0.75	2.38	3.13	3.13	3.13
Laguna Hills Dr. & Paseo de Valencia	N/A	0.75	0.75	0.75	2.38	3.13	3.13	3.13
Lake Forest Dr. & Avenida de la Carlota	N/A	1.08	1.41	1.41	2.38	3.46	3.79	3.79
Lake Forest Dr. & I-5 NB Ramps	N/A	0.91	1.00	1.00	2.38	3.29	3.38	3.38
Lake Forest Dr. & Jeronimo Rd.	N/A	0.75	0.83	0.83	2.38	3.13	3.21	3.21
Lake Forest Dr. & Muirlands Bl.	N/A	0.83	0.83	0.83	2.38	3.21	3.21	3.21
Lake Forest Dr. & Portola Pkwy.	N/A	1.66	1.66	1.66	2.38	4.04	4.04	4.04
Lake Forest Dr. & Rockfield Bl.	1.41	1.08	1.16	1.16	3.79	3.46	3.54	3.54
Los Alisos Bl. & Jeromino Rd.	1.66	0.83	1.08	1.08	4.04	3.21	3.46	3.46
Los Alisos Bl. & Rockfield Bl./Fordview St.	N/A	1.08	1.00	1.08	2.38	3.46	3.38	3.46
Los Alisos Bl. & Trabuco Rd.	1.00	0.91	0.75	0.75	3.38	3.29	3.13	3.13
Muirlands Bl. & Los Alisos Bl.	2.57	1.58	1.58	1.58	4.95	3.96	3.96	3.96
Portola Pkwy .East & SR-241 Ramps	1.16	1.83	1.83	1.83	3.54	4.21	4.21	4.21
Ridge Route at Moulton Pkwy.	1.08	N/A	N/A	N/A	3.46	2.38	2.38	2.38
Santa Maria Av. & Moulton Pkwy.	1.00	N/A	0.75	N/A	3.38	2.38	3.13	2.38
Trabuco Rd. & Alicia Pkwy.	1.49	0.83	0.83	0.83	3.87	3.21	3.21	3.21
University Dr. at I-405 SB Ramps	1.16	N/A	N/A	N/A	3.54	2.38	2.38	2.38
University Dr. at Michelson Dr.	1.08	N/A	N/A	N/A	3.46	2.38	2.38	2.38
Number of Intersections above 8-hr state standard of 9 ppm					0	0	0	0

Table 5.3-27
CALINE 4.0 1-hour Carbon Monoxide Modeling Results 2025

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3 ppm) (ppm)			
	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan
"A" Dr. & Irvine Bl.	N/A	N/A	0.90	0.90	3.00	3.00	3.90	3.90
"B" Dr. & Irvine Bl.	N/A	N/A	N/A	0.80	3.00	3.00	3.00	3.80
"Y" St. & Irvine Bl.	N/A	N/A	0.80	0.80	3.00	3.00	3.80	3.80
Alicia Pkwy. & Muirlands Bl.	1.70	1.20	1.20	1.80	4.70	4.20	4.20	4.80
Alton Pkwy. & Enterprise Dr.	N/A	0.70	0.80	0.80	3.00	3.70	3.80	3.80
Alton Pkwy. & I-5 NB Ramps	N/A	1.70	1.60	1.70	3.00	4.70	4.60	4.70
Alton Pkwy. & Irvine Bl.	N/A	1.70	1.80	1.80	3.00	4.70	4.80	4.80
Alton Pkwy. & Irvine Center Dr.	N/A	2.00	1.90	2.00	3.00	5.00	4.90	5.00
Alton Pkwy. & Muirlands Bl.	N/A	0.80	0.80	1.10	3.00	3.80	3.80	4.10
Alton Pkwy. & Toledo Wy.	N/A	N/A	N/A	0.60	3.00	3.00	3.00	3.60
Bake Pkwy. & Commercentre Dr.	1.30	0.70	0.70	0.70	4.30	3.70	3.70	3.70
Bake Pkwy. & I-5 NB Ramps	N/A	1.70	0.80	1.20	3.00	4.70	3.80	4.20
Bake Pkwy. & I-5 SB Ramps	2.00	N/A	1.10	1.20	5.00	3.00	4.10	4.20
Bake Pkwy. & Irvine Bl.	2.30	1.10	1.80	1.80	5.30	4.10	4.80	4.80
Bake Pkwy. & Jeronimo Rd.	2.80	1.50	1.60	1.60	5.80	4.50	4.60	4.60
Bake Pkwy. & Muirlands Bl.	N/A	N/A	0.80	0.80	3.00	3.00	3.80	3.80
Bake Pkwy. & Rancho Pkwy. S	N/A	0.60	0.70	0.60	3.00	3.60	3.70	3.60
Bake Pkwy. & Rockfield Bl.	1.90	1.60	1.50	1.60	4.90	4.60	4.50	4.60
Bake Pkwy. & Toledo Wy.	1.30	0.70	0.70	0.80	4.30	3.70	3.70	3.80
Barranca Pkwy. & Irvine Center Dr.	N/A	1.30	1.30	1.30	3.00	4.30	4.30	4.30
Barranca Pkwy. & Technology Dr.	N/A	0.70	0.60	0.70	3.00	3.70	3.60	3.70
Culver Dr. & I-5 SB Ramps	1.80	1.00	1.00	1.00	4.80	4.00	4.00	4.00
Culver Dr. & Irvine Center Dr.	N/A	0.90	0.90	0.90	3.00	3.90	3.90	3.90
Culver Dr. & Trabuco Rd.	1.60	2.20	2.20	2.20	4.60	5.20	5.20	5.20
Culver Dr. & University Dr.	1.90	1.90	1.90	1.90	4.90	4.90	4.90	4.90
Culver Dr. & Walnut Av.	2.20	0.80	0.80	0.80	5.20	3.80	3.80	3.80
El Toro Rd. & Aliso Creek Rd.	1.40	N/A	0.70	0.70	4.40	3.00	3.70	3.70
El Toro Rd. & Avenida de la Carlota	4.00	N/A	N/A	N/A	7.00	3.00	3.00	3.00

Table 5.3-27
CALINE 4.0 1-hour Carbon Monoxide Modeling Results 2025

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3 ppm) (ppm)			
	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan
El Toro Rd. & Avenida de la Carlota	N/A	2.10	2.20	2.20	3.00	5.10	5.20	5.20
El Toro Rd. & I-5 NB Ramps	N/A	1.10	1.10	1.20	3.00	4.10	4.10	4.20
El Toro Rd. & Jeronimo Rd.	1.30	0.90	1.40	1.40	4.30	3.90	4.40	4.40
El Toro Rd. & Moulton Pkwy.	1.90	1.90	2.00	2.00	4.90	4.90	5.00	5.00
El Toro Rd. & Portola Pkwy./Santa Margarita Pkwy.	N/A	1.00	1.00	1.00	3.00	4.00	4.00	4.00
El Toro Rd. & Rockfield Bl.	N/A	0.70	0.70	0.90	3.00	3.70	3.70	3.90
El Toro Rd. & SR-73 NB Ramps	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
El Toro Rd. & SR-73 SB Ramps	N/A	N/A	N/A	0.60	3.00	3.00	3.00	3.60
El Toro Rd. & Trabuco Rd.	N/A	1.10	1.10	1.60	3.00	4.10	4.10	4.60
El Toro Rd. at Muirlands Bl.	1.50	N/A	N/A	N/A	4.50	3.00	3.00	3.00
El Toro Rd. at Rockfield Bl.	1.50	N/A	N/A	N/A	4.50	3.00	3.00	3.00
I-5 NB Ramps & Trabuco Rd.	N/A	N/A	0.60	0.60	3.00	3.00	3.60	3.60
I-5 SB Ramps & Alicia Pkwy.	1.80	N/A	N/A	N/A	4.80	3.00	3.00	3.00
I-5 SB Ramps & Enterprise Dr.	N/A	0.50	0.50	0.50	3.00	3.50	3.50	3.50
Irvine Center Dr. & Enterprise Dr.	N/A	2.20	2.20	2.20	3.00	5.20	5.20	5.20
Irvine Center Dr. & I-405 SB Ramps	N/A	2.00	2.00	2.10	3.00	5.00	5.00	5.10
Jeffrey Rd. & Alton Pkwy.	2.20	N/A	N/A	N/A	5.20	3.00	3.00	3.00
Jeffrey Rd. & Alton Pkwy.	N/A	1.10	1.10	1.10	3.00	4.10	4.10	4.10
Jeffrey Rd. & Barranca Pkwy.	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
Jeffrey Rd. & I-405 NB Ramps	N/A	1.10	1.10	1.10	3.00	4.10	4.10	4.10
Jeffrey Rd. & Irvine Center Dr.	N/A	1.30	1.30	1.30	3.00	4.30	4.30	4.30
Jeffrey Rd. & Walnut Av.	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
Jeffrey Rd. at I-405 NB Ramps	3.10	N/A	N/A	N/A	6.10	3.00	3.00	3.00
Jeronimo Rd. & Alicia Pkwy.	N/A	N/A	0.80	0.80	3.00	3.00	3.80	3.80
Laguna Cyn. Rd. & Old Laguna Cyn. Rd.	N/A	0.80	1.10	1.10	3.00	3.80	4.10	4.10
Laguna Cyn. Rd. & SR-73 NB Ramps	N/A	0.90	0.90	0.90	3.00	3.90	3.90	3.90

Table 5.3-27
CALINE 4.0 1-hour Carbon Monoxide Modeling Results 2025

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3 ppm) (ppm)			
	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan
Laguna Hills Dr. & Paseo de Valencia	N/A	1.30	1.30	1.30	3.00	4.30	4.30	4.30
Lake Forest Dr. & Avenida de la Carlota	N/A	2.20	1.90	1.90	3.00	5.20	4.90	4.90
Lake Forest Dr. & I-5 NB Ramps	N/A	1.20	1.30	1.30	3.00	4.20	4.30	4.30
Lake Forest Dr. & Irvine Center Dr.	N/A	1.00	1.10	1.10	3.00	4.00	4.10	4.10
Lake Forest Dr. & Jeronimo Rd.	N/A	0.90	1.00	1.00	3.00	3.90	4.00	4.00
Lake Forest Dr. & Muirlands Bl.	N/A	0.80	1.00	1.00	3.00	3.80	4.00	4.00
Lake Forest Dr. & Portola Pkwy.	N/A	1.30	1.30	1.30	3.00	4.30	4.30	4.30
Lake Forest Dr. & Rancho Pkwy. N	N/A	1.40	1.40	1.40	3.00	4.40	4.40	4.40
Lake Forest Dr. & Rancho Pkwy. S	N/A	1.50	1.50	1.50	3.00	4.50	4.50	4.50
Lake Forest Dr. & Rockfield Bl.	1.70	2.10	2.20	2.20	4.70	5.10	5.20	5.20
Lake Forest Dr. & SR-241 SB Ramps	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
Lake Forest Dr. & Trabuco Rd.	N/A	0.90	1.10	1.20	3.00	3.90	4.10	4.20
Los Alisos Bl. & Jeromino Rd.	2.00	1.00	1.00	1.00	5.00	4.00	4.00	4.00
Los Alisos Bl. & Rockfield Bl./Fordview St.	N/A	0.90	1.00	1.00	3.00	3.90	4.00	4.00
Los Alisos Bl. & Trabuco Rd.	1.20	N/A	0.80	0.80	4.20	3.00	3.80	3.80
Marine Wy. & Barranca Pkwy.	N/A	N/A	N/A	0.70	3.00	3.00	3.00	3.70
Moulton Pkwy. & Alicia Pkwy.	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
Moulton Pkwy. & Glenwood Dr./Indian Creek Ln.	N/A	1.00	0.80	0.80	3.00	4.00	3.80	3.80
Moulton Pkwy. & Laguna Hills Dr.	N/A	1.10	1.10	1.10	3.00	4.10	4.10	4.10
Muirlands Bl. & Los Alisos Bl.	3.10	1.50	1.50	1.50	6.10	4.50	4.50	4.50
Paseo de Valencia & Avenida de la Carlota	N/A	1.10	1.10	1.70	3.00	4.10	4.10	4.70
Portola Pkwy .East & SR-241 Ramps	1.40	1.50	1.50	1.50	4.40	4.50	4.50	4.50
Ridge Route at Moulton Pkwy.	1.30	N/A	N/A	N/A	4.30	3.00	3.00	3.00

Table 5.3-27
CALINE 4.0 1-hour Carbon Monoxide Modeling Results 2025

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3 ppm) (ppm)			
	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan
Sand Cyn. Av. & Alton Pkwy.	N/A	1.50	1.50	1.50	3.00	4.50	4.50	4.50
Sand Cyn. Av. & I-405 NB Ramps	N/A	0.70	0.70	0.70	3.00	3.70	3.70	3.70
Sand Cyn. Av. & I-405 SB Ramps	N/A	0.60	0.60	0.60	3.00	3.60	3.60	3.60
Sand Cyn. Av. & Irvine Bl.	N/A	1.00	0.80	0.80	3.00	4.00	3.80	3.80
Sand Cyn. Av. & Irvine Center Dr.	N/A	N/A	N/A	0.60	3.00	3.00	3.00	3.60
Sand Cyn. Av. & Trabuco Rd.	N/A	N/A	N/A	0.80	3.00	3.00	3.00	3.80
Santa Maria Av. & Moulton Pkwy.	N/A	0.90	1.00	1.00	3.00	3.90	4.00	4.00
Santa Maria Av. At Moulton Pkwy.	1.20	N/A	N/A	N/A	4.20	3.00	3.00	3.00
SR-133 SB Ramps & Irvine Bl.	N/A	0.70	0.70	1.00	3.00	3.70	3.70	4.00
Trabuco Rd. & Alicia Pkwy.	1.80	0.90	0.90	0.90	4.80	3.90	3.90	3.90
University Dr. at I-405 SB Ramps	1.40	N/A	N/A	N/A	4.40	3.00	3.00	3.00
University Dr. at Michelson Dr.	1.30	N/A	N/A	N/A	4.30	3.00	3.00	3.00
Yale Av. & Irvine Bl.	N/A	0.70	0.70	0.70	3.00	3.70	3.70	3.70
Yale Av. & Irvine Center Dr.	N/A	N/A	0.60	0.60	3.00	3.00	3.60	3.60
Number of Intersections above 1-hr state standard of 20 ppm					0	0	0	0

Table 5.3-28
CALINE 4.0 8-hour Carbon Monoxide Modeling Results 2025

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan
"A" Dr. & Irvine Bl.	N/A	N/A	0.75	0.75	2.38	2.38	3.13	3.13
"B" Dr. & Irvine Bl.	N/A	N/A	N/A	0.66	2.38	2.38	2.38	3.04
"Y" St. & Irvine Bl.	N/A	N/A	0.66	0.66	2.38	2.38	3.04	3.04
Alicia Pkwy. & Muirlands Bl.	1.41	1.00	1.00	1.49	3.79	3.38	3.38	3.87
Alton Pkwy. & Enterprise Dr.	N/A	0.58	0.66	0.66	2.38	2.96	3.04	3.04
Alton Pkwy. & I-5 NB Ramps	N/A	1.41	1.33	1.41	2.38	3.79	3.71	3.79
Alton Pkwy. & Irvine Bl.	N/A	1.41	1.49	1.49	2.38	3.79	3.87	3.87
Alton Pkwy. & Irvine Center Dr.	N/A	1.66	1.58	1.66	2.38	4.04	3.96	4.04
Alton Pkwy. & Muirlands Bl.	N/A	0.66	0.66	0.91	2.38	3.04	3.04	3.29
Alton Pkwy. & Toledo Wy.	N/A	N/A	N/A	0.50	2.38	2.38	2.38	2.88
Bake Pkwy. & Commercentre Dr.	1.08	0.58	0.58	0.58	3.46	2.96	2.96	2.96
Bake Pkwy. & I-5 NB Ramps	N/A	1.41	0.66	1.00	2.38	3.79	3.04	3.38
Bake Pkwy. & I-5 SB Ramps	1.66	N/A	0.91	1.00	4.04	2.38	3.29	3.38
Bake Pkwy. & Irvine Bl.	1.91	0.91	1.49	1.49	4.29	3.29	3.87	3.87
Bake Pkwy. & Jeronimo Rd.	2.32	1.25	1.33	1.33	4.70	3.63	3.71	3.71
Bake Pkwy. & Muirlands Bl.	N/A	N/A	0.66	0.66	2.38	2.38	3.04	3.04
Bake Pkwy. & Rancho Pkwy. S	N/A	0.50	0.58	0.50	2.38	2.88	2.96	2.88
Bake Pkwy. & Rockfield Bl.	1.58	1.33	1.25	1.33	3.96	3.71	3.63	3.71
Bake Pkwy. & Toledo Wy.	1.08	0.58	0.58	0.66	3.46	2.96	2.96	3.04
Barranca Pkwy. & Irvine Center Dr.	N/A	1.08	1.08	1.08	2.38	3.46	3.46	3.46
Barranca Pkwy. & Technology Dr.	N/A	0.58	0.50	0.58	2.38	2.96	2.88	2.96
Culver Dr. & I-5 SB Ramps	1.49	0.83	0.83	0.83	3.87	3.21	3.21	3.21
Culver Dr. & Irvine Center Dr.	N/A	0.75	0.75	0.75	2.38	3.13	3.13	3.13
Culver Dr. & Trabuco Rd.	1.33	1.83	1.83	1.83	3.71	4.21	4.21	4.21
Culver Dr. & University Dr.	1.58	1.58	1.58	1.58	3.96	3.96	3.96	3.96
Culver Dr. & Walnut Av.	1.83	0.66	0.66	0.66	4.21	3.04	3.04	3.04
El Toro Rd. & Aliso Creek Rd.	1.16	N/A	0.58	0.58	3.54	2.38	2.96	2.96
El Toro Rd. & Avenida de la Carlota	3.32	N/A	N/A	N/A	5.70	2.38	2.38	2.38

Table 5.3-28
CALINE 4.0 8-hour Carbon Monoxide Modeling Results 2025

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan
El Toro Rd. & Avenida de la Carlota	N/A	1.74	1.83	1.83	2.38	4.12	4.21	4.21
El Toro Rd. & I-5 NB Ramps	N/A	0.91	0.91	1.00	2.38	3.29	3.29	3.38
El Toro Rd. & Jeronimo Rd.	1.08	0.75	1.16	1.16	3.46	3.13	3.54	3.54
El Toro Rd. & Moulton Pkwy.	1.58	1.58	1.66	1.66	3.96	3.96	4.04	4.04
El Toro Rd. & Portola Pkwy./Santa Margarita Pkwy.	N/A	0.83	0.83	0.83	2.38	3.21	3.21	3.21
El Toro Rd. & Rockfield Bl.	N/A	0.58	0.58	0.75	2.38	2.96	2.96	3.13
El Toro Rd. & SR-73 NB Ramps	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
El Toro Rd. & SR-73 SB Ramps	N/A	N/A	N/A	0.50	2.38	2.38	2.38	2.88
El Toro Rd. & Trabuco Rd.	N/A	0.91	0.91	1.33	2.38	3.29	3.29	3.71
El Toro Rd. at Muirlands Bl.	1.25	N/A	N/A	N/A	3.63	2.38	2.38	2.38
El Toro Rd. at Rockfield Bl.	1.25	N/A	N/A	N/A	3.63	2.38	2.38	2.38
I-5 NB Ramps & Trabuco Rd.	N/A	N/A	0.50	0.50	2.38	2.38	2.88	2.88
I-5 SB Ramps & Alicia Pkwy.	1.49	N/A	N/A	N/A	3.87	2.38	2.38	2.38
I-5 SB Ramps & Enterprise Dr.	N/A	0.42	0.42	0.42	2.38	2.80	2.80	2.80
Irvine Center Dr. & Enterprise Dr.	N/A	1.83	1.83	1.83	2.38	4.21	4.21	4.21
Irvine Center Dr. & I-405 SB Ramps	N/A	1.66	1.66	1.74	2.38	4.04	4.04	4.12
Jeffrey Rd. & Alton Pkwy.	1.83	N/A	N/A	N/A	4.21	2.38	2.38	2.38
Jeffrey Rd. & Alton Pkwy.	N/A	0.91	0.91	0.91	2.38	3.29	3.29	3.29
Jeffrey Rd. & Barranca Pkwy.	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
Jeffrey Rd. & I-405 NB Ramps	N/A	0.91	0.91	0.91	2.38	3.29	3.29	3.29
Jeffrey Rd. & Irvine Center Dr.	N/A	1.08	1.08	1.08	2.38	3.46	3.46	3.46
Jeffrey Rd. & Walnut Av.	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
Jeffrey Rd. at I-405 NB Ramps	2.57	N/A	N/A	N/A	4.95	2.38	2.38	2.38
Jeronimo Rd. & Alicia Pkwy.	N/A	N/A	0.66	0.66	2.38	2.38	3.04	3.04
Laguna Cyn. Rd. & Old Laguna Cyn. Rd.	N/A	0.66	0.91	0.91	2.38	3.04	3.29	3.29
Laguna Cyn. Rd. & SR-73 NB Ramps	N/A	0.75	0.75	0.75	2.38	3.13	3.13	3.13

Table 5.3-28
CALINE 4.0 8-hour Carbon Monoxide Modeling Results 2025

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan
Laguna Hills Dr. & Paseo de Valencia	N/A	1.08	1.08	1.08	2.38	3.46	3.46	3.46
Lake Forest Dr. & Avenida de la Carlota	N/A	1.83	1.58	1.58	2.38	4.21	3.96	3.96
Lake Forest Dr. & I-5 NB Ramps	N/A	1.00	1.08	1.08	2.38	3.38	3.46	3.46
Lake Forest Dr. & Irvine Center Dr.	N/A	0.83	0.91	0.91	2.38	3.21	3.29	3.29
Lake Forest Dr. & Jeronimo Rd.	N/A	0.75	0.83	0.83	2.38	3.13	3.21	3.21
Lake Forest Dr. & Muirlands Bl.	N/A	0.66	0.83	0.83	2.38	3.04	3.21	3.21
Lake Forest Dr. & Portola Pkwy.	N/A	1.08	1.08	1.08	2.38	3.46	3.46	3.46
Lake Forest Dr. & Rancho Pkwy. N	N/A	1.16	1.16	1.16	2.38	3.54	3.54	3.54
Lake Forest Dr. & Rancho Pkwy. S	N/A	1.25	1.25	1.25	2.38	3.63	3.63	3.63
Lake Forest Dr. & Rockfield Bl.	1.41	1.74	1.83	1.83	3.79	4.12	4.21	4.21
Lake Forest Dr. & SR-241 SB Ramps	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
Lake Forest Dr. & Trabuco Rd.	N/A	0.75	0.91	1.00	2.38	3.13	3.29	3.38
Los Alisos Bl. & Jeromino Rd.	1.66	0.83	0.83	0.83	4.04	3.21	3.21	3.21
Los Alisos Bl. & Rockfield Bl./Fordview St.	N/A	0.75	0.83	0.83	2.38	3.13	3.21	3.21
Los Alisos Bl. & Trabuco Rd.	1.00	N/A	0.66	0.66	3.38	2.38	3.04	3.04
Marine Wy. & Barranca Pkwy.	N/A	N/A	N/A	0.58	2.38	2.38	2.38	2.96
Moulton Pkwy. & Alicia Pkwy.	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
Moulton Pkwy. & Glenwood Dr./Indian Creek Ln.	N/A	0.83	0.66	0.66	2.38	3.21	3.04	3.04
Moulton Pkwy. & Laguna Hills Dr.	N/A	0.91	0.91	0.91	2.38	3.29	3.29	3.29
Muirlands Bl. & Los Alisos Bl.	2.57	1.25	1.25	1.25	4.95	3.63	3.63	3.63
Paseo de Valencia & Avenida de la Carlota	N/A	0.91	0.91	1.41	2.38	3.29	3.29	3.79
Portola Pkwy .East & SR-241 Ramps	1.16	1.25	1.25	1.25	3.54	3.63	3.63	3.63
Ridge Route at Moulton Pkwy.	1.08	N/A	N/A	N/A	3.46	2.38	2.38	2.38

Table 5.3-28
CALINE 4.0 8-hour Carbon Monoxide Modeling Results 2025

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan
Sand Cyn. Av. & Alton Pkwy.	N/A	1.25	1.25	1.25	2.38	3.63	3.63	3.63
Sand Cyn. Av. & I-405 NB Ramps	N/A	0.58	0.58	0.58	2.38	2.96	2.96	2.96
Sand Cyn. Av. & I-405 SB Ramps	N/A	0.50	0.50	0.50	2.38	2.88	2.88	2.88
Sand Cyn. Av. & Irvine Bl.	N/A	0.83	0.66	0.66	2.38	3.21	3.04	3.04
Sand Cyn. Av. & Irvine Center Dr.	N/A	N/A	N/A	0.50	2.38	2.38	2.38	2.88
Sand Cyn. Av. & Trabuco Rd.	N/A	N/A	N/A	0.66	2.38	2.38	2.38	3.04
Santa Maria Av. & Moulton Pkwy.	N/A	0.75	0.83	0.83	2.38	3.13	3.21	3.21
Santa Maria Av. At Moulton Pkwy.	1.00	N/A	N/A	N/A	3.38	2.38	2.38	2.38
SR-133 SB Ramps & Irvine Bl.	N/A	0.58	0.58	0.83	2.38	2.96	2.96	3.21
Trabuco Rd. & Alicia Pkwy.	1.49	0.75	0.75	0.75	3.87	3.13	3.13	3.13
University Dr. at I-405 SB Ramps	1.16	N/A	N/A	N/A	3.54	2.38	2.38	2.38
University Dr. at Michelson Dr.	1.08	N/A	N/A	N/A	3.46	2.38	2.38	2.38
Yale Av. & Irvine Bl.	N/A	0.58	0.58	0.58	2.38	2.96	2.96	2.96
Yale Av. & Irvine Center Dr.	N/A	N/A	0.50	0.50	2.38	2.38	2.88	2.88
Number of Intersections above 8-hr state standard of 9 ppm					0	0	0	0

Table 5.3-29
CALINE 4.0 1-hour Carbon Monoxide Modeling Results Post-2025

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3 ppm) (ppm)			
	2002 Existing Conditions	Post -2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan	2002 Existing Conditions	Post-2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan
"A" Dr. & Irvine Bl.	N/A	N/A	0.70	0.70	3.00	3.00	3.70	3.70
"B" Dr. & Irvine Bl.	N/A	N/A	N/A	0.70	3.00	3.00	3.00	3.70
"Y" St. & Irvine Bl.	N/A	N/A	0.70	0.80	3.00	3.00	3.70	3.80
"Y" St. & Portola Pkwy.	N/A	N/A	0.70	0.70	3.00	3.00	3.70	3.70
Alicia Pkwy. & Muirlands Bl.	1.70	1.20	1.20	1.20	4.70	4.20	4.20	4.20
Alton Pkwy. & Enterprise Dr.	N/A	0.90	0.80	0.70	3.00	3.90	3.80	3.70
Alton Pkwy. & I-5 NB Ramps	N/A	1.70	1.60	1.60	3.00	4.70	4.60	4.60
Alton Pkwy. & Irvine Bl.	N/A	1.60	1.10	1.20	3.00	4.60	4.10	4.20
Alton Pkwy. & Irvine Center Dr.	N/A	1.90	1.80	1.80	3.00	4.90	4.80	4.80
Alton Pkwy. & Muirlands Bl.	N/A	0.70	0.70	0.80	3.00	3.70	3.70	3.80
Bake Pkwy. & Commercentre Dr.	1.30	0.70	0.70	0.70	4.30	3.70	3.70	3.70
Bake Pkwy. & I-5 NB Ramps	N/A	0.80	0.90	1.20	3.00	3.80	3.90	4.20
Bake Pkwy. & I-5 SB Ramps	2.00	N/A	N/A	0.90	5.00	3.00	3.00	3.90
Bake Pkwy. & Irvine Bl.	2.30	1.70	1.10	1.60	5.30	4.70	4.10	4.60
Bake Pkwy. & Jeronimo Rd.	2.80	1.60	1.60	1.60	5.80	4.60	4.60	4.60
Bake Pkwy. & Muirlands Bl.	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
Bake Pkwy. & Ridge Route Dr.	N/A	N/A	N/A	0.40	3.00	3.00	3.00	3.40
Bake Pkwy. & Rockfield Bl.	1.90	1.60	1.60	1.70	4.90	4.60	4.60	4.70
Bake Pkwy. & Toledo Wy.	1.30	N/A	N/A	0.80	4.30	3.00	3.00	3.80
Barranca Pkwy. & I-5 HOV Ramp	N/A	0.60	N/A	0.50	3.00	3.60	3.00	3.50
Barranca Pkwy. & Technology Dr.	N/A	1.00	0.90	0.90	3.00	4.00	3.90	3.90
Culver Dr. & Bryan Av.	N/A	0.60	0.60	0.60	3.00	3.60	3.60	3.60
Culver Dr. & I-5 SB Ramps	1.80	0.90	0.90	0.90	4.80	3.90	3.90	3.90
Culver Dr. & Irvine Bl.	N/A	0.70	0.70	0.70	3.00	3.70	3.70	3.70
Culver Dr. & Irvine Center Dr.	N/A	0.90	0.90	0.90	3.00	3.90	3.90	3.90
Culver Dr. & Trabuco Rd.	1.60	1.30	1.30	1.30	4.60	4.30	4.30	4.30
Culver Dr. & University Dr.	1.90	2.00	2.00	2.00	4.90	5.00	5.00	5.00
Culver Dr. & Walnut Av.	2.20	1.00	1.00	1.00	5.20	4.00	4.00	4.00
El Toro Rd. & Avenida de la	4.00	1.10	1.60	1.60	7.00	4.10	4.60	4.60

Table 5.3-29
CALINE 4.0 1-hour Carbon Monoxide Modeling Results Post-2025

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3 ppm) (ppm)			
	2002 Existing Conditions	Post -2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan	2002 Existing Conditions	Post-2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan
Carlota								
El Toro Rd. & I-5 NB Ramps	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
El Toro Rd. & Jeronimo Rd.	1.30	0.90	1.40	1.40	4.30	3.90	4.40	4.40
El Toro Rd. & Moulton Pkwy.	1.90	1.90	1.90	1.90	4.90	4.90	4.90	4.90
El Toro Rd. & Portola Pkwy./Santa Margarita Pkwy.	N/A	0.90	0.90	0.90	3.00	3.90	3.90	3.90
El Toro Rd. & Rockfield Bl.	1.50	0.70	0.70	0.70	4.50	3.70	3.70	3.70
El Toro Rd. & Trabuco Rd. (CMP)	N/A	1.00	1.00	1.00	3.00	4.00	4.00	4.00
El Toro Rd. at Aliso Creek Rd.	1.40	N/A	N/A	N/A	4.40	3.00	3.00	3.00
El Toro Rd. at Muirlands Bl.	1.50	N/A	N/A	N/A	4.50	3.00	3.00	3.00
I-5 SB Ramps & Alicia Pkwy.	1.80	N/A	N/A	N/A	4.80	3.00	3.00	3.00
I-5 SB Ramps & Enterprise Dr.	N/A	0.60	0.40	0.60	3.00	3.60	3.40	3.60
Irvine Center Dr. & I-405 SB Ramps	N/A	1.00	1.00	1.00	3.00	4.00	4.00	4.00
Jeffrey Rd. & Alton Pkwy.	2.20	1.10	1.10	1.10	5.20	4.10	4.10	4.10
Jeffrey Rd. & Barranca Pkwy.	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
Jeffrey Rd. & Bryan Av.	N/A	0.90	0.90	0.90	3.00	3.90	3.90	3.90
Jeffrey Rd. & I-405 NB Ramps	3.10	1.10	1.10	1.10	6.10	4.10	4.10	4.10
Jeffrey Rd. & Irvine Bl.	N/A	0.90	0.90	0.90	3.00	3.90	3.90	3.90
Jeffrey Rd. & Irvine Center Dr.	N/A	1.30	1.30	1.30	3.00	4.30	4.30	4.30
Jeffrey Rd. & Trabuco Rd.	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
Jeffrey Rd. & Walnut Av.	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
Laguna Cyn. Rd & Bake Pkwy.	N/A	1.80	1.80	1.80	3.00	4.80	4.80	4.80
Laguna Cyn. Rd. & Lake Forest Dr.	N/A	0.90	0.90	0.90	3.00	3.90	3.90	3.90
Laguna Cyn. Rd. & Old Laguna Cyn. Rd.	N/A	1.40	1.40	1.40	3.00	4.40	4.40	4.40
Laguna Cyn. Rd. & Santa Maria Av.	N/A	1.50	1.50	1.50	3.00	4.50	4.50	4.50
Laguna Cyn. Rd. & SR-73 NB Ramps	N/A	0.70	0.70	0.70	3.00	3.70	3.70	3.70
Laguna Hills Dr. & Paseo de Valencia	N/A	1.30	1.30	1.40	3.00	4.30	4.30	4.40

Table 5.3-29
CALINE 4.0 1-hour Carbon Monoxide Modeling Results Post-2025

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3 ppm) (ppm)			
	2002 Existing Conditions	Post -2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan	2002 Existing Conditions	Post-2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan
Lake Forest Dr. & Avenida de la Carlota	N/A	1.80	1.60	1.60	3.00	4.80	4.60	4.60
Lake Forest Dr. & I-5 NB Ramps	N/A	0.80	0.90	0.90	3.00	3.80	3.90	3.90
Lake Forest Dr. & Irvine Center Dr.	N/A	N/A	0.70	0.70	3.00	3.00	3.70	3.70
Lake Forest Dr. & Jeronimo Rd.	N/A	0.70	0.90	0.90	3.00	3.70	3.90	3.90
Lake Forest Dr. & Muirlands Bl.	N/A	0.70	0.80	0.80	3.00	3.70	3.80	3.80
Lake Forest Dr. & Portola Pkwy.	N/A	1.30	1.30	1.30	3.00	4.30	4.30	4.30
Lake Forest Dr. & Rancho Pkwy. N	N/A	1.40	1.40	1.40	3.00	4.40	4.40	4.40
Lake Forest Dr. & Rancho Pkwy. S	N/A	1.50	1.50	1.50	3.00	4.50	4.50	4.50
Lake Forest Dr. & Rockfield Bl.	1.70	1.20	1.90	1.30	4.70	4.20	4.90	4.30
Lake Forest Dr. & SR-241 SB Ramps	N/A	0.70	0.70	0.70	3.00	3.70	3.70	3.70
Lake Forest Dr. & Trabuco Rd.	N/A	0.80	0.90	1.10	3.00	3.80	3.90	4.10
Los Alisos Bl. & Jeromino Rd.	2.00	1.00	1.00	1.00	5.00	4.00	4.00	4.00
Los Alisos Bl. & Rockfield Bl./Fordview St.	N/A	0.60	0.60	0.60	3.00	3.60	3.60	3.60
Los Alisos Bl. & Trabuco Rd.	1.20	0.80	0.80	0.80	4.20	3.80	3.80	3.80
Moulton Pkwy. & Alicia Pkwy.	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
Moulton Pkwy. & Glenwood Dr./Indian Creek Ln.	N/A	1.00	1.00	1.00	3.00	4.00	4.00	4.00
Moulton Pkwy. & Laguna Hills Dr.	N/A	1.10	1.10	1.10	3.00	4.10	4.10	4.10
Muirlands Bl. & Los Alisos Bl.	3.10	1.40	1.50	1.50	6.10	4.40	4.50	4.50
Paseo de Valencia & Avenida de la Carlota	N/A	1.00	1.00	1.10	3.00	4.00	4.00	4.10
Portola Pkwy .East & SR-241 Ramps	1.40	1.50	1.50	1.50	4.40	4.50	4.50	4.50
Ridge Route Dr. & Jeronimo Rd.	N/A	0.50	0.60	0.60	3.00	3.50	3.60	3.60
Ridge Route Dr. & Moulton Pkwy.	1.30	0.80	0.80	1.20	4.30	3.80	3.80	4.20
Ridge Route Dr. & Rockfield Bl.	N/A	0.70	0.70	0.70	3.00	3.70	3.70	3.70
Sand Cyn. Av. & Alton Pkwy.	N/A	1.60	1.70	1.70	3.00	4.60	4.70	4.70

Table 5.3-29
CALINE 4.0 1-hour Carbon Monoxide Modeling Results Post-2025

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3 ppm) (ppm)			
	2002 Existing Conditions	Post -2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan	2002 Existing Conditions	Post-2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan
Sand Cyn. Av. & Collector St.	N/A	1.40	1.40	1.50	3.00	4.40	4.40	4.50
Sand Cyn. Av. & I-5 NB Ramps	N/A	N/A	0.80	0.90	3.00	3.00	3.80	3.90
Sand Cyn. Av. & Irvine Bl.	N/A	0.70	0.70	0.70	3.00	3.70	3.70	3.70
Sand Cyn. Av. & Irvine Center Dr.	N/A	N/A	0.70	0.70	3.00	3.00	3.70	3.70
Sand Cyn. Av. & Oak Cyn./Laguna Cyn. Rd.	N/A	N/A	1.10	1.10	3.00	3.00	4.10	4.10
Sand Cyn. Av. & Trabuco Rd.	N/A	1.10	N/A	N/A	3.00	4.10	3.00	3.00
Santa Maria Av. & Moulton Pkwy.	1.20	1.20	0.90	0.90	4.20	4.20	3.90	3.90
Trabuco Rd. & Alicia Pkwy.	1.80	0.90	0.90	0.90	4.80	3.90	3.90	3.90
University Dr. at I-405 SB Ramps	1.40	N/A	N/A	N/A	4.40	3.00	3.00	3.00
University Dr. at Michelson Dr.	1.30	N/A	N/A	N/A	4.30	3.00	3.00	3.00
Yale Av. & Irvine Bl.	N/A	0.70	0.70	0.70	3.00	3.70	3.70	3.70
Yale Av. & Irvine Center Dr.	N/A	N/A	0.50	0.50	3.00	3.00	3.50	3.50
Number of Intersections above 1-hr state standard of 20 ppm					0	0	0	0

Table 5.3-30
CALINE 4.0 8-hour Carbon Monoxide Modeling Results Post-2025

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	Post -2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan	2002 Existing Conditions	Post-2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan
"A" Dr. & Irvine Bl.	N/A	N/A	0.58	0.58	2.38	2.38	2.96	2.96
"B" Dr. & Irvine Bl.	N/A	N/A	N/A	0.58	2.38	2.38	2.38	2.96
"Y" St. & Irvine Bl.	N/A	N/A	0.58	0.66	2.38	2.38	2.96	3.04
"Y" St. & Portola Pkwy.	N/A	N/A	0.58	0.58	2.38	2.38	2.96	2.96
Alicia Pkwy. & Muirlands Bl.	1.41	1.00	1.00	1.00	3.79	3.38	3.38	3.38
Alton Pkwy. & Enterprise Dr.	N/A	0.75	0.66	0.58	2.38	3.13	3.04	2.96
Alton Pkwy. & I-5 NB Ramps	N/A	1.41	1.33	1.33	2.38	3.79	3.71	3.71
Alton Pkwy. & Irvine Bl.	N/A	1.33	0.91	1.00	2.38	3.71	3.29	3.38
Alton Pkwy. & Irvine Center Dr.	N/A	1.58	1.49	1.49	2.38	3.96	3.87	3.87
Alton Pkwy. & Muirlands Bl.	N/A	0.58	0.58	0.66	2.38	2.96	2.96	3.04
Bake Pkwy. & Commercentre Dr.	1.08	0.58	0.58	0.58	3.46	2.96	2.96	2.96
Bake Pkwy. & I-5 NB Ramps	N/A	0.66	0.75	1.00	2.38	3.04	3.13	3.38
Bake Pkwy. & I-5 SB Ramps	1.66	N/A	N/A	0.75	4.04	2.38	2.38	3.13
Bake Pkwy. & Irvine Bl.	1.91	1.41	0.91	1.33	4.29	3.79	3.29	3.71
Bake Pkwy. & Jeronimo Rd.	2.32	1.33	1.33	1.33	4.70	3.71	3.71	3.71
Bake Pkwy. & Muirlands Bl.	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
Bake Pkwy. & Ridge Route Dr.	N/A	N/A	N/A	0.33	2.38	2.38	2.38	2.71
Bake Pkwy. & Rockfield Bl.	1.58	1.33	1.33	1.41	3.96	3.71	3.71	3.79
Bake Pkwy. & Toledo Wy.	1.08	N/A	N/A	0.66	3.46	2.38	2.38	3.04
Barranca Pkwy. & I-5 HOV Ramp	N/A	0.50	N/A	0.42	2.38	2.88	2.38	2.80
Barranca Pkwy. & Technology Dr.	N/A	0.83	0.75	0.75	2.38	3.21	3.13	3.13
Culver Dr. & Bryan Av.	N/A	0.50	0.50	0.50	2.38	2.88	2.88	2.88
Culver Dr. & I-5 SB Ramps	1.49	0.75	0.75	0.75	3.87	3.13	3.13	3.13
Culver Dr. & Irvine Bl.	N/A	0.58	0.58	0.58	2.38	2.96	2.96	2.96
Culver Dr. & Irvine Center Dr.	N/A	0.75	0.75	0.75	2.38	3.13	3.13	3.13
Culver Dr. & Trabuco Rd.	1.33	1.08	1.08	1.08	3.71	3.46	3.46	3.46
Culver Dr. & University Dr.	1.58	1.66	1.66	1.66	3.96	4.04	4.04	4.04
Culver Dr. & Walnut Av.	1.83	0.83	0.83	0.83	4.21	3.21	3.21	3.21
El Toro Rd. & Avenida de la	3.32	0.91	1.33	1.33	5.70	3.29	3.71	3.71

Table 5.3-30
CALINE 4.0 8-hour Carbon Monoxide Modeling Results Post-2025

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	Post -2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan	2002 Existing Conditions	Post-2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan
Carlota								
El Toro Rd. & I-5 NB Ramps	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
El Toro Rd. & Jeronimo Rd.	1.08	0.75	1.16	1.16	3.46	3.13	3.54	3.54
El Toro Rd. & Moulton Pkwy.	1.58	1.58	1.58	1.58	3.96	3.96	3.96	3.96
El Toro Rd. & Portola Pkwy./Santa Margarita Pkwy.	N/A	0.75	0.75	0.75	2.38	3.13	3.13	3.13
El Toro Rd. & Rockfield Bl.	1.25	0.58	0.58	0.58	3.63	2.96	2.96	2.96
El Toro Rd. & Trabuco Rd. (CMP)	N/A	0.83	0.83	0.83	2.38	3.21	3.21	3.21
El Toro Rd. at Aliso Creek Rd.	1.16	N/A	N/A	N/A	3.54	2.38	2.38	2.38
El Toro Rd. at Muirlands Bl.	1.25	N/A	N/A	N/A	3.63	2.38	2.38	2.38
I-5 SB Ramps & Alicia Pkwy.	1.49	N/A	N/A	N/A	3.87	2.38	2.38	2.38
I-5 SB Ramps & Enterprise Dr.	N/A	0.50	0.33	0.50	2.38	2.88	2.71	2.88
Irvine Center Dr. & I-405 SB Ramps	N/A	0.83	0.83	0.83	2.38	3.21	3.21	3.21
Jeffrey Rd. & Alton Pkwy.	1.83	0.91	0.91	0.91	4.21	3.29	3.29	3.29
Jeffrey Rd. & Barranca Pkwy.	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
Jeffrey Rd. & Bryan Av.	N/A	0.75	0.75	0.75	2.38	3.13	3.13	3.13
Jeffrey Rd. & I-405 NB Ramps	2.57	0.91	0.91	0.91	4.95	3.29	3.29	3.29
Jeffrey Rd. & Irvine Bl.	N/A	0.75	0.75	0.75	2.38	3.13	3.13	3.13
Jeffrey Rd. & Irvine Center Dr.	N/A	1.08	1.08	1.08	2.38	3.46	3.46	3.46
Jeffrey Rd. & Trabuco Rd.	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
Jeffrey Rd. & Walnut Av.	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
Laguna Cyn. Rd & Bake Pkwy.	N/A	1.49	1.49	1.49	2.38	3.87	3.87	3.87
Laguna Cyn. Rd. & Lake Forest Dr.	N/A	0.75	0.75	0.75	2.38	3.13	3.13	3.13
Laguna Cyn. Rd. & Old Laguna Cyn. Rd.	N/A	1.16	1.16	1.16	2.38	3.54	3.54	3.54
Laguna Cyn. Rd. & Santa Maria Av.	N/A	1.25	1.25	1.25	2.38	3.63	3.63	3.63
Laguna Cyn. Rd. & SR-73 NB Ramps	N/A	0.58	0.58	0.58	2.38	2.96	2.96	2.96
Laguna Hills Dr. & Paseo de Valencia	N/A	1.08	1.08	1.16	2.38	3.46	3.46	3.54

Table 5.3-30
CALINE 4.0 8-hour Carbon Monoxide Modeling Results Post-2025

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	Post -2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan	2002 Existing Conditions	Post-2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan
Lake Forest Dr. & Avenida de la Carlota	N/A	1.49	1.33	1.33	2.38	3.87	3.71	3.71
Lake Forest Dr. & I-5 NB Ramps	N/A	0.66	0.75	0.75	2.38	3.04	3.13	3.13
Lake Forest Dr. & Irvine Center Dr.	N/A	N/A	0.58	0.58	2.38	2.38	2.96	2.96
Lake Forest Dr. & Jeronimo Rd.	N/A	0.58	0.75	0.75	2.38	2.96	3.13	3.13
Lake Forest Dr. & Muirlands Bl.	N/A	0.58	0.66	0.66	2.38	2.96	3.04	3.04
Lake Forest Dr. & Portola Pkwy.	N/A	1.08	1.08	1.08	2.38	3.46	3.46	3.46
Lake Forest Dr. & Rancho Pkwy. N	N/A	1.16	1.16	1.16	2.38	3.54	3.54	3.54
Lake Forest Dr. & Rancho Pkwy. S	N/A	1.25	1.25	1.25	2.38	3.63	3.63	3.63
Lake Forest Dr. & Rockfield Bl.	1.41	1.00	1.58	1.08	3.79	3.38	3.96	3.46
Lake Forest Dr. & SR-241 SB Ramps	N/A	0.58	0.58	0.58	2.38	2.96	2.96	2.96
Lake Forest Dr. & Trabuco Rd.	N/A	0.66	0.75	0.91	2.38	3.04	3.13	3.29
Los Alisos Bl. & Jeronimo Rd.	1.66	0.83	0.83	0.83	4.04	3.21	3.21	3.21
Los Alisos Bl. & Rockfield Bl./Fordview St.	N/A	0.50	0.50	0.50	2.38	2.88	2.88	2.88
Los Alisos Bl. & Trabuco Rd.	1.00	0.66	0.66	0.66	3.38	3.04	3.04	3.04
Moulton Pkwy. & Alicia Pkwy.	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
Moulton Pkwy. & Glenwood Dr./Indian Creek Ln.	N/A	0.83	0.83	0.83	2.38	3.21	3.21	3.21
Moulton Pkwy. & Laguna Hills Dr.	N/A	0.91	0.91	0.91	2.38	3.29	3.29	3.29
Muirlands Bl. & Los Alisos Bl.	2.57	1.16	1.25	1.25	4.95	3.54	3.63	3.63
Paseo de Valencia & Avenida de la Carlota	N/A	0.83	0.83	0.91	2.38	3.21	3.21	3.29
Portola Pkwy .East & SR-241 Ramps	1.16	1.25	1.25	1.25	3.54	3.63	3.63	3.63
Ridge Route Dr. & Jeronimo Rd.	N/A	0.42	0.50	0.50	2.38	2.80	2.88	2.88
Ridge Route Dr. & Moulton Pkwy.	1.08	0.66	0.66	1.00	3.46	3.04	3.04	3.38
Ridge Route Dr. & Rockfield Bl.	N/A	0.58	0.58	0.58	2.38	2.96	2.96	2.96
Sand Cyn. Av. & Alton Pkwy.	N/A	1.33	1.41	1.41	2.38	3.71	3.79	3.79

Table 5.3-30
CALINE 4.0 8-hour Carbon Monoxide Modeling Results Post-2025

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	Post -2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan	2002 Existing Conditions	Post-2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan
Sand Cyn. Av. & Collector St.	N/A	1.16	1.16	1.25	2.38	3.54	3.54	3.63
Sand Cyn. Av. & I-5 NB Ramps	N/A	N/A	0.66	0.75	2.38	2.38	3.04	3.13
Sand Cyn. Av. & Irvine Bl.	N/A	0.58	0.58	0.58	2.38	2.96	2.96	2.96
Sand Cyn. Av. & Irvine Center Dr.	N/A	N/A	0.58	0.58	2.38	2.38	2.96	2.96
Sand Cyn. Av. & Oak Cyn./Laguna Cyn. Rd.	N/A	N/A	0.91	0.91	2.38	2.38	3.29	3.29
Sand Cyn. Av. & Trabuco Rd.	N/A	0.91	N/A	N/A	2.38	3.29	2.38	2.38
Santa Maria Av. & Moulton Pkwy.	1.00	1.00	0.75	0.75	3.38	3.38	3.13	3.13
Trabuco Rd. & Alicia Pkwy.	1.49	0.75	0.75	0.75	3.87	3.13	3.13	3.13
University Dr. at I-405 SB Ramps	1.16	N/A	N/A	N/A	3.54	2.38	2.38	2.38
University Dr. at Michelson Dr.	1.08	N/A	N/A	N/A	3.46	2.38	2.38	2.38
Yale Av. & Irvine Bl.	N/A	0.58	0.58	0.58	2.38	2.96	2.96	2.96
Yale Av. & Irvine Center Dr.	N/A	N/A	0.42	0.42	2.38	2.38	2.80	2.80
Number of Intersections above 8-hr state standard of 9 ppm					0	0	0	0

Motor Vehicle Trip Reduction

In accordance with the requirements of the AQMP, the proposed project is required to demonstrate that vehicle trips and vehicle miles traveled will be reduced by its implementation. This may be accomplished through the implementation of a variety of transportation management strategies. Some of the major strategies that deserve consideration include increased utilization of public transportation, discouraging single occupant car use by increasing commuter parking fees, using parking fees as incentives for ride sharing, planning auto free land uses, and encouraging employer sponsored transit services.

The proposed project includes the construction of an Orange County Transportation Authority (OCTA) facility aimed at encouraging the use of alternative transportation such as buses, trains and bicycles and thus, reducing the overall motor vehicle trips generated by the proposed project.

Air Quality

The proposed project is also required to demonstrate that it does not have a long-term (post-construction) negative impact on the region's air quality. The major air quality impacts expected from the development of the proposed project include pollutant emissions due to construction (short-term), and emissions due to energy consumption and motor vehicle (mobile source) use. Construction impacts are considered short-term impacts though the complete development of the project is expected to last 19 years. These impacts will be mitigated using appropriate measures as required by the SCAQMD and local governing agencies. Energy consumption and motor vehicle impacts are long-term impacts that are considered to have localized air quality impacts above the SCAQMD significance thresholds, but they only constitute less than one-half (0.5) percent of projected SCAB basin wide emissions. Mitigation measures would be implemented that would further decrease these emissions, but the proposed project is not expected to significantly impact the overall air quality within the SCAB.

Unavoidable Adverse Impacts

Certain impacts that result from the development of the proposed project are termed "unavoidable" as these impacts cannot be completely mitigated and most of these changes are irreversible. Irreversible changes generally include a large commitment of nonrenewable resources, committing future generations to specific uses of the environment (e.g., converting undeveloped land to urban uses), or enduring environmental damage due to an accident.

Implementation of the proposed project is not anticipated to result in any significant irreversible adverse environmental changes. The proposed project would place only an incremental demand on nonrenewable and limited resources, such as energy, relative to the accelerated rate of use of these resources due to population growth and increased consumer demand. Construction related emissions are expected to cause unavoidable short term impacts and the implementation of mitigation measures will assist in minimizing these impacts. Operational emissions of the proposed project consist of area source and motor vehicle emissions, but the overall effect on air quality within the SCAB for the life of the proposed project is minimal.

5.3.4 Significant Impacts

Base Plan and Overlay Plan

- AQ1.** Implementation of the proposed project will result in a significant air quality impact associated with the fugitive dust emissions resulting from the demolition of existing structures, and land preparation and excavation for the construction of proposed structures. Additionally, the operation of the project will result in a significant impact associated with motor vehicle emissions.

5.3.5 Mitigation Measures

Base Plan and Overlay Plan

The following section provides a summary of the possible mitigation measures that could be implemented for the development of the former MCAS El Toro according to the proposed project. The limited availability of specific data to quantify air quality impacts for emission sources within the proposed project make it impossible to accurately quantify the effectiveness of each of the mitigation measures. However, these measures are identified as possibilities for the project, while some are recommended by the SCAQMD for all development projects within the SCAB. As expected, the implementation of some or all of the mitigation measures will result in an overall reduction in potential air emissions from the proposed project. However, the implementation of any of these emission mitigation measures cannot be guaranteed at this stage of the proposed project, because they may not be technically or economically feasible once actual development gets underway. Therefore, the emission mitigation measures discussed in the following sections are defined as alternate control measures that could be implemented for the proposed project.

Construction Emissions Mitigation

The major source of construction emissions are fugitive dust emissions resulting from the demolition of existing structures, and land preparation and excavation for the construction of proposed structures. Actual erection of structures is considered a minimal source of construction related dust emissions. The following mitigation measures are intended to effectively reduce pollutant emissions from construction activities. Some or all of the mentioned mitigation measures can be implemented as necessary, but quantification and application of these measures cannot be specified at this time.

- AQ1.** Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors; etc.; shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.

- AQ2.** Prior to the commencement of construction activities required to demolish and/or remove existing DON structure, including, runways, the Director of Community

Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plans shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Evaluate the availability and use, if available, of low-emission (i.e., methanol- or natural gas-powered) construction equipment instead of diesel for each construction phase.
- Water exposed soils at least twice daily and maintain equipment and vehicle engines in good condition and in proper tune.
- Wash off trucks leaving the site.
- Replace ground cover on construction sites when it is determined that the site will be undisturbed for lengthy periods.
- Reduce speeds on unpaved roads to less than 15 miles per hour.
- Halt all grading and excavation operations when wind speeds exceed 25 miles per hour.
- Suspend all emission generating activities during smog alerts.
- Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible.
- Properly maintain diesel-powered on-site mobile equipment.
- Sweep streets at the end of the day if substantial visible soil material is carried over to the adjacent streets.
- Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible.
- Use of low-VOC asphalt.
- Cover all trucks hauling dirt, sand, soil or other loose material to and from the site.
- Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic.
- Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible.
- Reroute construction trucks away from congested streets, whenever feasible.
- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible.

AQ3. Prior to the issuance of building permits for any future development, the applicant shall submit, and the Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Utilize built-in energy-efficient appliances to reduce energy consumption and emissions.
- Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions.

- Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible.
- Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning.
- Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible.
- Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods.
- Centralize space heating and cooling for multiple-family dwelling units and commercial space.
- Orient buildings north/south for reducing energy-related combustion emissions.
- Use solar energy, when feasible.
- Use high rating insulation in walls and ceilings.

AQ4. Information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find employment nearby.

AQ5. Future employment generating non-residential development shall include measures to reduce vehicle trips including: the promotion of carpool incentives and alternative work schedules, easy access to public transit systems, trail linkages between uses, low-emissions vehicle fleets, and the provision of on-site facilities such as banking and food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.

5.3.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Due to the size of the project, certain impacts that result from development will be "unavoidable" as these impacts cannot be completely mitigated and most of these changes are irreversible. This is considered a significant unavoidable impact, although the overall effect on air quality within the Basin for the life of the proposed project is estimated at less than one half of one percent. Construction-related emissions are expected to result in unavoidable short-term impacts in terms of ROG and NO_x, although implementation of mitigation measures during construction will minimize these impacts to the extent feasible. Short-term impacts on sensitive receptors are expected to be mitigated during construction and no long-term CO hotspots will be created that may affect sensitive receptors. Operational emissions from future development under the proposed project will consist of area source and motor vehicle emissions, which will exceed SCAQMD thresholds. These air quality emissions from future development under the proposed project will remain significant, even after mitigation.

Area Source (Post-Construction) Emission Mitigation

Emissions resulting from the post-construction and routine operation of various sources within a development contribute to long term impacts on air quality throughout its life. Some of the mitigation measures that could reduce energy consumption within the proposed project and thus, reduce associated emissions should be considered for implementation and are listed below.

- ◆ Central residential space heating and cooling for multi-dwelling units.
- ◆ Orient buildings north/south for reducing energy-related combustion emissions.
- ◆ Central commercial space heating.

These measures could be accounted for in the planning process such that the overall impact of the proposed project on prevalent air quality in the SCAB is minimized.

Motor Vehicle (Operational) Emission Mitigation

Motor vehicle emissions form a large portion of the total operational emissions from the proposed project. These emissions can be mitigated by the use of fuel-efficient vehicles and a well designed transportation system. However, most of the measures will be ineffective unless the occupants of various commercial and residential establishments within the project contribute their share in the mitigation effort. The implementation of some of the measures cannot be stated with certainty, as they are owner and employer specific and related specific land use types within the proposed project. Development of the proposed project will identify motor vehicle mitigation measures that would result in reductions in emissions and thereby contribute to the overall improvement in air quality within the SCAB. The inclusion of the OCTA facility within the proposed project is aimed at encouraging the use of alternative transportation thereby reducing motor vehicle congestion and related air quality emissions and impacts. The implementation of an emission reduction program under SCAQMD Rule 2202 is also expected to result in reducing motor vehicle air quality emissions and impacts.

Notes and References

1. Midwest Research Institute, Improvement of Specific Emission Factors (BACM Project No.1), 1996.

5.4 Noise

An environmental noise assessment to determine the potential noise impacts of the proposed project prepared by Black and Veatch Corporation is provided as Appendix H in Volume II of this Final Program EIR. The report is summarized below and provides the basis for determining projects impacts.

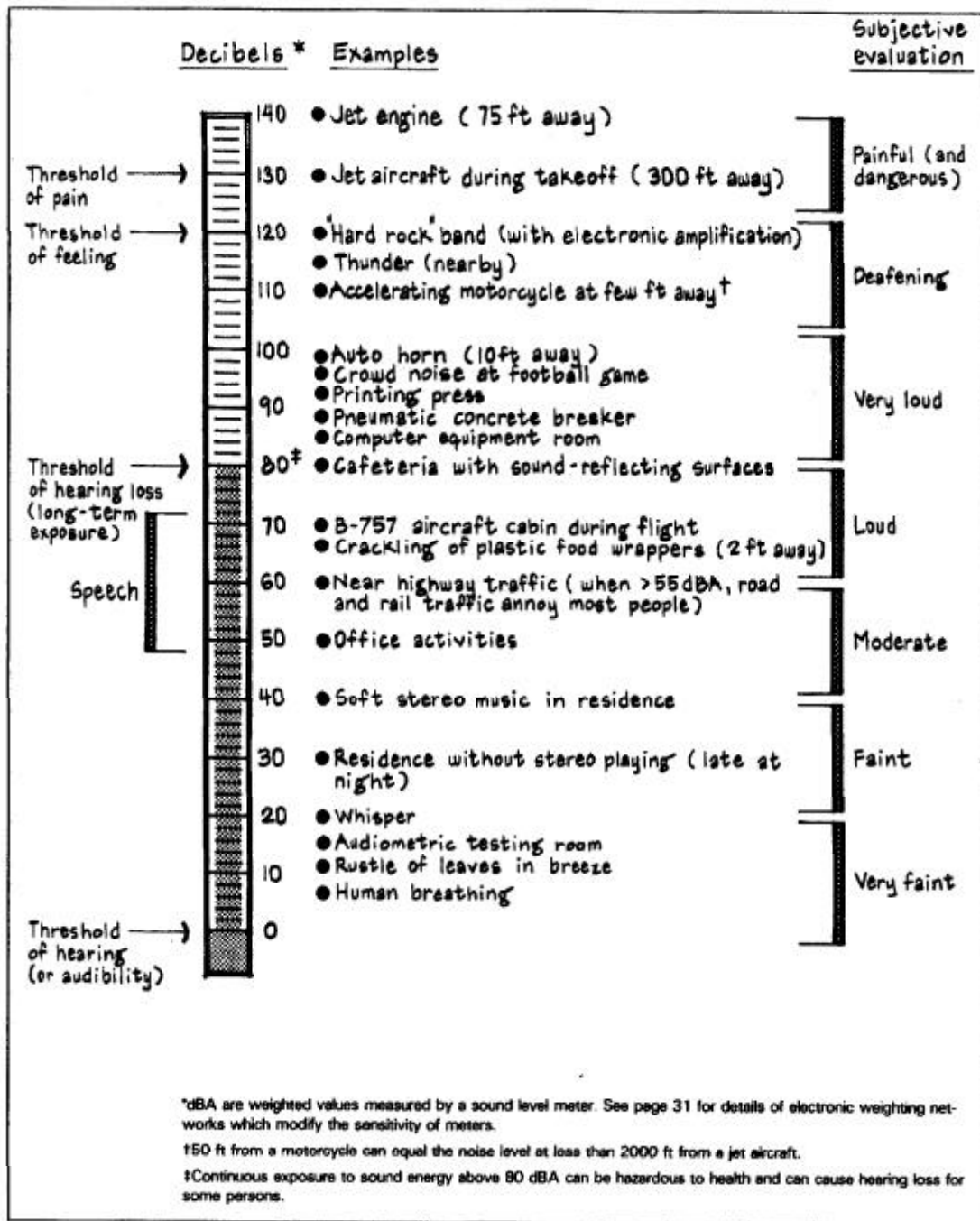
Acoustical Terminology

Definitions

Sound is generated by the propagation of energy in the form of pressure waves. Being a wave phenomenon, sound is characterized by amplitude (sound level) and frequency (pitch). Sound amplitude is measured in decibels (dB) and sound frequency is measured in hertz (Hz). The decibel is the logarithmic ratio of a sound pressure to a reference sound pressure. Typically, zero dB corresponds to the threshold of human hearing. For reference, the sound pressure levels associated with common noise sources are shown in Figure 5.4-1. The standard unit of measure for frequency is Hz (cycles per second). The typical human ear can hear frequencies ranging from 20 Hz to 20,000 Hz.

At typical sound pressure levels, the human ear is more sensitive to sounds in the middle and high frequencies (1,000 to 8,000 Hz) than sounds in the low frequencies. Various weighting networks have been developed to simulate the frequency response of the human ear. The A-weighting network was developed to simulate the frequency response of the human ear to sounds at typical environmental levels. The A-weighting network emphasizes sounds in the middle to high frequencies and de-emphasizes sounds in the low frequencies. Most sound level instruments can apply these weighting networks automatically. Any sound level to which the A-weighting network has been applied is expressed in A-weighted decibels (dBA) and most community noise standards are expressed in decibels on the dBA scale. Noise levels of common sounds in the environment include office background noise at about 50 dBA, human speech at 10 feet (ft) at about 60-70 dBA, cars driving by at 50 feet at 65-70 dBA, trucks at 50ft at 75-80 dBA, and aircraft overflights a mile from the approach at about 95-100 dBA. Table 5.4-1 shows typical sound levels according to the A-weighted decibel scale.

People are exposed to sound on a daily basis. Sound is perceived as a normal part of the natural environment. People quickly adapt to most everyday sounds and barely notice its presence. Other sounds can be annoying or disturbing. For purposes of environmental assessment, noise is defined as unwanted sound. Noise in the urban environment typically is produced by transportation activities and stationary activities. Transportation noise includes noise from automobile and truck traffic, trains and airplanes. Stationary noise sources typically include heating, ventilation and air conditioning systems, manufacturing activities, industrial equipment, entertainment activities, yard care equipment, and outdoor activities. Stationary sources of a temporary nature include construction activities and agricultural operations.



Source: Architectural Acoustics, M. David Egan, 1988.

Figure 5.4-1
Typical Sound Pressure Levels
Associated with Common Noise Sources

**Table 5.4-1
Typical Noise Levels**

Over-all Level (Noise level, dB(A))		Community (Outdoor)	Home or Industry (Indoor)	Loudness (Human Judgment of Different Sound Levels)
120-130	Uncomfortably Loud	Military Jet Aircraft Take-Off With After-Burner From Aircraft Carrier @ 50 ft. (130)	Oxygen Torch (121)	32 Times As Loud As 70 dB(A)
110-119		Turbo Fan Aircraft @ Take-Off Power @ 200 ft. (118)	Riveting Machine (110) Rock and Roll Band (108-114)	16 Times As Loud As 70 dB(A)
100-109		Boeing 707, DC-8 @ 6080 ft. Before Landing (106), Jet Flyover @ 1000 ft. (103), Bell J-2A Helicopter @ 100 ft. (100)		8 Times As Loud As 70 dB(A)
90-99	Very Loud	Power Mower (96) Boeing 707, CD-8 @ 6080 ft. Before Landing (97) Motorcycle @ 25 ft. (90)	Newspaper Press (97)	4 Times As Loud As 70 dB(A)
80-89		Car Wash @ 20 ft. (89) Propellor Plane Flyover @ 1000 ft. (88) Diesel Truck, 40 mph @ 50 ft. (84) Diesel Train, 45 mph @ 100 ft. (83)	Food Blender (88) Milling Machine (85) Garbage Disposal (80)	2 Times As Loud As 70 dB(A)
70-79	Moderately Loud	High Urban Ambient Sound (80) Passenger Car, 65 mph @ 25 ft. (77) Freeway @ 50 ft. From Pavement Edge @ 10 A.M. (76 +/- 6)	Living Room Music (76) TV-Audio, Vacuum Cleaner (70)	
60-69		Air Conditioning Unit @ 100 ft. (60)	Cash Register @ 10 ft. (65-70)	1/2 As Loud As 70 dB(A)
50-59	Quiet	Large Transformers @ 100 ft. (50)		1/4 As Loud As 70 dB(A)
40-49		Bird Calls (44) Lower Limit of Urban Ambient Sound in daytime (40)		1/8 As Loud As 70 dB(A)
	Just Audible	dB(A) Scale Interrupted		
0-10	Threshold of Hearing			

Source: Adapted by CBA from Melville C. Branch and R. Dale Beland. *Outdoor Noise in the Metropolitan Environment*. City of Los Angeles. 1970. Page 2.

Sound Level Metrics

Community noise consists of a wide variety of sounds, some near and some far away, some of which are short and some of long duration, some constant and some infrequent, which vary over the 24-hour day. Scientists and planners have found that humans respond generally to the 24-hour variation in noise based on the total energy content of the sound over the day, with a greater sensitivity to noise at night.

Several noise metrics have been developed to quantify fluctuating noise levels. These metrics include the equivalent-continuous sound level, the day-night sound level, and the community noise equivalent sound level. California standards for community noise use the Community Noise Equivalent Level (CNEL), in which the energy is averaged over a 24-hour day with a five-decibel penalty from 7:00 pm to 10:00 pm and a ten-decibel penalty from 10:00 pm to 7:00 am. The EPA uses the Day-Night Noise Level (L_{dn}) measure, which is identical to the CNEL, but without the evening noise weighting.

The equivalent-continuous sound level (L_{eq}) is the level of a hypothetical steady sound that has the equivalent sound energy as the actual fluctuating sound over a given time duration. For example, $L_{eq(24h)}$ is the equivalent-continuous sound level measured over a 24-hour period. This sound level provides an indication of the overall sound level over a 24-hour period, but does not provide any indication as to the variability of the sound level, such as from daytime to nighttime.

The day-night sound level (L_{dn}) is the 24-hour average L_{eq} sound level with a ten dB penalty applied to nighttime sound levels (10:00 pm to 7:00 am) to account for increased sensitivity to nighttime noise.

The exceedance sound level, L_x , is the sound level exceeded “x” percent of the sampling period and is referred to as a statistical sound level. The most common L_x values are L_{90} , L_{50} , and L_{10} . L_{90} is the sound level exceeded 90 percent of the sampling period. L_{90} is often referred to as the residual sound level because it measures the background sound level without the influence of loud, transient noise sources. L_{50} is the sound level exceeded 50 percent of the sampling period or the median sound level. L_{10} is the sound level exceeded ten percent of the sampling period. L_{10} is often referred to as the intrusive sound level because it measures the occasional louder noises.

Human Response to Sound

Human response to sound is highly individualized. Annoyance is the most common issue regarding community noise. The percentage of people claiming to be annoyed by noise will generally increase with the environmental sound level. However, many other factors will also influence people’s response to noise. These factors can include the character of the noise, the variability of the sound level, the presence of tones or impulses, and the time of day of the occurrence. Additionally, non-acoustical factors, such as the person’s opinion of the noise source, the ability to adapt to the noise, the attitude towards the noise and those associated with it, and the predictability of the noise, will all also influence people’s response. As such, response to noise varies widely from one person to another and with any particular noise, individual responses will range from “highly annoyed” to “not annoyed.”

Applicable Laws, Ordinances, Regulations, and Standards

This section outlines the laws, ordinances, regulations, and standards that are applicable to mixed land use developments and the proposed project. Regulatory requirements related to environmental noise are typically promulgated at the local level. However, federal and state agencies provide standards and guidelines to the local jurisdictions.

Federal Agencies

A number of federal agencies have published standards and guidelines related to environmental noise. These agencies include the Environmental Protection Agency, the Federal Highway Administration, the Department of Housing and Urban Development, and the Occupational Safety and Health Administration.

Environmental Protection Agency

As mandated by the Noise Control Act of 1972, the EPA has identified yearly day-night average sound levels (L_{dn}) sufficient to protect public health and welfare from the effects of environmental noise. According to the EPA, outdoor yearly levels are sufficient to protect public health and welfare if they do not exceed an L_{dn} of 55 dBA in sensitive areas such as residences, schools, and hospitals. Similarly, indoor yearly levels are sufficient to protect public health and welfare if they do not exceed an L_{dn} of 45 dBA. Additionally, the EPA has established that the 24-hour equivalent sound level exposure, L_{eq} , at the ear should not exceed 70 dBA in order to protect against hearing damage. The EPA emphasizes that these levels were derived without concern for technical feasibility and contain a margin of safety to ensure their protective value. Therefore, the levels must not be viewed as standards, criteria, regulations, or goals; but rather they should be viewed as levels below which there are no reason to suspect that the general population will be at risk from the effects of noise.

Federal Highway Administration

The Federal Highway Administration (FHWA) has established a set of design goals for traffic noise exposure. FHWA has established that impacts occur when predicted traffic noise levels approach or exceed established Noise Abatement Criteria. FHWA defines four land use categories and assigns maximum hourly equivalent sound levels (L_{eq}) as listed in Table 5.4-2. Category B, defined as picnic and recreation areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals, has a corresponding maximum exterior L_{eq} of 67 dBA. Category E, defined as residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums, has a corresponding maximum interior L_{eq} of 52 dBA. All highway projects funded by FHWA are subject to these criteria. Additionally, FHWA considers these limits to be goals in the design and evaluation of highway facilities and to also be helpful for planning projects near existing or future highways.

**Table 5.4-2
Federal Highway Administration - Traffic Noise Abatement
Criteria**

Activity Category	Leq(h)	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties or activities not included in Categories A or B.
D	–	Undeveloped lands.
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: 23 CFR Part 772.

Department of Housing and Urban Development

The Department of Housing and Urban Development (HUD) has established environmental criteria and standards for interior and exterior noise impacting HUD assisted housing sites. These standards are based on day-night average sound levels (L_{dn}) and identify the need for noise abatement, either at the property boundary or in the building construction. HUD's Site Acceptability Noise Standards rank exterior environmental noise and consider housing sites exposed to exterior noise levels not exceeding an L_{dn} of 65 dBA as acceptable. Housing sites exposed to noise levels exceeding an L_{dn} of 65 dBA require additional noise attenuation other than that provided in customary building techniques.

HUD also specifies minimum sound isolation standards for wall and floor/ceiling constructions separating living units from other living units, common service areas, or public spaces. For example, HUD specifies a minimum Sound Transmission Class (STC) of 45 for walls and floor/ceiling constructions separating living units, and a minimum Impact Isolation Class (IIC) of 45 for floor/ceiling constructions separating living units. These standards must be met if HUD financing will be considered for the housing developments.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration (OSHA) has established worker noise exposure limits. The OSHA worker noise exposure limits are based on a worker's noise exposure over a specific time period. Examples of these limits are outlined in Table 5.4-3.

Table 5.4-3
Occupational Safety and Health Administration - Permissible Daily Noise
Exposures

Duration per day in hours.	Sound Exposure Level, dBA.
8	90
6	92
4	95
3	97
2	100
1-1/2	102
1	105
1/2	110
1/4 or less	115

Source : 29 CFR Part 1910

When worker noise exposure exceeds the permissible noise exposure, feasible engineering or administrative controls must be implemented to reduce the noise exposure. When such controls fail to reduce the noise exposure, personal protective equipment must be provided and used to reduce the noise exposure to a permissible level. Although the permissible noise exposure over an 8-hour duration is shown as 90 dBA, OSHA has established a trigger level of 85 dBA over an 8-hour duration. When the trigger level is exceeded, the employer must provide the workers with hearing protection and establish an annual audiometric testing program.

All commercial and industrial uses developed within the project site must comply with the OSHA noise exposure limits.

State of California

California Environmental Quality Act

CEQA was enacted in 1970 and requires that all known environmental effects of a project be analyzed, including the environmental noise impacts. Under CEQA, a project has a potentially significant impact if the project exposes people to noise levels in excess of standards established in the local general plan or noise ordinance. Additionally, under CEQA, a project has a potentially significant impact if the project creates a substantial increase in the ambient noise levels in the project vicinity above levels existing without the project. If a project has a potentially significant impact, mitigation measures must be considered. If mitigation measures to reduce the impact to less than significant are not feasible due to economic, social, environmental, legal, or other conditions, the most feasible mitigation measures must be considered.

California Government Code

California Code Section 65302(f) mandates that the legislative body of each county and city adopt a noise element as part of their comprehensive general plan. The local noise element must recognize the land-use compatibility guidelines established by the State Department of Health Services as shown in Figure 5.4-2.

California Department of Transportation

The California Department of Transportation (CALTRANS) has established traffic noise policies for new construction or reconstruction transportation projects. These policies are also helpful in planning and evaluating non-transportation projects that are located near highways and roadways. CALTRANS has identified two conditions under which a traffic noise impact occurs. First, traffic noise impact occurs when the project creates a substantial increase in traffic noise. A substantial increase occurs when the predicted noise levels with the project exceed the existing noise levels by 12 dB, $L_{eq}(h)$. Second, a traffic noise impact also occurs when predicted noise levels with the project approach within one dB or exceed the Noise Abatement Criteria. The Noise Abatement Criteria is consistent with the FHWA criteria listed in Table 5.4-2. If traffic noise impacts are predicted, feasible and reasonable noise abatement measures must be evaluated and considered.

California Streets and Highways Code

The California Streets and Highways Code specify limits for noise within elementary or secondary schools produced by the traffic on a state freeway or by the construction of a state freeway. The interior noise level shall not exceed an hourly L_{eq} of 52 dBA or an L_{10} of 55 dBA due to the freeway traffic or construction. This requirement is consistent with the interior Noise Abatement Criteria for schools established by FHWA and CALTRANS.

This requirement applies to the construction or reconstruction of state transportation projects and does not specifically apply to this project. However, the criteria can be used as a guideline for the compatibility of new schools near roadways.

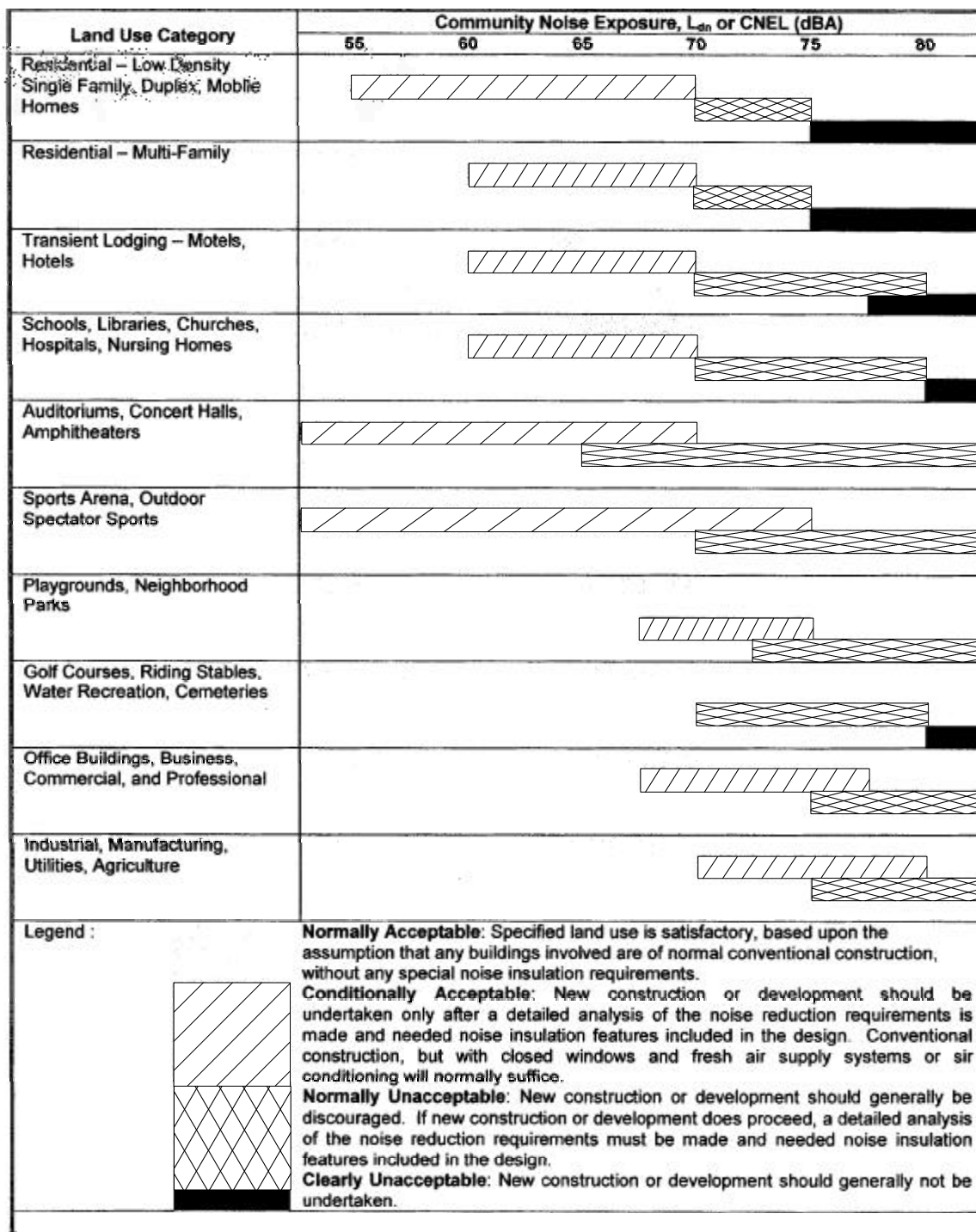
California Division of Occupational Safety and Health

The California Division of Occupational Safety and Health (CALOSHA) has established noise exposure limits to protect workers. The CALOSHA noise exposure limits are consistent with the OSHA worker noise exposure limits. All commercial and industrial uses developed within the project site must comply with the CALOSHA noise exposure limits.

California Building Standards

The California Building Standards establish uniform minimum noise insulation performance standards to protect persons within new hotels, motels, dormitories, long-term care facilities, apartment houses, and dwellings (other than detached single-family homes) from the effects of excessive noise. These standards specify minimum sound insulation requirements for interior and exterior sound transmission.

Wall and floor/ceiling assemblies separating habitable rooms from each other and from public or service areas such as interior corridors, garages, and mechanical spaces must provide airborne sound insulation. The airborne sound insulation must equal that required to meet a Sound Transmission Classification (STC) of 50 or a Noise Isolation



Source: General Plan Guidelines, Office of Planning and Research, California, November 1998, pg. 187.

Figure 5.4-2
California Department of Health Services
Land Use Compatibility Standards

Classification (NIC) of 45 if field tested. Additionally, floor/ceiling assemblies must provide impact sound insulation equal to that required to meet an Impact Insulation Classification (IIC) of 50 or a Field Impact Insulation Classification (FIIC) of 45 if field tested.

Interior noise levels attributable to exterior sources must not exceed 45 dBA in any habitable room. The noise metric should be either L_{dn} or CNEL; whichever is consistent with the noise element of the local general plan. When the exterior noise levels cause interior noise levels to exceed 45 dBA, the building must be designed to prevent the transmission of exterior noise. Proper acoustical design includes, but is not limited to, orientation of the structure, setbacks, shielding, and sound insulation of the building itself.

The California Building Standards will apply to all new hotels, motels, dormitories, long-term care facilities, apartment houses, and habitable dwellings other than detached single-family homes within the project site.

County of Orange

As mandated by the California Government Code, the County of Orange has adopted a noise element as a component of the Orange County General Plan. The Orange County Noise Element is administered by the Orange County Planning and Development Services Department and applies to all unincorporated portions of the County. The Noise Element establishes noise criteria to ensure that each county resident's quality of life is not affected adversely by high noise levels. The noise criteria are based on land use compatibility and are depicted in Table 5.4-4 and 5.4-5. In general, all outdoor living areas are compatible with noise levels less than CNEL 65 dBA. Outdoor living areas are defined in Figure 5.4-3. Similarly, indoor living spaces are compatible with interior noise levels less than CNEL 45 dBA. As mentioned, these standards only apply to unincorporated areas of the County. Therefore, these standards are only applicable to the project as guidelines for land use compatibility.

The County of Orange has also adopted a noise ordinance. The intent of the Orange County Noise Ordinance is to control unnecessary, excessive, and annoying sounds emanating from unincorporated areas of the County. Since the project site will be within the Irvine city boundaries, the ordinance is not applicable to the proposed project.

Local Jurisdictions

The local jurisdictions adjacent to the project area include the cities of Irvine and Lake Forest. Since Irvine intends to incorporate the project area in the Sphere of Influence, the project area and all future development of the area will be under the jurisdiction of Irvine.

City of Irvine

As mandated by the California Government Code, Irvine has adopted a noise element as a component of the Irvine Comprehensive General Plan. Irvine's interior and exterior noise standards are based on land use compatibility and are shown in Figure 5.4-4. Irvine has established a residential noise standard of CNEL 65 dBA for outdoor environments and CNEL 45 dBA for indoor environments. These standards are consistent with the noise

compatibility standards established by Orange County and are applicable to the project for evaluating land use compatibility within Irvine.

Table 5.4-4
Compatibility Matrix for Land Use and Community Noise
Equivalent Levels

Type of Use	65+ decibels CNEL	60-65 decibels CNEL
Residential	3a, b, e	2a, e
Commercial	2c	2c
Employment	2c	2c
Open Space		
<i>Local</i>	2c	2c
<i>Community</i>	2c	2c
<i>Regional</i>	2c	2c
Educational Facilities		
<i>Schools (K through 12)</i>	2c, d, e	2c, d, e
<i>Preschool, college, other</i>	2c, d, e	2c, d, e
Places of Worship	2c, d, e	2c, d, e
Hospitals		
<i>General</i>	2a, c, d, e	2a, c, d, e
<i>Convalescent</i>	2a, c, d, e	2a, c, d, e
Group Quarters	1a, b, c, e	2a, c, e
Hotels/Motels	2a, c	2a, c
Accessory Uses		
<i>Executive Apartments</i>	1a, b, c	2a, e
<i>Caretakers</i>	1a, b, c, e	2a, c, e

Source: Orange County Noise Element

Note: See Table 5.4-5 for Explanations and Definitions

**Table 5.4-5
Explanation and Definitions of Table 5.4-4**

Action Required to Ensure Compatibility Between Land Use and Noise from External Sources

- 1 = Allowed if interior and exterior community noise can be mitigated.
 2 = Allowed if interior levels can be mitigated.
 3 = New residential uses are prohibited in areas within the 65-decibel CNEL contour from any airport or air station; allowed in other areas if interior and exterior community noise levels can be mitigated. The prohibition against new residential development excludes limited "infill" development within an established neighborhood.

Standards Required for Compatibility of Land Use and Noise

- a = Interior Standard: CNEL of less than 45 decibels (habitable rooms only).
 b = Exterior Standard: CNEL of less than 65 decibels in outdoor living areas.
 c = Interior Standard: Leq(h)=45-65 decibels interior noise level; depending on interior use.
 d = Exterior Standard: Leq(h) of less than 65 decibels in outdoor living areas.
 e = Interior Standard: As approved by the Board of Supervisors for sound events of short duration such as aircraft flyovers or individual passing railroad trains.

Key Definitions

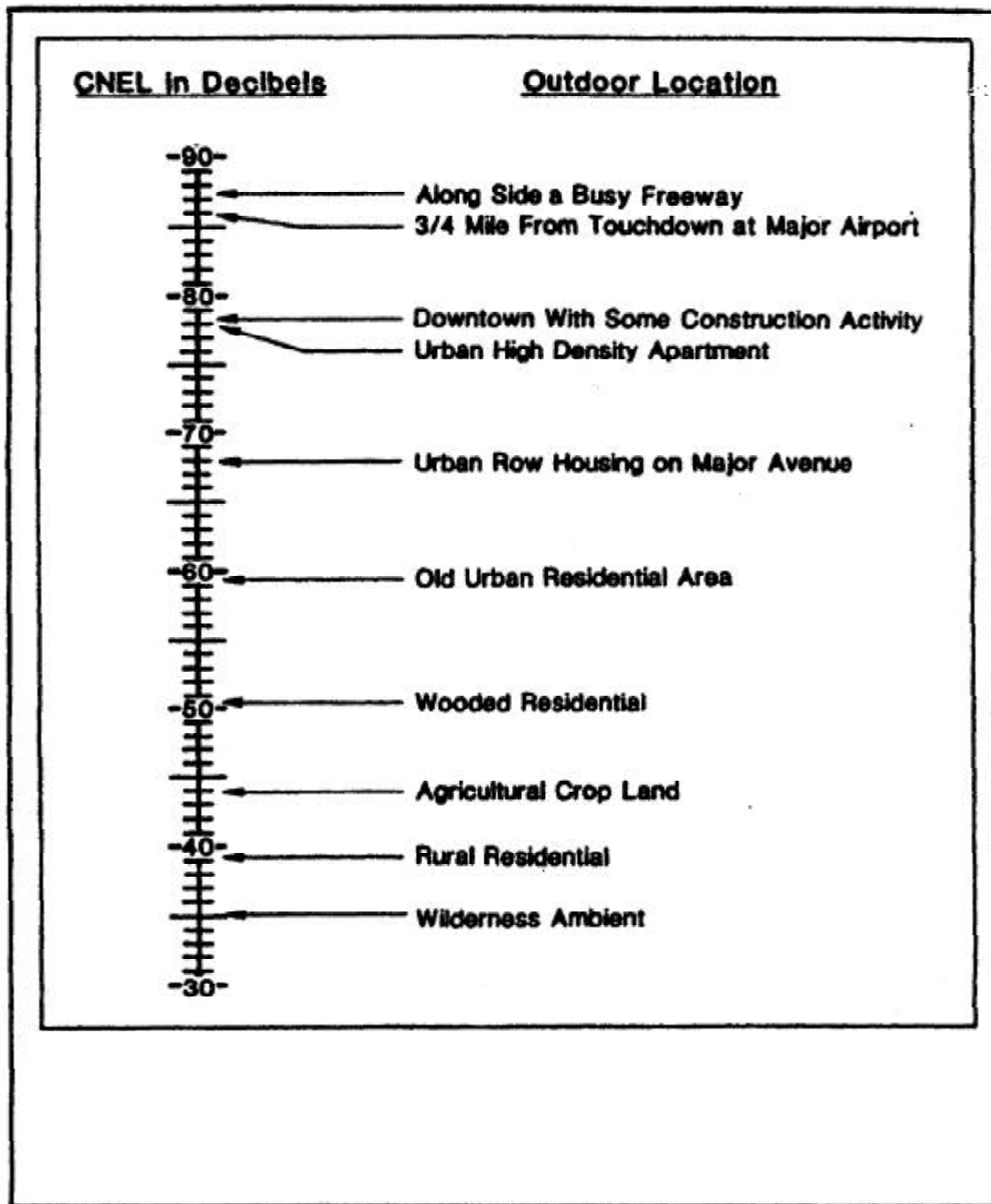
Habitable Room: Any room meeting the requirements of the Uniform Building Code or other applicable regulations which is intended to be used for sleeping, living, cooking, or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms, and similar spaces.

Interior: Spaces that are covered and largely enclosed by walls.

Leq(h): The A-weighted equivalent sound level averaged over a period of "h" hours. An example would be Leq(12) where the equivalent sound level is the average over a specified 12-hour period (such as 7:00 am to 7:00 pm). Typically, time period "h" is defined to match the hours of operation of a given type of use.

Outdoor Living Area: Outdoor living areas is a term used by the County of Orange to define spaces that are associated with residential land uses typically used for passive private recreational activities or other noise-sensitive uses. Such space include patio areas, barbeque areas, Jacuzzi areas, etc. associated with residential uses; outdoor patient recovery or resting areas associated with hospitals, convalescent hospitals, or rest homes, outdoor areas associated with places of worship which have a significant role in services or other noise-sensitive activities; and outdoor school facilities routinely used for education purposes which may be adversely impacted by noise. Outdoor areas usually not included in this definition are: front yard areas, driveways, greenbelts, maintenance areas, and storage areas associated with residential land uses; exterior areas at hospitals that are not used for patient activities; outdoor areas associated with places of worship and principally used for short-term gatherings; and outdoor areas associated with school facilities that are not typically associated with educational uses prone to adverse noise impacts (for example, school play yard areas).

Source: *Orange County Noise Element*



Source: Orange County Noise Element.
(Based on EPA, "Protective Noise Levels, Condensed Version of the EPA Levels Document," 1979, Fig. 4).

Figure 5.4-3
Examples of Outdoor CNEL Levels
at Various Locations

INTERIOR AND EXTERIOR NOISE STANDARDS ENERGY AVERAGE (CNEL)

LAND USE CATEGORIES	USES	ENERGY AVERAGE (CNEL)	
		INTERIOR ¹	EXTERIOR ²
RESIDENTIAL	Single Family	45 ³	65
	Multiple Family		
	Mobile Home	—	65 ³
COMMERCIAL/ INDUSTRIAL/ INSTITUTIONAL	Hotel, Motel, Transient lodging	45	65
	Commercial, retail, bank, restaurant	55	—
	Office building, Professional office, research development, city office building	50	—
	Amphitheater, concert hall, auditorium meeting hall	45	—
	Gymnasium (Multipurpose)	50	—
	Sport clubs	55	—
	Manufacturing, warehousing, wholesale, utilities	65	—
	Movie theatre	45	—
INSTITUTIONAL	Hospital, school classroom	45	65
	Church, library	45	—
OPEN SPACE	Parks	—	65

Interpretation

1. Indoor environment excluding bathrooms, toilets, closets and corridors.
2. Outdoor environment limited to private yard of single family; multi-family private patio or balcony which is served by a means of exit from inside; mobile home park; hospital patio; park's picnic area; school's playground; and hotel and motel recreation area.
3. Noise level requirement with closed windows. Mechanical ventilating system or other means of natural ventilation shall be provided as of Chapter 12, Section 1205 of UBC.
4. Noise level requirement with open windows, if they are used to meet natural ventilation requirement.
5. Exterior noise level should be such that interior noise level will not exceed 45 CNEL.
6. Except those areas affected by aircraft noise.

Source: City of Irvine Comprehensive General Plan Noise Element.

Figure 5.4-4
Interior and Exterior Noise Standards
Energy Average (CNEL)

Irvine has also adopted a noise ordinance. The intent of the Irvine Noise Ordinance is to control unnecessary, excessive, and annoying noise from stationary sources within the city limit. The noise level limits are based on the noise zone of the property receiving the noise and are outlined in Table 5.4-6.

**Table 5.4-6
City of Irvine Noise Ordinance Maximum Permissible Noise Levels**

Noise Zone		Period	Permissible Noise Level (dBA) (for a period not exceeding)				
			30 min	15 min	5 min	1 min	0 min
1	Exterior	7 am to 10 pm	55	60	65	70	75
		10 pm to 7 am	50	55	60	65	70
	Interior	7 am to 10 pm	-	-	55	60	65
		10 pm to 7 am	-	-	45	50	55
2	Exterior	Anytime	55	60	65	70	75
	Interior	Anytime	-	-	55	60	65
3	Exterior	Anytime	60	65	70	75	80
	Interior	Anytime	-	-	55	60	65
4	Exterior	Anytime	70	75	80	85	90
	Interior	Anytime	-	-	55	60	65

Noise Zone Designations:

- 1 All hospitals, libraries, churches, schools, and residential properties
- 2 All professional office and public institutional properties.
- 3 All commercial properties excluding professional office properties.
- 4 All industrial properties.

The Irvine Noise Ordinance also specifies construction activities and agricultural operations can only occur between 7:00 am and 7:00 pm Monday through Friday and between 9:00 am and 6:00 pm on Saturday. No construction activities or agricultural operations are permitted outside these hours or on Sundays or federal holidays unless a temporary waiver is requested and granted.

Following annexation to the City the Irvine Noise Ordinance is directly applicable to the project site. All future stationary noise sources associated with the various land use developments within the project site must comply with these regulations. Additionally, all construction activities associated with the development of the project must comply with these regulations.

City of Lake Forest

As mandated by the California Government Code, Lake Forest has adopted a noise element as a component of the Lake Forest General Plan. Lake Forest's interior and exterior noise standards are based on land use compatibility and are shown in Figure 5.4-5. Lake Forest has established a residential noise standard of CNEL 65 dBA for outdoor environments and CNEL 45 dBA for indoor environments. These standards are consistent

INTERIOR AND EXTERIOR NOISE STANDARDS

Land Use	Noise Standards ¹	
	Interior ^{2,3}	Exterior
Residential - Single family, multifamily, duplex, mobile home	CNEL 45 dB	CNEL 65 dB ⁴
Residential - Transient lodging, hotels, motels, nursing homes, hospitals	CNEL 45 dB	CNEL 65 dB ⁴
Private offices, church sanctuaries, libraries, board rooms, conference rooms, theaters, auditoriums, concert halls, meeting halls, etc.	Leq(12) 45 dB(A)	-
Schools	Leq(12) 45 dB(A)	Leq(12) 67 dB(A) ⁵
General offices, reception, clerical, etc.	Leq(12) 50 dB(A)	-
Bank lobby, retail store, restaurant, typing pool, etc.	Leq(12) 55 dB(A)	-
Manufacturing, kitchen, warehousing, etc.	Leq(12) 65 dB(A)	-
Parks, playgrounds	-	CNEL 65 dB ⁵
Golf courses, outdoor spectator sports, amusement parks	-	CNEL 70 dB ⁵

NOTES

1. CNEL: Community Noise Equivalent Level.
Leq(12): The A-weighted equivalent sound level averaged over a 12-hour period (usually the hours of operation).
2. Noise standard with windows closed. Mechanical ventilation shall be provided per UBC requirements to provide a habitable environment.
3. Indoor environment excluding bathrooms, toilets, closets and corridors.
4. Outdoor environment limited to rear yard of single family homes, multifamily patios and balconies (with a depth of 6' or more) and common recreation areas.
5. Outdoor environment limited to playground areas, picnic areas, and other areas of frequent human use.

Source: Lake Forest General Plan Safety and Noise Element.

Figure 5.4-5
Interior and Exterior Noise Standards

with the noise compatibility standards established by Orange County and are applicable to the project for evaluating land use compatibility within Lake Forest.

Lake Forest has also adopted a noise ordinance. The intent of the Lake Forest Noise Ordinance is to ensure that adjacent properties are not exposed to excessive noise from stationary sources (non-transportation) located within the city limits. The ordinance is not applicable to the proposed project.

5.4.1 Environmental Setting

Existing Noise Sources

The existing acoustical environment around the project area is typical of urban and suburban communities. The primary sources of noise throughout the community include both mobile and stationary sources. The mobile sources include the various modes of transportation such as automobiles, trucks, motorcycles, trains, and aircraft. The community locations directly adjacent to the roadways experience noise dominated by vehicles. The project area and locations immediately surrounding the project area currently experience noise from aircraft operations associated with John Wayne Airport and other outlying area airports. As the military mission at the former MCAS El Toro is terminated, no noise from military flight operations associated with the former air station is present.

The project area is dominated by mobile noise sources (i.e., traffic noise from roadways and freeways located near the project area). The project area is located north of the Santa Ana (I-5) Freeway, east of the Eastern Transportation Corridor (SR-133), and south of the Foothill Transportation Corridor (SR-241). Major roadways that border the project area include Barranca Parkway to the south, Sand Canyon Avenue to the west, Portola Parkway and Irvine Boulevard to the north, and Alton Parkway to the east. In addition, the Irvine Transportation Center, a major multi-modal transit center linking bus, commuter rail, and Amtrak rail services, is located along the southern edge of the project area, adjacent to the Southern California Regional Rail Authority (SCRRA) railroad. Passenger train operations at this facility generate noise along the tracks.

Noise emanating from the project area is limited to vehicle noise from security personnel and other limited activities. The Musick Branch Jail generates noise associated with vehicles trips to and from the jail and from stationary sources and activities associated with the jail. The IRWD parcel generates limited noise from the pump equipment. Land uses adjacent to the project area that generate vehicle noise include commercial business, light industry, and agricultural uses.

The stationary sources include the noise associated with the commercial and industrial land uses throughout the community. These stationary noise sources typically include building systems, manufacturing activities, industrial equipment, and entertainment activities. Specifically, the Irvine Spectrum business park and entertainment center is located to the south of the project area, industrial/business parks are located to the east, and agricultural land and a regional park are located to the north. Stationary sources of a temporary nature include construction activities and agricultural operations. Other community noise sources

include the noise from residential sources such as air conditioners, yard care equipment, and outdoor activities.

Ambient Noise Survey

A noise survey was conducted on December 10-12, 2002, to characterize the existing acoustical environment at nearby noise sensitive receptors. Noise measurements were conducted within the residential areas near the project area. Four representative residential locations were identified for long-term measurement and five additional locations were selected for short-term measurement. The locations selected are shown in Figure 5.4-6. Each location was selected to capture the acoustical environment within the residential community. Long-term noise measurements were conducted for a minimum duration of 46 hours and included the hourly equivalent-continuous sound level (L_{eq}); the 90-percentile exceedance sound level (L_{90}); the 50-percentile exceedance sound level (L_{50}); and the 10-percentile exceedance sound level (L_{10}). The short-term measurements were conducted for a minimum of 10 minutes to capture a typical spectrum that is experienced during the daytime. Weather conditions during the measurement period generally included clear skies, light winds, and temperatures ranging from approximately 47°F to 75°F.

The measurement results are detailed in Table 5.4-7 and Figure 5.4-7. Detailed survey results are included in the Noise Technical Report provided in Appendix H of this Final Program EIR. As indicated in Table 5.4-6, the CNEL sound levels at the surveyed residential locations ranged from 58 dBA to 65 dBA. The audible sources included typical suburban sources such as local traffic, distant traffic, birds, aircraft, and human voices. The measured sound levels are typical of suburban residential areas and are compatible with residential areas based on the local standards.

The additional survey results detailed in Figure 5.4-7 provide an indication of the variation in the daily sound levels at each location. As expected, the smallest variations occurred during the nighttime hours when local/neighborhood activities were minimal. During the nighttime hours, the L_{90} and L_{10} sound levels approached equivalent levels. These trends are typical of suburban areas.

Groundborne Noise and Vibration¹

Non-seismic groundborne vibration is generally a concern inside buildings and is rarely perceived as a problem outdoors. Groundborne vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings, and then throughout the remainder of the structure. Building vibration may be perceived by occupants as motion of building surfaces, rattling of items on shelves or hanging on walls, or as a low-frequency rumbling noise. The rumble noise is caused by the vibrating walls, floors, and ceilings radiating sound waves. In most cases, groundborne noise and vibration is annoying but does not cause damage.

Typical sources of groundborne vibration are construction equipment, trains, and traffic on rough roads. Problems with groundborne vibration and noise from these sources are usually localized to areas within about 100 feet from the vibration source. When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible.

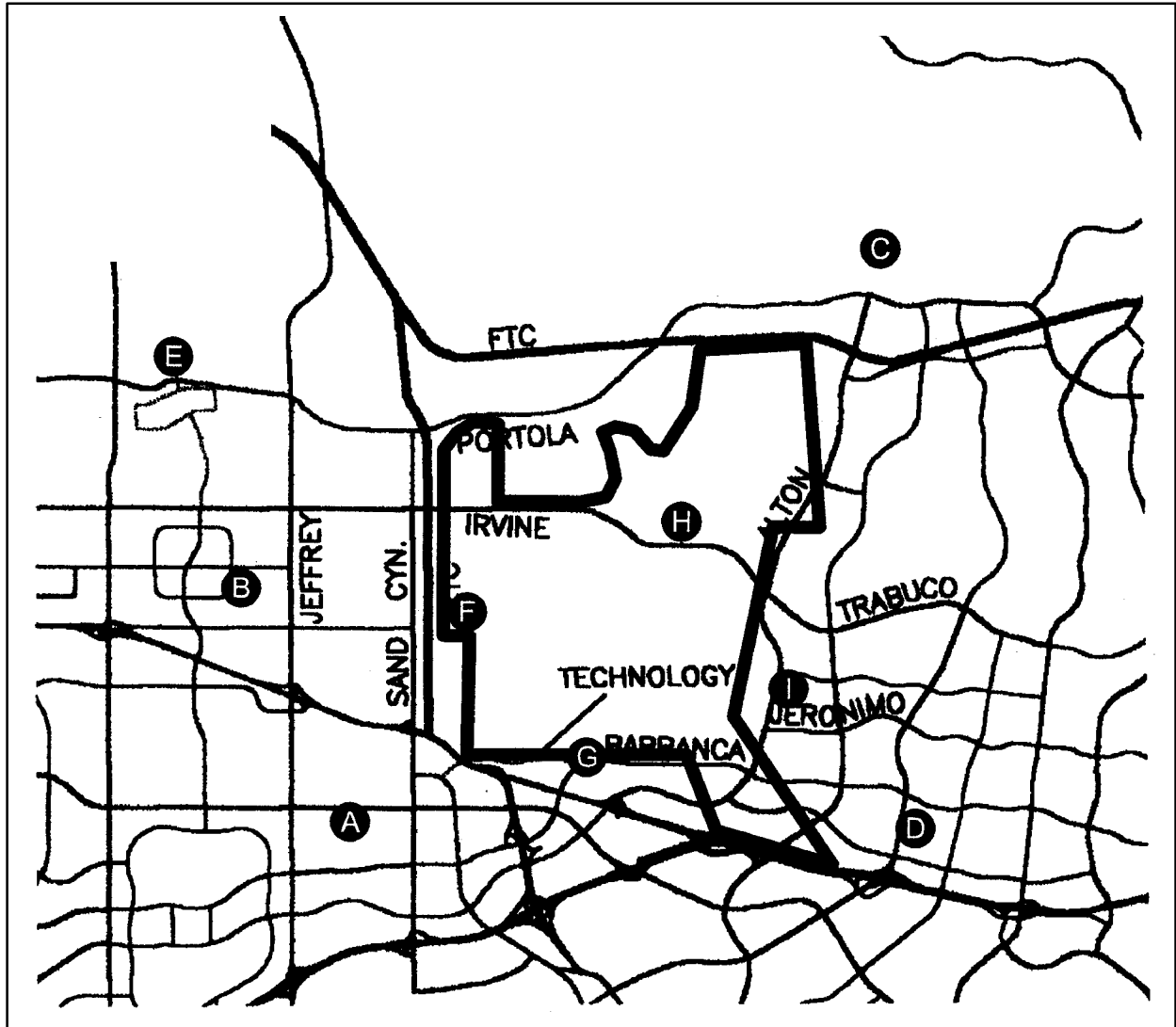


Figure 5.4-6
Measurement Locations for the Long-Term (A-D)
and Short-Term (E-I) Ambient Monitoring Locations
in Irvine and Lake Forest

Not to Scale

Table 5.4-7
Long-term and Short-term Ambient Noise Level Measurements

Noise Monitoring Location		L_{eq} dBA	L_{dn} dBA	L_{den} (CNEL) dBA	Audible Noise Sources
A	Orange Blossom and Tarocco (Irvine)	56 (46 hrs)	58	58	Local traffic, distant traffic, human voices, music from car stereo
B	Columbus and Eastwood (Irvine)	59 (47 hrs)	62	63	Local traffic, distant traffic, occasional small power tools
C	Teed and Roebuck (Lake Forest)	56 (49 hrs)	64	64	Distant traffic, local traffic, electric power tool, birds, distant aircraft, sprinklers
D	Paloma and Vallecito (Lake Forest)	60 (46 hrs)	64	65	Local traffic, distant traffic, barking dog, distant human voices, residential A/C unit
E	Portola east of Culver west of Jeffrey	61 / 63 (10 min)	n/a	n/a	Local traffic, birds
F	Trabuco at MCAS El Toro gate (Cal. St. Fullerton) at SR133	64 / 65 (10 min)	n/a	n/a	Local traffic, distant traffic, agricultural equipment
G	Barranca east of Technology in Irvine Spectrum Bus. Park	66 / 67 (10 min)	n/a	n/a	Local traffic, distant traffic
H	MCAS El Toro Gate 2; Irvine Blvd. west of Alton	58 / 59 (10 min)	n/a	n/a	Traffic, distant agricultural equipment
I	Corner of Alton and Morgan by Residence Inn	65 (10 min)	n/a	n/a	Traffic, small aircraft

Note:

1. Measured hourly L_{eq} , L_{90} , and L_{10} sound levels are shown in Figure 5.4-7 for A, B, C, and D
2. "n/a" denotes not applicable

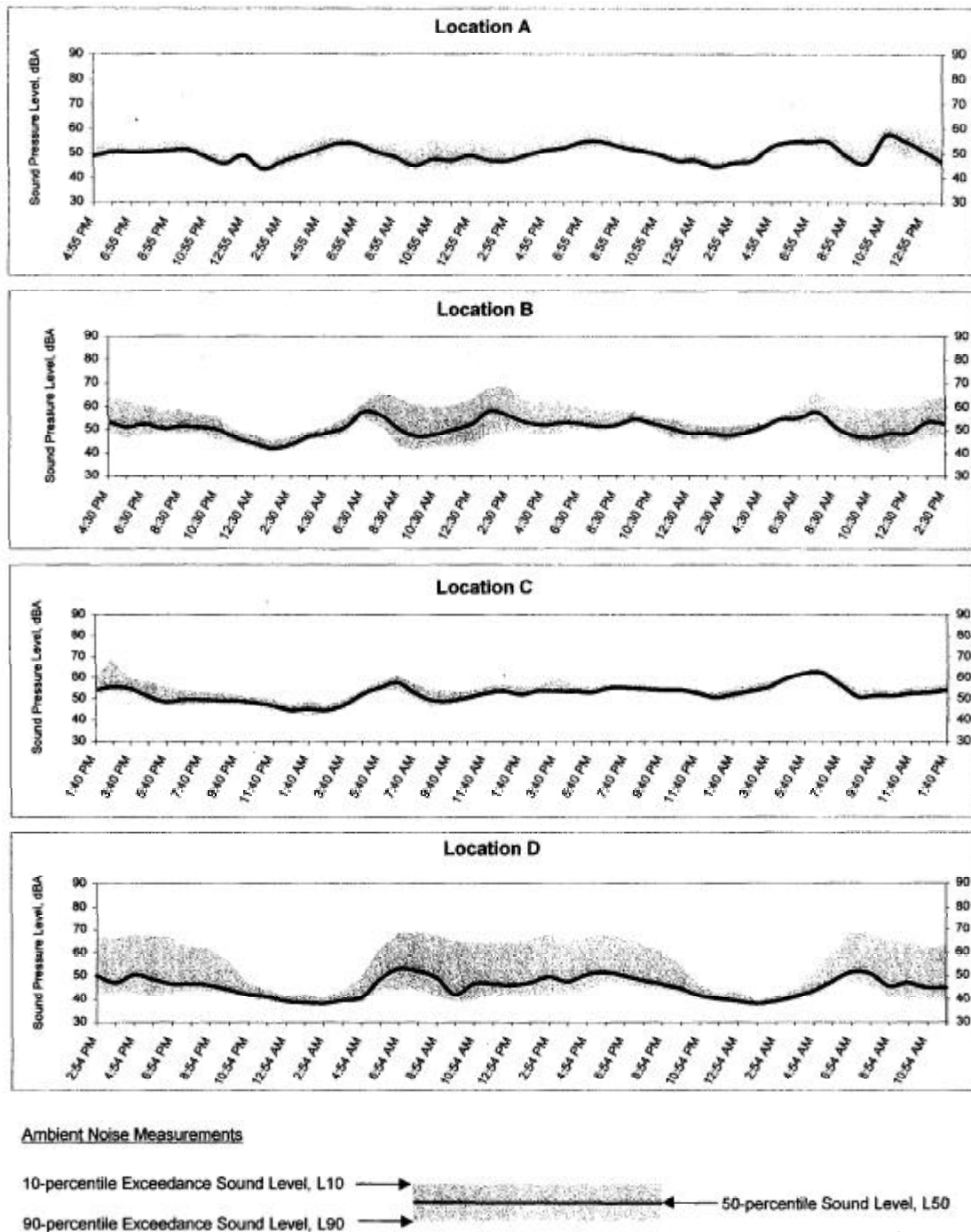


Figure 5.4-7
Ambient Sound Level Measurements
within Nearby Residential Areas

Physical damage from groundborne vibration is generally limited to construction activities, except in rare cases. Groundborne noise is generally not a problem because noise arriving airborne usually is greater than the associated groundborne noise.

5.4.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G, outlines the thresholds for determining significance for noise.

Would the project result in:

1. *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*
2. *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*
3. *Substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*
4. *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*
5. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*
6. *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?*

5.4.3 Environmental Impact

The Musick Branch Jail and the IRWD parcel are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. As a result, implementation of the proposed project will not result in a significant noise quality impact associated with the annexation of the Musick Branch Jail or the IRWD parcel.

Noise impacts on the surrounding areas due to the proposed project can be considered either short-term impacts or long-term impacts. Short-term impacts include those noise impacts due to the construction of the project from initial construction to final build-out. Long-term impacts include those post-construction noise impacts due to the operation and occupancy of the project area after its completion.

Construction Impacts

Threshold 1: Would the project cause exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Threshold 4: Would the project cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Base Plan and Overlay Plan

The construction phases are scheduled to correspond with the capacity and development of proposed roadways and growth of the surrounding community. Specific construction activities, level of activity, and the location of the construction will continually change throughout the course of project development. Development phasing will result in staggered noise impacts from demolition and construction activities and prevent extensive construction noise at any one time. Early construction will involve demolition and removal of portions of the existing infrastructure including the runways, and construction of the infrastructure backbone.

The proposed project has been designed so that noise-sensitive areas are buffered from noise sources that surround the project area and is compatible with the Irvine General Plan and zoning ordinance. Sensitive receptors are buffered from major transportation corridors and off-project area industrial land uses by areas of commercial land development and open space areas. Also, sensitive receptors will be located away from major noise sources such as the sports park and the OCTA facility, as well as the existing railroad line and the I-5 Freeway. New development under Overlay Plan will be required to comply with all applicable federal, state and local noise regulations as they relate to publicly funded roadway and housing projects, employee safety and noise compatibility. Also, HUD standards must be met if HUD financing is considered for the multi-family residential uses. All commercial uses developed within the project area must comply with the OSHA and CALOSHA noise exposure limits. California Building Standards related to noise will apply to all new hotels, motels, dormitories, long-term care facilities and multi-family housing associated with the Overlay Plan.

Total development of the project is expected to occur over approximately a 20-year period. The construction phases are scheduled to correspond with the capacity and development of the proposed roadways and growth of the community. The specific construction activities, the level of activity, and the location of the construction will continually change throughout the course of the project development. The phasing of development will stagger the noise impacts from demolition and construction activities and prevent extensive construction noise at any one time during the 20-year development period.

The removal of the existing runways will take place during the course of the project. The specific timing of the removal is dependent upon the availability of funding for park improvements as well as the market for the aggregate created. Demolition of the runways will involve breaking up the concrete using up to five tracked breakers, 15 wheel loaders,

and one or two portable on-site crushing plants. The temporary crushing plants will be located remote from the existing noise sensitive areas. Removal of the crushed concrete by heavy truck is anticipated, as the crushed concrete may be sold for use as aggregate for off-project area roadways and other uses. The runway demolition and crushing activities are anticipated to be the noisiest component of construction. The nearest residences are located more than 1 mile from the existing runways.

The construction of the infrastructure will also be scheduled to support the construction schedule for the various proposed developments. Construction of the infrastructure will involve the installation of major sewer lines, water lines, gas lines, and electrical/communication cables, as well as the grading, clearing, and preparing of land. Infrastructure construction will require a variety of large diesel equipment operating at various locations on the site. It is anticipated that four to 20 large pieces of mobile equipment will be operating at various locations on the site at any given time. The nearest off-site residences are located approximately 4,000 feet from the edge of the project area.

Estimated sound levels for typical construction equipment are shown in Table 5.4-8. The outlined sound levels are based on typical equipment sound levels at a distance of 50 feet from the equipment. The main noise producing activities are anticipated to occur primarily during the early phases of construction. Portions of the infrastructure construction activities and runway demolition may occur simultaneously. The sound levels associated with this worst case condition were evaluated at the nearest off-project area residences. The combined sound level was estimated for 20 pieces of large mobile equipment operating at a distance of 5,000 feet, five concrete breakers operating at a distance of 6,000 feet, and two crusher plants operating at a distance of 10,000 feet. These distances represent the closest possible location of the construction equipment to the nearest off-project area residences. Based on these equipment types and quantities, the combined effect of this equipment would result in a sound level of approximately 56 dBA at the nearest off-project area residential locations during a heavy construction period. The construction sound levels will be below this level during most of the construction period. During general project construction, noise emissions are anticipated to be less than the noise emissions from runway demolition and infrastructure construction.

Post-construction Project Impacts

Long-term impacts include those post-construction noise impacts due to the operation and occupancy of the various land uses proposed for the project area. Post-construction noise sources include vehicle traffic generated by the project and stationary sources associated with the project land uses, such as commercial uses, and transportation facility uses. Post-construction noise impacts due to traffic generated by the project can be evaluated quantitatively by utilizing traffic volume studies. However, since the exact type, amount, and location of the project stationary noise sources are undetermined at this time, long-term impacts due to stationary noise sources can only be evaluated qualitatively.

**Table 5.4-8
Typical Noise Levels for Construction Equipment¹**

Type of Equipment	Range of Measured Sound Levels, dBA at 50 feet	Suggested Sound Level for Analysis, dBA at 50 feet
Material-Handling and Transport Equipment: Concrete Batch Plants Vibratory Conveyors Concrete Vibrators Pavers	80 – 85 70 – 80 68 – 81 82 – 92	83 77 78 89
Impact Equipment: Pile Drivers 12000-18000 ft-lb/blow 20000-32000 ft-lb/blow Rock Drills Paving Breakers, Jack Hammers unquieted quieted Pneumatic Tools Temporary Crushing Plant	81 – 96 94 – 107 83 – 99 75 – 85 69 – 77 78 – 88	93 104 96 82 75 85 95 ⁽²⁾
Auxiliary Equipment: Pumps Chain Saws Electric Gas Electric Saws Welders Paging Systems Warning Horns	68 – 80 59 – 69 72 – 88 66 – 72 66 – 75 80 – 92 98 – 102	77 66 85 70 73 89 100

Notes:

1. Based on *Power Plant Construction Noise Guide*, Bolt Beranek and Newman Inc., 1977
2. Sound level based on similar construction equipment

Threshold 1: Would the project cause exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Threshold 3: Would the project cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Base Plan and Overlay Plan

Traffic Noise Analysis Methodology

Under CEQA, consideration must be given to the magnitude of the increase and the existence of noise sensitive receptors in order to determine if the noise increase is a significant adverse environmental effect. Since CEQA does not define the magnitude of a significant increase, other applicable sources must be referenced. In general, a noise level increase of three dB is typically considered just barely perceptible while an increase of five dB is typically considered clearly noticeable. CALTRANS defines a noise increase as substantial when the predicted noise levels with the project exceed the existing noise levels by 12 dB. Additionally, CALTRANS has established a screening procedure that recommends further detailed traffic noise analysis when the ratio of the traffic volumes indicates a noise level increase equal to or greater than three dB. In addition, Lake Forest has recently developed a document titled *CEQA Significance Thresholds Guide* which provides guidance for the preparation of environmental documents. The guide specifies that traffic noise is significant if 1) the project causes a noise increase of three dB or more near a sensitive receptor and 2) the “future with project” noise level exceeds 65 dB CNEL. Therefore, to be conservative, this screening analysis includes further evaluation of any project-related traffic noise level increase greater than 1.5 dB within residential areas.

Base Plan

Traffic Noise Impacts

The Noise Technical Report is provided as Appendix H of this Final Program EIR and lists the changes in traffic noise for the with and without the project for interim years 2007 and 2025 and for build-out year post-2025 in Table B-2. The future traffic noise level change is represented as ten times the logarithm of the ratio of the future traffic volume to the existing traffic volume. The traffic noise change due solely to the project is the difference between the future change with and without the project. A negative change indicates a decrease in the traffic noise level and a positive change indicates an increase in the traffic noise level.

As shown in Table B-2 on the Noise Technical Report (Appendix H), the increase in the traffic noise levels due solely to the project-generated traffic ranges from -4.6 dB to 9.8 dB in the interim year 2007, -10.0 dB to 13.3 dB in the interim year 2025, and -1.7 dB to 13.1 dB in the build-out year post-2025. Specifically, eight roadway segments are predicted to experience a traffic noise level increase greater than 1.5 dB due to the project in either the

interim years 2007 and 2025 or in the build-out year post-2025. These roadway segments include the following.

Year 2007

- ◆ Trabuco Road from Jeffery Road to Sand Canyon Avenue
- ◆ Marine Way
- ◆ Jeronimo Road from Alton Parkway to Bake Parkway
- ◆ Barranca Parkway from Technology Drive to Alton Parkway
- ◆ Rockfield Boulevard from Bake Parkway to Lake Forest Drive
- ◆ Toledo Way from Alton Parkway to Bake Parkway

Year 2025

- ◆ Marine Way
- ◆ Jeronimo Road from Alton Parkway to Bake Parkway
- ◆ Barranca Parkway from Technology Drive to Alton Parkway
- ◆ Post-2025
- ◆ Irvine Boulevard west of Alton Parkway
- ◆ Toledo Way from Alton Parkway to Bake Parkway
- ◆ Barranca Parkway from Technology Drive to Alton Parkway
- ◆ Rockfield Boulevard from Alton Parkway to Bake Parkway
- ◆ Marine Way

Overlay Plan

The increase in the traffic noise levels due solely to the project-generated traffic ranges from -4.6 dB to 9.0 dB in the interim year 2007, -2.8 dB to 13.6 dB in the interim year 2025, and -1.4 dB to 13.4 dB in the build-out year post-2025. Specifically, eight roadway segments listed in Table B-2 are predicted to experience a traffic noise level increase greater than 1.5 dB due to the project in either 2007, 2025, or post-2025. These roadway segments include the following.

Year 2007

- ◆ Barranca Parkway from Technology Drive to Alton Parkway
- ◆ Jeronimo Road from Alton Parkway to Bake Parkway
- ◆ Marine Way
- ◆ Toledo Way from Alton Parkway to Bake Parkway
- ◆ Rockfield Boulevard from Bake Parkway to Lake Forest Drive
- ◆ Trabuco Road from Jeffery Road to Sand Canyon Avenue

Year 2025

Barranca Parkway from Technology Drive to Alton Parkway

- ◆ Marine Way
- ◆ Jeronimo Road from Alton Parkway to Bake Parkway
- ◆ Irvine Boulevard from Research Drive to Alton Parkway

Post-2025

- ◆ Barranca Parkway from Technology Drive to Alton Parkway
- ◆ Marine Way
- ◆ Toledo Way from Alton Parkway to Bake Parkway
- ◆ Irvine Boulevard from Research Drive to Alton Parkway
- ◆ Jeronimo Road from Alton Parkway to Bake Parkway
- ◆ Rockfield Boulevard from Alton Parkway to Bake Parkway

The land uses along these specific roadway segments are identified and listed in Table B-1 based on available land use and zoning maps. As shown, the land uses along all of these roadway segments consist of agricultural, commercial, or industrial uses. In general, most of the operations in these land uses are conducted indoors, and employees and occupants at these sites would not be exposed to traffic noise levels that could pose a nuisance. Agricultural, commercial, and industrial land uses are typically not considered noise sensitive land uses under the local noise elements.

Project Land Uses

Activities associated with the operation and occupancy of the land uses proposed for the project may emit noise to the existing surrounding land uses. The existing surrounding land uses consist of a mixture of commercial, agricultural, and open space. The nearest residential neighborhoods are located approximately one mile west and southwest of the site and approximately one mile east and southeast of the site.

Commercial Uses

Interim and future commercial land uses are anticipated to include retail stores, business offices, entertainment facilities, hotel/overnight accommodations, and other supporting services. Interim industrial uses are anticipated to include warehousing, materials recovery, light manufacturing facilities such as communication equipment manufacturing, electronics manufacturing, furniture manufacturing, and pharmaceutical manufacturing; motion picture studios; printing and publishing businesses. The primary stationary noise sources associated with these uses will be noise from the specific on-site equipment, loading/unloading operations (delivery and shipment of goods), and the operation of HVAC equipment.

Noise from specific HVAC and other equipment will be highly variable and can only be evaluated as individual projects and land uses are developed. Individual commercial and industrial developments must be designed in accordance with the compatibility guidelines set forth in the City of Irvine Noise Element and the regulations set forth in the City of Irvine Noise Ordinance. Noise associated with the commercial and industrial land uses will be less than significant provided appropriate acoustical design features are incorporated to comply with the local regulations. Acoustical design features may include effective sound insulating construction, perimeter barrier walls, acoustical equipment enclosures, and operational restrictions. Additionally, commercial and industrial land uses within the project must comply with the OSHA and CALOSHA worker noise exposure limits in order to protect all workers from hearing damage. Noise mitigation measures required to ensure compliance with OSHA and CALOSHA must be evaluated on a case-by-case basis as each proposed land-use occupies existing spaces or is developed. In general, mitigation measures may

include equipment enclosures, barrier walls, low-noise equipment, hearing-protection devices, or limited worker access.

Cultural/Institutional/Educational Uses

The cultural, institutional, and educational land uses may emit noise to the surrounding community during their use. The noise associated with these uses will vary depending on the specific use, but are likely to include building equipment noise and activity noise. While the cultural/institutional/educational land use areas have been identified for the project, the specific uses and locations will not be known until the properties are purchased and developed. As such, noise from the cultural/institutional/educational uses must be evaluated as the individual properties are developed. Nonetheless, the individual developments must be designed in accordance with the compatibility guidelines set forth in the City of Irvine Noise Element and the regulations set forth in the City of Irvine Noise Ordinance.

Transportation Facilities

The transportation facilities will be constructed along the existing Southern California Regional Rail Authority (SCRAA) corridor in the southern portion of the site and will be integrated with the existing Irvine Transportation Center. The transportation center will include a maintenance center and will serve as a transit hub for bus, rail, and shuttle transportation. The facility will be located along the existing rail line within a light industrial area or transit-oriented development remote from off-site residences. Noise sources associated with the facility will be similar to those currently experienced at the existing Irvine Transportation Center and will include rail traffic, vehicle traffic, and bus traffic. Other sources may include the noise from any stationary equipment associated with the operation of the facility. The actual sound levels from the various facilities will depend on the specific activities and equipment. As such, noise from the proposed transportation facilities must be evaluated as each specific facility is developed. Nonetheless, the facilities must be designed in accordance with the compatibility guidelines set forth in the Irvine Noise Element and the regulations set forth in the Irvine Noise Ordinance.

Threshold 2: Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Base Plan and Overlay Plan

Short-term construction activities may result in groundborne noise and vibration. Since groundborne noise from construction will be less than airborne noise generated from that same construction, mitigation measures to limit construction noise will work to ensure a less-than-significant impact. Furthermore, groundborne noise from construction will be temporary, will cease with construction, and is not expected to be discernable from airborne noise. The impact related to groundborne noise will be less than significant.

Groundborne vibration from construction may in some cases be noticeable and perhaps even result in damage if structures are located adjacent. However, for damage to occur, the source of the vibration will need to be extremely close and powerful. For example, bulldozers and other heavy earth-moving equipment may result in groundborne-vibration-

induced cosmetic damage (e.g. plaster cracks) to sensitive structures (for example, historic buildings) between 25 feet and 50 feet away. No sensitive structures are located at the former MCAS El Toro (refer to Section 5.11), and heavy construction equipment is not expected to be concentrated for longer periods of time within close proximity to structures.

Extremely close blasting and impact pile driving are the primary sources of damage from groundborne vibration. In this case, such activities may occur during the demolition of runways. These operations will take place far from any habitable structure, and impact will be less than significant. Nuisance vibration from other construction-related groundborne vibration will be temporary, and therefore, less than significant.

Post-construction (long term) groundborne noise and vibration results primarily from trains and vehicular traffic (and in particular, truck traffic) on uneven roads. Annoyance and damage from these sources is very rare, except at extremely close distances. Again, groundborne noise is almost always drowned out by the corresponding airborne noise, and impact will be less than significant. All roads on the project site will be constructed and maintained to acceptable standards such that the impact of groundborne vibration from traffic on adjacent streets will be less than significant.

The proposed project site is located adjacent to the SCRRA railroad tracks. Vibration from trains can result in annoyance at sensitive uses, such as residences, within approximately 50ft to 100ft of the track. Groundborne vibration increases if the tracks are not maintained adequately or there is extensive switching infrastructure imbedded in the track. Structural damage from train-induced groundborne vibration is rare, except at extremely close distances to the track (substantially closer than 25 feet). Groundborne vibration will be limited adjacent to these tracks because they are relatively straight in this stretch and switching equipment is rare. Irvine and the SCRRA require setbacks to its tracks to ensure that, among other things, groundborne vibration-induced damage is limited. The impact will be less than significant.

Threshold 5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Base Plan and Overlay Plan

The proposed project is a non-aviation alternative for the former MCAS El Toro site. Flight activities on the site have ceased. No public airport, public use airport, or airport land use plan is located in the vicinity. No impact will result.

Threshold 6: For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Base Plan and Overlay Plan

The project is not in the vicinity of any private airstrip. No impact will result.

Off-Project Area Noise Impacts

Noise impacts on the proposed project site can be considered either short-term impacts or long-term impacts. Short-term impacts include those noise impacts due to the construction of the project from initial construction to final build-out. Long-term impacts include those noise impacts on the project itself due to the surrounding community and the proposed project land uses.

Construction Project Impacts

Short-term impacts include those noise impacts due to the construction of the project from initial construction to final build-out.

Base Plan and Overlay Plan

Project Construction

The noisiest construction activities will include demolition of the existing runways and construction of the infrastructure. Project site construction will continue throughout the development of the overall project area. The construction activities of the on-going development may cause some short-term noise within the residential areas.

In the Overlay Plan, the residential areas are proposed just south of the intersection of College Road and Irvine Boulevard as well as along the east side of Irvine Boulevard just west of the Habitat Preserve. The specific construction equipment, the level of activity, and the location of the construction activities are not known at this time. However, the cumulative construction sound level was conservatively estimated for the worst possible case where approximately 20 pieces of large mobile equipment, five concrete breakers, and two crusher plants are operating at a distance of approximately 600 feet from the nearest residential area. This represents the demolition of the north end of the runways. Based on these equipment types and quantities, the combined effect of this equipment would result in a sound level of approximately 70 dBA at the nearest on-site residential locations during a typical heavy construction period. As mentioned, this applies to a situation that includes residential occupancy of the project site during heavy construction (i.e., runway demolition). During the general construction periods that are anticipated to follow the initial heavy construction period, the construction sound levels are anticipated to be below this level and of short-term duration.

Construction activities must be conducted in accordance with the Irvine Noise Ordinance. The Irvine Noise Ordinance does not specify a limit on construction noise levels but does specify that construction activities only occur between 7:00 am and 7:00 pm Monday through Friday and between 9:00 am and 6:00 pm on Saturday. No construction activities are permitted outside these hours or on Sundays or federal holidays unless a temporary waiver is requested and granted.

Post-construction Project Impacts

Long-term impacts include those noise impacts due to the operation and occupancy of the various land uses proposed for the project site. Long-term noise sources include vehicle traffic within the project and stationary sources associated with the land uses within and surrounding the project.

Base Plan and Overlay Plan

Traffic Noise

The proposed land uses within the project site will be exposed to noise from project generated traffic and non-project related traffic. As discussed, the Base Plan does not include any noise sensitive receptors, such as residences. Therefore, the traffic noise associated with the Base Plan would not impact any on-site noise sensitive receptors. The Overlay Plan, however, includes limited low-density and medium density residential areas along Irvine Boulevard and College Road. The traffic noise impact on the residences within the project should be evaluated during the detailed design of the residential areas to determine the specific required setback or mitigation necessary to comply with the local limit of CNEL 65 dBA. However, for preliminary purposes, the traffic noise impacts on the residences within the project were evaluated to determine an estimated setback necessary to comply with the local limit. The methodology used to estimate the traffic noise levels is based on the FHWA Highway Traffic Noise Prediction Model. The model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to estimate traffic noise level. The California reference energy mean emission levels were used for each vehicle type as required by CALTRANS. Urban Crossroads, Inc. provided the traffic volumes. The mix and hourly traffic flow distribution were based on those specified by the Orange County Environmental Management Agency. The roadway geometries were based on preliminary roadway information detailed in previous reuse plans due to the lack of roadway information in the current Great Park Plan.

Preliminary estimates indicate that the residences along Irvine Boulevard must include a setback of approximately 1540 feet from the edge of the road right-of-way (ROW) in order to comply with the local compatibility standard of maximum allowable CNEL 65 dBA. This setback is based on an estimated ROW width of 160 feet, a vehicle speed of 65 mph, flat terrain, and no roadside barrier walls. It is anticipated that this setback distance is prohibitive with respect to economical development of the residential areas. Therefore, if residences will be located closer than this distance, measures to reduce traffic noise would need to be implemented, which would occur through compliance with existing City regulations in the City's noise ordinance.

Preliminary estimates also indicate that the residences along College Road must include a setback of approximately 110 feet from the ROW in order to comply with the local compatibility standard of maximum allowable CNEL 65 dBA. This setback based on an estimated ROW width of 120 feet, a vehicle speed of 45 mph, flat terrain, and no roadside barrier walls. If residences will be located closer than this distance, measures to reduce traffic noise would need to be implemented which would occur through compliance with existing City regulations in the City's noise ordinance.

Surrounding Land Uses

Noise from land uses within and surrounding the project site may cause impacts on noise sensitive land uses within the project site. Noise sensitive land uses within the project include low and medium density residences (proposed in the Overlay Plan only). The project site has been arranged such that residential areas within the project are buffered from noise producing areas within the project. In addition, the residential areas within the project are located remotely from the off-site commercial and industrial areas that would be considered incompatible with the residential areas.

All land uses within the project must be designed and developed in accordance with the compatibility guidelines set forth in the Irvine Noise Element and the regulations set forth in the Irvine Noise Ordinance. Additionally, the noise sensitive land uses may be subject to the Noise Insulation Standards in the California Building Standards.

Project Land Uses

Noise from land uses within the project site may cause impacts on noise sensitive land uses within the project site. Noise sensitive land uses within the project include low and medium density residences. The commercial developments within the project may impact noise sensitive land uses within the project site.

Aircraft Noise

The project site is located approximately 7 miles from the John Wayne Airport. The project site is well outside the current and future CNEL 60 dBA contour associated with the aircraft operations at John Wayne Airport. Although distant aircraft operations may, on occasion, be discernible on-site, the noise impact due to aircraft associated with John Wayne Airport will not exceed the local noise compatibility standards for residential land uses and will be less than significant.

The project site is also located approximately seven miles from the MCAS Tustin. There will be no impacts on the project due to the fact that aircraft operations at the former MCAS Tustin ceased with base closure as of July 1999.

5.4.4 Significant Impacts

Base Plan and Overlay Plan

No significant noise impact has been identified.

5.4.5 Mitigation Measures

Base Plan and Overlay Plan

No mitigation measure is proposed, as no significant noise impact has been identified.

5.4.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Not applicable.

Notes and References

1. Alameda Corridor Transportation Authority. *Alameda Corridor Draft Environmental Impact Report*. January 1993.

5.5 Public Health and Safety

5.5.1 Environmental Setting

Hazardous Materials and Wastes

Former MCAS El Toro (PAs 51 and 30)

The operation of facilities located in PA 51 (the former MCAS El Toro) historically included many involving the use, storage, transfer, and disposal of hazardous materials. The following discussion summarizes information from the Base Realignment and Closure Business Plan for MCAS El Toro dated May 2002 and other relevant sources. This information is subject to periodic change as additional information is generated from cleanup programs and activities that are being planned for or are in progress. This information may be found at the MCAS El Toro Information Repository Collection located both at the Heritage Park Regional Library in Irvine, California and at the former MCAS El Toro in the Administrative Record.

The military mission at the MCAS El Toro commenced towards the end of World War II and concluded with the closure of the air station in 1999. During the approximate 55 years of military operation, air station activities, the operation and maintenance of military aircraft and automotive vehicles, required the use of a large variety of hazardous materials. These hazardous materials consisted of petroleum-based products such as aviation and vehicular fuels, engine and lubricating oils, solvents, cleaners, paints, thinners, pesticides and herbicides; chlorinated/halogenated compounds, including trichloroethylene (TCE) and polychlorinated biphenyls (PCB); some radioactive materials; ordnance munitions; and propellants. Use of these materials typically involves the generation of hazardous byproducts and waste. A risk of explosion is associated with some of these materials. Oil-water separators (OWS) were located throughout the former air station at various facility locations. Wastewater from aircraft wash areas and vehicle wash racks passed through OWSs to the sanitary sewer and storm drainage systems. Materials recovered from the OWSs were handled as hazardous wastes. Fuel storage areas also generated hazardous wastes when fuel storage tanks were cleaned and sludge pumped out or when fueling/de-fueling or loading/unloading operations resulted in spills. Storage areas were located throughout the former air station and held hazardous, flammable, and unused chemical material and wastes. Ordnance munitions were used, handled, stored, and disposed of in PA 51. Pesticides and herbicides historically were used at the former air station to control rodents, vectors, and weeds as well as on agricultural parcels leased to farming operations. PCB transformers were in use throughout the former air station.

Many of the existing buildings and facilities may contain hazardous building materials such as asbestos-containing building materials (ACM) and lead-based paint (LBP). Asbestos is associated with respiratory ailments, including cancer, caused by inhaled asbestos fibers and gastro-intestinal disease associated with ingestion. Friable (brittle or readily crumbled) ACM is more readily released into the air than non-friable ACM. These hazardous building materials were in common use prior to 1980 when many of the structures were built on PA

51. Lead is known to have adverse effects on the human body, particularly in children. Exposure is usually through ingestion and inhalation.

Prior to the transfer or sale of any portion of the former MCAS El Toro site containing ACM, the DON must document all available information concerning ACMs, including the following:

- The type, location and condition of ACMs
- The results of any asbestos testing
- Description of asbestos control measures taken, if any
- The costs or time necessary to remove existing ACMs
- The results of any site-specific asbestos inventory updates

Existing source of ACMs are not required to be remediated unless they present an immediate threat to human health or are otherwise not in compliance with applicable regulations at the time of transfer. This is generally limited to friable asbestos in accessible locations. The DON policy is to not remove or otherwise abate asbestos hazards if remediation is otherwise required when all of the following conditions are met:

- The building is scheduled for demolition by the transferee
- The transfer documents specifically prohibit use and occupation of the building prior to demolition
- The transferee has assumed the responsibility to manage the ACMs in accordance with all applicable regulatory requirements

Certain LBP abatement and hazard disclosure requirements must be complied with prior to the transfer of the former MCAS El Toro site from federal responsibility. Housing units constructed prior to 1960 must be abated of LBP and LBP hazards. The presence of LBP and LBP hazards must be disclosed for housing units constructed between 1960 and 1978. Occupation of housing units scheduled for demolition due to the presence of LBP or LBP hazards is prohibited. Post-demolition sampling and response actions for any hazards due to lead in soil shall be conducted, consistent with regulatory requirements, prior to the occupancy of any newly constructed housing units to ensure public health and safety. Remediation of existing sources of LBPs is not required in certain circumstances:

- The building is scheduled for demolition by the transferee and the property transfer document specifically prohibits occupation of the units
- The building is scheduled for non-residential use
- The building is scheduled for residential use and the transferee agrees to comply with all LBP hazard abatement activities in accordance with applicable regulatory requirements

Many of the existing public streets in the project vicinity were probably used by vehicles transporting hazardous materials and wastes to and from PA 51 and the region resulting in the potential for hazardous spills. Rail cars on the railroad tracks may also have transported hazardous materials. Hazardous materials were also transported on-site by pipeline (jet fuel and natural gas). There is an existing fuel pipeline in the railroad right-of-way along the southern boundary of the site. A preliminary investigation into the potential presence of hazardous materials associated with the railroad is being conducted.

Environmental Regulations Affecting MCAS El Toro

In 1975, the DOD initiated a pilot program to investigate past disposal sites at military installations. In 1980, the Installation Restoration Program (IRP) was established to identify and remediate hazardous contamination sites that originated at military installations. IRP sites are sources of environmental contamination that are either within the boundaries of the installation or originated on the installation and subsequently migrated off-site. The IRP has three phases. The first phase was an Initial Assessment Study (IAS) to identify disposal sites and contaminated areas through record searches, on-site surveys, and employee interviews. The second phase consisted of a confirmation study to verify and characterize contamination and rank sites for priority of cleanup. The last phase was the identification, development and implementation of remedial measures to remove the contamination and/or restore the sites to acceptable conditions. The intent of these IRP actions was to protect human health and safety, and the environment. The IRP is an “in-house” program managed by DOD with the participation of state regulatory agencies as appropriate.

As the IRP only addresses contaminated sites that are within federal jurisdiction, it does not include a public review and comment process or independent third party review. At the former MCAS El Toro, the IRP sites are those covered by the Comprehensive Environmental Response, Liability and Cleanup Act (CERCLA). The 1980 “Superfund” legislation and subsequent amendments to CERCLA created a national framework for the identification and cleanup of contaminated sites, provided standards and financial assistance for site cleanups and imposed liability on parties responsible for such contamination.

The Resource Conservation and Recovery Act (RCRA), adopted in 1976, provides the basic framework for federal regulation of hazardous waste. The California Department of Toxic Substances Control (DTSC) is authorized to implement the State hazardous waste program in lieu of federal RCRA regulations. RCRA provides for “cradle-to-grave” regulation of hazardous wastes including generation, treatment, transportation, and disposal. RCRA sites at the project area consist of temporary accumulation areas (TAA) and solid waste management units (SWMU). Sites that are contaminated with petroleum products, which are not federally regulated, are not covered by the IRP or RCRA, but are managed by state agencies.

On the former MCAS El Toro, RCRA addresses existing and former hazardous waste storage and management facilities, while CERCLA addresses the release of hazardous materials and hazardous waste. There are both RCRA and CERCLA sites located on the project area. The DTSC manages implementation of RCRA, while the EPA manages the implementation of CERCLA. Sites are ranked using a Hazard Ranking System (HRS). Under CERCLA the EPA established a National Priorities List (NPL) for the expenditure of cleanup funds for contaminated sites ranked most hazardous by the HRS. The former MCAS El Toro was officially placed on the NPL Federal Section in February 1990.

Site Evaluation and Risk Assessment Methods

The site evaluation and cleanup method(s) selection under CERCLA is generally referred to as the Remedial Investigation and Feasibility Study process (RI/FS). The RI covers site assessment activities under which lead agencies evaluate the nature and extent of site contamination, general site conditions, and begin to identify possible cleanup methods. Considerations for remedial action objectives are provided in 40 Code of Federal

Regulations section 300.430(e)(2)(i), and states that remedial actions selected must attain a degree of cleanup and control further releases which, at a minimum, assures protection of human health and the environment. In the FS process, comprehensive cleanup options are developed and evaluated to select alternatives. Permanent solutions are preferred as opposed to mere containment or re-disposal of contaminated materials. The EPA and individual states approve cleanup plans, including cleanup standards, in a formal document called the Record of Decision (ROD). Final cleanups should reduce contamination to levels that meet Clean Water Act and Safe Drinking Water Act standards as well as potentially more stringent Applicable or Relevant and Appropriate Requirements (ARAR) standards.

All IRP sites on military installations follow the comprehensive, step-by-step CERCLA RI/FS process. Although some sites may require interim remedial actions, permanent cleanup follows the signing of a ROD. For evaluated sites that are determined to not have any contamination or have insignificant levels of contamination, no feasibility study is conducted and the process is completed with a No Further Action ROD. Some sites may require the implementation of interim remedial actions.

As lead agency, the DON is responsible for the establishment of cleanup goals. The DON's approach to the project site has been to evaluate and identify remediation strategies that allow for unrestricted use of as much of the land and resources as possible. The City of Irvine requested and received from the DON its policy regarding potential land-use control strategies that may be employed on specific IRP sites; this policy is outlined in a letter from the DON to the City of Irvine dated November 29, 2000 and is kept on file with the City of Irvine and the DON's Administrative Record. During the initial screening process for potential environmental contamination the DON may make use of the EPA's preliminary remediation goals (PRG) to protect human health. However, PRGs are not always applicable to a particular site and do not address non-human health endpoints such as ecological impacts (e.g., impacts to groundwater resources).

Base Realignment and Closure Cleanup Plan

In March 1993, the former MCAS El Toro was listed for closure by the Base Realignment and Closure Act (BRAC III). DON established a BRAC Cleanup Team (BCT) to manage and coordinate closure activities and to prepare a BRAC Cleanup Plan (BCP) for the former MCAS El Toro. The BCT is also the decision-making body for the level and methodology of remediation. The BCT includes representatives from DON, EPA, DTSC, and the Santa Ana Regional Water Quality Control Board.

The scope of the BCP considers the following regulatory mechanisms:

- BRAC III
- National Environmental Policy Act
- RCRA
- CERCLA, as amended by the Superfund Amendments and Reauthorization Act (SARA), and the Community Environmental Response Facilitation Act (CERFA)
- Other applicable state and local laws

The BCP objectives of the environmental restoration program for MCAS El Toro are as follows:

- Expedite and improve environmental response actions to facilitate the disposal and reuse of the site
- Protect human health and the environment
- Comply with existing federal, state, and local statutes and regulations
- Conduct IRP activities in a manner consistent with Section 120 of CERCLA as amended by SARA
- Meet the provisions of the Federal Facilities Agreement (FFA)
- Continue efforts to identify potentially contaminated areas
- Establish priorities for environmental restoration-related compliance activities so that property disposal and reuse goals can be met
- Design schedules and cost estimate costs for performing remedial activities for IRP sites and compliance program issues
- Identify and map area suitable for transfer by deed/lease and areas unsuitable for transfer by deed

The BCP for the former MCAS El Toro describes the current status of environmental restoration and compliance programs. The first BCP was issued in 1994 and is updated annually with the latest version being released in May 2002. The current BCP outlines 866 locations of concern, including IRP sites, TAAs, SWMUs, underground storage tanks (UST), and aboveground storage tanks (AST), targeted for remediation. The programs outlined in the BCP support the environmental restoration of the site and its disposal and reuse. The BCP describes active remediation sites, the status of other studies and assessments being conducted, and other on-going compliance-related programs. Remediation is on-going and required by the DON even though the military mission at the former MCAS El Toro has been terminated. The BCP emphasizes expedited remedial actions rather than lengthy site characterization studies and prolonged RI/FS activities. Several methods are used to streamline and accelerate cleanup of the former MCAS El Toro. Presumptive remedies use preferred technologies developed for common categories of waste sites to ensure consistency in remedy selection and reduce time and cleanup costs at appropriate sites. Currently accepted presumptive remedies exist for volatile organic compounds (VOC) and municipal and military landfills. Other strategies for streamlining cleanup include overlapping phases and a commitment to partnership amongst the BCT.

Environmental Restoration Programs at MCAS El Toro

An environmental baseline survey (EBS) was conducted in 1995 for the purpose of identifying which properties on the former MCAS El Toro were eligible for transfer or sale as uncontaminated. This study also provided information regarding the general environmental status of other structures, facilities and other properties on the former MCAS El Toro site. In preparation for transfer of available land, the DON has updated its 1995 EBS with an April 2003 Draft Final EBS. The April 2003 Draft Final EBS represents the most relevant evaluation of continuing remediation efforts undertaken by the DON. The updated EBS has identified 76 new potential release locations, all of which require further evaluation for potential releases to the environment and subsequent remediation, if required. The April 2003 Draft Final EBS catalogs the types of sites and distinguishes between those that require no further action, those that require further evaluation, those that require implementation of response actions, and those that require completion of on-going response actions. The DON will not transfer fee title to the property of the former MCAS El Toro until the parcels have been remediated to acceptable exposure levels; property not meeting acceptable exposure levels will not transfer or may be transferred to private control through a lease in furtherance of conveyance until remediation is complete. The April 2003 Draft Final EBS

concludes that of the 3,738-acres of former MCAS El Toro property expected to become available for transfer, approximately 84 percent are environmentally suitable for transfer of fee title at the present time. The DON evaluated potential soil contamination adjacent to and underneath certain runway extensions; no evidence of significant levels of contamination exists in these areas. The updated EBS also concludes that widespread unidentified contamination is not likely to exist at the former MCAS El Toro.

The DON is required to complete all necessary remedial actions before the fee title to the former MCAS El Toro is transferred from federal ownership. However, even after the title is transferred the federal government is required to conduct further remediation if additional contamination caused by DON actions is discovered or of a remedy fails to perform adequately. Federal law also provides that the DON may be required to indemnify the new owners or certain other parties for liabilities arising from claims of personal injury or property damage resulting from the release or threatened release of any hazardous substances, pollutants or contaminants, or petroleum or petroleum derivatives attributable to DON actions on military installations.

Installation Restoration Program

The IRP was authorized in 1984 for the former MCAS El Toro and the Initial Report was completed in 1986 outlining hazardous remediation needs. The IRP identified 24 sites (Sites 1-22, 24, and 25) for investigation at the former MCAS El Toro. The IRP sites are now divided into two categories: No Further Action sites and Action Required sites. As of September 1997, ten No Further Action sites were identified, following EPA guidance. These sites are 4, 6, 7, 9, 10, 13, 14, 15, 19, 20, 21, 22 and 25. The Action Required sites are shown on Figure 5.5-1, Installation Restoration Program Sites.

A number of IRP sites are under various stages of remedial investigation and/or cleanup. The six IRP sites that have the highest priority are Sites 18 and 24 (VOC groundwater and soil contamination) and landfill Sites 2, 3, 5, and 17. A presumptive remedy is being used for the vadose zone of the VOC source area (Site 24). Presumptive remedies are being considered for the landfill sites (Sites 2, 3, 5, and 17).

VOC Sites 24 (Soil-Source) and 18 (Groundwater-Regional). The two most wide spread contamination problems are Sites 18 and 24. Aircraft and support vehicle maintenance utilizing industrial solvents was conducted at Site 24 (potential VOC source area) from the mid-1940s to the mid-1970s. Solvents, including trichloroethylene, (TCE) and other VOCs were used for degreasing parts, painting, stripping, and aircraft and vehicular washing. Site 18 is a VOC plume caused by VOC contaminants leaching from Site 24 through the subsurface soils (vadose zone) into the shallow aquifer and then to the deeper aquifer, which flows generally to the northwest. Site 18 currently extends roughly from Site 24 down-gradient approximately three miles (west and northwest) into the City of Irvine.

Remediation for the sites is a two-step process. Soil remediation of Site 24 by soil vapor extraction (SVE) was planned to prevent or significantly minimize further impact to the

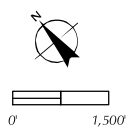
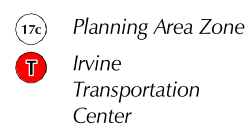
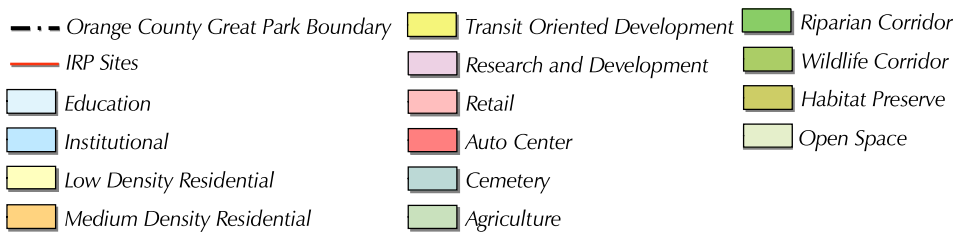
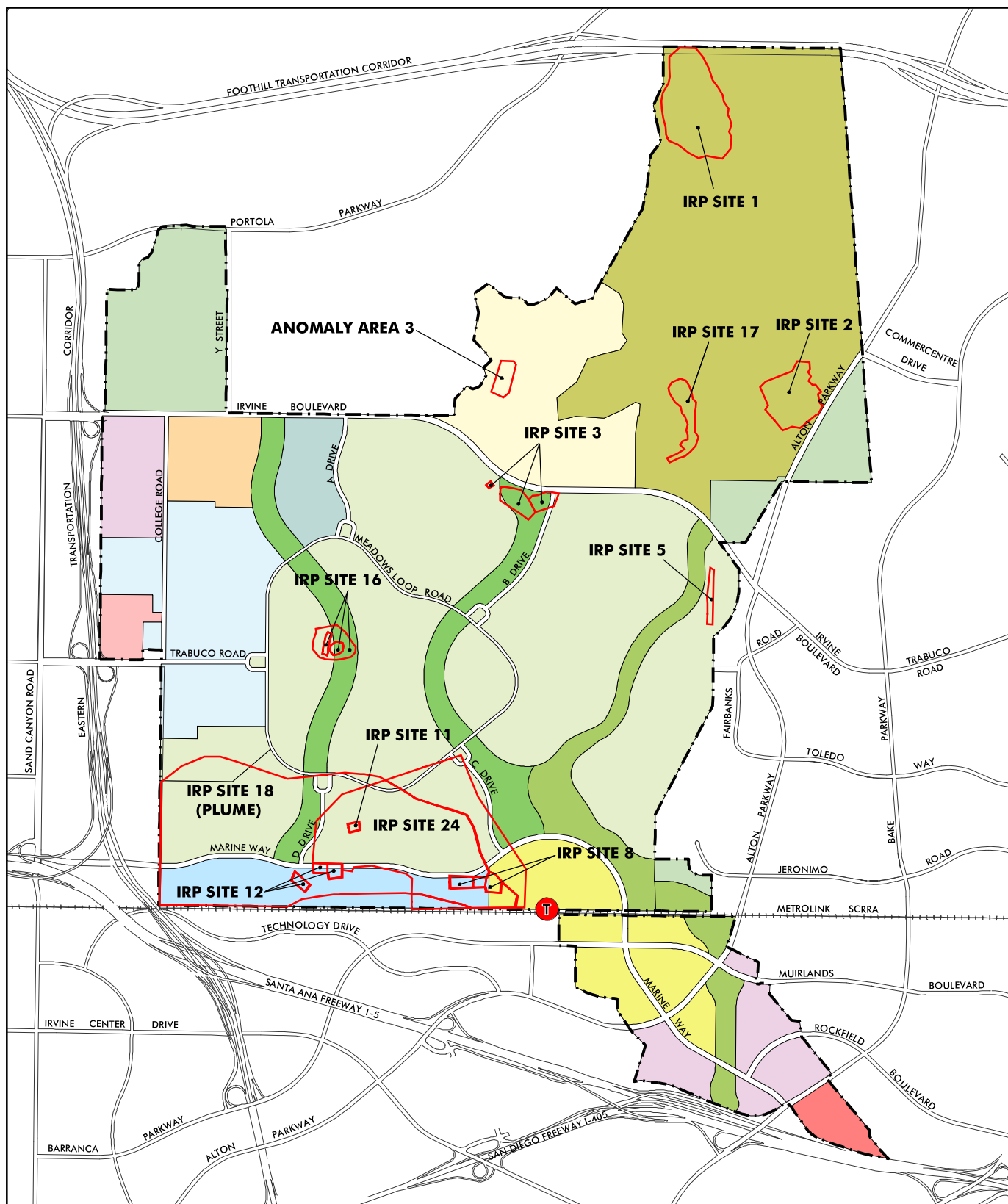


Figure 5.5-1
Installation Restoration
Program Sites

groundwater. Following the signing of the interim ROD for Site 24 in 1997, SVE treatment commenced in 1999. Testing of the vadose zone was completed in 2000 and a draft closure report was issued in 2001. For Site 18, the DON, the Orange County Water District (OCWD), and the Irvine Ranch Water District (IRWD) negotiated an agreement to construct and operate a joint water supply treatment project to remove contaminants from the groundwater to levels acceptable to the regulatory agencies (the Irvine Desalter Project).

In addition to the interim ROD for the contaminated soil of Site 24, a final ROD for groundwater contamination at Sites 18 and 24 was signed in June 2002. Please refer to the *Final Record of Decision, Operable Unit 1, Site 18 – Regional Volatile Organic Compound Groundwater Plume, Operable Unit 2A, Site 24 – VOC Source Area, Former MCAS El Toro, California* (Bechtel National, Inc. 2002a) for additional information. The draft ROD for Sites 3 and 5 was issued in March 1999. The draft final ROD will be issued following evaluation of the results from radiological survey/sampling. Please refer to the *Draft ROD, Operable Unit 2C, Landfill Sites 3 and 5, MCAS El Toro, California* (Bechtel National, Inc. 1999) for additional information.

Landfill Sites 2, 3, 5, and 17. IRP Site 2 (Magazine Road Landfill) operated between 1950 and 1980. It is believed to contain inert solid waste, municipal solid waste, unspecified industrial wastes, lead batteries, transformers, household refuse, hydraulic fluid, unspecified waste fuels, crankcase oil, lead-based paint residues, and scrap metal. IRP Site 3 (Original Landfill) covers approximately 20 acres and operated between 1943 and 1955. It is believed to contain municipal solid waste, scrap metal, incinerator ash, construction debris, paint residues, unspecified oily wastes, industrial solvents, hydraulic fluid and engine coolants. IRP Site 5 (Perimeter Landfill) operated between 1955 and the late-1960s, covers approximately 1.5 acres, and contains municipal solid waste, solvents and cleaning fluids, scrap metals, paint residues, and unspecified oil and fuel wastes. The draft version of the ROD for Sites 3 and 5 was issued in March 1999. The draft final ROD will be issued following evaluation of the results from radiological survey/sampling. Please refer to the *Draft ROD, Operable Unit 2C, Landfill Sites 3 and 5, MCAS El Toro, California* (Bechtel National, Inc. 1999) for additional information.

Site 17 (Communication Station Landfill) operated between 1981 and 1993. It contains cooking grease, oils, fuels, and municipal debris. Initially, the presumptive remedy for these landfill sites of capping with a soil cover (and a flexible membrane for several of the landfills) plus institutional controls and long-term groundwater monitoring was proposed by the DON and taken into consideration by CALEPA and EPA. Recently, the issue of potential presence of radioactive materials in the landfills resulting from the disposal of radium paint residues was identified in the Historical Radiological Assessment (HRA) report. As a result, the DON conducted site specific radiological investigations for the presence of radioactive materials. A final report is expected in 2003. Until this issue is appropriately resolved, the proposed remedy and the associated ROD are held in abeyance until the presence or non-presence of these materials can be confirmed. An interim ROD was signed in July 2000 for Sites 2 and 17 to allow for the design of the landfill caps to proceed. However, construction of the landfill caps will not proceed until radiological survey/sampling is complete and the data have been evaluated to determine potential impact on the remedial design. Please refer to the *Final Interim ROD, Operable Unit 2B, Landfill Sites 2 and 17, MCAS El Toro, California* (Bechtel National, Inc. 2000) for additional information.

Sites 8, 11, and 12. IRP Site 8 is the Defense Reutilization and Marketing Office (DRMO) Storage Yard where PCB-containing transformer fluids were released. It operated from the

mid-1970s to early 1999. PCB-containing transformers were stored at IRP Site 11 (the Transformer Storage Area) between 1968 and 1983. Wastewater sludge was spread on land at two locations adjacent to IRP Site 12 (Sludge Drying Beds) from 1943 to 1972. Site 12 also includes former sewage and industrial wastewater treatment plant sites. The HRA Report also identified IRP Sites 8 and 12 as potentially associated with the storage or disposal of radium paint residues. According to information in the HRA Report, IRP Site 8 may have received empty radium paint containers and debris from the demolition of the Radium Paint Shop at Building 296 for temporary storage waiting for disposal. IRP Site 12 may have received sludge contaminated with Radium 226 from the sanitary sewage treatment plant as resulting from the disposal of radium paint to the sanitary sewer system. Originally, the draft proposed plan for remediation of these sites recommended remedial actions for excavation of shallow soil contamination. This plan is now in abeyance until the issue is resolved by a radiological investigation to be conducted by DON.

Sites 7, 14, and 16. Kerosene-based jet fuel (JP-5) and lubrication oils were rinsed from aircraft drop tanks at IRP Site 7 (Drop tank Drainage Area No. 2) from 1969 to 1983. IRP Site 14 (Battery Acid Disposal Area) was used for disposal of vehicle battery acid, lubrication oils and paint residue between 1977 and 1983. Aviation fuels (JP-5, AVGAS), chlorinated solvents, hydraulic fluid, crankcase oil, white phosphorus, magnesium phosphate, and napalm were burned in unlined pits for fire training at IRP Site 16 (Crash Crew Pit No. 2) from 1972 to 1985. A Phase I Remedial Investigation was conducted for these three sites. A No Action ROD was signed for Sites 7 and 14 in 2001. Due to TCE contamination in groundwater at Site 16, the DON is completing a RI/FS to determine the appropriate remedial action that will likely include multi-phase extraction to remove contaminants from soil and groundwater simultaneously.

Site 7, Drop Tank Drainage Area No.2, and Site 14, Battery Acid Disposal Area, received concurrence for no further action in the final ROD signed in June 2001. Please refer to the *Final ROD, Operable Unit 3B, No Action Sites 7 and 14, MCAS El Toro, California* (Bechtel National, Inc. 2001) for additional information. Monitored natural attenuation is the selected remediation procedure for Site 16. A ROD is being prepared to document the selected remediation process. Please refer to the *Proposed Plan for Site 16, Crash Crew Training Pit No.2 at MCAS El Toro* (Bechtel National, Inc 2002b) for additional information.

Site 1 – Explosive Ordnance Disposal Range. The Explosive Ordnance Disposal (EOD) Range, located in the habitat preserve area, is currently inactive. The site was used for the disposal of excess and/or defective ordnance. Hazardous materials including sulfur trioxide, chlorosulfonic acid, and perchlorate, have been associated with the site. Post closure status of the range has not yet been determined. It may be closed by the DON under CERCLA, transferred to another federal, state, or local agency, or continue to be used as an EOD facility by law enforcement agency(s). The DON operations at the site were terminated by the DTSC in mid-1999 for operating a non-permitted disposal facility. As such, formal closures activities conducted by the DON are anticipated to begin in the near future. Currently, if a public agency desires to re-open the site as an EOD facility, then that agency will be required to prepare an application for and receive a Part B Permit from the DTSC to operate it as a treatment, storage and disposal facility. The Department of Justice is considering retaining this site as an EOD range. The DON is in the process of completing a remedial investigation to determine the nature and extent of contamination at Site 1. Please refer to the *Final Work Plan, Phase II Remedial Investigation, IRP Site 1, Explosive Ordnance Disposal Range, MCAS El Toro, California* (Earth Tech, Inc. 2001) for additional information.

Resource Conservation and Recovery Act Facility Assessment

A RCRA Facility Assessment (RFA) was conducted for the former MCAS El Toro between 1990 and 1993. The purpose of the RFA was to identify SWMUs and TAAs where there was an actual, or potential for, release of hazardous waste into the environment, and whether further actions might be required. The RFA was finalized on May 31, 1996. It presents results, recommendations and closure strategies for SWMUs and TAAs. Some of these sites are incorporated in the IRP; others are handled under alternative regulatory procedures. The RCRA sites must meet current environmental compliance requirements. The State of California considers any site from which hazardous constituents may migrate to be a SWMU, but corrective action can be addressed through the Federal Facilities Agreement for the former MCAS El Toro or responses to petroleum releases with oversight provided by the Regional Water Quality Control Board.

Compliance Program Sites and Other Locations of Concern

A number of compliance programs are in effect at the former MCAS El Toro that involve different types of locations of concern including USTs, less-than 90-day accumulation areas, PCB transformers, and OWSs. Many of these facilities were used to support current operations on the former air station.

A storage tank assessment was conducted at former MCAS El Toro to address compliance and closure issues related to UST/AST. The April 2003 Draft Final EBS provides the most recent and comprehensive assessment of the status of storage tanks at the former MCAS El Toro. The Orange County Health Care Agency (OCHCA) oversees tank closure and ensures that the proper locations are sampled when tanks are removed. The Santa Ana Regional Water Quality Control Board (SARWQCB) oversees site assessments, site remediation, and groundwater remediation associated with releases of hazardous substances from USTs. Based on the April 2003 Draft Final EBS, a total of 404 USTs were in use at the former air station. Of these USTs, 357 have been remediated and have received findings of “no further action” from the appropriate regulatory authority. Of a total of 39 ASTs used in support of the military mission at the former MCAS El Toro, 36 have been remediated and received “findings of no further action.”

The DTSC states that the former MCAS El Toro contains two hazardous waste management units (HWMU). The HWMUs include a hazardous waste container storage area and open burn/open detonation (OB/OD) hazardous waste treatment unit. A hazardous waste facility permit (a RCRA-equivalent permit) to operate the hazardous waste container storage area designated as Building 673-T3 was issued in August 1993 by the DTSC. The permit allowed the storage of hazardous wastes for longer than 90-days in Building 673-T3. In March 1996, the closure certification report was accepted by the DTSC and the container storage area was considered closed.

James A. Musick Jail Facility (Portion of PA 35)

Existing environmental issues consist of transformers installed prior to 1978 which may contain PCBs, soils containing agricultural pesticides, buildings containing ACMs, an underground storage tank, six 55-gallon drums, a small oil pump, and the storage and use of solvents on-site. EIR 654 concludes that there are no hazardous materials issues on-site.

IRWD Parcel (Portion of PA 35)

No significant hazardous material has been identified on this parcel.

Emergency Plans

The former MCAS El Toro (PA 51 and 30) is a potential emergency response staging area in the event of a large regional catastrophe such as a severe earthquake because of its capacity for processing and storing large quantities of cargo. The County of Orange, in coordination with all other local jurisdictions and emergency service providers in the County, is responsible for the preparation, maintenance, and implementation of emergency response plans and emergency evacuation plans for the County. The “Orange County Emergency Plan” is the official emergency plan for the County. The Plan is a basic reference and training document for emergency preparedness, response, recovery, mitigation, and provides the authority and basis for the development of more detailed departmental and functional standard operating procedures. This plan was recently revised to incorporate the standardized emergency management system (SEMS) established by the Governor’s Office of Emergency Services (OES). The SEMS standardizes the response to emergencies involving multiple jurisdictions or agencies.

Wildland Fires

Former MCAS El Toro (PAs 51 and 30)

The former MCAS El Toro is not identified as a high or very high fire hazard zone in the Safety Element of the Orange County General Plan. However, the area northeast of the project area is identified as a high fire hazard area in the Orange County’s Safety Element. This area is adjacent to the proposed habitat preserve and has the same coastal sage scrub plant community and topography as the habitat preserve. The habitat preserve has the same high fire hazard level. The existing housing in the northeastern part of PA 51 has a higher fire hazard risk than other portions of the former air station because of the numerous eucalyptus trees which increase the fire hazard and the potential for wildland fires associated with the adjacent coastal sage scrub plant community adjacent to the housing area.

James A. Musick Jail Facility (Portion of PA 35)

The jail facility is not identified as a high fire severity zone in the Safety Element of the City of Irvine General Plan.

IRWD Parcel (Portion of PA 35)

The IRWD parcel is not identified as a high fire severity zone in the Safety Element of the City of Irvine General Plan.

5.5.2 Threshold For Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for public health and safety.

Would the project:

1. *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*
2. *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*
3. *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*
4. *Be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?*
5. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area?*
6. *For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area?*
7. *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*
8. *Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

5.5.3 Environmental Impact

The following analysis focuses on the potential public health and safety impacts associated with implementation of the Base Plan and the Overlay Plan for the former MCAS El Toro (PAS 51 and 30). The Musick Branch Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. As a result, implementation of the proposed project will not result in a significant public health and safety impact associated with the annexation of the James A. Musick Jail Facility and the IRWD Parcel.

The potential for adverse impacts in the form of human exposure to unsafe levels of hazardous contaminants may occur if cleanup standards applied to site remediation activities are not appropriate for the proposed land uses. These impacts are most likely to occur in areas where recreational, or mixed land uses are proposed. Under CERCLA, contaminated federal property cannot be transferred until all necessary remedial actions have been taken or a remediation system is operating properly and successfully. Cleanup responsibility remains with the DOD until the property is fully remediated. Therefore, some of the former air station property cannot be transferred immediately.

There are 9 recommended federal conveyances for the former air station property at this time. The proposed project accommodates the transfer of the 995-acre Habitat Preserve to the Federal Aviation Administration (FAA). Other conveyances, such as property transfers for transitional housing or warehouse facilities, may not be implemented until appropriate remediation has been completed. The construction and operation of the proposed project could result in an impact related to public health and safety as described below. Any reuse of the former MCAS El Toro may involve the use, storage, handling and/or disposal of hazardous materials or waste, all of which will be subject to all applicable federal, state, and local environmental regulations.

Threshold 1. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Base Plan and Overlay Plan

There is a potential project impact resulting from the routine transport of hazardous materials on the proposed streets in the project area. This same potential impact exists for all freeways, local streets, and railroad tracks in the project vicinity, surrounding areas, and the region. However, federal and state regulations strictly control the design and size of transport vehicles, the training of vehicle operators, the types and quantities of materials that can be transported, the documentation of the material from its source to its destination, and procedures in the event of an accidental spill. In addition, California Department of Transportation, the California Highway Patrol, and local law enforcement and fire authorities are trained in emergency response procedures for safely responding to accidental spills of hazardous and toxic substances.

Many of the proposed land uses such as the recreational/cultural/open spaces, and sports park are not likely to use and store substantial quantities of hazardous materials other than typical materials such as cleaners and relatively small amounts of paints and thinners, fuels and oil, pesticide and other chemicals used for building and/or grounds maintenance. Other proposed uses such as golf courses, agriculture, auto center parking, educational, and research and development may store, handle and use hazardous materials and generate hazardous waste. However, business activities or facilities will be required to comply with all regulatory requirements and permit conditions administered by applicable federal, state and local regulatory agencies with jurisdiction over hazardous material storage and use and hazardous waste management.

The proposed project is not expected to result in a significant adverse impact related to the transport, use, or disposal of hazardous materials on or through the project area. Therefore, no mitigation is required.

Threshold 2. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Base Plan and Overlay Plan

Asbestos-Containing Building Materials and Lead-Based Paint

Prior to the transfer or sale of any portion of the former MCAS El Toro site containing ACMs, the DON must document all available information concerning ACMs, including the following:

- The type, location and condition of ACMs
- The results of any asbestos testing
- Description of asbestos control measures taken, if any
- The costs or time necessary to remove existing ACMs
- The results of any site-specific asbestos inventory updates

Existing source of ACMs are not required to be remediated unless they present an immediate threat to human health or are otherwise not in compliance with applicable regulations at the time of transfer. Where remediation may otherwise be required, it is the DON policy to not remediate asbestos if all of the following conditions are met:

- The building is scheduled for demolition by the transferee
- The transfer documents specifically prohibit use and occupation of the building prior to demolition
- The transferee has assumed the responsibility to manage the ACMs in accordance with all applicable regulatory requirements

Certain LBP abatement and hazard disclosure requirements must be complied with prior to the transfer of the former MCAS El Toro site from federal responsibility. Housing units constructed prior to 1960 must be abated of LBP and LBP hazards. The presence of LBP and LBP hazards must be disclosed for housing units constructed between 1960 and 1978. Occupation of housing units scheduled for demolition due to the presence of LBP or LBP hazards is prohibited. Post-demolition sampling and response actions for any hazards due to lead in soil shall be conducted, consistent with regulatory requirements, prior to the occupancy of any newly constructed housing units to ensure public health and safety. Remediation of existing sources of LBPs is not required if the following conditions are met:

- The building is scheduled for demolition by the transferee and the property transfer document specifically prohibits occupation of the units
- The building is scheduled for non-residential use
- The building is scheduled for residential use and the transferee agrees to comply with all LBP hazard abatement activities in accordance with applicable regulatory requirements

Construction activities involving demolition and possible substantial remodeling of existing structures in the project area as the project area develops could result in the disturbance of structures and/or soils containing ACMs or LBPs. This is considered a significant impact. A total of 161 non-residential buildings on the site are known to contain ACMs, 52 of which have friable ACMs. There are 233 non-residential buildings that have not been surveyed for the presence of ACMs. Some residential units were also found to contain ACMs.

The DON policy states that any facility on the former MCAS El Toro site constructed, repaired or maintained prior to 1980 is assumed to contain LBP. Approximately 670 units on the former air station in three residential communities have “high” LBP levels according to hazardous risk assessment criteria. They are the Moffet Meadows/Saddleback Terrace housing built in 1964, the Wherry Housing built in 1954, and the Saddleback Terrace/Vista Terrace housing built in 1947. In addition, there are 450 non-residential structures constructed prior to 1980 that are assumed to have LBP.

All non-residential construction projects of five or more acres require the project proponent to seek coverage under the National Pollutant Discharge Elimination System (NPDES) General Construction Storm Water Discharge Permit. This coverage requires a Storm Water Pollution Prevention Plan (SWPPP), which identifies all materials storage areas and construction vehicle/equipment staging areas and any other areas where hazardous materials are used and stored. The SWPPP must include Best Management Practices (BMP) to ensure that unauthorized discharges of hazardous materials do not drain into stormdrains or natural drainages during construction.

Major grading and/or land altering actions may result in the disturbance of previously unidentified contaminated soils that could expose construction workers to contamination. Proper management actions and regulatory compliance, including implementing a hazardous materials management plan for construction activities, testing if soils are suspected of containing contaminants, and reporting findings to regulatory agencies, will minimize potential impact from such occurrences.

There is also a potential impact associated with accidental releases of stored hazardous materials such as fuels and paint and potential leakage associated with construction equipment parking and staging areas. However, construction activities are also required to comply with all regulatory requirements and permit conditions administered by appropriate federal, state, and local regulatory agencies.

Remediation efforts at IRP Sites 18 and 24 could result in some releases of VOCs into the environment. According to the South Coast Air Quality Management District (SCAQMD), air emissions from vapor extraction activities typically generate one to two percent (by weight) of the volatile constituent after controls such as oxidation and carbon adsorption. The individual VOC emissions from the site remediation activities do not pose a significant impact on the air quality of the region. Implementation of mitigation measures such as site watering to control fugitive dust emissions during construction as described in Section 5.3 of this Final Program EIR will reduce the potential impacts of construction-related releases to below a level of significance. No significant long-term impacts associated with the release of hazardous materials into the environment are anticipated as a result of the proposed project.

Threshold 3. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Base Plan and Overlay Plan

A regional educational campus is planned on the west side of the former MCAS El Toro site. The campus could support both corporate and public educational and training facilities (research and development) with ancillary retail, lodging and housing uses. These facilities will likely store, use and transport some hazardous materials as well as generate some hazardous waste. Typical hazardous materials/waste will likely consist of, but not be limited: oils and petroleum products, paints, solvents, pesticides and herbicides, and VOC air emissions. These substances are regulated and controlled through federal, state and local regulations governing the storage, handling, transportation and manifesting of hazardous materials and wastes. None of these hazardous materials are considered atypical for research and development purposes, and should not represent a significant risk to people residing and working within one-quarter mile of the proposed project area. Therefore, the proposed project is not anticipated to result in a significant impact related to hazardous emissions or materials within one-quarter mile of a proposed school. This issue is not considered a significant impact.

Threshold 4. Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?

Base Plan

The proposed project will result in substantial changes to the existing land uses on the project area. While much of the air station contamination was evaluated and assessed prior to the advent of the current proposed project, adopted cleanup standards contemplated a wide variety of uses for IRP sites. Some contaminated sites are located in areas proposed for land uses including recreational, research and development, transportation, and open space/park.

Under CERCLA, contaminated federal property cannot be transferred until all necessary remedial actions have been initiated or a remediation system is operating properly and successfully. Remediation efforts have been ongoing since 1985. As established by BRAC III, the DON will continue its environmental restoration activities after installation disposal. Sites that require continuing monitoring and remediation will receive continuing investigation/remediation beyond installation closure, which occurred in July 1999.

The DON considered the “No Further Action” IRP Sites 4, 6, 9, 10, 13, 19, and 22 to be available for unrestricted uses, which would include the proposed recreational and multi-use activities. No significant impacts are associated with these sites.

The “Action Required” IRP sites are superimposed on Figure 5.5-1. Zoning districts of the Base Plan in relation to “Action Required” IRP sites are shown in Table 5.5-2. The environmental impacts of these sites are analyzed in the following sections.

Sites 18 and 24 (VOC Contamination)

Remediation of contaminated soils at IRP Site 24, the VOC Source Area, began in spring 1999 and was completed in 2001. IRP Site 24 is located in zoning districts categorized as 6.1 Institutional and 1.5 Recreation. The DON's human health risk assessment for Site 24 indicates that neither a recreational or institutional land use of the proposed site would result in a higher than acceptable risk. The DON, however, intends to remediate the existing contamination of the shallow groundwater at Site 24 to an unrestricted standard. This remediation process will likely take multiple years to complete and during this time the DON is likely to implement various institutional controls that will limit access to groundwater and related activities to portions of Site 24. Consequently, the temporary restricted use/access of Site 24 due to institutional controls (not contamination) is considered a significant impact.

IRP Site 18, VOC Groundwater Contamination Plume, is a plume of TCE extending below the ground surface into the aquifer system off-site of the former air station. This contamination does not impact the existing and proposed land uses on the project area.

Sites 2, 3, 5, and 17 (Landfills)

All of the landfill sites will be managed with institutional controls that prevent unauthorized access, degradation, access to groundwater, and irrigation of the site. The controls may also limit use and access by providing a buffer zone around the landfills. Issues relating specifically to IRP Sites 2, 3, 5, and 17 (landfills), including settling, are not expected to constrain proposed land uses within the project area. Possible exposure issues in regard to the potential presence of radioactive materials in the landfills resulting from the disposal of radium paint residues were identified in the HRA report. As a result, the DON is conducting site specific radiological investigations for the presence of radioactive materials. Until this issue is appropriately resolved, the proposed remedy and the associated RODs are held in abeyance by the regulatory agencies until the presence or non-presence of these materials can be confirmed.

IRP Sites 2 (Magazine Road Landfill) and 17 (Communications Station Landfills) are located in the proposed zoning district designated as 1.4 Preservation. Notwithstanding any potential changes resulting from the above mentioned radiological investigation, the proposed presumptive remedy for landfills at the former MCAS El Toro is the installation of an impermeable layer with a soil cap. This remedy will not result in any impact to the habitat preserve and is not considered a significant impact.

Table 5.5-1
Zoning Districts of No Further Action IRP Sites – Base Plan

IRP Site	IRP Site Description	Zoning District
4	Ferrocene Spill Area	1.5 Recreation
6	Drop Tank Drainage Area No. 1	1.5 Recreation
9	Crash Crew Pit No. 1	1.5 Recreation
10	Petroleum Disposal Area	1.5 Recreation
13	Oil Change Area	1.5 Recreation
15	Suspended Fuel Tanks	1.5 Recreation
19	Aircraft Expeditionary Refueling	1.5 Recreation
20	Hobby Shop	1.5 Recreation
21	Materials Management Group	6.1 Institutional
22	Tactical Air Fuel Dispensing System	1.5 Recreational

Sources: Cotton/Bridges/Associates 2002.

Table 5.5-2
Zoning Districts of Action Required IRP Sites – Base Plan

IRP Site	IRP Site Description	Zoning District
1	EOD Range	1.4 Preservation
2	Magazine Road landfill	1.4 Preservation
3	Original Landfill	1.5 Recreation
5	Perimeter Road Landfill	1.5 Recreation
7	Drop Tank Drainage Area No. 2	1.5 Recreation
8	DRMO Storage Yard	6.1 Institutional
11	Transformer Storage Area	1.5 Recreation
12	Sludge Drying Beds	6.1 Institutional
14	Battery Acid Disposal Area	1.5 Recreation
16	Crash Crew Pit No. 2	1.5 Recreation
17	Communications Station Landfill	1.4 Preservation
24	VOC Source Area	6.1 Institutional/ 1.5 Recreation

Source: Cotton/Bridges/Associates 2002.

IRP Site 3 (Original Landfill) is located in the proposed zoning district designated as 1.5 Recreation. As stated above, notwithstanding any potential changes resulting from the above radiological investigation, the proposed presumptive remedy for landfills at former MCAS El Toro is the installation of an impermeable flexible membrane with a soil cap. Due to the use of institutional controls, Site 3 and a possible buffer site surrounding it will not be available for immediate reuse activity. Apart from restricted access to the site by unauthorized parties, no impacts from contamination following implementation of the proposed remediation are likely to occur. The restricted use of Site 3 due to institutional controls (not contamination) is considered a significant impact.

IRP Site 5 (Perimeter Road Landfill) is located in the proposed zoning district designated as 1.5 Recreation. Notwithstanding any potential changes resulting from the radiological investigation, the proposed presumptive remedy for landfills at former MCAS El Toro is the installation of an impermeable flexible membrane with a soil cap. It is likely that this issue will not result in a significant impact to the habitat preserve/wildlife corridor.

Site 8

IRP Site 8 is located in zoning district designations 6.1 Institutional. As mentioned previously, information in the HRA Report indicates that IRP Site 8 may have received empty radium paint containers and debris from the demolition of the Radium Paint Shop at Building 296 for temporary storage awaiting disposal. The draft proposed plan for remediation of this site recommended excavation and proper disposal of shallow soil contamination. This plan is now in abeyance until the radiological issue is successfully resolved following completion of the radiological investigation that will be conducted by the DON. The DON intends to convey the site as suitable for unrestricted use. Therefore, no significant impacts are associated with this site.

Sites 11 and 12

IRP Site 11 (Transformer Storage Area) is located in a zoning district designation 1.5 Recreation and Site 12 (Sludge Drying beds) is located in a zoning district designation 6.1 Institutional. Site 12 may have received sludge contaminated with Radium 226 from the sanitary sewage treatment plant resulting from the disposal of radium paint to the sanitary sewer system. The draft proposed plan for remediation of these sites recommended excavation and proper disposal of shallow soil contamination. This plan is also in abeyance until the radiological issue is successfully resolved following completion of the radiological investigation that will be conducted by the DON. No significant impact is expected to result from remediation activities on Site 12, withstanding any potential changes that may result from the radiological investigation. Site 11 is located in 1.5 Recreation. The DON intends to convey the site as suitable for unrestricted use. Therefore, no significant impacts are associated with this site.

Sites 7, 14, and 16

IRP Site 7 (Drop Tank Drainage) is located in zoning district designations 1.5 Recreation. The DON intends to convey the site as suitable for unrestricted use. Therefore, no significant impacts are associated with this site.

IRP Site 14 (Battery Acid Disposal Area) is located in zoning district designation 1.5 Recreation. The DON intends to convey the site as suitable for unrestricted use. Therefore, no significant impacts are associated with this site.

IRP Site 16 (Crash Crew Pit No. 2) is located in zoning district designation 1.5 Recreation. Because of the potential risks associated with the existing groundwater contamination, the DON may restrict use of the site until the groundwater is remediated to an appropriate risk level, at which time the site would be released for unrestricted use. This remediation process will likely take multiple years to complete, and during this time various institutional controls will be implemented to limit certain activities and unauthorized access to the site.

Consequently, the temporary restricted use/access of Site 16 due to institutional controls (not contamination) is considered a significant impact.

Site 1

IRP Site 1 (EOD Range) is located in zoning district designation 1.4 Preservation. Post closure status of the EOD Range has not been determined. It could be closed by the DON under CERCLA, transferred to another federal, state or local agency, or continue to be used as an EOD facility. If a government agency desires to use the site as an EOD facility, then a RCRA Part B Permit would be required from CALEPA and the DTSC. In this circumstance, an independent remedial investigation outside of the current CERCLA program would be required as well as an independent cleanup, as appropriate. If this circumstance does not materialize, then remediation of the site will remain within current CERCLA program requirements. No significant impact is expected from the remediation of Site 1.

Anomaly Area 3

Anomaly Area 3 is an approximately 9-acre site located in the northwest section of the project area near Pusan Way and adjacent to Agua Chinon wash in zoning district designation 1.5 Recreation. This site is considered a former refuse disposal area for construction debris. To date, the DON has conducted a geophysical investigation, exploratory trenching, radiological screening, and installed monitoring wells and vadose zone wells. Preliminary results indicate buried metallic and construction debris, along with plastics, asbestos, pipes, wood and concrete. Radiological readings in the soil were at or below background levels. Some groundwater samples exceeded the maximum contaminant levels and are subject to further investigation. Soil levels for arsenic, total petroleum hydrocarbons, lead, and benzopyrene exceed industrial and residential PRGs. Investigation of the site is ongoing and no decisions about remediation have been made to date. If the DON remediates consistent with unrestricted use there will be no significant impacts. Otherwise, if the DON adopts a remediation strategy that includes institution controls, there would be a significant impact.

Due to the use of institutional controls, Anomaly Area 3 and a possible buffer site surrounding it will not be available for immediate reuse activity. Apart from restricted access to the site by unauthorized parties, no impacts from contamination following implementation of the proposed remediation are likely to occur. The restricted use of Anomaly Area 3 due to institutional controls (not contamination) is considered a significant impact.

Jet Fuel Distribution System

The Norwalk Pipeline was used as a jet fuel distribution system in support of the military mission at the former MCAS El Toro. The pipeline originates in Norwalk, California, enters the project area near the existing commissary located adjacent to Irvine Boulevard, and runs through the former air station housing to the former storage tank facilities. In May 1999, all the jet fuel was purged from the pipeline from Norwalk to the installation using a pigging process and replaced with an inert gas (nitrogen). The Defense Energy Support Center (DESC) currently maintains the pipeline. The presence of the pipeline containing inert material is considered a less than significant impact.

Overlay Plan

“Further Action” IRP sites are superimposed on the Figure 5.5-1. Zoning districts of the Overlay Plan in relation to “No Further Action” IRP sites are shown in Table 5.5-3. The DON intends to convey the “No Further Action” IRP Sites 4, 6, 9, 10, 13, 19, and 22 as suitable for unrestricted use. Therefore, there are no significant impacts associated with these sites.

Table 5.5-3
Zoning Districts of No Further Action IRP Sites – Overlay Plan

IRP Site	IRP Site Description	Zoning District
4	Ferrocene Spill Area	4.4 Commercial Recreation
6	Drop Tank Drainage Area No. 1	2.2 Low-Density Residential with 1.8 Golf Course Overlay
9	Crash Crew Pit No. 1	1.5 Recreation
10	Petroleum Disposal Area	1.5 Recreation
13	Oil Change Area	1.5 Recreation
15	Suspended Fuel Tanks	1.5 Recreation
19	Aircraft Expeditionary Refueling	2.2 Low-Density Residential with 1.8 Golf Course Overlay
20	Hobby Shop	2.3 Medium Density Residential
21	Materials Management Group	6.1 Institutional
22	Tactical Air Fuel Dispensing System	1.5 Recreational

Sources: Cotton/Bridges/Associates 2002.

The “Action Required” IRP sites are superimposed on Figure 5.5-1. Zoning districts of the Overlay Plan in relation to “Action Required” IRP sites are shown in Table 5.5-4.

**Table 5.5-4
Zoning Districts of Action Required IRP Sites – Overlay Plan**

IRP Site	IRP Site Description	Zoning District
1	EOD Range	1.4 Preservation
2	Magazine Road landfill	1.4 Preservation
3	Original Landfill	1.5 Recreation/ 2.2 Low-Density Residential with 1.8 Golf Course Overlay
5	Perimeter Road Landfill	1.5 Recreation
7	Drop Tank Drainage Area No. 2	1.5 Recreation
8	DRMO Storage Yard	6.1 Institutional/ 3.2 Transit Oriented Development
11	Transformer Storage Area	1.5 Recreation
12	Sludge Drying Beds	6.1 Institutional
14	Battery Acid Disposal Area	1.5 Recreation
16	Crash Crew Pit No. 2	1.5 Recreation
17	Communications Station Landfill	1.4 Preservation
24	VOC Source Area	6.1 Institutional/ 1.5 Recreation/ 3.2 Transit Oriented Development

Source: Cotton/Bridges/Associates 2002.

The environmental impacts of the “Action Required” sites are analyzed in the sections that follow.

Sites 18 and 24 (VOC Contamination)

Remediation of contaminated soils at IRP Site 24, the VOC Source Area, began in spring 1999 and was completed in 2001. IRP Site 24 is located in zoning districts categorized as 6.1 Institutional and 1.5 Recreation. The DON’s human health risk assessment for Site 24 indicates that neither a recreational or institutional land use of the proposed site would result in a higher than acceptable risk. The DON, however, intends to remediate the existing contamination of the shallow groundwater at Site 24 to an unrestricted standard. This remediation process will likely take a period of years to complete and during this time the DON is likely to implement institutional controls that will limit access to groundwater and related activities to portions of Site 24. Consequently, the temporary restrictions on Site 24 due to institutional controls (not contamination) are considered a significant impact.

IRP Site 18, VOC Groundwater Contamination Plume, is a plume of TCE extending below the ground surface into the aquifer system off-site of the former air station. This contamination does not impact the existing and proposed land uses on the project area.

Sites 2, 3, 5, and 17 (Landfills)

Issues relating to IRP Sites 2, 3, 5, and 17 (landfills), including settling are not expected to constrain proposed land uses within the project area. Possible exposure issues in regard to the potential presence of radioactive materials in the landfills resulting from the disposal of radium paint residues were identified in the HRA report. As a result, the DON is conducting

site specific radiological investigations for the presence of radioactive materials. Until this issue is appropriately resolved, the proposed remedy and the associated RODs are held in abeyance by the regulatory agencies until the presence or non-presence of these materials can be confirmed.

IRP Sites 2 (Magazine Road Landfill) and 17 (Communications Station Landfills) are located in the proposed zoning district designated as 1.4 Preservation. Notwithstanding any potential changes resulting from the above mentioned radiological investigation, the proposed presumptive remedy for landfills at the former MCAS El Toro is the installation of an impermeable layer with a soil cap with the use of institutional controls. This remedy will not result in any impact to the habitat preserve and is not considered a significant impact.

IRP Site 3 (Original Landfill) is located in the proposed zoning district designated as 1.5 Recreation. As stated above, notwithstanding any potential changes resulting from the above radiological investigation, the proposed presumptive remedy for landfills at former MCAS El Toro is the installation of an impermeable flexible membrane with a soil cap. Due to the use of institutional controls, Site 3 and a possible buffer site surrounding it will not be available for immediate reuse activity. Apart from restricted access to the site by unauthorized parties, no impacts from contamination following implementation of the proposed remediation are likely to occur. The restricted use of Site 3 due to institutional controls (not contamination) is considered a significant impact.

IRP Site 5 (Perimeter Road Landfill) is located in the proposed zoning district designated as 1.5 Recreation. Notwithstanding any potential changes resulting from the radiological investigation, the proposed remedy for landfills at former MCAS El Toro is the installation of an impermeable flexible membrane with a soil cap, along with institutional controls. It is likely that this issue will not result in a significant impact to the habitat preserve/wildlife corridor.

Site 8

IRP Site 8 is located in zoning district designations 6.1 Institutional and 3.2 Transit Oriented Development. As mentioned previously, information in the HRA Report indicates that IRP Site 8 may have received empty radium paint containers and debris from the demolition of the Radium Paint Shop at Building 296 for temporary storage awaiting disposal. The draft proposed plan for remediation of this site recommended the excavation and proper disposal of shallow soil contamination. This plan is now in abeyance until the radiological issue is successfully resolved following completion of the radiological investigation that will be conducted by the DON. Withstanding any potential changes resulting from the radiological investigation, the proposed presumptive remedy for Site 8 is excavation and removal of the contaminated soil. As the DON intends to convey the suit as suitable for unrestricted use, there would be no significant impact associated with this site.

Sites 11 and 12

IRP Site 11 (Transformer Storage Area) is located in a zoning district designation 1.5 Recreation and Site 12 (Sludge Drying beds) is located in a zoning district designation 6.1 Institutional. Site 12 may have received sludge contaminated with Radium 226 from the sanitary sewage treatment plant resulting from the disposal of radium paint to the sanitary sewer system. The draft proposed plan for remediation of these sites recommended the

excavation and proper disposal of shallow soil contamination. This plan is also in abeyance until the radiological issue is successfully resolved following completion of the radiological investigation that will be conducted by the DON. No significant impact is expected to result from remediation activities on Site 12 because industrial standards are adequate for this land use, withstanding any potential changes that may result from the radiological investigation. Site 11 is located in 1.5 Recreation. As the DON intends to convey the site as suitable for unrestricted use, there is no significant impact associated with this site.

Sites 7, 14, and 16

IRP Site 7 (Drop Tank Drainage) is located in zoning district designations 1.5 Recreation. As the DON intends to convey the site as suitable for unrestricted use, there is no significant impact associated with the site.

IRP Site 14 (Battery Acid Disposal Area) is located in zoning district designation 1.5 Recreation. As the DON intends to convey the site as suitable for unrestricted use, there is no significant impact associated with the site.

IRP Site 16 (Crash Crew Pit No. 2) is located in zoning district designation 1.5 Recreation. Because of the potential risks associated with the existing groundwater contamination, the DON may restrict use of the site until the groundwater is remediated to an appropriate risk level, at which time the site would be released for unrestricted use. This remediation process will likely take multiple years to complete, and during this time various institutional controls will be implemented to limit certain activities and unauthorized access to the site. Consequently, the temporary restricted use/access of Site 16 due to institutional controls (not contamination) is considered a significant impact.

Site 1

IRP Site 1 (EOD Range) is located in zoning district designation 1.4 Preservation. Post closure status of the EOD Range has not been determined, although it is intended to be retained by the Federal government. It could be closed by the DON under CERCLA, transferred to another agency, or continue to be used as an EOD facility. If a government agency desires to use the site as an EOD facility, then a RCRA Part B Permit would be required from CALEPA and the DTSC. In this circumstance, an independent remedial investigation outside of the current CERCLA program would be required as well as an independent cleanup, as appropriate. If this circumstance does not materialize, then remediation of the site will remain within current CERCLA program requirements. The DON's remedial investigation and feasibility studies are ongoing. Pending resolution of the site status and the outcome of the RI/FS process, remediation is expected to be consistent with the land use designation and the potential reuse activities. Therefore, no significant impact is expected.

Anomaly Area 3

Anomaly Area 3 is an approximately 9-acre site located in the northwest section of the project area near Pusan Way and adjacent to Agua Chinon wash in zoning district designation 2.2 Low Density Residential. This site is considered a former refuse disposal area for construction debris. To date, the DON has conducted a geophysical investigation, exploratory trenching, radiological screening, and installed monitoring wells and vadose

zone wells. Preliminary results indicate buried metallic and construction debris, along with plastics, asbestos, pipes, wood and concrete. Radiological readings in the soil were at or below background levels. Some groundwater samples exceeded the maximum contaminant levels and are subject to further investigation. Soil levels for arsenic, total petroleum hydrocarbons, lead, and benzopyrene exceed industrial and residential PRG standards. Investigation of the site is ongoing and no decisions about remediation have been made to date. Due to the use of institutional controls, Anomaly Area 3 and a possible buffer site surrounding it will not be available for immediate reuse activity. Apart from restricted access to the site by unauthorized parties, no impacts from contamination following implementation of the proposed remediation are likely to occur. The restricted use of Anomaly Area 3 due to institutional controls (no contamination) is considered a significant impact.

Jet Fuel Distribution System

The Norwalk Pipeline was used as a jet fuel distribution system in support of the military mission at the former MCAS El Toro. The pipeline originates in Norwalk, California, enters the project area near the existing commissary located adjacent to Irvine Boulevard, and runs through the former air station housing to the former storage tank facilities. In May 1999, all the jet fuel was purged from the pipeline from Norwalk to the installation using a pigging process and replaced with an inert gas (nitrogen). The pipeline is currently maintained by the DESC. The presence of the pipeline containing inert material is considered a less than significant impact.

Threshold 5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Base Plan and Overlay Plan

The proposed project is a non-aviation plan for the former MCAS El Toro site. Absence of aviation uses on the site would eliminate the risk of aircraft accidents. This is not considered a significant impact.

Threshold 6. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Base Plan and Overlay Plan

The project is not in the vicinity of a private airstrip. This is not considered a significant impact.

Threshold 7. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Base Plan and Overlay Plan

There is a minimal impact as a result of changes that would be necessary to current emergency response and evacuation plans. Following annexation, the City of Irvine would

assume responsibility for the project area and would need to revise its existing emergency response and evacuation plans. The land use changes associated with the proposed project will also require revisions to the Orange County Emergency Plan. Currently, former MCAS El Toro is designated a potential emergency response staging area for fixed-wing aircraft and emergency response equipment. The implementation of a non-aviation plan for the project area will remove the site as a potential emergency response staging area for fixed-wing aircraft. Two other sites in the County, the Los Alamitos Armed Forces Reserve Center in Los Alamitos and Mile Square Regional Park in Fountain Valley, will remain designated emergency staging areas. Portions of the proposed project area could remain available to non-aviation emergency response equipment. Therefore, the proposed project is not expected to interfere with emergency response and evacuation plans once they are revised and would not result in a significant impact related to emergency response and evacuation plans.

Threshold 8. *Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

Base Plan and Overlay Plan

There is an impact resulting from exposure of people and structures to wildland fires. The Habitat Preserve, Wildlife Corridor, and Recreational areas in the northeastern portion of PA 51 will be exposed to the highest level of fire risk from wildfires because these areas and adjacent areas are currently defined as having high risk for wildland fires. The proposed project will result in an increase in both population and structures adjacent to this high fire risk area and the impact is considered significant. Additionally, the City has no record of construction of existing structures on the site. Reuse of existing structures will require the City to inspect the building for conformance to fire life safety code requirements. This is a potentially significant impact.

5.5.4 Significant Impacts

Base Plan and Overlay Plan

HH 1. Construction activities involving demolition and possible substantial remodeling of existing structures in the project area as the project area develops could result in the disturbance of structures and soils containing ACMs or LBP. This is considered a significant impact.

The presence of ACMs and LBP in structures and soils of properties conveyed by the DON may pose a future hazard to the public if the materials degrade or are otherwise disturbed. This is considered a significant impact.

HH 2. IRP Site 24 is located in zoning districts categorized as 6.1 Institutional and 1.5 Recreation. The site may be conveyed with temporary restrictions on use that are not appropriate for transportation facility use. This is considered a significant impact.

Future uses of IRP Site 3 may be potentially constrained by the implementation of institutional controls. This is considered a significant impact.

IRP Site 16 (Crash Crew Pit No. 2) is located in zoning district designation 1.5 Recreation. The site may be conveyed with temporary restrictions on use that are not appropriate for recreational land uses. This issue is considered a significant impact.

- HH 3.** The Habitat Preserve, Wildlife Corridor, and Recreational areas in the northeastern portion of PA 51 will be exposed to the highest level of fire risk from wildfires because these areas and adjacent areas are currently defined as having high risk for wildland fires. The proposed project will result in an increase in both population and structures adjacent to this high fire risk area and the impact is considered significant. Additionally, existing structures may not meet City fire safety requirements.

5.5.5 Mitigation Measures

Base Plan and Overlay Plan

HH 1.

- a. Prior to the conveyance of the property and issuance of subsequent grading permits, where the presence of ACMs is identified, the DON or its transferee shall ensure that all available information concerning ACMs has been provided to the City of Irvine, and the purchasers of the property, including:
 - The type, location and condition of ACMs
 - The results of any asbestos testing
 - Description of asbestos control measures taken, if any
 - The costs or time necessary to remove existing ACMs
 - The results of any site-specific asbestos inventory updates
- b. For any structures known to contain ACMs that will be renovated and/or demolished prior to transfer, the DON shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.
- c. Prior to transfer of any structure constructed before October 1988, scheduled for renovation and/or demolition, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by the DON. This requirement can be waived if an architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building material, and to the best of their knowledge, no ACMs were used as a building material.

- d. Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.
- e. Any renovation and/or LBP abatement activities on residential units at former MCAS El Toro, shall be conducted in accordance with all applicable federal, state and local regulatory requirements.

HH 2.

- a. Prior to transfer, the City of Irvine shall receive from the DON, with the concurrence of the appropriate regulatory agencies, a statement that the "Action Required" IRP Site 3 is to be conveyed for restricted use and that all institutional controls have been identified and implemented. The City of Irvine will adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.
- b. Prior to transfer, if the DON chooses to impose temporary restrictions on the use of Sites 16 and 24 pending adequate remediation of groundwater, the City of Irvine shall receive from the DON a statement of temporary restrictions on the use of the sites and the release of the sites for unrestricted use following implementation of adequate remediation of groundwater. The City of Irvine shall adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.

- HH 3.** The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for "Development Within and Exclusion from Very High Fire Severity Zones" and "Fuel Modification Plans and Maintenance." Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the proposed project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.

- HH 4.** Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.
- HH 5.** Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director of Community Development of the City of Irvine in a timely manner.
- HH 6.** The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells located on the former MCAS El Toro in a geographic information systems database (GIS). The City will review all permit applications on the former air station for monitoring well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to monitoring wells will be limited to authorized personnel.

5.5.6 Significance of Impact After Mitigation

Base Plan

Less than Significant.

Overlay Plan

Less than Significant.

Notes and References

1. County of Orange. *MCAS El Toro Community Reuse Plan DEIR, Volume 1*. 1996.
2. City of Irvine. *General Plan*. March 9, 1999.
3. County of Orange. *James A. Musick Jail Expansion and Operation DEIR No. 564*. August 1996.

5.6 Geology and Seismicity

5.6.1 Environmental Setting

Former MCAS El Toro (PAs 51 and 30)

Geology/Soils

Planning Areas 51, 35, and 30 (PAs 51, 35, and 30) extend from the southern margin of the foothills of the Santa Ana Mountains to the southeastern edge of the alluvial Tustin Plain. The Santa Ana foothills are underlain by a tilted sequence of stratified sedimentary bedrock units which make up the hills and ridges. The Tustin Plain is a gently sloping alluvial plain underlain by alluvial fan sediments consisting of sand, silt, and clayey silty sand.

PA 51 and PA 35 are situated within both the Santa Ana foothills and alluvial plain areas of the subject site. Foothill elevations range from approximately 450 feet above mean sea level (MSL) to about 750 feet above MSL. Some slopes of the foothills exceed 20 percent in gradient. The topography of the Tustin Plain portion of PA 51 is nearly flat and slopes gently down to the west to southwest with elevations ranging from approximately 450 feet above MSL to 200 feet above MSL. Slope gradients within this area of the Tustin Plain range from 2.5 percent in the northeast to 1.5 percent in the southwest. PA 30 is located at the southeast margin of the Tustin Plain, bordered on the west by the San Joaquin Hills. Elevations within PA 30 range from roughly 260 to 300 feet above MSL, with a gentle slope upward from the northwest to the southwest.

The foothill portions of the project area are underlain by sedimentary bedrock units, mantled by only a thin soil cover. Within PA 51 and PA 35, the Tustin Plain contains alluvial soils of six major soil associations, consisting predominantly of varying sands, silts, and clayey silty sands. The surface and near-surface soils underlying PA 30 are composed of terrace deposits, old alluvium, and unconsolidated recent alluvium of the Myford and Sorrento series. Both the Myford and Sorrento soils are comprised of sand, silt, and clay mixtures. The northern one-quarter of PA 30 is underlain by clayey loam alluvial material.

The historic uses of PAs 51 and 30 (the former MCAS El Toro) for natural resources has been restricted to limited sand and gravel borrow sites in the foothill areas and agricultural uses such as citrus and field crops within the alluvial plain. Several small landslides have been documented in the undeveloped northeastern portions of PA 51; however, due to the relatively flat topography of the remainder of the site, the landslide potential outside of the Santa Ana foothills is considered very low. No known mudflows have occurred in the project area, and there are no unusual or unique topographic features on the site. No oil, gas or mineral extraction has occurred on the site and these resources are not anticipated based on the known geologic conditions.

Seismicity

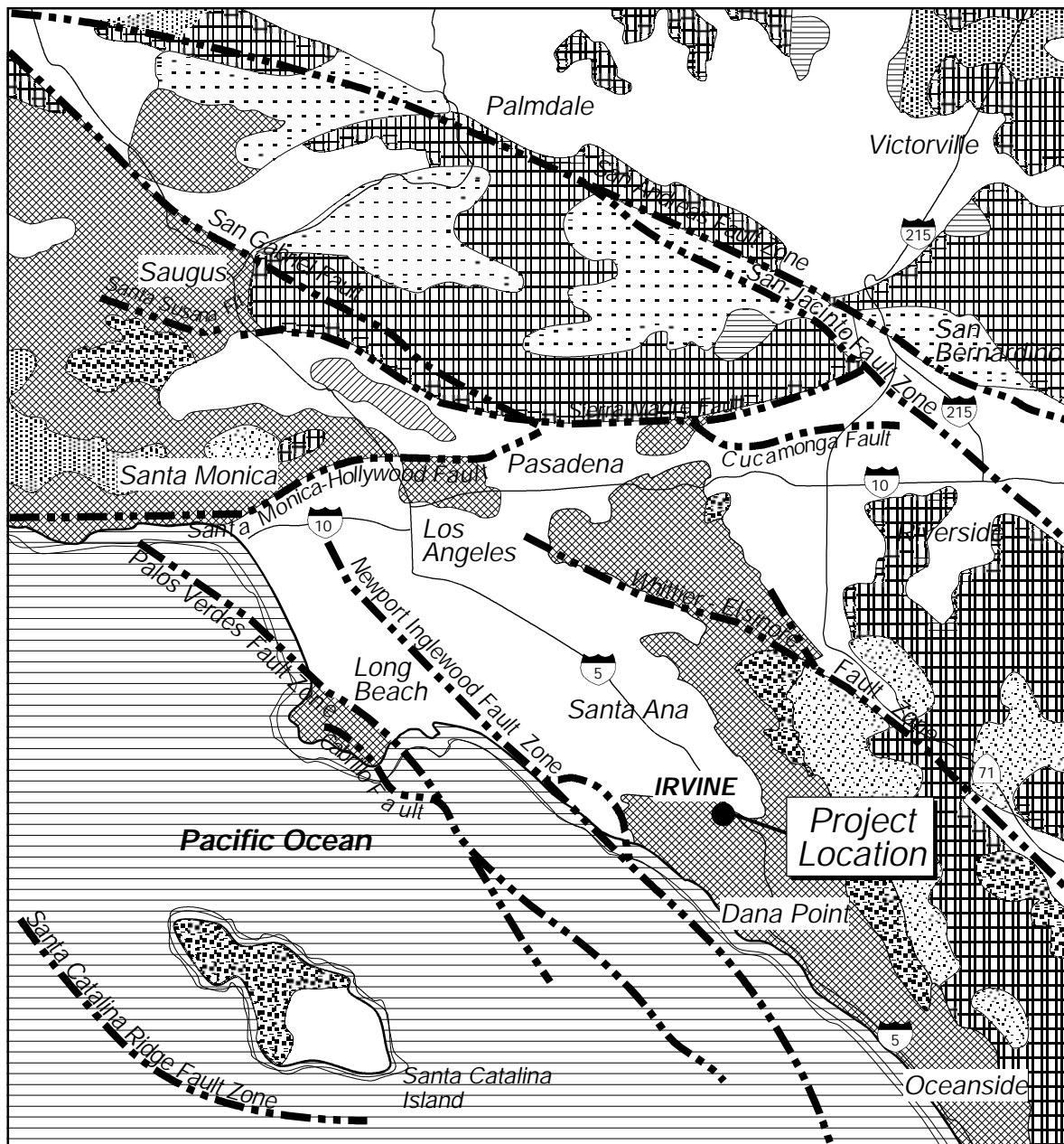
The project area is located in the seismically active Southern California region. There is no known active or potentially active fault crossing or projecting into the project area. Ground shaking has been experienced in the past and may occur in the future. The site has a low susceptibility for liquefaction because the alluvial sediments are relatively coarse and the water table is generally more than 80 feet below the ground surface. Figures 5.6-1 and 5.6-2, Regional Geology and Inactive Fault Locations, depict the location of major fault and fault zones, and inactive fault zones in relation to the project site. The Elsinore Fault, located approximately 14 miles northeast of the site, and the Newport-Inglewood Fault have the greatest potential for seismic ground shaking on the site. The recently discovered San Joaquin Hills fault is also located to the west of the site. The status of the newly discovered San Joaquin fault is being researched by the geologic community. The fault runs roughly along the coastline south of Huntington Beach and north of Dana Point; however, its precise location is unknown. The fault geologic community is researching whether the fault is considered active or inactive, and the potential earthquake magnitude.

In order to assess the geologic/seismic risk associated with potential development, the City evaluates five general types of geologic conditions through Seismic Response Areas (SRA). SRAs describe the different types and magnitudes of potential seismic hazards, making it possible to evaluate the risks of property damage, personal injury, and loss of vital services which may result from an earthquake. The majority of the project area, including most of PA 51 and all of PAs 30 and 35, is located within SRA-2. SRA-2 consists of denser soils/deeper ground water. The primary potential seismic hazard in this area is ground motion. The majority of the project area is within SRA-2 and is considered suitable for development. The northeastern portion of the project area is located within SRA-3 and SRA-4. SRA-3 consists of shallow alluvium over and abutting bedrock. In this area, the primary potential seismic hazard is ground motion. Figure 5.6-3 depicts Seismic Response Areas from the City's General Plan.

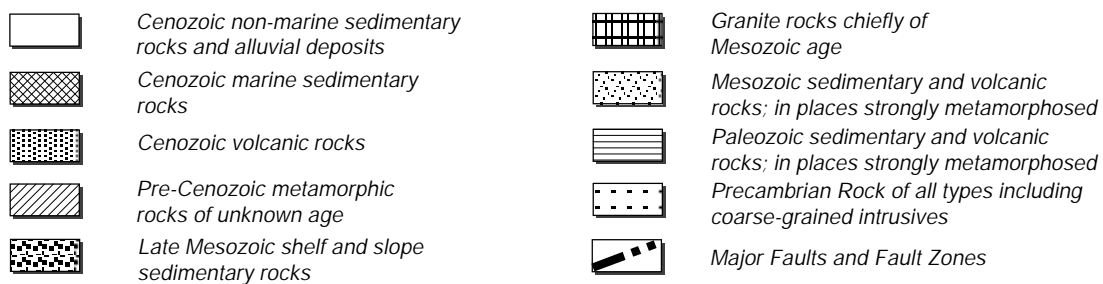
Many of the existing buildings on the former MCAS El Toro do not meet current seismic codes. Many are older structures that were constructed prior to seismic codes being in place or were constructed to federal military standards, not California Seismic Code standards.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail site is relatively flat, with a localized highland in the northeastern portion of the site. Throughout the site, total relief is approximately 82 feet. Borrego Wash lies to the west/northwest of the property and will ultimately be separated from the jail facility by the future extension of Alton Parkway. Groundwater was not encountered on the site within 45 feet of the ground surface. The Musick Jail occupies portions of both SRA-2 (denser soils/deeper groundwater) and SRA-3 (alluvium/shallow bedrock).

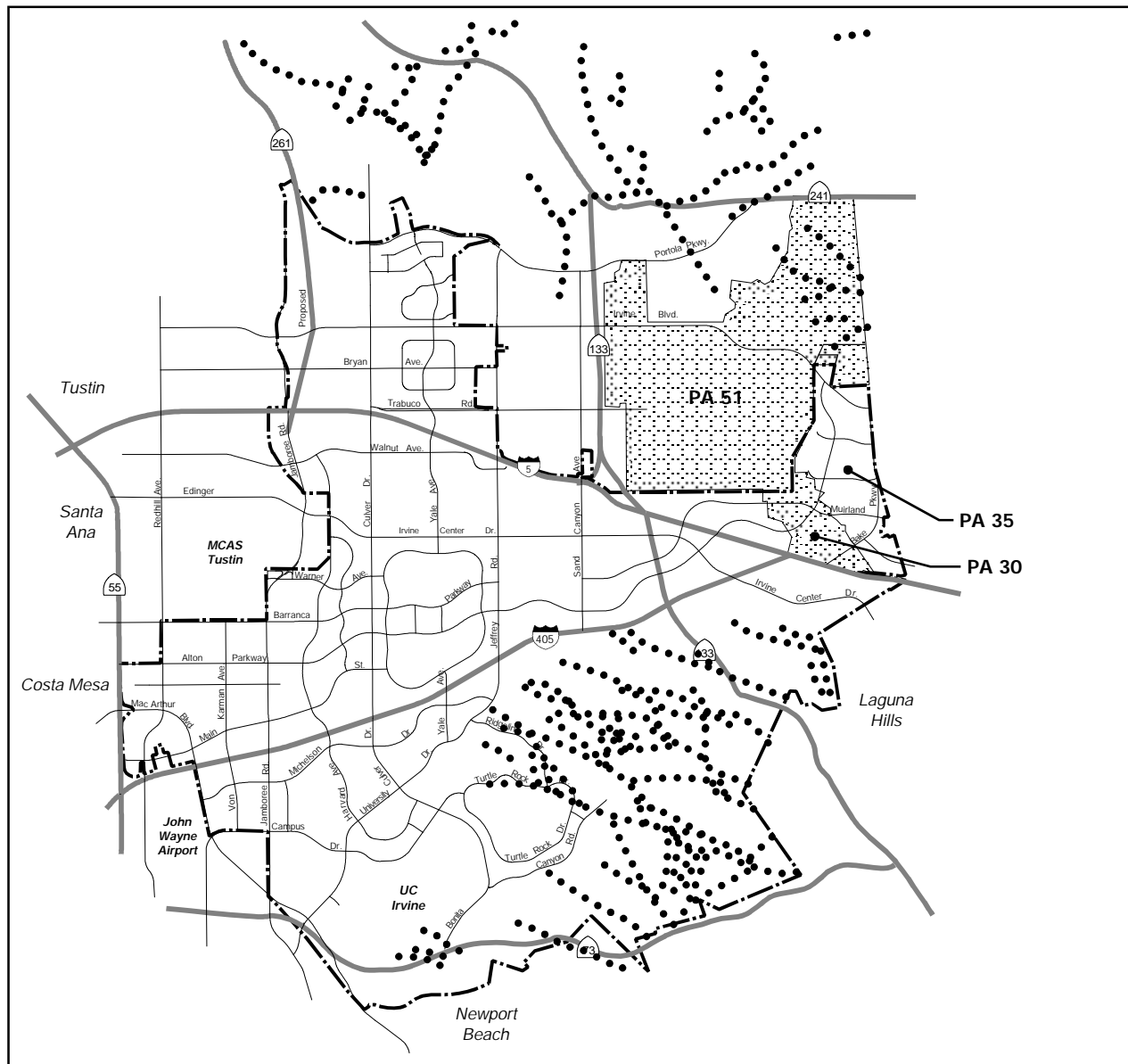


Source: City of Irvine, General Plan





No Scale

Figure 5.6-1
Regional Geology



Source: City of Irvine, General Plan

-  Fault Line
-  Project Area

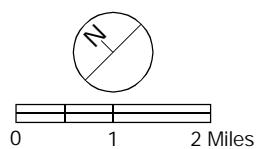
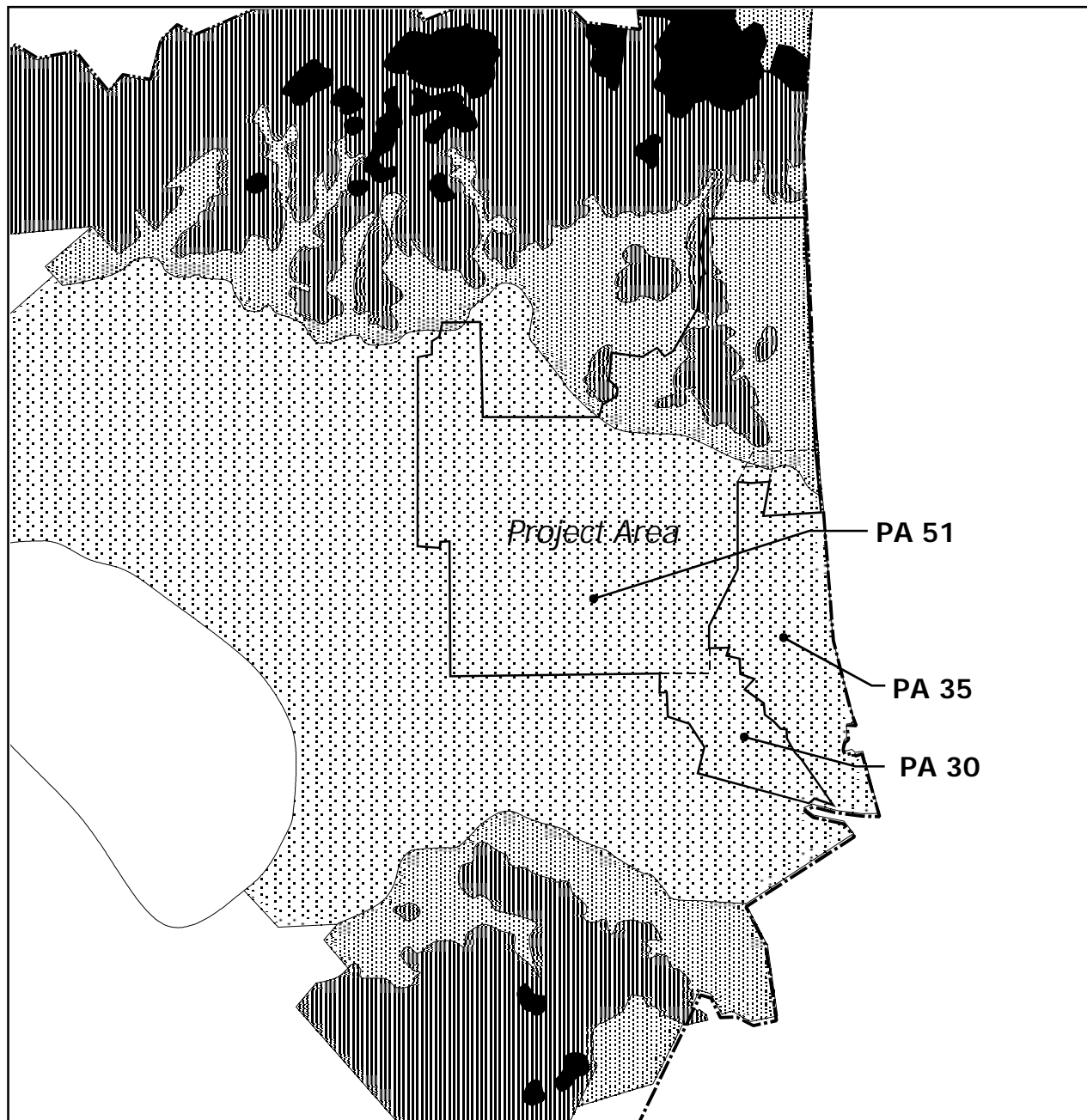







Figure 5.6-2
Inactive Fault Locations



Source: City of Irvine, GIS Program

- | | | | |
|---|--|---|--|
|  | SRA-1: Soft soils/high groundwater |  | SRA-4: Highlands over 20% slope |
|  | SRA-2: Denser soils/deeper groundwater |  | SRA-5: Less stable geologic formations |
|  | SRA-3: Alluvium/shallow bedrock | | |

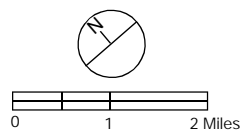


Figure 5.6-3
Seismic Response Areas

IRWD Parcel (Portion of PA 35)

The IRWD parcel is relatively flat, with a localized highland in the northeastern portion of the site. The types of soils that underlie the site are mainly alluvial and terrace deposits, with some clay content. The IRWD parcel occupies portions of both SRA-2 (denser soils/deeper groundwater) and SRA-3 (alluvium/shallow bedrock).

5.6.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for geology and seismicity.

Would the project:

1. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:*
 - *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?*
 - *Strong seismic ground shaking?*
 - *Seismic-related ground failure, including liquefaction?*
 - *Landslides?*
2. *Result in substantial soil erosion or the loss of topsoil?*
3. *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*
4. *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?*
5. *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*
6. *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*
7. *Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

5.6.3 Environmental Impact

The following analysis focuses on the potential geology and seismic impacts associated with implementation of the Base Plan and the Overlay Plan for the former MCAS El Toro (PAs 51

and 30). The Musick Branch Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. As a result, implementation of the proposed project will not result in a significant geology and seismicity impact associated with the annexation of the James A. Musick Jail Facility and the IRWD Parcel.

Threshold 1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

- ***Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?***

Base Plan and Overlay Plan

The potential for fault rupture in the project area is extremely low, whether the project site is developed according to the land uses identified in the Base Plan or the Overlay Plan. According to the City of Irvine General Plan, Figure D-1 (see Figures 5.6-1 and 5.6-2) there are no known active or potentially active faults crossing or projecting into the project area. No significant impact is anticipated through the post 2025 level of development.

Threshold 1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

- ***Strong seismic ground shaking?***

Base Plan and Overlay Plan

Whether the project site is developed according to Base Plan land uses or Overlay Plan land uses, future development of the project area has the potential to result in the exposure of people or structures to strong seismic ground shaking in the event a major earthquake occurs along any one of the active faults in the region. This is considered a significant impact. Severe ground shaking can cause damage to poorly designed or constructed buildings. The level of seismic activity expected in the project area is similar to the County as a whole, and other areas of Southern California. As such, the risk of loss, injury or death involving strong seismic ground shaking is similar to the risk associated with other regions within Southern California. New development in the project area will need to be constructed according to the latest adopted building codes, which address construction practices related to seismic safety.

PA 30 is located in that portion of the Coastal Plain that is bounded by the Santa Ana Mountains on its southern and eastern borders and the San Joaquin Hills on its western border. The surface and near surface soils of the site are composed of Terrace deposits, old alluvium, and unconsolidated alluvium of the Myford and Sorrento series. Both the Myford and Sorrento soils are composed of sand, silt, and clay mixtures. The northern one-quarter of the site is underlain with clayey loam alluvial material. Due to the topography of the site, landslide potential is considered very low. In addition, PA 30 is located in SRA-2, which is comprised of denser soils and deeper groundwater. PA 30 has a low potential for

seismically induced liquefaction due to the dense soils and deep groundwater which underlie the area.

Many of the existing buildings on the former MCAS El Toro site do not meet current seismic codes. The City has no record of how the existing structures were constructed; whether they were constructed to seismic codes in effect at the time; whether they were field inspected, and if so, what type of field inspection and quality control existed; and whether they are still being utilized for their originally intended use. The reuse of existing development would need to meet a level of life safety protection that is appropriate for that use. The City would need to assess the building condition, compliance with codes, and suitability of the current intended reuse. As such, temporary or permanent reuse of these facilities could expose people to a greater seismic risk than buildings that are constructed to applicable seismic codes. This is considered a significant impact.

Threshold 1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

- ***Seismic-related ground failure, including liquefaction?***

Base Plan and Overlay Plan

The potential for seismically induced liquefaction resulting from severe ground shaking is considered low based on the characteristics of the existing soils in the project area. No significant impact to this issue is anticipated. However, the potential for liquefaction will be analyzed by site-specific geological investigations prior to grading and construction of individual projects in the project area.

Threshold 1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

- ***Landslides?***

Base Plan

The only documented landslides are located in the undeveloped northeastern foothills area of the project area within PA 51. The land use designation for this portion of the project area is proposed as OCGP Habitat Preserve (Hab) and OCGP Cemetery/OCGP Low Density Residential (Cem/Ldr). Under the Base Plan this area is planned as Habitat Preserve and Open Space and will be used as natural open space to protect significant wildlife habitat. No intensive development is proposed in this area and no significant impact to this issue is anticipated.

Overlay Plan

The only documented landslides are located in the undeveloped northeastern foothills area of the project area within PA 51. The land use designation for this portion of the project area is proposed as OCGP Habitat Preserve (Hab) and OCGP Cemetery/OCGP Low Density Residential (Cem/Ldr). Under the Overlay Plan, this area is planned as Habitat Preserve and Low Density Residential. Because development of habitable structures would

be allowed under the Overlay Plan, the project would result in a significant impact associated with landslides.

Threshold 2: Result in substantial soil erosion or the loss of topsoil?

Base Plan and Overlay Plan

Grading associated with future development in any portion of the project area will involve the removal of soils, compaction, and possible import or export of fill material. Grading will include the renewal of the existing runways. These activities will expose soil surfaces to increased wind and water erosion. Future development of the project area has the potential for impacts resulting from soil erosion or the loss of topsoil. This impact is considered significant.

Threshold 3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Base Plan and Overlay Plan

The majority of the soil material in the project area is identified as well suited for grading and construction. No significant impact to this issue is anticipated.

Threshold 4: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risk to life or property?

Base Plan and Overlay Plan

Some expansive soils may be present in localized areas within the project area. The presence of expansive soils could create risks to life or property. This issue is considered a significant impact.

Threshold 5: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Base Plan and Overlay Plan

Sewers will be available to serve all future development for the disposal of wastewater. No significant impact to this issue is anticipated.

Threshold 6: Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Base Plan and Overlay Plan

There are no known mineral resources on the site. No significant impact to this issue is anticipated.

Threshold 7: *Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

Base Plan and Overlay Plan

There is no known mineral resource on the site. No significant impact regarding this issue is anticipated.

5.6.4 Significant Impacts

Base Plan and Overlay Plan

- GS 1.** Future development of the project area has the potential to result in the exposure of people or structures to strong seismic ground shaking in the event a major earthquake occurs along any one of the active faults in the region. This is considered a significant impact.
- GS 2.** The level of seismic activity expected in the project area is similar to the County as a whole, and other areas of Southern California. As such, the risk of loss, injury or death involving strong seismic ground shaking is similar to the risk associated with other regions within Southern California.
- GS 3.** Some expansive soils may be present in localized areas within the project area. The presence of expansive soils could create risks to life or property through the post 2025 development levels. This impact is considered significant.
- GS 4.** Many of the existing buildings on the former MCAS El Toro site may not have been constructed in a manner that is acceptable for its intended use. Temporary or permanent reuse of these facilities could expose people to a greater seismic risk than buildings that are constructed to applicable seismic codes. This is considered a significant impact.
- GS 5.** Future development of the project area has the potential for impacts resulting from soil erosion or the loss of topsoil. This impact is considered significant through the post 2025 development levels.
- GS 6.** Some expansive soils may be present in localized areas within the project area. The presence of expansive soils could create risks to life or property. This is considered a significant impact.

5.6.5 Mitigation Measures

Base Plan and Overlay Plan

- GS 1.** Prior to issuance of a building permit, the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.
- GS 2.** Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.
1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be conducted. The purpose of the subsurface evaluation is to:
 - a. Further evaluate the subsurface conditions in the area of the proposed structures.
 - b. Provide specific data on potential geologic and geotechnical hazards.
 - c. Provide information pertaining to the engineering characteristics of earth materials in the project area.

From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural sections, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:

- C Seismic Ground Shaking - Measures to prevent risk of loss, injury or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.
- C Erosion or Loss of Topsoil – Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances.
- C Where Expansive Soils Exist – Measures for the design of foundations, slabs, flatwork and other improvements subject to drainage from expansive soils.

Compliance with this measure shall be verified by the Community Development Department.

- GS 3.** Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of any existing structure if a building permit is not issued, a seismic evaluation of the structure including recommendations for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.
- GS 4.** Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

5.6.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Less than significant.

Notes and References

1. City of Irvine. *Irvine Planning Area 30 GPA/ZC 321633-GA/21635-ZC FEIR*, pg. 4.4-1. November 26, 1996.
2. County of Orange. *James A. Musick Jail Expansion and Operation DEIR* No. 564, pgs. 53 and 57. August 1996.
3. City of Irvine. *General Plan, Figure D-1*. March 9, 1999.
4. PBS&J. *MCAS El Toro Community Reuse Plan, Volume 1*, pgs. 3-15. January 1995.
5. County of Orange. *MCAS El Toro Community Reuse Plan DEIR, Volume 1*. August 1996.
6. City of Irvine. *General Plan*, pgs. D-1 - D-7. March 9, 1999.

5.7 Hydrology/Water Quality

5.7.1 Environmental Setting

Hydrologic Setting

Former MCAS El Toro (PAs 51 and 30)

The project area lies within the San Diego Creek watershed, which is 105 square miles and encompasses portions of the cities of Irvine and Tustin, Santa Ana, Costa Mesa, Lake Forest, Laguna Hills, Orange and Newport Beach, as well as unincorporated Orange County. The watershed includes the San Diego Creek along with Peters Canyon channel and their tributaries. Natural watercourses, agricultural channels, storm drain systems, and flood control channels transport runoff from the proposed annexation area and surrounding lands in the watershed to Upper Newport Bay.

The former MCAS El Toro property is traversed by six drainage channels flowing generally from the northeast to the southwest. Headwaters originate off-site in the Santa Ana Mountains, collect in the various upstream canyons and flow downstream into four improved channels that cross the former base property from Irvine Boulevard to the SCRRA railroad tracks. These are referred to as the “Marshburn”, “Bee Canyon”, “Agua Chino”, and the “Borrego” Channels (see more detailed discussion below). South of the Metrolink railroad (i.e. within PA 30) two other facilities cross the property. These facilities are the “Serrano Creek” channel and the Upper San Diego Creek channel. Each channel connects and discharges to existing County of Orange regional facilities.

James A. Musick Jail Facility (Portion of PA 35)

James A. Musick Branch Jail is a relatively small portion of PA 35. The Jail facility lies within the San Diego Creek drainage basin. Approximately 20 acres of the existing 100-acre Musick Jail site is covered by impervious surface. Approximately 36 acres of the site are tributary to a storm drain at the southerly corner of the site, which flows into a drain in Parker Avenue and eventually into Serrano Creek. The remaining 64 acres of the site are tributary to Borrego Canyon Wash.¹ Both Serrano Creek and Borrego Canyon Wash are tributaries of San Diego Creek.

IRWD Parcel (Portion of PA 35)

The Irvine Ranch Water District (IRWD) parcel is also a relatively small portion of PA 35. The IRWD parcel also lies within the San Diego Creek drainage basin. The parcel drains into the Borrego Canyon Wash.

Storm Drain System

Former MCAS El Toro (PAs 51 and 30)

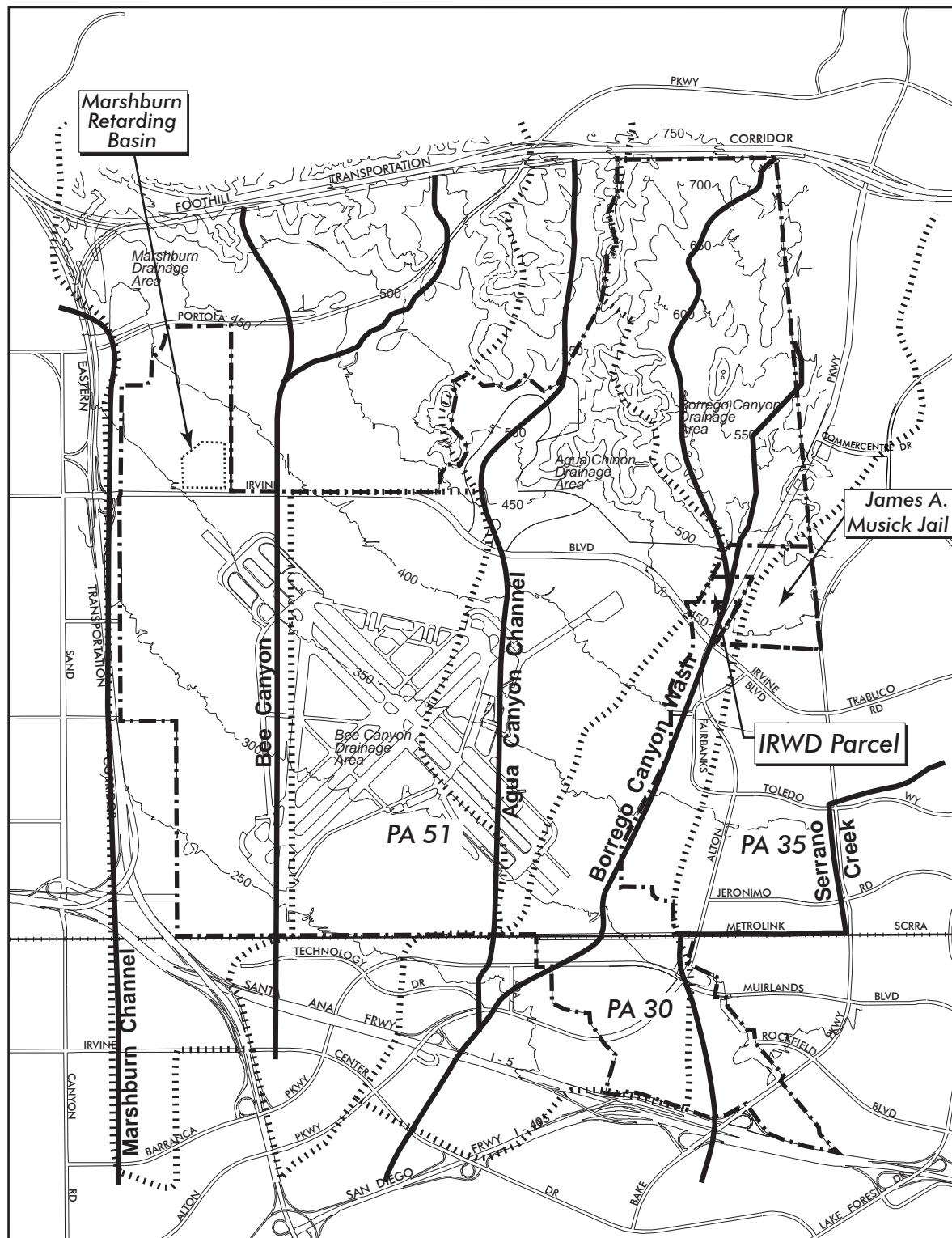
Figure 5.7-1 illustrates the drainage areas and topographic conditions present in the project area. The following provides a description of the major drainage channels and the Marshburn Retarding Basin located in the project area.

Marshburn Channel: Tributary drainage areas upstream of Irvine Boulevard drain into the Marshburn retarding basin located just north of Irvine Boulevard between the Eastern Transportation Corridor and Lambert Road. An interim 48-inch diameter Spiral Rib Pipe in Irvine Boulevard delivers flows northwesterly toward the Marshburn Channel from the retarding basin. This channel runs along the southeasterly side of the Eastern Transportation Corridor. The channel reach between Irvine Boulevard and Trabuco Road is a trapezoidal concrete lined channel with a bottom that varies from eight-feet to 10-feet in width and ranges from five-feet to seven-feet in depth. South of Trabuco Road to Interstate 5, Marshburn Channel is a concrete rectangular channel with the bottom of the channel varying from 14-feet to 15-feet and ranging from nine-feet to 10.5 feet in depth.

Bee Canyon Channel: The Bee Canyon Channel drainage system consists of reinforced concrete boxes ten feet by six feet and 3.5 feet by 4.5 feet under the runways and open channels outside the runway areas. The capacity of the boxes is 680 cubic feet per second (cfs) and 630 cfs, respectively. Upstream of the box underneath Irvine Boulevard is a transition structure with a weir structure routing excess flows into the Marshburn retarding basin. The channel reach south of the SCRRA railway tracks to Interstate 5 is a 12-foot wide by nine feet in depth double reinforced concrete box. The Bee Canyon and Round Canyon retarding basins have been constructed in conjunction with the Foothill Transportation Corridor.

Agua Chinon Channel: The Agua Chinon Channel begins at the northeasterly limits of the Wherry housing area. Similar to the Bee Canyon Channel system, this system consists of a series of boxes under the existing runways and open channels outside the runways. The drainage facility south of the railroad tracks is a combination of 10-foot wide by 7.5-foot high with a 2:1 slope, rock lined trapezoidal channel, 12-foot by 12-foot triple reinforced concrete box, and six 10-foot by 10-foot reinforced concrete box underneath Interstate 5. In addition, the Agua Chinon retarding basin has been constructed just south of the Foothill Transportation Corridor.

Borrego Canyon Channel: The Borrego Canyon Channel runs along the southern boundary of the base. Its headwaters begin in the Santa Ana Mountains to the east. The facility is a natural bottom channel upstream of Irvine Boulevard. Downstream of this point, for a distance of about 2,900 feet, the channel is a 25-foot wide by 9.5-foot high reinforced concrete channel. This concrete channel is outside the former base. Downstream of this point, the channel enters the base property and becomes a soft bottom channel.



- Existing Drainage Channels
- - - Proposed Project Area
- Drainage Area Boundary
- Basin
- 300' — Topographic Lines

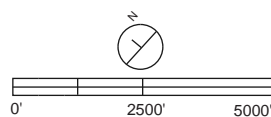


Figure 5.7-1
Drainage Areas and Topography

Serrano Creek: Serrano Creek is a drainage system located in the southern tip of the former base. It consists of a 30-foot-wide by 10-foot-high rectangular concrete channel upstream of Muirlands Boulevard and an earthen channel downstream of Muirlands Boulevard to Interstate 5. The creek crosses the intersection of Alton Parkway and Muirlands Boulevard in a triple 10-foot by 10-foot reinforced concrete box.

Upper San Diego Creek Channel: At the southerly most point of PA 30 is the Upper San Diego Creek Channel, which is an unimproved earthen berm.

Marshburn Retarding Basin: The Marshburn Retarding Basin was constructed as part of the Eastern Transportation Corridor (SR-133) improvements. The basin is located north of Irvine Boulevard, approximately 2,500 feet east of Sand Canyon Avenue. The basin is designed to accommodate the future ultimate condition drainage/runoff; however, the interim condition configuration for the basin was designed so that the interim discharge from the basin would not exceed the capacity of the Marshburn Channel. Reconstruction of the collector system and outflow lines will be required to accommodate ultimate development of the watershed.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail is located within the Borrego Canyon drainage system. Approximately 69 acres of the site drain into the Borrego Canyon Wash, and the remaining 36 acres drain into a storm drain located at the southern corner of the site which connects to the Serrano Creek facility.

IRWD Parcel (Portion of PA 35)

The IRWD parcel is located within the Borrego Canyon drainage system, and drains into the Borrego Canyon Wash.

Flood Conditions and System Deficiencies

The “Flood Control Master Plan for San Diego Creek” (John M. Tettemer and Associates, 1989) analyzed the existing tributary drainage areas of San Diego Creek from its headwaters to I-405 downstream of the confluence with Peters Canyon Channel. The Flood Control Master Plan identified a range of flood control improvements for the San Diego Creek watershed that would control flood peaks based on a 100-year flood. The Flood Control Master Plan was adopted by the City of Irvine, the City of Tustin, the Irvine Company, and the Orange County Environmental Management Agency and is currently being implemented in phases by these agencies.

The Orange County Flood Control District (OCFCD) is the agency responsible for regional channel reaches where it has right-of-way (either fee title or easements). Local facilities are the responsibility of the County of Orange in unincorporated areas and the City of Irvine within its city limits.

PAs 51 and 30 (Former MCAS El Toro)

Final EIR 563 and the Draft Supplemental Analysis indicated that a variety of flood control facility deficiencies existed in PAs 51 and 30 as of 1995. Likewise, the U.S. Army Corps of Engineers had previously reported that about 40 percent of PAs 51 and 30 would be flooded during a 100-year storm. The recent construction of transportation corridors and freeway improvements adjacent to the site has included installation of drainage improvements and retarding basins (Bee Canyon, Round Canyon, Aqua Chinon, and Marshburn) that have significantly reduced, but not entirely eliminated, the flooding problems previously identified. The Federal Emergency Management Agency (FEMA) identified two modifications (associated with the Eastern Transportation Corridor (SR-133) improvements) to the flood plain maps. The changes will show that the 100-year flood zone north and west of the project area has been reduced due to the development of drainage improvements described above. The extent of that reduction is discussed in the following sections. There are no improvements to existing flood control systems currently adopted for the annexation area.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail is located within the Borrego Canyon drainage system. The improvements related to the expansion of Alton Parkway will assist in alleviating flooding problems on-site.

IRWD Parcel (Portion of PA 35)

The IRWD parcel is located within the Borrego Canyon drainage system, and drains into the Borrego Canyon Wash.

Water Quality

Regulatory Background

For the purposes of regional administration of California's water quality control program, the State is divided into nine regions, each having its own Regional Water Quality Control Board (RWQCB). The City of Irvine is in the Santa Ana Region (Region 8). The Santa Ana RWQCB has adopted a Water Quality Control Plan (WQCP) or Basin Plan, which outlines Board responsibilities for adoption and implementation of water quality control plans, issuance of waste discharge requirements, and performance of other functions concerning water quality control. This document is called the "Water Quality Control Plan - Santa Ana Basin (8)". Specifically, the Basin Plan: (1) designates beneficial uses for surface and ground waters; (2) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's antidegradation policy; (3) describes implementation programs to protect the beneficial uses of all waters in the Region; and (4) describes surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan [California Water Code §§13240 - 13244, and §13050(j)]. The Basin Plan incorporates by reference all applicable State and Regional Board plans and policies.

California Water Code Section 13050(h) defines “water quality objectives” as “the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.”

By definition, water quality objectives must protect the most sensitive of the beneficial uses, which have been designated for a water body. Water quality objectives may be numerical values for water quality constituents or narrative descriptions.

Surface Waters

The Basin Plan states that point sources and nonpoint sources of pollution shall be controlled to protect designated beneficial uses of water. Beneficial uses are defined as the uses of water necessary for the survival or well being of humans, plants, and wildlife. Examples include drinking, swimming, industrial, and agricultural water supply, and the support of fresh and saline aquatic habitats. Inland surface waters of the San Diego Creek drainage basin have been exempted by the Regional Board from the municipal use designation under the terms and conditions of State Board Resolution No. 88-63, Sources of Drinking Water Policy. Surface waters in the project area discharge directly into water bodies with beneficial uses. Runoff water from the proposed project will also discharge into the municipal storm drain system that eventually drains into the San Diego Creek. The San Diego Creek, in turn, drains into Upper Newport Bay. Beneficial uses, as identified by the Regional Board are depicted in Table 5.7-1.

Coastal Receiving Waters

The coastal waters of the Pacific Ocean are defined in the Basin Plan as waters subject to tidal action. Beneficial uses of receiving coastal waters (i.e., Upper and Lower Newport Bay) generally include REC-1, REC-2, EST (estuarine habitat), WILD, RARE (habitat support for rare, threatened or endangered species), MAR (marine habitat), and NAV (navigation).

Groundwater

The Basin Plan indicates that the Irvine Forebay I and II groundwater subbasins generally encompass the proposed project area. Groundwaters that meet the criteria mandated by the Sources of Drinking Water Policy are designated MUN (municipal and domestic water supply). The Basin Plan currently designates the project area groundwater subbasins for municipal and domestic supply, agricultural supply, and industrial process and service supply. A large plume of groundwater contaminated by organic compounds including trichloroethylene (TCE) as a result of the historical use of solvents and fuels, is present beneath the project area.

Table 5.7-1
Beneficial Uses of Upper Newport Bay, San Diego Creek, and Tributaries

Beneficial Use	Other Tributaries	San Diego Creek (below Jeffery Road)	San Diego Creek (above Jeffery Road)	Upper Newport Bay
Groundwater Recharge	X		X	
Water Contact Recreation	X	X	X	X
Non-Contact Water Recreation	X	X	X	X
Commercial and Sport Fishing				X
Warm Freshwater Habitat	X	X	X	
Preservation of Biological Habitats of Special Significance				X
Wildlife Habitat	X	X	X	X
Rare, Threatened, or Endangered Species				X
Spawning, Reproduction, and Development				X
Marine Habitat				X
Shellfish Harvesting				X
Estuarine Habitat				X
1 For areas of San Diego Creek upstream of Jeffery Road, the Agua Chinon Wash, and other tributaries, applicable beneficial uses are intermittent only, meaning that water conditions do not allow the beneficial use to exist year-round.				

Existing Permits and Water Quality Management Plans

Surface water quality is regulated by the U.S. Environmental Protection Agency (EPA), the California State Water Resources Control Board, the California Regional Water Quality Control Board, the Santa Ana Region Water Quality Control Board, the County of Orange (for unincorporated areas), and the City of Irvine.

The federal Clean Water Act and the State Porter Cologne Act are the principal statutes governing water quality. The laws are similar in many ways. The fundamental purpose of both laws is to protect the beneficial uses of water. An important distinction between the two is that the Porter Cologne Water Quality Control Act addresses both ground and surface waters while the Clean Water Act addresses surface water only. The Clean Water Act requires the State to adopt water quality standards for water bodies subject to the review and approval of the EPA. Direct discharges of pollutants into waters of the United States are not allowed, except in accordance with the permitting program of the Clean

Water Act, the National Pollutant Discharge Elimination System. The County of Orange and the City of Irvine hold a NPDES permit governing the storm drain systems. Additionally, the State has issued a NPDES general permit relating to construction activities on sites over five acres in area. In March 2003, this provision will apply to residential construction sites that result in the disturbance of one acre or more.

Where water quality standards are not being achieved, the Clean Water Act requires the identification and listing of that water body as “impaired” under Section 303(d). Once a water body has been deemed “impaired” a Total Maximum Daily Load (TMDL) for the pollutant that has impaired the water body must be developed for that water body. A TMDL is an estimate of the total load of pollutants that a water body may receive without exceeding applicable water quality standards. Once established, the TMDL is allocated among current and future dischargers into the water body. Impaired waters relevant to the project are the San Diego Creek and Upper Newport Bay. TMDLs have been established for these water bodies and are shown on Table 5.7-2

The State Water Resources Control Board adopted the “Nonpoint Source Management Plan” (NPSMP) in 1988. In that plan, San Diego Creek was designated as the region's pilot watershed project since the Creek's water quality has been impaired by excessive sedimentation, nitrates, pesticides, and metals originating from point and nonpoint sources.

In 1982, the Southern California Association of Governments (SCAG) completed the “San Diego Creek Comprehensive Stormwater Sedimentation Control Plan” as part of an areawide planning process conducted pursuant to Section 208 of the Clean Water Act (The Flood Control Master Plan for San Diego Creek also includes the “208 Plan” for watershed sedimentation control). This Plan recommends management of the erosion-siltation problem through agricultural and construction Best Management Practices (BMPs) and Resource Conservation Plans (RCPs). The recommendations of the 208 Plan have been and are being implemented by the State, local agencies and The Irvine Company, the largest private landowner in the watershed. To minimize sediment transport to Newport Bay, programs have been implemented to control erosion resulting from grading operations at construction sites and to prevent erosion of agricultural lands. The cities of Irvine, Costa Mesa, Santa Ana, and Newport Beach have grading ordinances that require erosion/siltation control plans for construction projects within their boundaries. The focus of these plans is on the implementation of BMPs. Permit actions by the RWCQB (the areawide stormwater permit for Orange County) and the State Water Resources Control Board (the general construction activity stormwater permit) will necessitate additional coordinated efforts between the two agencies to control sediment inputs from construction activities. With technical assistance from the RWCQB, Orange County oversees a program to ensure development and implementation of RCPs by agricultural landowners, principally The Irvine Company.

Table 5.7-2
TMDLs Applicable to Newport Bay and San Diego Creek

	Sediment	Nutrients	Pathogens	Toxics (future)
General Info & Reduction	1998 estimate: 250,000 tons deposited/yr. Reduction: 50% (to 125,000 tons/yr) within ten years.	1998 estimate: 1,087,000 lbs/yr. Predominant sources: commercial nursery and agricultural land tailwaters. Reduction: 50% by 2012.	Fecal coliform bacteria used as indicator. Reduction: less than 200 organisms/100 ml. No more than 10% of samples to exceed 400 organisms/100 ml for any 30-day period.	San Diego Creek and Newport Bay are "impaired" water bodies for toxic substances. Problem toxic substances: PCBs, DDT, diazinon, chlorpyrifos, toxaphene, copper and selenium (may occur naturally).
Allocation	62,500 tons to Newport Bay. 62,500 tons to rest of the watershed. Load allocations (total 10 yr. running annual avg. (in tons/yr): open space = 28,000; agriculture = 19,000; construction = 13,000; urban = 2,500.	Loading targets for seasonal and annual amounts of total nitrogen and phosphorus, with 5, 10, and 15-year target dates. Waste & load allocations for total nitrogen (5-year target) (in lbs/season): nursery = 67,344; Silverado Constr. = 25,671; urban = 20,785; agricultural = 22,963; open space & natural = 63,334. Waste & load allocations for total phosphorous (5-year target) (in lbs/yr): urban = 4,102; construction = 17,947; agricultural = 26,196; open space = 38,640.	Waste & load allocations (14 yr. target date): urban runoff (incl. storm water), agricultural runoff (incl. storm water), and natural sources = 5-day sample/30-day geometric means of less than 200 organisms/100 ml, no more than 10% of samples to exceed 400 organisms/100 ml for any 30-day period; vessel waste = 0.	282.1 g/yr PCB to San Diego Creek, 432.6 g/yr DDT to San Diego Creek, Diazinon: acute 80 ng/L; chronic 50 ng/L, chlorpyrifos: acute 20 ng/L; chronic 14 ng/L, toxaphene 8.9 g/yr, copper to Newport Bay 11,646 lbs/yr, selenium to San Diego Creek 891.4 ug/L.
Implementation	Monitoring and surveys conducted by the County, and cities of Irvine, Tustin, Lake Forest, Costa Mesa, Santa Ana, and Newport Beach with the financial participation of The Irvine Company. Maintenance of basins to performance standards and other requirements.	Agricultural Nutrient Management approved by Regional Board identifies management measures and guidance practices. Based upon monitoring studies, Regional Board will review and may revise the current nitrogen objective for San Diego Creek in the Basin Plan.	Monitoring plans resulting from studies conducted by County Health Care Agency. Monitoring study to determine appropriateness of current bacteria objectives and reduction target.	Phase out household use of diazinon and chlorpyrifos. DDT and PCBs – State conduct investigations or potential spill sites to identify hotspots and remedial action. Selenium – monitor flow, discharge management practices. Copper – reduce through five areas of action.

National Pollutant Discharge Elimination System MS 4 Permit

The City of Irvine is a co-permittee under the National Pollutant Discharge Elimination System (NPDES) program. A co-permittee is a permittee to an NPDES permit (i.e., Areawide Municipal Storm Water Permit) that is responsible for permit conditions relating to the discharge for which it is operator. As used in the Storm Water Permit Implementation Agreement, co-permittees are the County of Orange, its incorporated cities, and OCFCDD.

General Permits are issued administratively to a discharger after a completed Notice of Intent (NOI) or appropriate application has been filed and, if necessary, the Regional Board Executive Officer has determined that the discharger meets the conditions specified in the Permit. The Areawide and general NPDES permits contain waste discharge requirements for storm water and urban runoff from the County of Orange, the Orange County Flood Control District, and the incorporated cities of Orange County.

The Regional Board has issued a MSW (MS4) Permit to the County, the County Flood Control District, and most of the incorporated cities in the County, including the City of Irvine for their storm drain systems. (Regional Board Order 96-31) The Drainage Area Management Plan (DAMP) is a document required under the MSW permit granted to the co-permittees by the Santa Ana RWQCB. The DAMP contains required and recommended BMPs aimed at alleviating pollutant levels in stormwater runoff. BMPs are defined as "schedules of activity, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the pollution of 'waters of the United States'." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. A Revised DAMP is currently being prepared by the County with input from all Co-permittees. The proposed project will be required to comply with any new requirements or BMPs that are adopted as part of the revised DAMP.

The current DAMP established by the County and City pursuant to the Municipal Stormwater Permit relies upon BMPs instead of numeric effluent limitations to comply with the Basin Plan. The original DAMP was prepared in 1993 and has been revised several times, with the most recent revision in September 2000. The DAMP specifically addresses BMPs for new development. It describes the range of structural controls, such as filtration, and non-structural controls, such as education programs. The DAMP also includes other programs and requires the preparation of a Water Quality Management Plan to address post-construction water quality. The DAMP does not specify a minimum development size to be considered for BMP applications, nor does it specify which land uses should receive the most attention. In general, BMPs are required on a variety of land uses, both residential and non-residential.

Although the provisions of the draft MSW permit may still be modified prior to final vote on the permit, the current draft MSW permit contains the following requirements:

- Pollution in discharges from the Municipal Separate Storm Sewer System (MS4) must be reduced to the maximum extent practicable;
- Certain non-storm water discharges are conditionally allowed (such as irrigation return flows, non-commercial car wash water, fire fighting flows) but other non-storm water discharges to the MS4 are prohibited;

- Local governments must inspect and report upon certain commercial, industrial, and construction facilities on a specified schedule;
- Local governments are given specific guidance regarding the elimination of illicit and illegal connections to the MS4, regarding the repair of leaking sanitary sewer and septic lines that might discharge into the MS4, regarding water quality from municipally-owned construction and industrial properties, regarding mandatory citizen education programs, and regarding regional monitoring of water quality;
- Local governments must review their project approval process to focus upon specified water quality improvement goals;
- In lieu of an approved water quality management plan, or equivalent or alternative regional water quality controls, new development projects that have not received tentative tract map approval by July 1, 2003 must implement structural best management practices meeting a specific design standard (treatment, infiltration, or filtration of specified volumes or flow rates associated with a design storm event);
- By October 1, 2003, the permittees must review and revise the DAMP to reflect specific water quality goals set for new development and significant redevelopment and to make any other revisions to the document annually necessary to comply with the permit; during the revision process; the permittees must implement their existing requirements for new development;
- Discharges from the MS4 are subject to relevant waste load allocations established in the TMDLs for the area.

As indicated in Final EIR 563 and the Draft Supplemental Analysis, PA 51 and 30 have a current industrial site NPDES permit for stormwater runoff. At the time of base closure, numerous structural BMP controls were employed in PA 51 due to the high propensity for pollutant runoff from a variety of sources, including aircraft and vehicle fluids and the accidental release of hazardous materials and wastes into off-site water courses. Oil and water separators, properly permitted hazardous materials storage and use facilities, routine sweeping, and a Spill Prevention Countermeasure and Control (SPCC) Plan are among the BMPs implemented at the facility.

Additional BMPs suited for various types of development include first flush diversion, detention/retention basins, infiltration trenches/basins, porous pavement, grass swales, swirl concentrators, and engineering and design modification of existing structures. Non-structural BMPs include programs to educate the public on proper disposal of hazardous/toxic wastes, regulatory approaches, street sweeping and facility maintenance, and detection and elimination of illicit connections and illegal discharges. Prior to the issuance of a precise grading permit, each new development is required to submit a Water Quality Management Plan (WQMP) and implement appropriate non-structural and structural BMPs, in keeping with the size and type of development, to minimize the introduction of pollutants into the drainage system.

Surface Water Quality

The San Diego Creek and its tributaries ultimately flow to the Upper and Lower Newport Bay. Any water quality deficiencies upstream of Newport Bay are compounded when they reach the Bay and contribute to water quality problems. Urban and agricultural runoff are the primary constituents of storm water and pollutants conveyed to Newport Bay. As indicated in EIR 563 and in the Basin Plan, although BMP implementation in PA 51 (former

MCAS El Toro) and surrounding sites has been effective at reducing the discharge of contaminated water to flood control facilities, the entire Newport Bay watershed is characterized by relatively high levels of various pollutants.

The Water Quality Control Plan notes that San Diego Creek and certain portions of Newport Bay have shown high levels of trace metals and organics, thus the Bay's inclusion in the State Toxic Substances Monitoring Program and the Bay Protection and Toxic Cleanup Program. Additionally, the Basin Plan notes that nutrient loading to the Bay is high, particularly from the San Diego Creek watershed, as a result of nutrient-laden runoff from agricultural crops and nurseries. Such pollutants contribute to seasonal algal blooms, which can adversely affect recreational, aesthetic, and habitat beneficial uses of Newport Bay.

The EIR 563 Draft Supplemental Analysis recognized several water quality deficiencies of the project area flood control system. Those deficiencies related to the inability of the existing system (as of 1995) to minimize sediment loading and transport within the project area drainage facilities. High sedimentation levels in stormwater runoff were deemed indicative of reduced surface water quality, particularly during 100-year storm events. The specific facility deficiencies are described in detail in the EIR 563 Draft Supplemental Analysis. Additionally, the Basin Plan notes that erosion in the watershed and the resulting siltation in the Bay are a continual threat to the Bay's designated beneficial uses.

San Diego Creek, which is the largest drainage system in the watershed, accounts for approximately 94 percent of the sediment delivered to Newport Bay. Sediment loads result from erosion of open space lands in foothill areas and from urban activity in the watershed, including: extensive grading for development; increased runoff and channel erosion due to urbanization; and erosion of agricultural lands and unprotected channel embankments. Most deposition occurs during major storm events, although low-level transport occurs year-round. However, recent construction of and/or improvements to the Marshburn, Bee Canyon, Round Canyon, and Agua Chinon detention basins have reduced many of the identified capacity deficiencies, thereby improving sedimentation levels accordingly. Additionally, project-related detention and conveyance facility improvements are proposed as part of the proposed project, as discussed in following sections.

Groundwater Quality

Although most ground waters in the Region are considered suitable or potentially suitable as sources of drinking water, EIR 563 and the Basin Plan have documented the contamination of groundwater in the Irvine Forebay. Constituents include a variety of volatile organic compounds (VOCs) historically used in PA 51 (former MCAS El Toro), as well as contaminants related to past agricultural activities in PAs 51 and 30. Section 5.5 (Public Health and Safety) contains information about groundwater pollutant levels and the status of groundwater remediation activities.

5.7.2 Threshold For Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for hydrology and water quality.

Would the project:

1. *Violate any water quality standards or waste discharge requirements?*
2. *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*
3. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?*
4. *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*
5. *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*
6. *Otherwise substantially degrade water quality?*
7. *Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*
8. *Place within a 100-year flood hazards area structures which would impede or redirect flood flows?*
9. *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?*
10. *Cause inundation by seiche, tsunami or mudflow?*

As per the criteria provided in the WQCP for the Santa Ana River Basin, failure to implement the Plan would also result in a significant adverse environmental impact. Water quality would not be protected, thereby resulting in an adverse impact to the public and wildlife. An adverse impact on a beneficial use would also occur where there is an actual or threatened loss or impairment of that beneficial use.

Additionally, violations of waste discharge requirements (WDRs) or applicable statutory or regulatory requirements, as defined in the State Water Resources Control Board Water Quality Enforcement Policy (Resolution No. 96-030, as amended by Resolution No. 97-085), would result in a significant environmental impact.

5.7.3 Environmental Impact

The following analysis focuses on the potential hydrology and water quality impacts associated with implementation of the Base Plan and the Overlay Plan for the former MCAS El Toro (PAs 51 and 30). The Musick Branch Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. As a result, implementation of the proposed project will not result in a significant hydrology or water quality impact associated with the annexation of the James A. Musick Jail Facility and the IRWD Parcel.

Threshold 1: Violate any water quality standards or waste discharge requirements?

Base Plan and Overlay Plan

Grading and excavation activities required for future development could result in the exposure of bare soils which could result in both wind and water-related erosion, and a significant water quality impact if not properly treated. Through buildout of the proposed project, wind and water related erosion has the potential to violate water quality standards or waste discharge requirements. This is considered a significant impact.

Threshold 2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Base Plan and Overlay Plan

Previous analyses, including Final EIR 563 and the EIR 563 Draft Supplemental Analysis, indicate that proposed development in the project area will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. This issue is not considered a significant impact. Groundwater quality and ongoing military base remediation activities are discussed in detail in Section 5.5 (Public Health and Safety).

Threshold 3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Base Plan and Overlay Plan

The project will not substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site. No significant impact to this issue is anticipated. All proposed stormwater conveyance and detention facilities are intended to reduce siltation in area flood control facilities, including San Diego Creek and in the receiving waters of Newport Bay. As flood control improvements are implemented, they will augment capacity within existing channels and facilities but will not substantially alter the existing drainage pattern of the site or area in a way that would result in substantial erosion or siltation on- or off-site. Future development will be planned and phased in accordance with the capacities of existing or planned stormwater drainage systems and pollutant reduction programs.

Threshold 4: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Base Plan and Overlay Plan

The existing drainage patterns of the project site will not be substantially altered nor will stream courses or rivers be substantially altered. With recent improvements to upstream flood control facilities, the floodplain area has likely decreased and fewer areas of the project area are subject to inundation. The phasing of the flood control system improvements in PAs 51 and 30 will be coordinated with the street-phasing schedule so that the storm drains are installed prior to or in concert with road construction. Improvements to the flood control system shall be evenly scheduled during the various phases of development. The City's DAMP requires that increased surface flow due to increased impervious surfaces be minimized. The DAMP requires that BMPs be implemented in order to reduce increased runoff to stormdrains. The project proposed flood control facilities that will control runoff on-site. However, without proposed project drainage improvements a substantial increase in the rate or amount of surface runoff due to new development in localized areas may occur, resulting in flooding on- or off-site depending on the future proposed development, and it must be assured that proposed flood control facilities are implemented. The potential for flooding to occur on- or off-site as a result of future development of the project area is considered a significant impact.

Threshold 5: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Base Plan and Overlay Plan

The "Regional Flood Control Master Plan for San Diego Creek" (John M. Tettner and Associates, April 1989) analyzed various drainage areas within the San Diego Creek watershed and provides a summary of proposed improvements within the watershed to accommodate the 100-year storm. Various components of the Master Plan have been implemented as projects within the drainage basin have been constructed. Construction of

the Foothill Transportation Corridor in the 1990's included construction of Bee Canyon Retarding Basin as well as the Round Canyon Retarding Basin. The Agua Chinon and Marshburn Retarding Basins have also been built. Improvements to the Marshburn Channel downstream of Trabuco Road to the I-5 Freeway were done in conjunction with the construction of the Eastern Transportation Corridor. These improvements were built on the basis of the 1989 Master Plan recommendations. The four retarding basins, located upstream of the El Toro Marine Base site, have dramatically restricted storm flows entering on to the base property.

As part of site planning for the reuse of the former MCAS El Toro, a hydrology study for the 100-year storm was prepared based on the Orange County Hydrology Manual (BV Engineering, March 2002). Design discharges were developed and compared against values found in the 1989 Master Plan report. The Orange County Unit Hydrograph method was used to generate peak flows for the sub-drainage areas. Table 5.7-3 provides a summary of the peak flows:

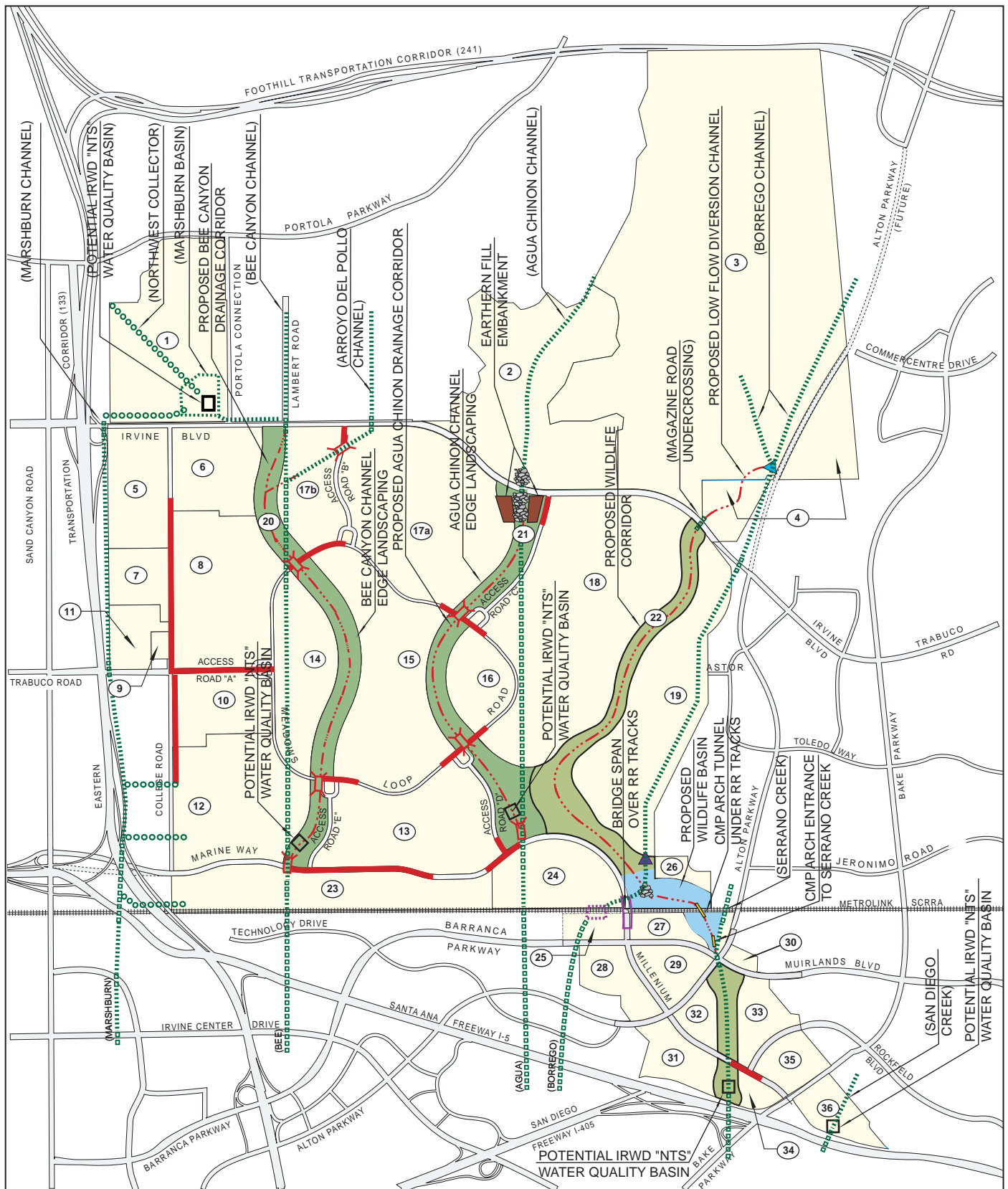
**Table 5.7-3
Summary of Peak Flows**

Channel	Subareas Designation	1989 Master Plan Report Peak Flows (cfs)
Marshburn	C30A	902
	C30C	168
	C30B	1084
	C31A	592
	C31B	480
Bee Canyon	L24A	1850
Chinon Channel	B19A	3076
Borrego Canyon	B14	5592

Source: BV Engineering, March 2002.

In order to address stormwater flows on the project site, a drainage concept plan has been prepared for the proposed project. Pipe locations and sizing, and proposed drainage channels were developed based upon anticipated runoff from various land uses so as to maintain and improve the existing level of flood control service. The proposed systems all drain into existing County of Orange regional facilities.

The backbone flood control system for the PA 51 and PA 30 components of the project area is based on proposed land uses and subsequent development potential. The proposed storm drain system is shown in Figure 5.7-2. The proposed storm drain system calculations were prepared assuming 25-year flows would be conveyed in the pipe with the streets carrying the incremental difference during a 100-year occurrence. The Orange County Hydrology Manual Rational Method was used to estimate peak runoffs in the systems. Storm runoff was estimated by applying appropriate runoff values for the various land uses in the site. The conceptual storm drain system, shown in Figure 5.7-2, takes into consideration and implements improvements identified in the Flood Control Master Plan for San Diego Creek. The drainage boundaries for each drainage facility identified in that master plan was maintained when the proposed system was analyzed.



Source: Fuscoe Engineering, City of Irvine, 2002.

LEGEND

- ① Parcel Number (Typical)
- EXISTING STORM DRAIN FACILITIES**
- Buried Pipeline
 - At Grade Open Channel
 - Buried Box Culvert Channel
 - Buried Box Culvert Crossing

- Railroad Trestle
- Basin

PROPOSED STORM DRAIN FACILITIES

- Stream Flowline
- Buried Culvert w/ Inlet & Outlet Structures
- Rip Rap Lining
- Storm Drain Pipe

- ▲ Borrego Channel Drop Structure
- ▲ Low Flow Division Structure At Borrego Creek

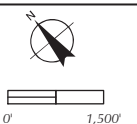


Figure 5.7-2
Proposed Drainage System

The Orange County Flood Control District (OCFD) is the local governmental body with jurisdiction for flood protection in the San Diego Creek watershed. In 1989, flood control consultants John Tettemer and Associates produced a study of the San Diego Creek watershed areas that was converted into a Flood Control Master Plan (FCMP) and subsequently adopted by the Orange County Public Facilities and Resources Department (formerly the Orange County Environmental Management Agency), the Irvine Company, and the cities of Irvine and Tustin. The OCFD maintains the FCMP which specifies comprehensive flood control measures designed to protect the basin from a 100-year return interval storm event by identifying specific flood control improvements for the San Diego Creek watershed drainage channels and devices. The FCMP is currently being implemented in phases as development occurs in the watershed.

The proposed drainage plan for the project is based on an earthen open channel and landscaped drainage corridor (corridor) method. A typical "corridor" consists of a trapezoidal channel cross-section that is four to six feet deep and up to 500 feet wide with side slopes climbing at a rate of five to ten percent, depending on the location. A "strip" approximately 100 feet in width containing the streamline and the lowest portion of the side slopes is proposed to be protected by natural riparian plant types. Adjacent to the riparian strip, the corridor is proposed to be planted to the edges with a conventional landscaping palette.

The proposed improvements for each of the major drainage areas are described below:

Marshburn Channel. Under the proposed plan, the Marshburn Channel detention basin and Marshburn Channel will remain substantially unchanged and will continue to be owned and operated by the OCFCD. Under this arrangement, proposed on-site improvements will be restricted only to the extension of an existing 66" diameter pipe branch departing the main channel. Connecting to the Marshburn Channel in the southwest corner of the site, the new storm drain installation would capture runoff from the westerly most portion of the former base for conveyance to the main channel. In the future, off-site FCMP facilities may be constructed separately by other projects, however, off-site improvements are not proposed as part of this project. These improvements include 2,000 lineal feet of concrete box channel measuring nine feet wide by ten feet high serving as an inlet to the existing detention basin, 3,200 lineal feet of spiral ring pipe, measuring 120 inches in diameter used to supplement a similar pipe inlet to the existing detention basin, 1,400 lineal feet of reinforced concrete pipe measuring 96 inches in diameter to replace the existing collector channel adjacent to Irvine Boulevard, and 2,000 lineal feet of concrete box channel measuring 14 feet wide by six feet high to replace the existing trapezoidal section main channel adjacent to the Eastern Transportation Corridor between Irvine Boulevard and Trabuco Road. No additional downstream improvements are necessary since the existing channel discharge capacity is adequate to transmit tributary flow.

Bee Canyon Channel. Under the proposed plan, the Bee Canyon Channel, upstream of Irvine Boulevard, would remain substantially unchanged and would continue to be maintained by the present owner. Downstream (south) of Irvine Boulevard, in selected locations, the existing concrete box culverts and open channels would be demolished and replaced with the corridor cross-section and supporting internal culvert crossings, and storm drain laterals. The corridor measures approximately 10,200 feet in length. Further downstream, in the vicinity of the SCRRA railroad tracks, the new drainage corridor would reconnect to the existing Bee Canyon Channel. Continuing downstream, the channel would

cross the railroad and depart the project site via a reinforced concrete box measuring 12 feet wide by nine feet high that will be protected in place. No additional downstream improvements are necessary since the existing channel discharge capacity is adequate to transmit the tributary flow from the project.

Agua Chinon Channel. Under the proposed plan, the Agua Chinon Channel, upstream of Irvine Boulevard, would remain substantially unchanged and would continue to be maintained by the present owner. At Irvine Boulevard, the existing concrete box culvert crossing will be protected in place. Immediately upstream and downstream of the culvert location, the existing earthen channel will be improved with a riprap lining. Downstream from that location, the plan proposes selected demolition of the existing concrete box culverts and open channels and replacement with the corridor cross-section; and supporting internal culvert crossings and storm drain laterals. The corridor is approximately 8,000 feet in length. Further downstream, in the vicinity of the SCCRA railroad tracks, the new drainage corridor would reconnect to the existing Agua Chinon Channel. Continuing downstream, the channel would cross the railroad tracks and depart the project site via a reinforced concrete box measuring 12 feet wide by ten feet high that is proposed to be protected in place. No additional downstream improvements are necessary since the existing channel discharge capacity is adequate to transmit tributary flow.

Borrego Channel, Wildlife Corridor and Serrano Creek. The upstream reach of Borrego Channel east of Irvine Boulevard currently consists of a natural wash flowing down from the Santa Ana Mountains. Runoff flows beneath the intersection of Irvine Boulevard and Alton Parkway in a dual barrel culvert crossing which outlets to a trapezoidal section channel measuring 25 feet wide by six feet high, traveling 2,800 feet to the southwest. At the end of the trap channel section, the channel transitions into a vertical wall-reinforced concrete section measuring 25 feet wide by nine feet high. From there, the channel continues for approximately 4,000 lineal feet into the vicinity of the SCRRRA railroad tracks, where it curves to the northwest and transitions into a rock lined earthen channel. This rock-lined channel travels about 600 lineal feet to a point where it crosses the railroad tracks, ultimately discharging runoff downstream into an OCFCD regional drainage facility. No additional downstream improvements are necessary since the existing channel discharge capacity is adequate to transmit tributary flow.

Under the proposed project, the Borrego Channel would be modified to initially release upstream and later recapture downstream, low flow water rerouted out of the existing wash and into a new Wildlife Corridor (as described in Section 5.9 Biological Resources of this Final Program EIR). East of Irvine Boulevard, in the upstream reach of Borrego Wash, a concrete structure will be constructed to divert flow out of the wash streamline. From that point, a shallow channel would be constructed to convey the flow toward and through the existing Magazine Road tunnel below Irvine Boulevard to the entrance of the proposed Wildlife Corridor. Diverted flow will travel in the new corridor streamline to a downstream location in the vicinity of the SCRRRA railroad tracks near the Borrego Channel. At this location, Borrego Channel will be covered with a reinforced concrete roof span and buried below the earthen fill. Low flow runoff that is diverted from Borrego Wash into the wildlife corridor will arrive at this location, will cross over the buried Borrego Channel and flow toward a new catch basin inlet where it is recaptured and returned northwesterly to the rock lined section of the Borrego Channel via a storm drain lateral.

From the Magazine Road tunnel to the recapture inlet, the proposed wildlife corridor will be approximately 9,000 lineal feet and generally parallels Borrego Channel. It has a cross section and landscaping matching the descriptions previously given for depth, side slope, and ground cover. At the recapture inlet, intercepted low flow will be redirected to the northwest, while the wildlife corridor will continue southeasterly toward a connection to Serrano Creek. Along the southeasterly route, wildlife movement will be channeled through a proposed 15 foot wide by 12 foot high corrugated metal arch tunnel crossing below the SCRRA railroad. The tunnel will emerge on the southerly side of the railroad, where the corridor continues uncovered for 700 lineal feet to a second arch tunnel of a similar configuration. The second tunnel will be built to permit wildlife movement into the existing Serrano Creek Channel at the intersection of Barranca Parkway and Alton Parkway. Below the Barranca-Alton intersection, a triple ten foot high by ten foot wide reinforced concrete box culvert will allow wildlife movement to proceed south in Serrano Creek to the project boundary at the I-5 Freeway.

San Diego Creek. At the southerly most point of PA 30 is the San Diego Creek. It is an unimproved earthen channel that will be replaced with 1,000 lineal feet of buried storm drain conduit measuring 96 inches in diameter.

With recent improvements to upstream flood control facilities, the floodplain area has likely decreased and fewer areas of the project area are subject to inundation. The phasing of the flood control system improvements in PAs 51 and 30 will be coordinated with the street-phasing schedule so that the storm drains are installed prior to or in concert with road construction. Improvements to the flood control system shall be evenly scheduled during the various phases of development. However, without proposed project drainage improvements a substantial increase in the rate or amount of surface runoff due to new development in localized areas may occur, resulting in flooding on- or off-site depending on the future proposed development. This is considered a significant impact.

Threshold 6: Otherwise substantially degrade water quality?

Base Plan and Overlay Plan

Flood control conveyance and detention facilities that are proposed to be implemented during project buildout will comply with the requirements of the Basin Plan and decrease the project area contribution to sediment loading and toxic pollutants in downstream facilities and the receiving waters of Newport Bay.

The Irvine Ranch Water District (IRWD) is proposing installation of “natural treatment system” (NTS) basins that will capture and treat dry weather flow. The proposed system consists of NTS detention basins of varying dimension and capacity, selectively situated throughout the watershed. The basins will cleanse surface water by impounding low flow. As the impounded water in the basin accumulates, the “natural ecosystem process” works to remove sediments, nutrients, pathogens, and other contaminants from impounded flow. To address potential water quality issues as a result of proposed development under the plan, NTS basins (or equivalent) will be placed in or adjacent to the stream paths of the Bee Canyon, Agua Chinon, Serrano and San Diego Creek Channels and Marshburn Basin. The basins or equivalent will mitigate regional water quality impacts. Additionally, mitigation of on-site water quality impacts will be provided on the project site in accordance with the requirements of the NPDES program.

As per the requirements of the Regional Water Quality Control Board, proposed projects occurring upstream of or discharging into impaired waterbodies listed on the Clean Water Act Section 303(D) list may be subject to additional controls (specifically Total Maximum Daily Loads or TMDLs) pursuant to that regulation. Depending on the specific type of project proposed, these controls could include discharge prohibitions, revisions to discharge permits, or management plans to address water quality impacts. This is especially important in the Newport Bay watershed. At this program level of planning, the potential to degrade surface water quality is considered a significant impact.

Threshold 7: Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary of Flood Insurance Rate Map or other flood hazard delineation map?

Base Plan and Overlay Plan

With recent improvements to upstream flood control facilities, the floodplain area has likely decreased and fewer areas of the project are subject to inundation. The exact boundaries of the 100-year floodplain in PA 51 and 30 is unknown at this time. The entire County of Orange Flood Insurance Rate Maps (FIRMs) are being revised by the Federal Emergency Management Agency (FEMA). At the request of the City of Irvine, the revisions will add the former MCAS El Toro to the FIRMs. When the FIRMs were originally prepared, Federal lands were not included, but are now being added as those lands change into non-Federal ownership. The revised FIRMs are due to be completed in the spring of 2003. Developers with property located in the newly delineated 100-year floodplain will be required to construct such improvements as necessary to remove the property from the 100-year floodplain and to prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request is filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from property. After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process. The potential for placement of housing within a 100-year floodplain is low; however, at this program level of environmental review, this issue is considered significant. FEMA maps, or Flood Insurance Rate Maps (FIRMs) have not been prepared for the project area as the area is still currently federal property.

Project development is proposed in areas of PAs 51 and 30. Existing and proposed development within these areas could be subject to potential flooding associated with a 100-year frequency storm. This is considered a significant impact.

Threshold 8: Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Base Plan and Overlay Plan

With recent improvements to upstream flood control facilities, the floodplain area has likely decreased and fewer areas of the project are subject to inundation. The exact location of the 100-year floodplain in PAs 51 and 30 is unknown at this time. During the site planning process for the project area the 100-year floodplain boundary shall be delineated in order to

accurately ascertain flood-prone areas and development constraints. The potential for the placement of structures within a 100-year floodplain is considered a significant impact. Updates to existing Federal Emergency Management Agency (FEMA) flood hazard maps may already have been processed as flood control improvements have been completed and will be reflected in future site plans. The City will coordinate floodplain delineation efforts with the Orange County Flood Control District and FEMA.

Project development is proposed in areas of PAs 51 and 30. Existing and proposed development within these areas could be subject to potential flooding associated with a 100-year frequency storm. This is considered a significant impact.

Threshold 9: Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Base Plan and Overlay Plan

The proposed project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam because there is not a levee or a dam in the vicinity of the project area. The impact to this issue is not considered significant.

Threshold 10: Would the project result in inundation by seiche, tsunami or mudflow?

Base Plan and Overlay Plan

The proposed project would not place people or structures in a location that would be adversely affected by a seiche, tsunami or mudflow. There is not a dam or levee in the vicinity of the project site that could result in a potentially harmful seiche or mudflow resulting from an earthquake. The project site is located far enough from the shoreline as to avoid the adverse affects of a tsunami. The impact to this issue is not considered significant.

5.7.4 Significant Impacts

Base Plan and Overlay Plan

H/WQ 1. Grading and excavation activities required for future development could result in the exposure of bare soils which could result in both wind and water-related erosion, and a significant water quality impact if not properly treated. Through buildout of the proposed project, wind and water related erosion has the potential to violate water quality standards or waste discharge requirements. This is considered a significant impact. Implementation of Mitigation Measures HW1 and HW2 will reduce the impact associated with the potential to violate water quality standards and waste discharge requirements to a level less than significant.

Additionally, a Storm Water Pollution Prevention Plan (SWPPP), Water Quality Management Plan (WQMP) will be prepared. A Notice of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the City Engineer for: a) any disturbance of one acre or more of soil in the project area; b) General Dewatering NPDES Permit of the Santa Ana RWQCB; and c) provisions of the Countywide Permit.

These measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned, designed, and constructed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future.

- H/WQ 2.** Improvements to the flood control system shall be evenly scheduled during the various phases of development. However, a substantial increase in the rate or amount of surface runoff due to new development may occur, resulting in flooding on- or off-site depending on the future proposed development. The potential for flooding to occur on-or off-site as a result of future development of the project area is considered a significant impact. Implementation of Mitigation Measure HW3 will reduce this impact to a level less than significant.
- H/WQ 3.** With recent improvements to upstream flood control facilities, the floodplain area has likely decreased and fewer areas of the project area are subject to inundation. The phasing of the flood control system improvements in PAs 51 and 30 will be coordinated with the street-phasing schedule so that the storm drains are installed prior to or in concert with road construction. Improvements to the flood control system shall be evenly scheduled during the various phases of development. However, a substantial increase in the rate or amount of surface runoff due to new development may occur, resulting in flooding on- or off-site depending on the future proposed development. This is considered a significant impact. Implementation of Mitigation Measure HW3 will reduce on- or off-site flooding due to surface runoff to a level less than significant.
- H/WQ 4.** As per the requirements of the Regional Water Quality Control Board, proposed projects occurring upstream of or discharging into impaired waterbodies listed on the Clean Water Act Section 303(D) list may be subject to additional controls (specifically Total Maximum Daily Loads or TMDLs) pursuant to that regulation. Depending on the specific type of project proposed, these controls could include discharge prohibitions, revisions to discharge permits or management plans to address water quality impacts. This is especially important in the Newport Bay watershed. At this program level of planning, the potential to degrade surface water quality is considered a significant impact. Implementation of Mitigation Measure

HW1 will reduce the impact of future development on surface water quality to a level less than significant.

Additionally, a Storm Water Pollution Prevention Plan (SWPPP), Water Quality Management Plan (WQMP), Notice of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the City Engineer for: a) any disturbance of one acre or more of soil in the project area; b) General Dewatering NPDES Permit of the Santa Ana RWQCB; and c) provisions of the Countywide Permit.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Grading or building permit applicants will be required to submit and obtain approval of a Water Quality Management Plan (WQMP) from the City of Irvine prior to issuance of the permits. The WQMP will specifically identify BMPs that will be used on-site to control predictable pollutant runoff. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.), and shall reference the location(s) of structural BMPs.

Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

- H/WQ 5.** Project development is proposed in areas of PAs 51 and 30. Existing and proposed development within these areas could be subject to potential flooding associated with a 100-year frequency storm. Mitigation Measure HW4 will reduce the impact of exposure of future residential development in the project area to a level less than significant.

5.7.5 Mitigation Measures

Base Plan and Overlay Plan

- H/WQ 1.** Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City of Irvine adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will

ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area . . . and residential construction sites that result in the disturbance of five acres or more . . . shall be required to develop and implement BMPs . . . to control erosion and siltation and contaminated runoff from the construction sites." Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of one acre or more.

The City's standard conditions of approval indicate that a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.

Additionally, prior to the issuance of a grading permit, project applicants must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.), and shall reference the location(s) of structural BMPs.

Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the Director of Community Development for any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES Permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

- H/WQ 2.** Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TDML) Implementation Plan adopted for this watershed.
- H/WQ 3.** Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrology studies and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.
- H/WQ 4.** Prior to issuance of a building permit, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.
- After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process.

5.7.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Less than significant.

Notes and References

1. County of Orange. *MCAS El Toro Community Reuse Plan DEIR No. 563, Volume 1*. 1996.
2. County of Orange. *Draft Supplemental Analysis for EIR No. 563*. 1999.

3. City of Irvine. *Draft Urban Services Plan for the El Toro Annexation*. Cotton/Beland/Associates. October 1999.
4. City of Irvine. *Irvine Planning Area 30, GPA/ZC-#21633-GA/#21635-ZC FEIR*. 1996.
5. *ETRPA Millennium/MCAS El Toro Reuse Plan Technical Appendices*. 1998.
6. City of Irvine. *General Plan*. March 9, 1999.
7. Tettemer, John A. and Associates. *Flood Control Master Plan for San Diego Creek*. 1989.

5.8 Agricultural Resources

5.8.1 Environmental Setting

To assess potential impacts to agricultural resources, lands classified as agricultural land by the California Department of Conservation and any land in the project area that is currently used for agricultural production, zoned for agricultural use, or within a Williamson Act contract, must be identified.

Agricultural Classifications Within the Project Area

The California Department of Conservation, through the Farmland Mapping and Monitoring Program (FMMP) of the Division of Land Resource Protection defines classifications of agricultural lands as follows:

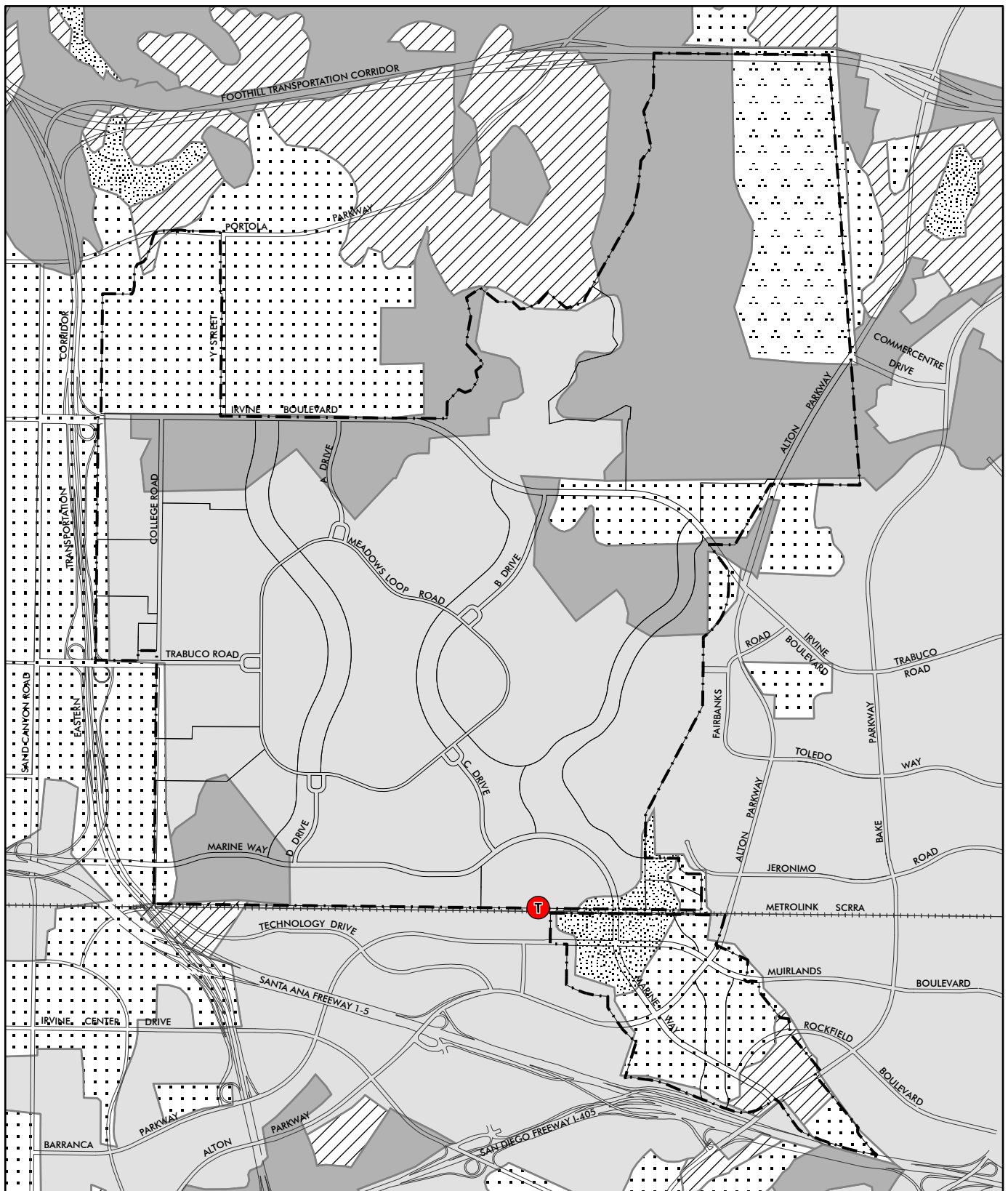
Prime Farmland: Land which has the best combination of physical and chemical features able to sustain long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for production of irrigated crops at some time during the previous two map updates.

Farmland of Statewide Importance: Similar to Prime Farmland that has a good combination of physical and chemical features able to sustain long-term production of agricultural crops. This land has minor shortcomings, such as greater slopes or less ability to store soil moisture than Prime Farmland. Land must have been used for production of irrigated crops at some time during the two previous map updates.

Unique Farmland: Lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. This land is used for the production of specific high economic value crops such as oranges, olives, avocados, rice, grapes, or cut flowers. Land must have been cropped at some time during the two previous map updates.

Farmland of Local Importance: Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

The Orange County Board of Supervisors has not designated any farmland as being of "Local Importance." Table 5.8-1 shows the approximate acreages of the different FMMP agricultural classifications within the project area. The location of these farmland classifications is depicted in Figure 5.8-1.



Source: California Department of Conservation, Farmland Mapping and Monitoring Program, 2000.

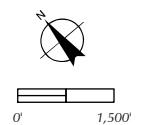
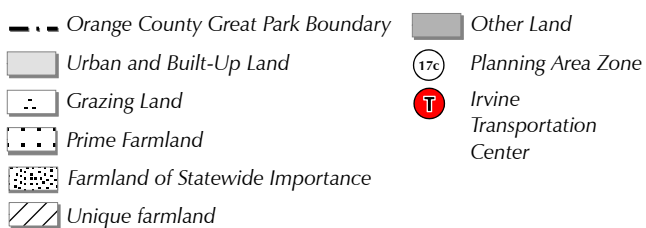


Figure 5.8-1
Agricultural Resources

**Table 5.8-1
Existing Agricultural Classifications Within
the Project Area**

Agriculture Classification	Approximate Acreage
Prime Farmland	659*
Farmland of Statewide Importance	99
Unique Farmland	70

Source: California Department of Conservation FMMP, 2002.

* includes 55 acres on the Musick Jail Facility

Surrounding Agricultural Classifications

The project area is adjacent to unincorporated land within the City of Irvine's Sphere of Influence and incorporated areas of Irvine and Lake Forest. As shown in Figure 5.8-1, land to the north and west of the project area is identified as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland by the FMMP. The remainder of existing agricultural land within the City of Irvine (including all of the existing agricultural land within the project site) is designated for urban uses, and agriculture is only designated as an interim use until the land is developed.

Orange County Agriculture Conversion

Table 5.8-2 depicts the conversion of agricultural land to non-agricultural uses within Orange County from 1998-2000. As depicted in this table, 10,127 acres of Prime Farmland, 763 acres of Farmland of Statewide Importance and 6,063 acres of Unique Farmland were inventoried in Orange County in 2000. Based on the County's total acreage, the lands identified by the FMMP for the project site as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland comprise seven, 13, and one percent of the County's total acreage of these categories, respectively.

As can be seen in Table 5.8-2, a net loss of agricultural lands within Orange County occurred from 1998 to 2000. This trend is expected to continue as the increase in population continues to create pressure for new housing and employment opportunities.

Lands in Agricultural Production

Portions of the project area are within agricultural production. Specifically, portions of PAs 51 and 30 are currently leased for agricultural uses, and approximately 55 acres of PA 35 are used for agricultural production associated with the James A. Musick Jail operation. No agriculture is contained on the IRWD parcel.

Table 5.8-2
Orange County
Change In Land Use Summary

Land Use Category	Total Acreage Inventoried		1998-00 Acreage Changes			
	1998	2000	Acres Lost (-)	Acres Gained (+)	Total Acreage Changed	Net Acreage Changed
Prime Farmland	11,099	10,127	985	13	998	-972
Farmland of Statewide Importance	842	763	83	4	87	-79
Unique Farmland	6,259	6,063	264	68	332	-196
Farmland of Local Importance	0	0	0	0	0	0
Important Farmland Subtotal	18,200	16,953	1,332	85	1,417	-1,247
Grazing Land	38,518	37,964	660	106	766	-554
Agricultural Land Subtotal	56,718	54,917	1,992	191	2,183	-1,801
Urban and Built-Up Land	269,986	273,383	592	3,989	4,581	3,397
Other Land	181,770	180,174	2,351	755	3,106	-1,596
Water Area	986	986	0	0	0	0
Total Area Inventoried	509,460	509,460	4,935	4,935	9,870	0

Source: Farmland Conversion Report 1998 to 2000 (Department of Conservation).

(1) Total area inventoried differs from previously reported acreage due to adoption of 1:24,000 digital county boundary file and conversion to Albers Equal Area Projection.

Williamson Act

All of the identified agricultural land within PAs 51 and 30 is currently in governmental ownership and is exempt from taxes; no agricultural land within the project area is currently covered by Williamson Act contracts. Williamson Act contracts with private landowners in the vicinity of the project area have been noticed for non-renewal by the landowners and all contracts have terminated as of July 1999.

City of Irvine Policies and Programs

Build-out of the City of Irvine and its Sphere of Influence in accordance with the General Plan would result in the conversion of open space, including agricultural land, to urban use. In the City of Irvine Comprehensive General Plan Update – Phase 2 and Zoning Ordinance Update – Phase VI Master EIR (State Clearinghouse #93-111034), this was considered a potentially significant impact.

In accordance with the policies and programs of the Conservation and Open Space Element, the General Plan Land Use Diagram designates large areas in the City and Sphere of Influence for permanent open space. Over time, as build-out of the City occurs, these lands will all be dedicated and placed in public ownership through the City's Phased Dedication and Compensating Development Program.

The City of Irvine General Plan includes as a stated objective the protection and preservation of agriculture in undeveloped areas until the areas are ready for development, or if the areas are not available for development (Objective L-10). In June 2002, the City of

Irvine amended General Plan Objective L-10 regarding the City's policies related to agriculture. The purpose of this amendment was to address the cumulative loss of agricultural resources in Irvine and Orange County as a whole. The revised amendment, as follows, shifted the emphasis from retention of agriculture for open space relief (which the community achieves through its Phased Dedication and Compensating Development Program) to a retention of smaller scale agricultural operations for heritage value.

Objective L-10: Agriculture

"Encourage the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development. "

Policy (a): Provide for farming opportunities in the community, where feasible and appropriate, through an Agricultural Legacy Program facilitating limited scale agricultural operations and programs on public lands. The program may include components such as edible landscape, metro-farming, heritage farming, model farming, education and community service farming and other farm or farm market programs. Locations for implementation of the Agricultural Legacy Program to be considered should, at a minimum, include:

- C Designated open space spine network
- C Designated open space areas not subject to the Natural Community Conservation Plan (NCCP)
- C Other appropriate publicly owned lands

Policy (b): Consider creating a "working model" farm to act as a center for education and enjoyment of all age groups pursuant to the Agricultural Legacy Program in conjunction with the City's planning efforts concerning the reuse of MCAS El Toro, or with the Couth Coast Research Extension owned by UC Regents.

Policy (c): Permit agricultural use of land which is unsuitable for building because it is within flood plains, or is subject to hazards to public health, safety, and welfare or similar constraints precluding development. Conversion from agricultural use may be allowed where the identified hazard conditions have been eliminated.

Policy (d): Permit agriculture uses, on an interim bases, on land designated for development, and consider agricultural uses as part of the City's planning efforts for the re-use of MCAS El Toro.

Policy (e): Encourage and support federal and state legislation proposed for the purpose of preservation of agricultural lands which are compatible with the City's goals and objectives.

Policy (f): Allow for conversion of interim and permanent agricultural uses to development to provide land for the construction of housing units consistent with the Land Use and Housing Elements, and the development of commercial and industrial buildings consistent with the provision of job opportunities as described in

the Land Use Element, where such conversion does not conflict with other L-10 policies.

Policy (g): Pursue the open space policies contained in the Conservation and Open Space Element and address any open space or aesthetic impacts from the conversion of interim and permanent agricultural uses to development as part of the City's existing policies for the preservation of open space and existing policies for mitigation of views and aesthetic impacts under the policies in the Conservation and Open Space Element.

PA 51 and 30 are currently designated for a variety of urban uses in the City of Irvine General Plan. The jail and IRWD parcels are designated for Public Facilities. No portion of the project area is presently designated agriculture on the City's Conservation and Open Space or Land Use Element diagrams. However, this does not preclude agricultural use. In keeping with the policies above, the project encourages agriculture as an interim land use prior to development of the land.

Agricultural Legacy Program

The purpose of the Agricultural Legacy Program outlined in Policy L-10 is to facilitate limited scale agricultural operations and programs on public lands within Irvine. As part of the Agricultural Legacy Program, specific sites in Irvine will be made available for metro farming within the next five years. Metro farming generally includes small scale agricultural operations and activities that can be accommodated in an urban environment. Such activities could include, but not be limited to, small-scale specialty farming, model farming, heritage farming, and community service/educational farming. One example of a metro-farming operation is an Edible Landscape Program, a heritage farming operation involving Southern California Edison easements, where produce is grown within the public easements and sold by the farmer.

The City identified the following areas as having the soils and other qualities that make them candidates for metro-farming, subject to further evaluation:

- C Approximately 100 acres within Planning Area 6. These areas are currently proposed for development as part of the Northern Sphere Project, but may be made available for agricultural use.
- C Approximately 11 acres within the Jeffrey Open Space Spine south of Interstate 5, between Walnut Avenue and the railroad right-of-way.
- C Approximately 266 acres within Planning Area 16 (Implementation Districts G and H). Habitat sensitive agricultural operations could be considered within this area.
- C Approximately 51 acres within minor preservation areas P-10 and P-13.
- C Easements or public lands, including land within the former MCAS El Toro designated for agricultural uses in accordance with any re-use plan.

The Irvine Company and the City of Irvine are in the process of further evaluating potential sites to include in the Agricultural Legacy Program. Specific sites that may be suitable for implementation of the Agricultural Legacy Program, as well as Southern California Edison (SCE) easements/properties in general are currently being considered. The Draft Technical Memorandum for the Irvine Agricultural Legacy Program Preliminary Sites Assessment (City of Irvine November 26, 2002) identifies potential sites as well suited for inclusion in the Agricultural Legacy Program due to its soils, local and regional access, established nursery operations, and topography. Site 5 (SA-1 of the project area, which is a portion of PA 51) is included as a potential site for implementation of the Agricultural Legacy Program. Both the Base Plan and Overlay Plan propose Agriculture land use and zoning designations in this portion of PA-51.

In the past few years the City has been considering conversion of agricultural lands in three remaining areas of the City and its Sphere of Influence – the Northern Sphere, Spectrum 8, and the proposed project site. The City has examined the combined, or cumulative impact of the conversion of agricultural lands, and has also examined potential locations for agricultural land to be preserved as mitigation for some or all of the conversions of agricultural land considered in these areas. The City has also examined potential City-wide mitigation and fee programs for all of these conversions, and has concluded that it is not appropriate or feasible to preserve large scale agricultural operations, or to adopt a fee program designed to generate revenue to acquire agricultural lands elsewhere.

The City has adopted its Agricultural Heritage program which is designed to mitigate impacts on a City-wide basis as part of the City's implementation of General Plan Policy L-10 as amended in June 2002. Policy L-10 was intended by the City to apply throughout the City and its sphere areas. As part of its current proposed development plan for the Orange County Great Park, the City has designated agricultural land to be preserved, in addition to the land that would be included in the City's Agricultural Heritage program. Beyond these preserved areas, and looking at this issue on a combined basis, and in the context of each project, the City has determined that there are no additional areas within each of these areas that are suitable for agricultural preservation.

Long Term Viability of Large Scale Agricultural Production in Orange County

Even apart from the perceived potential for the conversion of agricultural uses to other uses due to development pressure, the long-term viability of agricultural production in Orange County in general continues to deteriorate. Factors that impact the viability of agricultural uses include: 1) the cost of land; 2) the cost of water; 3) the cost of labor; 4) property taxes; 5) the impact of urbanization; 6) competition; and 7) the impact of environmental regulation.

Land Value: Land prices in Orange County for raw land in the vicinity of the proposed project range from about \$600,000 to \$1,000,000 per acre, depending upon variables such as location, intended uses, existing infrastructure, existing land use entitlements, land constraints, and other issues. Agricultural production is considered not to be viable on any parcel valued at more than \$30,000-\$35,000 per acre, since a reasonable rent based on these land values would be prohibitive to a profitable agricultural operation. (See *Trends in*

Agricultural Land & Lease Values – 2001, California Chapter of the American Society of Farm Managers and Rural Appraisers, [<http://www.calasfmra.com>].

Water Costs: Irrigation water cost is a major component in determining the viability of agricultural operations. Irrigation water for existing agricultural tenants within the project area is approximately \$290 per acre foot. This water includes water purchased from the Irvine Ranch Water District and water transported from deep wells that produce water of sufficient quality for agricultural operations located in the western portion of the City and transported to the agricultural area in the northeast part of the City through a system of pipes and lift stations. This contrasts with water costs for growers in the major comparable growing areas in the Central Coast area, which includes Oxnard and Santa Maria, where the weighted average cost of agricultural surface water is \$128 per acre foot. On a regional basis, the South Coast Region, which includes Orange County, has by far the highest weighted average cost of agricultural water in the state at \$373 per acre foot. (California Department of Water Resources, California Water Plan, Bulletin 160-98, Appendix 4A)

Labor Costs: In general, an adequate labor supply is available for Irvine growers. The cost of labor is actually slightly lower for Irvine growers than in Oxnard and Santa Maria. Recently, however, growers have reported that agricultural workers are moving from the fields to higher paying warehouse, factory, and other support service jobs, which are becoming more plentiful as surrounding areas develop. Even so, the cost of labor for Irvine growers is higher in competitive markets outside of California where the minimum wage is lower. (US Department of Labor, Minimum Wage Laws in the States, [<http://www.dol.gov>].

Property Taxes: Since none of the agricultural areas are subject to Williamson Act contracts, property taxes in areas considered likely to convert to other uses reflect increasingly higher property values, subject to the constraints of Proposition 13. In other words, these areas are subject to high property taxes due to the high value of the land, making it difficult to obtain an economic return on the land from agricultural operations.

Urbanization: As land surrounding the current agricultural operations continues to develop, operational and economic constraints increase. These constraints include limitations on hours of operation, limits on chemical (pesticide and fertilizer) applications, required setbacks from adjacent non-agricultural uses, and clean up required due to the use of farm equipment on public roads. Growers also experience increasing acts of vandalism and crop theft due to adjacent urbanization. (Dr. Daniel Hagillhi, South Coast Research and Extension Center SCREC))

Competition: Increasingly, Oregon and other areas with lower production costs, such as Santa Maria and Oxnard, are also shifting to high cash crops. This shift has impacted the ability of Orange County farmers to overcome the high cost of agricultural activities in Orange County in the competitive market. In addition, competition from foreign growers is increasing considerably. Produce grown in Mexico, Chile, Argentina, and the Dominican Republic can be produced at dramatically lower costs due to cheap labor, availability of land and resources, a farm friendly environment, and the lack of regulatory requirements that are in California. The North American Free Trade Agreement (NAFTA), which calls for gradual removal of tariffs and trade barriers, is resulting in the easing of restrictions on the import of agricultural products, such as avocados, which will result in even greater competition. Mexico, for example, is by far the largest producer of avocados in the world.

(Food and Agriculture Organization of the United States, Statistical Data Base, Year 2000 Data)

Environmental Regulation: The regulation of agricultural activities is an increasingly significant cost for agricultural operations. Both the Clean Water Act and Clean Air Act, as administered through state agency regulations, increasingly affect agriculture, and particularly field crops. By way of example, under the Clean Air Act, the PM₁₀ rule affects the amount of suspended particulates from a field, just as that regulation applies to a construction project. Also, by way of example, the Clean Water Act requires states to adopt and implement water quality standards for water bodies in the state. The watershed within the project area drains into San Diego Creek and ultimately to the Upper and Lower Newport Bay. These water bodies have been classified as “impaired” under Section 303(d) of the Clean Water Act. Accordingly, the Regional Water Quality Control Board must adopt a Total Daily Maximum Load (TMDL) for these water bodies. The TMDLs must then be allocated between current and future dischargers into those bodies. TMDLs have been adopted for nutrients, sediment, and pathogens, and agricultural operators have been allocated TMDLs for these items. An additional TMDL is currently under development for toxicity, which will include agricultural chemicals.

5.8.2 Threshold For Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for agricultural resources.

Would the project:

1. *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use;*
2. *Involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland to non-agricultural use; or*
3. *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

5.8.3 Environmental Impact

The following analysis focuses on the potential impacts associated with implementation of the Base Plan and the Overlay Plan for the Former MCAS El Toro (PAs 51 and 30). The Musick Branch Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. As a result, implementation of the proposed project will not result in a significant agricultural resources impact associated with the annexation of the James A. Musick Jail Facility and the IRWD Parcel.

Threshold 1: Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use?

Base Plan and Overlay Plan

A major component of the Orange County Great Park Plan is the preservation of agriculture within several areas of the property. Under the proposed Base Plan, 443 acres of land are proposed for an Agriculture land use. Of these 443 acres, a total of 370 of the approximately 1,053 acres of land classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance will be preserved in perpetuity as agriculture. Interim agriculture will be allowed on another 121 acres of Prime Farmland and Farmland of Statewide Importance.

Under the proposed Overlay Plan, 307 acres of land are designated as an Agriculture land use. Of these 307 acres, 251 of the approximately 1,053 acres of land classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance will be preserved in perpetuity.

Although the proposed project helps implement the Agricultural Legacy Program by proposing agricultural land uses in the portion of PA 51 that is identified by the Irvine Agricultural Legacy Program Preliminary Sites Assessment (City of Irvine November 26, 2002), both the Base Plan and Overlay Plan would result in the permanent loss of between 683 acres (under the Base Plan) and 802 acres (under the Overlay Plan) of land classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. This is considered a significant impact.

For a discussion of mitigation measures considered to reduce the significant impact associated with the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses, please see Section 5.8.5 Mitigation Measures of this Final Program EIR. This section discusses several mitigation measures determined to be infeasible and identifies feasible measures. Even with implementation of the feasible mitigation measures, the impact associated with conversion of land classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses is significant and unavoidable.

Threshold 2. Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of existing farmland to non-agricultural use?

Base Plan and Overlay Plan

While both the proposed Base Plan and Overlay Plans will result in the loss of some existing agriculture on-site, both plans would also preserve in perpetuity several large areas of farmland. Agriculture will continue to be allowed as an interim use, and portions of the property that are not currently used for any agricultural purposes may be converted to agriculture and utilized for agricultural production on an interim basis.

The project would not have a significant indirect effect of increasing development pressure and accelerating the loss of the remainder of the agricultural land in the surrounding area. Development pressure already exists in these surrounding lands as a result of newly constructed roadways that provide access to the area. Additionally, surrounding property owners have already submitted plans to develop the surrounding agricultural lands with a

variety of urban uses. Specifically, the recently approved 7,743 acre Northern Sphere Project, which is located directly to the north of the project area, allows a variety of residential, community commercial, commercial recreational, medical and science, institutional, multi-use, and recreation uses. The Northern Sphere Project also allows a minimum of four elementary/middle schools, and over 3,000 acres of open space. The 730-acre PA 40 (Spectrum 8), which is located directly to the west of the project area, proposes approximately 640 acres of General Industrial and Medical and Science development. An additional 21 acres of the site would be dedicated for recreational use along the Jeffrey Open Space Spine. Land uses to the east and south of the site are primarily developed.

However, a net decrease in farmland under cultivation in the project area may have an indirect consequent increase in agricultural production costs such as transportation and labor. Agricultural activities tend to be incompatible with urban and suburban neighbors because of factors such as dust, odors, pesticide use, and machinery noise associated with normal farming operations. Residential uses are proposed in the northern portion of the project area. Also, the Educational Use allows for lodging and housing. Inclusion of on-going agricultural operations in the City's standard disclosure notices would forewarn residents and occupants of new development in the project area of adjacent agricultural activities. This would offer some degree of protection to farmers from complaints and nuisance suits regarding activities that are part of normal agricultural operations. Please see Section 5.8.5 Mitigation Measures for a detailed discussion of mitigation measures considered, but determined to be infeasible, and feasible mitigation measures that will be implemented.

The conversion of agricultural land to urban uses is a long and continuing trend in Orange County. Although it is difficult to quantify the amount of agricultural land that is under development pressure within the County, it is unarguable that such pressure exists and will continue with or without implementation of the proposed project. In addition, The Irvine Company, the owner of the unincorporated lands within the City of Irvine Sphere of Influence adjacent to the project area, has development plans for this property (i.e., Northern Sphere and PA 40) and the long-term agriculture is not viable due to the reasons identified in the EIRs for the subject projects.

As a result, while there are existing pressures that would result in the conversion of agriculture within and adjacent to the project area with or without implementation of the proposed project, the project will result in a significant and unavoidable impact associated with the conversion of existing agricultural land to non-agricultural uses.

Threshold 3: Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Base Plan and Overlay Plan

As discussed above, no land within the project area is designated by the City of Irvine General Plan for agriculture, nor is it zoned for agricultural uses in the Irvine Zoning Code. As all agricultural land within the project area is located on government owned land, no Williamson Act contract exists for properties within the project area. Agricultural lands surrounding the project area which have been under Williamson Act contracts have been noticed for non-renewal, and as of July 1999 all of the existing Williamson Act contracts

have terminated. As a result, the proposed project will not conflict with existing zoning or an existing Williamson Act contract.

5.8.4 Significant Impacts

Base Plan and Overlay Plan

- Ag 1.** The project Base Plan will convert 574 acres of Prime Farmland, 63 acres of Unique Farmland, and 46 acres of Farmland of Statewide Importance to non-agricultural use. The Overlay Plan will convert 651 acres of Prime Farmland, 63 acres of Unique Farmland and 88 acres of Farmland of Statewide Importance to non-agricultural uses.
- Ag 2.** The project will involve changes in the existing environment, which, due to their location or nature, could result in conversion of existing farmland to non-agricultural use.

5.8.5 Mitigation Measures

Mitigation Measures Considered But Determined to be Infeasible

CEQA Section 21002.1(b) requires that “each public agency shall mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so.” The term “feasible” is defined by CEQA Section 21061.1 to mean “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.”

A number of mitigation measures were considered for mitigating or avoiding the impact of the conversion of agricultural lands to other uses; however, no feasible mitigation measures are available that would reduce the impacts of the Base Plan or the Overlay Plan to a level less than significant. Potential mitigation measures considered include: the retention of agricultural land on-site; the purchase, set-aside, or transfer of development rights to preserve agricultural land elsewhere in the City or region, and assessing agricultural impact fees. The following is a brief discussion of the mitigation considered to attempt to reduce the impacts of the project to a level less than significant and the reasons why these measures were found to be infeasible.

Retention of Agricultural Uses

The encroachment of urban areas on agricultural lands is a long and continuing trend in Orange County. Although it is difficult to quantify the amount of agricultural land that is under development pressure within the County, it is evident that such pressure exists and will continue to exist with or without implementation of the project. The rising costs of irrigation water, increased land values, labor costs, and damage from vandalism have made

it difficult to maintain a successful large scale agricultural operation in the County. The conversion of agricultural land to urban uses is thus an important decisions that must ultimately be left to each local jurisdiction. The following describes actions considered by the City of Irvine to mitigate the loss of agricultural land.

Onsite Retention of Agricultural Uses

As discussed in subsection 5.8.1 *Environmental Setting* above, the City is working to establish an Agricultural Legacy Program, which is intended to address the local and regional loss of agricultural land. As part of this program, an initial assessment of candidate sites has been prepared (City of Irvine, November 26, 2002). Based on this preliminary assessment, several hundred acres of land will, within the next five years, be made available for metro farming, which may include such activities as specialty farming, model farming, heritage farming, and community service/educational farming. The proposed project helps implement the Agricultural Legacy Program on-site by proposing the OCGP General Plan designation and 1.1 Exclusive Agriculture Zoning designation on land within PAs 51 and 30, which will help retain on-site agricultural uses.

The retention of additional areas of the site in agricultural use is considered to be infeasible due to the constraints on the continued long-term viability of large scale agriculture in the area as discussed in the *Environmental Setting* subsection above. These constraints, particularly the economic constraints and constraints due to increased environmental regulation, will become greater over time. Despite any City actions to zone additional land for agricultural uses on-site, the City does not have the authority to require landowners to continue farming operations on land that is zoned for agricultural use. The retention of agricultural land use designations on the site will not, therefore, necessarily result in the continuation of agricultural uses. Moreover, a reduction in the development of the site would impede the City from achieving the voters' and the City's objectives for the site in a fiscally sound manner.

As noted above, the proposed project will retain a portion of the site in agricultural use, and agricultural uses may continue on other portions of the site until such time that development is to occur. These proposed long-term and interim uses, however, do not mitigate the significant impact of the conversion of significant farmland and existing agricultural land to non-agricultural uses.

Preservation of Agricultural Uses Citywide

The Irvine General Plan and the Phased Dedication and Compensating Development Opportunities Program will require the preservation of approximately 500 acres of land that has the soil quality and growing season that would otherwise qualify it as Significant Farmland.

Agricultural uses will continue on the South Coast Research and Extension Center SCREC site, which is owned by the University of California and is therefore not subject to many of the constraints on continued agricultural operations noted above. Land uses immediately adjacent to this facility should be planned with the continued agricultural operations at this

facility in mind. In addition, agricultural operations are currently occurring in open space areas or lands owned by utilities whose operations are compatible with continuing agricultural activities, such as utility corridors.

As discussed above, the City is working to establish an Agricultural Legacy Program, which is intended to address the local and regional loss of agricultural land. As part of this program, an initial assessment of candidate sites has been prepared (City of Irvine, November 26, 2002). All of the potential sites are undeveloped and most are currently available for agriculture. The topography, climate, and other factors associated with the sites make them conducive to growing a variety of crops. Based on the preliminary assessment of the candidate sites, several hundred acres of land will be made available for metro farming, which may include such activities as specialty farming, model farming, heritage farming, and community service/educational farming.

No other area of Significant Farmland within the City is planned for agricultural uses in the Irvine General Plan. The restriction of additional lands within the City for permanent and exclusive agricultural uses would be inconsistent with the goals and objectives of the Irvine General Plan. In addition, the same constraints on the continued viability of long-term, large-scale, agricultural production noted above with respect to the onsite preservation of agricultural uses would apply to these lands as well, regardless of the land use designation. Without some type of economic support or developed agreements, the mere designation of these lands for agricultural land uses will not ensure long-term agricultural operations.

Finally, even if it were feasible to preserve existing agricultural uses elsewhere in the City, the preservation of such uses would not result in the replacement of the agricultural land converted by the project. There is a finite amount of land suitable for agricultural production and there would still be a net reduction in Significant Farmland and land in agricultural production. The acquisition of fee title or conservation easements over off-site parcels would not, therefore, avoid, reduce, or compensate for the conversion of agricultural land to non-agricultural uses as a result of implementation of the project. At most, the acquisition might prevent the conversion of other farmland and agricultural uses as a result of other hypothetical future projects. This does not meet the requirement of a feasible measure as defined by CEQA.

Agricultural Impact Fees

Agriculture impact mitigation fees could be assessed against the project and used to purchase development rights in other areas so as to assure that permanent agriculture will be maintained. There are several programs that might be funded by impact fees.

The State Department of Conservation operates the California Farmland Conservancy Program, which provides grants to qualifying agencies for the acquisition of agricultural conservation easements. Establishing agricultural conservation easements involves purchasing deed restrictions on prime agricultural lands that preclude their use for development or non-agricultural purposes. The deed restriction would be permanent unless otherwise negotiated. The land under an easement remains in private ownership and use. Typically, restrictions imposed by an agricultural conservation easement limit residential, non-farm commercial, industrial, and extractive uses of the land. Deeds often allow construction of facilities for the production and processing of agricultural products. This

program does accept private contributions. Applications, however, must be made by public agencies such as a county or a city, or certain qualifying not-for-profit entities. The County of Orange and the City of Irvine have not participated in this program. No other agency in Orange County has been identified that participates in this program.

Also, the General Plan of the County of Orange contemplates an evaluation of the establishment of an Agricultural Preservation Program, which would use funds generated from the cancellation of agricultural preserves to fund grants, loans, research, and other programs relating to agricultural resources in an effort to mitigate the long-term impact of Williamson Act contract cancellations and to provide economic and technical support to County agricultural activities. The County has not yet initiated the evaluation of such a program, and has no plans to implement such a program (Northern Sphere EIR, December 2001).

Neither the City of Irvine nor the County of Orange has a fee mitigation program, nor has any specific local program been identified that might be funded by such an impact fee. To be successful, such a program would have to be implemented on a regional basis. In view of the lack of a regional fee mitigation program or any other program for the acquisition of development easements in the vicinity of the project, the imposition of a mitigation fee on a project-by-project basis is not considered to be feasible mitigation because it would not be capable of being accomplished within a reasonable period of time. Also, as is the case with the preservation of off-site agricultural resources, the preservation of existing agricultural resources by the acquisition of agricultural conservation easements would not prevent the net loss of significant farmlands and agricultural uses, and would not, therefore, mitigate the direct adverse effects of the project. Finally, the preservation of agricultural resources in the City of Irvine or even the County of Orange will not have a measurable impact on the availability of agricultural resources or agricultural production on a statewide or regional basis.

Since none of the potential mitigation measures are feasible, as discussed above, the impact related to the loss of agricultural land and significant farmland resulting from the implementation of the proposed project will remain significant and unavoidable.

Mitigation Measures Determined to be Feasible

Base Plan and Overlay Plan

Ag 1. In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operations, City Of Irvine Standard Discretionary Case Condition B.4 and City Of Irvine Standard Subdivision Condition 3.4 regarding disclosure statements shall be amended to include the following for subdivisions proposed adjacent to existing agricultural operations:

Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:

- C Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.

Ag 2. Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.

Ag 3. Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operation and adjacent urban uses.

5.8.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Ag 1. Significant and unavoidable.

Ag 2. Significant and unavoidable.

Notes and References

None.

5.9 Biological Resources

The information contained in this section is summarized from the *Biological Technical Report of Findings for the Millennium Plan - Phase II* prepared by the Chambers Group, Inc. (October 1999). The document is on file at the City of Irvine.

5.9.1 Environmental Setting

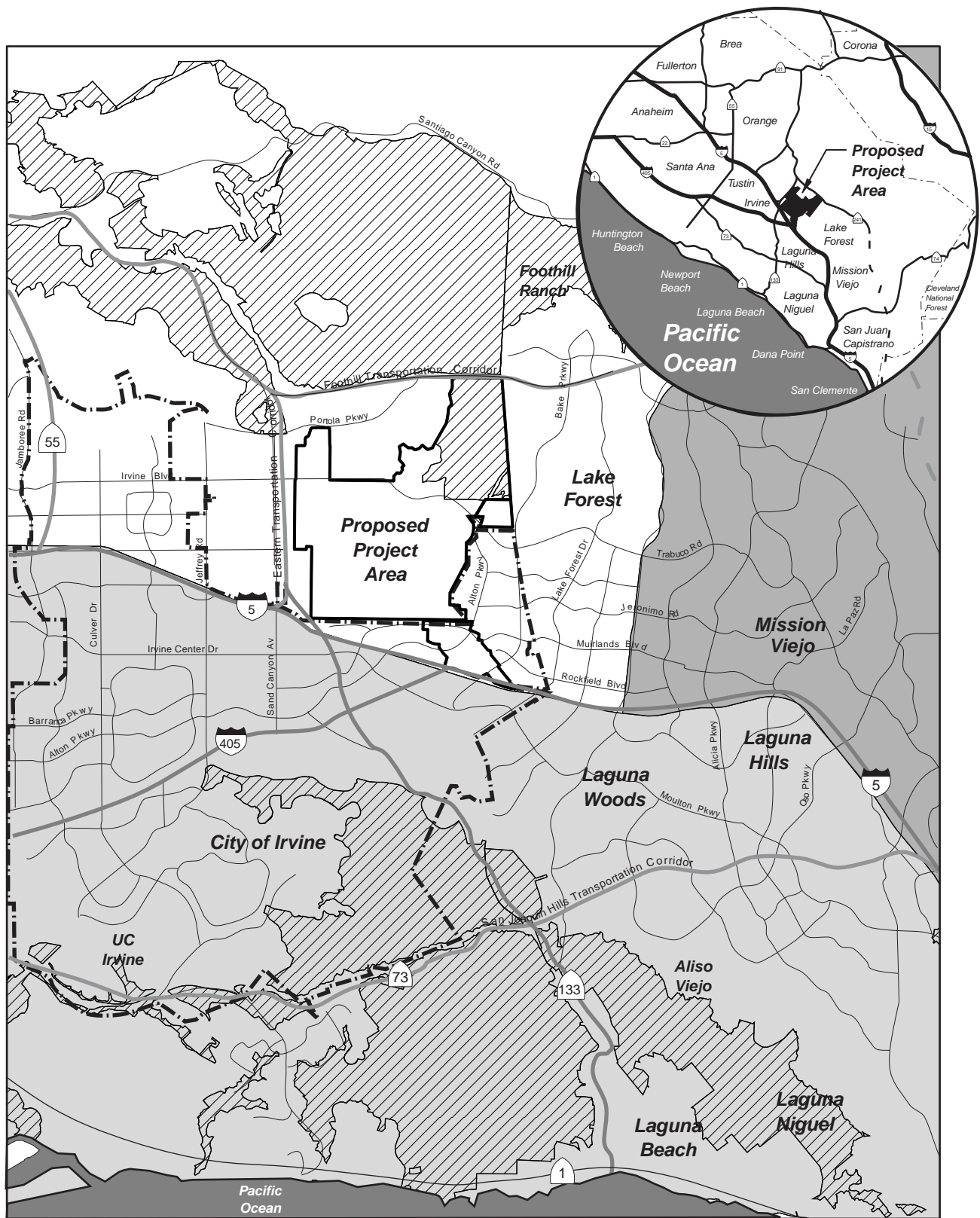
Former MCAS El Toro (PAs 51 and 30)

PAs 51 and 30 are relatively flat to moderately sloping terrain, with elevations ranging from approximately 220 to over 700 feet above mean sea level (MSL). Land uses contained on the former base consist mainly of airport runways, associated auxiliary aviation, military facilities, and housing areas. There is also a habitat preserve in PA 51, which consists of 995 acres, that has been used for military activities. The activities consisted of explosive ordinance demolition, magazine (ordnance storage), fuel storage, and pistol and archery ranges. A portion of the habitat preserve has been disturbed; however, the quality of the native habitats in the preserve is high and contains a number of special interest plant and wildlife species, including the California gnatcatcher, a species listed as threatened under the Federal Endangered Species Act.

The habitat reserve was identified for incorporation in the Orange County Central-Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) Reserve. This is based on consideration of the proximity of the reserve to the Lomas de Santiago frontal slopes; the density of California gnatcatcher and coastal cactus wren, which are NCCP target species in the reserve; potential linkages to core habitat areas and other areas containing high NCCP target species concentrations; and the ability for practical management within the reserve system. Figure 5.9-1 depicts the project site in relation to the NCCP/HCP. The NCCP/HCP is discussed in more detail below.

The intent of the County's NCCP program is to provide long-term, regional protection of the natural vegetation and wildlife diversity, while allowing compatible land use and appropriate development and growth. The Central-Coastal Subregion NCCP/HCP program, which includes the former MCAS El Toro property, was adopted by the Orange County Board of Supervisors on April 16, 1996. The Plan went into effect on July 17, 1996, on execution of the Implementing Agreement by the participating landowners and public agencies and issuance of a Section 10(a) permit by the U.S. Fish and Wildlife Service (USFWS) and 2081 and 2835 management authorizations from the California Department of Fish and Game (CDFG) to the program participants.

Although areas outside the habitat preserve provide minimal native or undisturbed habitat, many of these areas do provide agricultural, ornamental, and domestic landscapes. Golf courses, agricultural fields, residential neighborhoods, and landscaped area around commercial buildings commonly support migrating and local native bird species.



**Natural Community Conservation Planning /
Habitat Conservation Planning (NCCP / HCP)**

- NCCP/HCP Central Boundary
- NCCP/HCP Coastal Boundary
- NCCP/HCP South Boundary
- NCCP/HCP Reserve Area



0 1 2 Miles

Figure 5.9-1
Project Site in Relationship
to NCCP/HCP Area

Special Interest Biological Resources

Special interest species are species afforded special recognition by federal, State or local resource conservation agencies, organizations and/or jurisdictions. Special interest species include those listed as rare, threatened and/or endangered by resource conservation agencies such as the USFWS, CDFG, and the California Native Plant Society (CNPS).

In some cases, unlisted species considered sensitive by the scientific community or knowledgeable experts are included as special interest species. The special status of these species is generally due to limited, declining and/or threatened population sizes. The USFWS, CDFG, local agencies, and special interest groups such as CNPS publish “watch lists” of declining species; these lists often describe the general nature and perceived severity of the decline. In addition, recently published findings and preliminary results of on-going research provide a basis for consideration of species that are candidates for State and/or federal listing. Finally, species that are clearly not rare or threatened statewide or regionally, but whose local populations are sparse, rapidly dwindling or otherwise unstable, may be considered to be of “local concern.”

A sensitive species is considered as a potential inhabitant of the project area if its known geographical distribution encompassed part of the project area or if its distribution was near the project area and general habitat requirements of the species were present (such as the presence of roosting, nesting or foraging habitat, or a permanent water source). Furthermore, the potential for each species to occur in the project area was also assessed. The “potential for occurrence” ranking is based on the following criteria:

- C **Low potential for occurrence** - No recent or historical records exist of the species occurring in the project area or its immediate vicinity (within approximately five miles) and the diagnostic habitat requirements strongly associated with the species do not occur in the project area or its immediate vicinity.
- C **Moderate potential for occurrence** - Either a historical record exists of the species in the project area or its immediate vicinity (within approximately five miles) or the diagnostic habitat requirements associated with the species do occur in the project area or its immediate vicinity.
- C **High potential for occurrence** - Both a historical record exists of the species in the project area or its immediate vicinity (within approximately five miles) and the diagnostic habitat requirements strongly associated with the species do occur in the project area or its immediate vicinity.
- C **Species present** - The species was observed in the project area at the time of the survey on September 7, 1999 or in recent surveys.

Natural Community Conservation Program/Habitat Conservation Program (NCCP/HCP)

The State of California's NCCP pilot program is a cooperative effort to protect habitats and species. The program, which began in 1991 under the State's Natural Community Conservation Planning Act, is broader in its orientation and objectives than the California and Federal Endangered Species Acts (CESA, FESA). These laws are designed to identify and protect individual species that have already declined in number significantly. The primary objective of the NCCP program is to conserve natural communities and accommodate compatible land use. The program seeks to anticipate and prevent the controversies and gridlock caused by species' listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process.

The focus of the pilot program is the coastal sage scrub habitat of Southern California, home to the California gnatcatcher and approximately 100 other potentially threatened or endangered species. Because of its location on coastal plains and shallow slopes, urbanization and agricultural land conversion have disproportionately affected coastal sage scrub. This much-fragmented habitat is scattered over more than 6,000 square miles and encompasses large parts of three counties (Orange, San Diego, and Riverside) and smaller portions of two others (Los Angeles and San Bernardino). Fifty-nine local government jurisdictions, scores of landowners from across these counties, federal wildlife authorities, and the environmental community are actively participating in the program.

The Southern Coastal Sage Scrub NCCP region was approved in 1996 and established a 37,380-acre reserve system that includes significant areas of 12 major habitat types and covers 39 sensitive plant and animal species. The plan will guide habitat conservation and compatible land use over 209,000 acres of developed land and open space in two non-contiguous areas of Orange County (the Central and Coastal subregions, see below). The plan establishes a permanent reserve of about 38,000 acres of several types of habitat, including 19,000 acres of coastal sage scrub habitat. The NCCP region is organized into 11 planning "Subregions." For planning purposes, some of the Subregions are organized into "Subareas" that correspond to the geographic boundaries of participating jurisdictions or landowners. In each subregion and subarea, a local lead agency coordinates the collaborative planning process. Working with landowners, environmental organizations, and other interested parties, the local agency oversees the numerous activities that compose the development of a conservation plan. The CDFG and the USFWS provide the necessary support, direction, and guidance to NCCP participants in these functions.

Target and Identified Species

In 1996, the County of Orange approved the Central and Coastal Subregion NCCP/HCP and its associated Implementation Agreement. The NCCP/HCP designated the coastal California gnatcatcher, coastal cactus wren, and the orange-throated whiptail lizard as "Target Species," to be used as umbrella species to guide the design of a permanent habitat Reserve System to be created within the Central and Coastal Subregion. By providing long-term protection for the habitat required by the three "Target Species," sufficient coastal sage scrub (CSS) and other habitat would be protected to benefit a much broader range of CSS-related species. The NCCP/HCP also recognized "Identified Species" as those species that the NCCP/HCP addresses as if they were listed as endangered species under CESA or FESA.

Existing Use Areas or Special Linkage Areas

The Implementation Agreement defines “Existing Use Areas” as those areas with important populations of Identified Species but which are not included in the Reserve System and do not provide primary connectivity functions. Special Linkage Areas comprise areas that contain CSS, Target Species or provide connectivity functions between habitat areas within the Reserve System, between the Central/Coastal Subregion and other subregions, or between the Reserve System and outlying Identified Species populations such as those around Upper Newport Bay. Development within Special Linkage Areas is constrained by the Special Linkage Area provisions in the NCCP/HCP, including project design and open space requirements. The NCCP/HCP does not establish permanent commitments for the Existing Use Areas. However, significant portions of these areas contain Identified Species and these areas may serve to provide habitat for source populations in the event of declines of Identified Species within the Reserve System due to natural or other factors. Therefore, harming, harassing, modifying habitat or other activities prohibited by the Take provisions of FESA (“Take”) is not authorized in these areas under the NCCP/HCP Implementation Agreement. No Existing Use Areas or Special Linkage Areas are identified within the project area.

Protection, Mitigation, and Takings

The multiple-habitat Reserve System of the NCCP/HCP provides a diverse habitat mosaic within its boundaries. Inclusion of multiple habitat types provides significant levels of protection for a broad range of species beyond the “Target Species” that are dependent on both CSS and non-CSS habitats. In addition to protecting habitat for the “Target Species,” the Reserve System provides habitat for 36 other “Identified Species” at a level that justifies state and federal regulatory coverage under CESA and FESA. Included among these additionally covered species is the Peregrine falcon, a species that is currently listed as endangered by the USFWS.

The satisfactory implementation of the NCCP/HCP and its Implementation Agreement will adequately provide for the “conservation, protection, restoration, enhancement, and management of the Identified Species and their habitat in the Central/Coastal Subregion, and no additional mitigation for Identified Species will be required of Participating Landowners.” In addition, and specific to PAs 51 and 30, the Implementation Agreement provides that “neither USFWS nor CDFG shall seek to impose any mitigation requirements for impacts to the Identified Species or their habitat beyond those provided by the NCCP/HCP and this Agreement in connection with the reuse planning process for the former MCAS El Toro property. The mitigation measures and assurances provided in the Agreement shall be considered by USFWS and CDFG to serve as the basis for authorization of Take of any Identified Species on those portions of MCAS El Toro outside of the 1,033 acres designated for inclusion in the Reserve System.” In other words, implementation of the NCCP/HCP provides mitigation for adverse impacts to Identified Species (including Peregrine falcon) and no additional mitigation is necessary or can be required.

Habitat Preserve (Planning Analysis Zone 3)

As previously mentioned, the habitat preserve, as designated in the northeastern portion of the proposed project (Planning Analysis Zone 3), was identified for incorporation in the Orange County Central-Coastal Subregion NCCP/HCP Reserve System. The non-profit corporation, Nature Reserve of Orange County (NOC) was established for the management of the Reserve System as set forth in the Implementation Agreement. A “Fed to Fed” transfer (transfer from one federal agency to another) of the land in the habitat preserve has occurred and this area is under the control of the Federal Aviation Administration (FAA). It is anticipated that future management of the area by the Fish and Wildlife Service will occur. Following transfer, the El Toro National Wildlife Refuge (NWR) would be created. Establishment and management of the El Toro NWR would support the Orange County NCCP/HCP.

Vegetation Communities

A reconnaissance-level botanical survey was conducted on September 7, 1999, for PAs 51 and 30 to verify vegetation communities as delineated in the 1996 County of Orange EIR 563 and to determine the presence or potential presence of sensitive plant species and habitat.

Prior to the survey, the most recent records of the California Natural Diversity Database and the California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California were reviewed regarding the potential presence of threatened, endangered, candidate or other sensitive species in PAs 51 and 30. The database records are organized by U.S. Geological Survey (USGS) 7.5 minute topographic quadrangles. Records for the quadrangle containing the project area were searched.

Vegetation communities present within PAs 51 and 30 were consistent with those identified in EIR 563. Nine vegetation communities occur within PAs 51 and 30. These include Venturan-Diegan sage scrub, southern cactus scrub, chaparral, woodland, riparian scrub, grassland, open water, agriculture, and disturbed or developed. The disturbed or developed areas of the property have been severely impacted by past and present military and agricultural activities. The following discussions focus on the less disturbed habitat reserve part of the PA 51, as this is primarily where the native plant communities occur.

Venturan-Diegan Sage Scrub

This community can be defined as low, drought-deciduous and evergreen shrubs that occur on steep to moderate slopes mostly below 3,000 feet in elevation. It is considered a sensitive habitat due to its potential to support threatened and endangered species and has been acknowledged as such by its involvement in the NCCP. Four sub-communities occur in the reserve: sagebrush-black sage scrub, mixed scrub, sagebrush scrub, and bush mallow sage scrub.

Chaparral

Chaparral consists of evergreen, medium-height to tall shrubs, which commonly cover hills and low slopes of Southern California. This community is highly adapted to drought and fire conditions. Shrub canopy cover is generally continuous. California sagebrush and California buckwheat occur in the understory of the larger shrubs.

Woodlands

Woodland habitats consist of multi-layered vegetation with a canopy that is 20 to 80 percent tree cover. There are two types of wood lands in the habitat reserve, Mexican elderberry woodland and coast live oak woodland.

Riparian Habitats

Riparian habitats consist of trees, shrubs or herbs that occur along watercourses or water bodies.

Aquatic Habitat

The habitat reserve has three types of open water habitats: open water, ephemeral drainages and washes, and a freshwater swale. Most of these habitats are intermittent and do not contain standing water year round. Six drainages occur within the project area, including Marshburn Channel, Bee Canyon Channel, Agua Chinon Channel, Borrego Canyon Channel, Serrano Creek, and San Diego Creek. Limited amounts of mule fat scrub were found along the unchannelized portions of Borrego Canyon and Agua Chinon Channel. Serrano Creek exhibits hydrophytic vegetation and the appropriate hydrology to qualify as a wetland. The length of the creek between Muirlands Boulevard and the Santa Ana Freeway is proposed for channelization. Army Corps of Engineers (ACOE) jurisdictional wetlands were delineated within the project limits in San Diego Creek, scattered fragments along Borrego Canyon Channel south of the railroad tracks, and along Agua Chinon Channel south of the military housing. The vast majority of drainage courses within the project area are channelized and most are concrete-lined. Two blue-line drainages also occur along the southern boundary of PA 51 outside the habitat reserve.

Grasslands

Grassland consists of low herbaceous vegetation dominated by grasses. It grows in deep, well developed soils on gentle slopes and flats, mostly at low elevations. There are three types of grassland in the project area including native grassland, non-native annual grassland, and ruderal grassland.

Agriculture

Agricultural areas exist at several locations within PAs 51 and 30. The areas vary in size from less than one acre to about 290 acres. The largest area, 290 acres, is located in PA 30.

Disturbed/Developed

PA 51 has several locations that are disturbed/developed. They consist of urban, non-urban commercial, industrial and institutional, transportation, parks and ornamental, and cleared and graded areas. Also included in this category are the airport runways, hangars, and other related structures. There are also buildings constructed to support the Marines as well as open space and urban lawns.

Sensitive Plant Species

A sensitive species is considered a potential inhabitant if its known geographical distribution encompasses all or part of the project area or if its distribution is near the project area and general habitat requirements are present. The literature review resulted in a list of 20 special-status plant species with potential to occur within the project boundaries. A description of each of these species is included in Table 1 of the *Biological Technical Report of Findings for the Millennium Plan - Phase II* on file at the City. No federal or State listed or proposed endangered or threatened species were observed within PAs 51 and 30 during the survey on September 7, 1999.

Several sensitive plant species have the potential to occur within PAs 51 and 30. The prostrate spineflower has been observed within the habitat preserve, so is considered present. The southern tarplant, Palmer's grapplinghook, many-stemmed dudleya, Coulter's Matilija poppy, Catalina mariposa lily, and intermediate mariposa lily have a high potential to occur within PAs 51 and 30. The Coulter's saltbush, Laguna Beach dudleya, San Fernando Valley spineflower, and the Lewis's evening-primrose have a moderate potential for occurrence, while the Los Angeles sunflower, south coast saltscale, Santa Monica Mountains dudleya, heart-leafed pitcher sage, coast wooly-heads, slender-horned spineflower, Santa Barbara morning glory, tecate cypress and salt spring checkerbloom have a low potential for occurrence.

Mature Trees

No formal inventory has been performed; however, the project site contains a large number of mature trees. According to the Orange County Register (July 15, 1998. "Growing Awareness"), tree species include elm, oak, magnolia, carobwood, jacaranda, pepper, palm, and pink-flowered Laguneria pattersoni. The cost to purchase trees of similar age and condition (if they could be found) has been estimated at one million dollars or more. These trees also provide wildlife habitat in the disturbed portions of the project site.

Wildlife

Biological resources for wildlife are primarily found in the native habitats in the habitat preserve (Subarea 3) and the non-native habitats in the agricultural areas. The habitat preserve area includes high quality wildlife habitat, providing a wide variety of native vegetation, topographical conditions, and water that supports large numbers of wildlife species. Habitat in the agricultural areas is generally of low quality, consisting of homogeneous plantings of crops that lack diversity, are subject to pesticide and herbicide usage, and undergo periodic disturbance from plowing. Disturbed and developed areas

provide very little wildlife habitat value. However, agricultural fields, habitat preserve, and open grasslands do provide suitable foraging habitat for a number of raptor species, including the Swainson's hawk.

No amphibian was observed within PAs 51 and 30 during the surveys. However, a portion of the PAs 51 and 30 follows the course of the Borrego Canyon Wash and most likely supports common species such as the California chorus frog, western toad, and Pacific tree frog. One reptilian species, the western fence lizard, was observed during the surveys. Reptiles that have the potential to occur within the project area include the western whiptail, gopher snake, and side-blotched lizard.

Bird species observed during the site visit on September 7, 1999, included the mourning dove, red-tailed hawk, common raven, great egret, Anna's hummingbird, common yellowthroat, burrowing owl, song sparrow, killdeer, and turkey vulture. Local birds that utilize the local waterways, such as the snowy egret, black-crowned night-heron, and American coot are also likely to exist in PAs 51 and 30.

Two mammals, the California ground squirrel and the desert cottontail, were observed during the surveys. Bat vocalizations and guano were observed in a crevice in the ceiling of the I-5 freeway culvert, but identification of the bat species could not be determined at the time of the survey. Coyote tracks were observed within the wash at the northeast and southwest ends of the proposed wildlife corridor (discussed below).

Sensitive Wildlife Species

One sensitive wildlife species, the burrowing owl, was observed at the southwest end of the PAs 51 and 30 along Serrano Creek. Forty other sensitive wildlife species or species of local concern have the potential to occur within PAs 51 and 30. The biological technical report available at the City provides a description of federal- and State-listed endangered or threatened, State and FSOC species, and otherwise sensitive wildlife species that occur or have the potential to occur within PA 51 and 30.

Several sensitive wildlife species have the potential to occur within PAs 51 and 30. The western spadefoot, San Diego horned lizard, orange-throated whiptail, coastal western whiptail, Cooper's hawk, sharp-shinned hawk, ferruginous hawk, Swainson's hawk, northern harrier, white-tailed kite, prairie falcon, burrowing owl, California horned lark, coastal cactus wren, coastal California gnatcatcher, loggerhead shrike, Southern California rufous-crowned sparrow, grasshopper sparrow, Bell's sage sparrow, northwestern San Diego pocket mouse, and San Diego desert woodrat have been observed within PAs 51 and 30, so are considered present. The northern red diamond rattlesnake and red-shouldered hawk have a high potential to occur within PAs 51 and 30. The Riverside fairy shrimp, San Bernardino ringneck snake, coastal boa, merlin, peregrine falcon, southwestern willow flycatcher, least Bell's vireo, and yellow-breasted chat have a moderate potential for occurrence, while the quino checkerspot butterfly, arroyo southwestern toad, Coronado skink, southwestern pond turtle, golden eagle, and pacific pocket mouse have a low potential for occurrence. While not considered sensitive species, the San Diego black-tailed jackrabbit and coyote are present within PAs 51 and 30, and the southern grasshopper mouse and gray fox have a moderate potential to occur.

Habitat Linkages and Wildlife Corridors

Wildlife movement corridors are of substantial importance to the viability of regional planning efforts to obtain habitat linkages. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, some wildlife species, especially the larger and more mobile mammals, will not likely persist over time because they prohibit the infusion of new individuals and genetic information. Corridors mitigate the effects of this fragmentation by (1) allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fire or disease) will result in population or local species extinction, and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

Currently, the project area does not serve as a significant wildlife movement corridor between the habitat preserve and the coastal habitat preserves. Various agencies and organizations desire to establish a wildlife corridor between the Lomas Ridge and the San Joaquin Hills. Public agencies include the City of Irvine, the County of Orange, the U.S. Army Corps of Engineers, USFWS, and CDFG. This effort is also supported by various organizations, including the Laguna Canyon Foundation, The Irvine Company, and The Nature Conservancy.

Recognizing the environmental benefit for a wildlife corridor within the project area, a wildlife corridor is included in the proposed project. Figure 3-5 depicts the location of the proposed wildlife corridor. Wildlife sign (tracks, scat) and evidence of movement was found along both ends of the proposed corridor, including Serrano Creek and the I-5 undercrossing. Currently, these areas do not lead to additional wildlife habitat areas, but rather dead end into concrete channels and paved streets. The agricultural fields are the final destination of wildlife movement using these areas. The agricultural fields dead-end into Alton Boulevard and no evidence of movement along the concrete portion of Serrano Creek was observed. By definition, a corridor is a linear habitat whose primary wildlife function is to connect significant habitat areas. Therefore, by definition no wildlife corridor currently exists within the project area.

Wildlife Corridor Concept Plan

The Wildlife Corridor Concept Plan is designed to implement the draft Special Area Management Plan (SAMP)/Master Streambed Alteration Agreement (MSAA) policies for the El Toro Plan Area of the San Diego Creek Watershed. These guiding policies allowed for implementation of the SAMP/MSAA. Development within the El Toro area must be consistent with these policies in order to comply with the SAMP/MSAA. The SAMP/MSAA objective within the El Toro area is to support the delineation of specific habitat corridor linkages and aquatic habitat preservation/restoration areas.

Proposed Wildlife Corridor Vegetation and Wildlife

As part of the wildlife corridor feasibility study a vegetation and wildlife survey was completed for the proposed wildlife corridor. The following summarizes the findings.

As described in Section 3.0 – Project Description the project includes the development of a wildlife corridor where one currently does not exist (see the Environmental Impact discussion).

Wildlife is dependent on the biological resources found primarily in native habitat areas. Currently, most of the native habitat along the corridor is within the El Toro National Wildlife Reserve (NWR) and the Needlegrass Creek Conservation Area. Native vegetation can also be found along natural drainages found within the planning area, but those resources are not as significant as the El Toro NWR and Needlegrass Creek Conservation Area.

The El Toro NWR, located at the northern end of the wildlife corridor, is characterized by high quality wildlife habitat providing a wide variety of native vegetation, topographical conditions, and water that support large numbers of wildlife species. According to the Chambers Group report, an assortment of wildlife species were observed in this area, summarized in the following paragraphs.

Birds

Bird species observed included the morning dove, red-tailed hawk, common raven, great egret, Anna's hummingbird, common yellowthroat, burrowing owl, song sparrow, killdeer, and turkey vulture. Birds that utilize local waterways, such as the snowy egret, black-crowned night-heron, and American coot are also likely to occur onsite. Two red-tailed hawk nests were observed in large sycamore trees within the El Toro NWR.

Two focused surveys completed in 1996 and 1998 for the least Bell's vireo and southwestern flycatcher observed a total of four territorial male least Bell's vireo located within San Diego Creek, south of Irvine Center Drive. No southwestern willow flycatchers were located within this area. The survey also recorded several sensitive avian species including the yellow-breasted chats, yellow warblers, black-shouldered kites, sharp-shinned hawks, Cooper's hawk, and red shouldered hawks.

Mammals

Two mammals, the California ground squirrel and the desert cottontail, were observed during the survey. Bat vocalizations and guano were also observed in a crevice in the ceiling of the 1-5 culvert. The bats were not visible and identification of the species could not be determined at the time of the survey. Coyote tracks were also observed within the wash at the northeast and southwest ends of the proposed wildlife corridor.

Amphibians

Veeh Creek contains suitable habitat for the pacific pond turtle, however no evidence of this species has been found or recorded.

Sensitive Wildlife Species

Over 30 sensitive wildlife species have the potential to occur in the project area. "Sensitive" means any wildlife species native to the state of California that is vulnerable or declining and is likely to become endangered or threatened in a significant portion of its range within the state without cooperative management or removal of threats. The San Diego black-tailed jackrabbit and coyote are present, and the southern grasshopper mouse and gray fox have a moderate potential to occur.

Vegetation Communities

An investigation of existing vegetation communities was performed in 1999 to determine the presence or potential presence of sensitive plant species and habitat. Existing vegetation presents important opportunities, as it is used by wildlife for food, habitat, shelter, and protection from predators.

Nine vegetation communities were observed within the former MCAS El Toro site, many located within the El Toro NWR. They include Venturan-Diegan sage scrub, southern cactus scrub, chaparral, woodland, riparian scrub, grassland, open water, agriculture, and disturbed or developed land.

The disturbed or developed areas correspond to the former MCAS El Toro property, (not including the El Toro NWR). The following briefly describes the nine vegetation communities.

Venturan-Diegan Sage Scrub can be defined as low-drought-deciduous and evergreen shrubs that occur on steep to moderate slopes mostly below 3,000 feet in elevation. It is considered a sensitive habitat due to its potential to support threatened and endangered species. Four sub-communities occur in the El Toro NWR: sagebrush-black sage scrub, mixed scrub, sagebrush scrub, and bush mallow sage scrub.

Chaparral consists of evergreen, medium-height to tall shrubs, which commonly cover hills and slopes of Southern California. This community is highly adapted to drought and fire conditions. Shrub canopy cover is generally continuous. California sagebrush and California buckwheat occur within the understory of larger shrubs.

Woodland vegetation consists of multi-layered vegetation with a canopy that is 20 to 80 percent tree cover. There are two types of woodlands in the El Toro NWR, Mexican elderberry woodland and coast live oak woodland.

Riparian vegetation consists of trees, shrubs, or herbs that occur along intermittent and perennial waterways. It is also essential for maintaining high quality in streams and rivers.

Three types of aquatic habitat are found in the El Toro NWR: open water, ephemeral drainages and washes, and a freshwater swale. Most of these habitats are intermittent and do not contain standing water year-round. Two blue-line streams also exist along the southern boundary of the former marine base outside the El Toro NWR.

Grasslands consist of low herbaceous vegetation dominated by grasses. They thrive in deep, well developed soils on gentle slopes and flats, mostly at low elevations. Three types of grassland are found in the area: native grasslands, non-native annual grasslands, and ruderal grasslands.

Agricultural areas exist primarily south of the El Toro NWR near Musick Jail, and within Planning Area 30 (290 acres).

The El Toro Natural Wildlife Reserve is composed of primarily scrub, chaparral, and grassland vegetation communities. Riparian habitat is prevalent along the existing intermittent streams and creeks. A large portion of the reserve is disturbed due to prior MCAS El Toro activities.

Areas south of the El Toro NWR are primarily disturbed and developed. They consist of commercial, industrial, institutional, transportation, parks, ornamental, cleared, and graded areas. Also considered in this category are the airport runways, hangars, and other related structures. There are also buildings constructed to support former Marine operations as well as open spaces and urban lawns. Agriculture can be found along Irvine Boulevard just west of Alton Parkway and throughout the panhandle area.

The Spectrum 5 project area is primarily disturbed or developed but also contains riparian woodlands found adjacent to all the drainage channels within this area. Riparian woodlands can be found along San Diego Creek downstream from Irvine Center Drive, Veeh Creek, and an unnamed tributary to Veeh Creek. Willow and mulefat are commonly found in the riparian woodland corridors. Minor sections of the riparian area include emergent vegetation such as cattail, and several acres along Veeh Creek contain strands of the alien grass species known as giant reed.

Sensitive Plant Species

Several sensitive plant species may potentially occur within the project area. Only the prostrate spineflower has been observed onsite.

Habitat Areas

Three types of wildlife habitat exist in the project area that are known to provide ample resources for wildlife: Annual grasslands, coastal sage scrub and riparian.

Annual Grassland habitat occurs mostly on flat plains to gently rolling hills and can be found primarily in the El Toro NWR. Annual grassland can also be found southeast of the wildlife corridor where new development has not occurred. Many wildlife species use annual grasslands for foraging, but some require special habitat features such as cliffs, caves, ponds, or habitats with woody plants for breeding, resting, and escape cover. A variety of reptiles, mammals and birds depend on annual grassland for their habitat.

Coastal Scrub can be found on flat terraces and moderate slopes. California sagebrush, purple sage and California buckwheat are common vegetation species found in southern sage scrub, a subtype of coastal scrub found primarily in Southern California (Santa Barbara

to Orange County). Little is known about the importance of coastal scrub habitat to wildlife, however, the black-tailed gnatcatcher is found extensively within this habitat.

Riparian Habitat is a combination of plant species that thrive along intermittent and perennial waterways. These waterways include Serrano Creek, Borrego Wash, San Diego Creek and Veeh Creek. Riparian habitats are considered among the most valuable habitats for wildlife because of the presence of water, lush vegetation, and high insect populations. Less disturbed riparian areas support a wide variety of wildlife, including amphibian, reptile, bird, and mammal species.

A component of the proposed Spectrum 5 project includes the natural river management concept (NRMC). The NRMC allows flood protection while providing for natural habitat. There are approximately 26 acres of riparian habitat that will be preserved downstream of Irvine Center Drive within the San Diego Creek and approximately 3.4 acres of riparian habitat will be preserved upstream of Irvine Center Drive. The created habitat will provide the same quality of riparian habitat as the existing habitat. The NRMC will be extended north to other areas within the corridor through projects proposed in this plan.

5.9.2 Threshold For Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for biological resources:

Would the project:

1. *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?*
2. *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?*
3. *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clear Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?*
4. *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites?*
5. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*
6. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or State habitat conservation plan?*

An evaluation of impacts using these criteria must consider the resource and its extent and distribution on a local and regional basis. For example, the permanent loss of an important resource, such as a population of a rare plant, would be considered a substantial impact. A determination of significance would depend on the degree to which the loss was substantial on a local or regional basis.

5.9.3 Environmental Impact

The following analysis focuses on the potential biological impacts associated with implementation of the Base Plan and the Overlay Plan for the Former MCAS El Toro (PAs 51 and 30). The Musick Branch Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. EIR No. 564 was prepared by the County of Orange for the jail expansion and did not identify any potential impact to biological resources that may result from the proposed jail expansion. As a result, implementation of the proposed project will not result in a significant biological resources impact associated with the annexation of the James A. Musick Jail Facility and the IRWD Parcel.

Threshold 1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?

Base Plan and Overlay Plan

Coastal sage scrub is considered sensitive in regards to the habitat it provides for the California gnatcatcher, and due to the decline of this habitat in the region. The majority of the habitat preserve consists of coastal sage scrub and will be protected in perpetuity; however, small portions of the habitat preserve, such as the EOD (bomb disposal area) may probably be reconveyed to other agencies (the Federal Bureau of Investigation, in the case of the EOD) and will not be part of the wildlife refuge. These actions are not a component of the proposed project, and would need to be evaluated in terms of potential environmental effects, by the federal agency proposing the action.

No federally-listed plant species was observed within PAs 51 and 30 during the surveys. Several species of concern have a high potential to occur within the project limits. Only the habitat preserve portion of the project site contains suitable habitat for the identified sensitive plant species, with the exception of the southern tarplant. Because the habitat preserve portion of the site will remain intact, as proposed by the project under both the Base Plan and the Overlay Plan, development of the remaining portion of the site is not expected to impact these plant species. However, the southern tarplant, a federal species of concern, may be affected by development of the site. Although this species has a high potential to occur in the disturbed portions of the site, presence of this plant is undetermined, as focused sensitive plant species surveys have not yet been conducted. Such focused sensitive plant species surveys will be conducted prior to development of the site. If subsequent surveys identify this species in an area proposed for development, it may be

possible to modify the project to avoid impacts. Otherwise mitigation will be negotiated through consultation with USFWS and CDFG.

No federally-listed endangered wildlife species was observed within PAs 51 and 30 during the surveys of the project site. Two federally-listed threatened species, the California gnatcatcher and Swainson's hawk, were observed within the project area during previous surveys. The California gnatcatcher is limited to the coastal sage scrub habitat which will be preserved within the habitat preserve in PA 51, as discussed below. This species is covered under the Central-Coastal subregions of the Orange County NCCP/HCP. Because the portion of the habitat reserve conveyed to the FAA will be managed in compliance with regulations set forth by the NCCP/HCP, the potential impact to this species is considered to be less than significant.

The habitat reserve and non-native grassland within the project site serve as moderate to high quality raptor foraging habitat. Raptors that may be affected by loss of foraging habitat include the red-tailed hawk, northern harrier, turkey vulture, white-tailed kite, American kestrel, prairie falcon, merlin, peregrine falcon, ferruginous hawk, and Swainson's hawk. The Swainson's hawk has been observed foraging around the project area. The agricultural fields serve as low to moderate quality raptor foraging habitat (depending on the type of crop that is planted). Development of the site will result in the loss of some of the available raptor foraging habitat. Development of the site will not affect the 995-acre habitat reserve which comprises the southern extension of the NCCP habitat reserve. Due to the proximity of the site to the large amount of additional raptor foraging grounds, including agricultural fields, open space, and the 39,000-acre NCCP habitat reserve, impacts to raptor foraging habitat are not considered significant. In addition, under the Base Plan, low to moderate quality foraging habitat (comparable to the existing agricultural fields) in the form of the approximately 576 acres of proposed golf course, 716 acres of parkland, 438 acres of agriculture, 179 acres of wildlife corridor, and 229 acres of drainage/riparian corridor (2,138 acres total) will be available after the completion of the project. Under the Overlay Plan, low to moderate quality foraging habitat (comparable to the existing agricultural fields) in the form of the approximately 526 acres of proposed golf course, 382 acres of parkland, 303 acres of agriculture, 179 acres of wildlife corridor, and 229 acres of drainage/riparian corridor (1,619 acres total) will be available after the completion of the project.

Several federal- and state-listed wildlife species of concern were observed within the project limits. A number of these species were found within the limits of the habitat preserve and are covered under the Central/Coastal NCCP. However, no formal protection for these species exists under the Endangered Species Act, therefore, the impact to these species is not considered significant.

Threshold 2: *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?*

Base Plan and Overlay Plan

Coastal sage scrub is considered sensitive in regards to the habitat it provides for the California gnatcatcher, and due to the decline of this habitat in the region. The majority of

the land within PA 51 designated for habitat preserve consists of coastal sage scrub and has been conveyed to the FAA and will be protected in perpetuity as a portion of the NCCP/HCP; however, small portions of the habitat preserve, such as the EOD (bomb disposal area), have been and may continue to be reconveyed to other agencies (the Federal Bureau of Investigation, in the case of the EOD) and will not be part of the wildlife refuge. These non-open spaces uses could significantly impact the coastal sage scrub. The City of Irvine does not have control over whether the federal government will convey portions of the habitat preserve to governmental agencies for uses other than habitat preserve. In the event that the federal government does convey portions of the habitat preserve for non-habitat preserve uses, the federal government will be responsible for evaluating the significance of the potential impacts, and mitigating them to a level less than significant.

Threshold 3: *Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?*

Base Plan and Overlay Plan

As discussed above, there is a limited riparian and aquatic habitat within PAs 51 and 30 which may contain wetlands as defined by Section 404. Because of the limited amount and highly disturbed nature of wetland/riparian habitat, impacts are considered significant, and mitigable. The City will permit and mitigate impacts to jurisdictional waters through subsequent consultation with ACOE pursuant to Section 404 and CDFG pursuant to Section 1600 et. seq. Wetland and riparian habitat creation and enhancement are available for mitigation within the proposed park/open space areas and wildlife movement corridor. The proposed plan offers an opportunity for substantial creation of wetland areas within the project site. The plan proposes to “daylight” two major drainage courses that currently pass under the base property via underground pipes. These areas are identified as General Plan land use “Drainage Corridor” and are shown as Subareas 20 and 21 on Figure 3-3 in the Project Description. The combined Drainage Corridor acreage is 129 acres. Additionally, wetland creation would occur within the proposed wildlife corridor (see PAZs 22a and 22b) on Figure 3-3. Riparian habitat associated with the Agua Chinon and Borrego Canyon Channels is present within the habitat reserve, but will not be affected by the project under both the Base Plan and the Overlay Plan.

Threshold 4: *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Base Plan and Overlay Plan

As discussed above, no evidence of a wildlife corridor was found during the biological survey of PAs 51 and 30. In addition, according to the NCCP/HCP and Implementation Agreement, there are no Existing Use Areas or Special Linkage Areas within the project area. Such designations would indicate presence of important populations of sensitive species or migration corridors outside of designated preserve areas. Since there are no such areas on

the project site, no impact to fish or wildlife movement is anticipated and no mitigation is required.

Proposed Irvine Wildlife Corridor

While no wildlife corridor currently exists within the project area, as discussed above, a wildlife corridor is desired by several public agencies including the City of Irvine, County of Orange, US Army Corps of Engineers, USFWS, and CDFG. To provide for the creation of a wildlife corridor connecting the Lomas Ridge and the San Joaquin Hills, the proposed project includes a wildlife corridor land use. The proposed wildlife corridor is depicted in Figure 5.9-2.

The wildlife corridor provides connection to the 975-acre habitat preserve, as well as the Limestone-Whiting Wilderness Park. To the south, the corridor will connect to the Laguna Coast Wilderness Park through existing and future major open space linkages.

As part of the wildlife corridor feasibility study, preliminary "fatal-flaw" analysis was conducted on August 15, 1999, and has been examined on several subsequent occasions by wildlife biologists. Biologists examined the proposed route and its feasibility as a wildlife movement corridor. A focused survey of the biological conditions along the proposed corridor was conducted on September 7, 1999. Biologists surveyed the extent of the route including the adjacent connective habitat at the start and end of the proposed corridor. Serrano Creek and Borrego Canyon Wash were also surveyed for use/potential use as wildlife corridors. Subsequent to these initial surveys, the proposed wildlife corridor has been informally surveyed by wildlife biologists and members of conservation groups.

The alignment of the corridor can be described in terms of five general segments. The first segment of the corridor covers the El Toro NWR and adjacent areas to the west within the northern sphere area. Currently, the El Toro Refuge consists primarily of native vegetation. Several dirt and paved roads, some fencing, closed landfills, and munitions buildings and bunkers remain from former MCAS El Toro uses on this site. Uses surrounding this segment include agriculture, single-family housing units, the James A. Musick Branch Jail, and industrial uses located in the City of Lake Forest. The Foothill Transportation Corridor Freeway forms the northern edge of the corridor. Several intermittent streams run through the Refuge, including Borrego Canyon Wash and Agua Chinon Wash.

The El Toro NWR is designated as preservation under the proposed Orange County Great Park Plan. The conceptual alignment of the corridor begins west of the Refuge at the Foothill Transportation Corridor Freeway within the northern sphere area, linking to the Cleveland National Forest through the Agua Chinon Wash crossing under the freeway. The conceptual alignment then runs south along the western boundary of the El Toro NWR adjacent to the Agua Chinon Wash and Retention Basin. The alignment veers to the east, following topographical features, to connect to an existing intermittent stream. Joining the course of Borrego Canyon Wash, the alignment then turns west approaching the Irvine Boulevard undercrossing at Magazine Road.

The second segment covers areas of the Orange County Great Park located between Borrego Canyon Wash at Musick Jail and proposed Marine Way. The segment proceeds south under Irvine Boulevard at Magazine Road, carrying a small portion of the flow of

Borrego Canyon Wash as a constructed riparian channel. The corridor then bisects the proposed golf courses as it proceeds to proposed Marine Way. Existing uses adjacent to the corridor include hangars and buildings associated with former MCAS El Toro uses to the north, and an existing golf course and driving range to the south.

Within this segment, the core zone of the corridor surrounds the alignment of a low-flow channel diverted from Borrego Canyon Wash. This channel, downstream from the mainline Borrego Canyon Wash, is a daylighted creek promoting vegetation growth and wildlife movement options. A soft bottom channel will allow for vegetation growth, which will create a natural environment familiar to wildlife.

A 30-foot wide conservation zone is proposed that would screen the core zone from the proposed golf course on the north side of the creek.

As the corridor nears Irvine Boulevard, there is a windrow of Eucalyptus trees north of an agricultural field, where birds of prey and local small animal populations have become accustomed to this existing habitat.

Irvine Ranch Water District also has interests within this segment. This is an opportunity to achieve the water quality objectives of the corridor as the Borrego Canyon Wash begins to migrate through this area. Downstream, this wash may receive street runoff and nuisance water. The wetland strategy should begin here. Biofiltration can start the cleansing process, whereby reducing the eventual pollutants from reaching the Back Bay estuary.

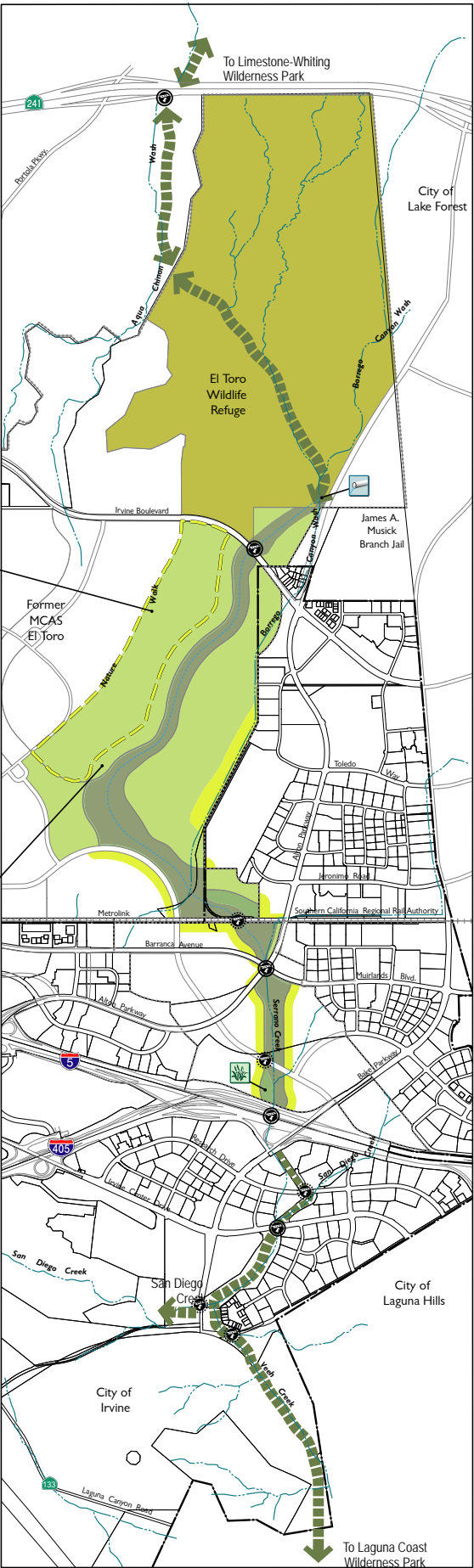
The corridor then runs south from proposed Marine Way to the Barranca Avenue/Alton Way undercrossing. All of the land in this third segment is under the planning jurisdiction of the City of Irvine.

Surrounding land uses in this segment present opportunities for creative design solutions within the corridor. A proposed 210-acre transit-oriented development is proposed adjacent to a portion of the corridor.

The corridor runs parallel to the alignment of proposed Marine Way, but is below the grade of the roadway to reduce potential conflicts. The corridor crosses over the capped channelized flood flow of Borrego Canyon Wash, passing through a proposed pier railroad bridge. Southeast of the railroad, the constructed riparian corridor merges with the natural course of Serrano Creek prior to crossing under the Alton/Barranca intersection.

Upon determination of actual location of clubhouse and residential units within golf course, these properties will be within the Encroachment Zone. Residential units and the clubhouse are subject to Encroachment Zone development regulations.

Clubhouse and residential uses within the golf course shall not be located within 500 feet of the centerline of the Core Zone



Legend

- Core Zone
- Habitat Zone - El Toro Wildlife Refuge
- Conservation Zone
- Activity Zone
- Encroachment Zone
- Wildlife Linkages
- Existing Wildlife Crossing
- Proposed Wildlife Crossing
- Proposed IRWD Water Quality Wetlands
- Low-flow Water Diversion
- Irvine City Limits
- Great Park Plan Boundary
- Creeks, Streams and Channels
- Low-flow Water Course



Figure 5.9-2
Wildlife Corridor Concept

The mainline Borrego Canyon Wash passes under the wildlife corridor just northeast of proposed Marine Way. From that point, the mainline channel crosses to the west, passing under Marine Way, across the railroad tracks, and into a box culvert southwest of Barranca Parkway, while the corridor (carrying low flow from the channel diverted in upper segment) continues to the southeast. Just before crossing under the SCRRA tracks, an inlet picks up the diverted Borrego Canyon Wash flow, carrying it northwest to rejoin the main channel just beyond proposed Marine Way. The inlet also carries a diverted portion of Serrano Creek from the same location. This second diverted flow forms the riparian channel used to carry the wildlife corridor under the SCRRA railroad and south to the Alton Parkway/Barranca Parkway undercrossing.

The fourth segment crosses the remaining portion of the El Toro "Panhandle." The corridor runs south from the Barranca Avenue/Alton Way undercrossing to the Interstate 5 / 405 interchange (the El Toro "Y").

The corridor runs southeast from the Barranca/Alton undercrossing, proceeding approximately 2,000 feet before passing under a proposed new undercrossing at Marine Way.

The size of this area presents an opportunity to create a detention basin, pond or lake as a means to provide additional wildlife habitat. This could be an open water/marsh area that will aid in the cleanup of water and enhance recharge of the Orange County aquifer, as well as attract a diverse range of wildlife. The wetlands produced will provide habitat for foraging and roosting waterfowl. The creation of such activities within the corridor will encourage animal movement. This area will also incorporate coastal sage scrub, where appropriate.

Within the portion of this segment north of Marine Way, a 30-foot wide conservation zone provides access to the core zone on the north side of Serrano Creek. Fencing will be added around the perimeter of this zone. South of Marine Way the IRWD water quality wetland is within the conservation zone.

This segment passes through one of the widest portions of the corridor within the built environment. Potential impacts can be reduced if parameters are defined and followed. Safeguards set in place in the early phases of corridor implementation can ensure that this area has limited human impact and high wildlife value. With the potential increase of artificial light sources and ambient noise levels generated by the planned Research and Development uses, as well as traffic on the northbound lanes of I-5, guidelines for placement of light sources within the encroachment zone are necessary. Design solutions including the choice of native plant species for screening and the placement of the core zone can also contribute to mitigating the impact of increased light and noise levels.

The fifth segment of the corridor travels south from the I-5/I-405 undercrossing through the Spectrum 5/Village 34 development project. At this location, development mitigation measures have determined the corridor alignment, width, and features.

Following the undercrossing at Interstate 5 Freeway, the corridor narrows to a width of approximately 145 feet. After crossing under Bake Parkway, the corridor continues south along Serrano Creek, crosses under Research Drive, and converges with San Diego Creek. Running southwest along San Diego Creek, the corridor separates into two segments. One

segment continues along San Diego Creek to the west, where it transitions into an open space corridor planned for walking and bicycle trails. A second segment runs along Veeh Creek crossing into Irvine Planning Area 18.

Running along Veeh Creek, this corridor segment passes under the proposed Lake Forest Drive extension, then travels southeast through the Needlegrass Creek Conservation Area, eventually crossing Laguna Canyon Road and entering the Laguna Coast Wilderness Park.

This portion of the corridor increases greatly in size as it converges into the dedicated open space areas of the Laguna Canyon Wilderness Park. Hiking and mountain bike trail linkages from the Laguna Canyon Wilderness Park could possibly exist within the Activity Zone, along San Diego Creek. As portions of Planning Area 18 adjacent to the corridor have been dedicated as open space and potential surrounding development would primarily involve low-density housing, artificial light and ambient noise potential is not as great as in other planning units. A more naturalistic appearance with wider open spaces can be provided in all zones.

The Wildlife Corridor planning efforts are on-going, and the Orange County Great Park Plan land use concepts will accommodate this on-going planning effort.

The guidelines presented here are chiefly concerned with the creation and revegetation of wildlife habitats that will flourish in the proposed areas and that will serve as protective cover for target wildlife species that will presumably utilize the proposed corridor. A preliminary design concept for the creation and/or revegetation of the proposed route has also been prepared which is consistent with the guidelines described below (Draft Irvine Wildlife Corridor Master Plan, November 2002). These terms are defined as they are generally used by restoration professionals in California and by the Society for Ecological Restoration (SER):

- C **Creation** establishes historical ecosystems on lands that did not previously support that ecosystem or on severely altered sites.
- C **Revegetation** establishes vegetation on disturbed lands. Ideally, revegetation uses plant material previously located on the site or adjacent to it, to maintain focal genetic diversity.

The viability of the final corridor will be based on the creation of suitable habitat that will serve as a linkage between habitat preserves. The revegetation/restoration plan would need to address various issues to increase the viability of the proposed corridor and will need to be prepared based on the following criteria:

- C **Reduce the amount of noise pollution and urban influence.** Sight and sound barriers need to be constructed at the edges of the corridor to help create a secluded, natural setting. Barriers may range from artificial sound walls to natural diversions such as hedges and tree lines.
- C **Remove and restore the unnecessary developed (paved) areas within the corridor right-of-way.** This includes all underpasses not associated with waterways, namely Magazine Road, and all unnecessary sidewalks and access roads. The reuse roads

crossing over the approximately 4.1 km long corridor. Astor Road is a secondary entrance that bisects both the corridor and the golf course. Restoration of this area will assist the continuity of the corridor and increase its viability.

- C **Create a protective habitat along the entire length of the corridor.** Based on observations during the site visit, the entire corridor should be revegetated with sycamore and cottonwood trees. Current conditions are suitable for the survival of these species and they will provide the necessary canopy for the corridor as well as suitable nesting sites for several bird species. Open, upland areas will need to be revegetated with native bunch grasses or an understory of drought resistant shrubs such as coastal sage scrub species. The earthen banks of the waterways will need to be revegetated with mule fat and other water associated plant species.
- C **Apply minimum height and width requirements based on the specific wildlife species.** Observations of common wildlife and plant species within the proposed migration area were recorded during the site visits. Table 5.9-1 provides a list of wildlife species expected to utilize the corridor. The species list was developed based on species observed during the site visit, species known to occur in the project vicinity.

Because of the length and proximity to highly urbanized areas, daily use of the corridor will likely be limited to reptiles, amphibians, birds, and small mammal species. The coyote is probably the largest predator that would utilize the corridor. However, deer and mountain lion are known to occur within the preserve and habitat just north of the preserve. Therefore, the corridor should be designed to accommodate these larger species that would require an escape route in case of wildfires or other emergencies.

While the project will not impact any existing wildlife corridor or movement since none currently exist in the project area, Mitigation Measure Bio B3 will ensure that the City of Irvine will continue to work with State and federal agencies to implement the revegetation/restoration plan necessary to create a viable wildlife corridor within the project area. The City has already engaged in this process as is demonstrated through the preparation of the Draft Irvine Wildlife Corridor Master Plan, which is independent of this project.

Threshold 5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Base Plan and Overlay Plan

In order to protect and enhance the existing urban forest resource by application of sustainability in landscaping policies and through the provision of professional management, the City of Irvine enacted the Urban Forestry Ordinance (UFO) (Section 5-7-401 et al) in 1994. PAs 51 and 30 contain a large number of trees, many of them mature, representing a wide range of species. The potential destruction or damage to these trees is considered a significant impact.

Threshold 6: *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

Both the Base Plan and the Overlay Plan designate the land in PAZ of PA 51 for habitat preserve, consistent with the adopted NCCP/HCP. The habitat preserve in PA 51 has been conveyed to the FAA and is expected to be preserved and maintained consistent with the NCCP/HCP. Since the proposed project is consistent with the adopted NCCP/HCP, no significant impact will occur.

Table 5.9-1
Target Wildlife Species of Wildlife Corridor

Reptiles	Amphibians
C Western fence lizard	C Pacific tree frog
C Gopher snake	C Western toad
C Coachwhip	C California chorus frog
C Side blotched lizard	
Mammals	Birds
C Striped skunk	C Showy egret
C Raccoon	C Great egret
C Burrowing rodents	C Lesser goldfinch
C Desert cottontail	C Great blue heron
C Blacktail jackrabbit	C Nuttall's woodpecker
C Coyote	C Common yellow throat
	C Yellow-rumped warbler
	C Bewick's wren
	C Song sparrow

5.9.4 Significant Impacts

Base Plan and Overlay Plan

- Bio 1.** The southern tarplant, a federal species of concern, may be affected by development of the site. This is considered a significant impact.
- Bio 2.** There is a limited amount of highly disturbed wetland habitat on the project site. The project may result in an impact to this habitat.
- Bio 3.** PAs 51 and 30 contain a large number of trees, many of them mature, representing a wide range of species. Implementation of the proposed project may result in damage and destruction to the trees. A significant impact related to conflicts with the City of Irvine's Urban Forestry Ordinance may occur.

5.9.5 Mitigation Measures

Base Plan and Overlay Plan

- Bio 1.** Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl, shall be conducted. Prior to approval of a subdivision map for development within, or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).
- Bio 2.** Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan subarea that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, re-creation (i.e. within the proposed wildlife corridor), and/or revegetation as deemed acceptable by the appropriate jurisdictional agencies.
- Bio 3.** The City shall continue to work with State and federal agencies during the implementation of the proposed project to implement the revegetation/restoration plan for the wildlife corridor. Measures such as sight and sound barriers, including artificial sound walls and natural diversions (e.g. hedges and tree lines) shall be incorporated into corridor design to ensure the viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the Final Program EIR.
- Bio 4.** Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered "Significant Trees" under the City of Irvine's Urban Forestry Ordinance (UFO) (Section 5-7-401 et al) and the UFO shall apply to all trees included in this inventory.

5.9.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Less than significant.

Notes and References

1. County of Orange. *James A. Musick Jail Expansion and Operation DEIR*, No. 564. August 1996.
2. City of Irvine. *Draft Irvine Wildlife Corridor Master Plan*. January 2002.

5.10 Paleontological Resources

5.10.1 Environmental Setting

Former MCAS El Toro (PAs 51 and 30)

Paleontology is the study of forms of life existing in prehistoric or geologic times. Paleontological resources within the project area include: fossil specimens; three recorded and an undetermined number of unrecorded fossil sites, associated geologic and geographic site data; and fossil-bearing rock units. The potential for discovering paleontological resources varies depending upon the geologic formations, or rock units underlying the project area. Certain formations or units are characterized as having a high potential for yielding significant paleontological resources due to the abundance, densities or importance of fossils that have been uncovered in the region. Other formations are characterized as low or moderate as the formations have historically produced lesser amounts of fossils of importance.

A fossil specimen is considered scientifically highly important if it is identifiable, complete, well-preserved, age diagnostic, useful in environmental reconstruction, a type of specimen, a member of a rare species and/or a species that is part of a diverse grouping. Identifiable land mammal fossils, for example, are considered scientifically highly important because of their potential use in providing very accurate age determinations and environmental reconstructions for rock units in which they occur. Such remains are comparatively rare in the fossil record. While the paleontological importance of a rock unit is a measure of its potential for yielding valuable material, any fossil site containing identifiable fossil remains and the fossil bearing layer are considered highly important paleontologically.

The majority of Planning Areas 51, 35, and 30 (PAs 51, 35, and 30) lie on the Tustin Plain, a coastal alluvial plain. Alluvium from the Late Pleistocene to Holocene Epochs (approximately 2 million to 11,000 years ago) immediately underlies the majority of the project area, including the part occupying the coastal plain and the washes in the eastern portion of PA 51.

The eastern portion of PA 51 occupies the western foothills of the northern Santa Ana Mountains. The hills and ridges in the eastern part of PA 51 are composed of older, underlying, marine and nonmarine rock units of early Oligocene to late Pleistocene age (23 million to 2 million years ago). In order of decreasing geologic age, these latter rock units include the undifferentiated Sespe and Vaqueros Formations, Topanga and Monterey Formations, Oso Member of the Capistrano Formation, Niguel Formation, and Nonmarine Terrace Deposits. Nonmarine Terrace Deposits also underlie the terraces at the south corner of the PA 51. The northwestern corner of PA 51 contains a small portion of the Santa Ana Mountain foothills, which were separated from the main formation by erosion. This small portion is composed of undifferentiated late Cretaceous (135 million years ago) marine Williams Formation. The rock units underlying parts of PA 51 have previously yielded scientifically highly important fossil remains at recorded fossil sites on and near the site.¹ Three recorded fossil sites have been identified in PA 51 (vicinity of former MCAS El Toro).² These fossil sites occur in undifferentiated Sespe and Vaqueros Formation and in

Topanga Formation, dating from the early Oligocene to the early and middle Miocene (38 million to 15 million years ago). Fossil types include marine invertebrates and vertebrates, continental vertebrates, land plants, and land mammals. The three recorded fossil sites lie within the proposed habitat preserve portion of PA 51.

The majority of PA 30 is underlain by Pleistocene Alluvium. This formation is widespread in the Tustin Plain area, and is believed to extend to depths of 1,000 feet in PA 30. A significant deposit of Pleistocene terrestrial vertebrates was recovered during excavation of a flood control basin 4 miles from the PA 30. These finds were buried approximately ten feet below existing grade and consisted of partially articulated skeletons of camel, sloth, mammoth, horse, and bison. It is possible that similar beds underlie PA 30.³

In addition to already identified paleontological resources, as described previously, various rock units can be assigned levels of paleontological importance. The paleontological importance of a rock unit reflects its potential productivity and the scientific importance of the fossils it has produced locally. Potential paleontological productivity is based on the abundance or densities of fossil specimens and/or recorded fossil sites in exposures of the rock unit on or near the site. Exposures of a specific rock unit in the project area are most likely to yield fossil remains similar in species quantities and densities to nearby rock units. The location and paleontological importance of the rock units found in the project area is summarized in Table 5.10-1. Figure 5.10-1 depicts the paleontological sensitivity zones of the project area and surrounding areas.

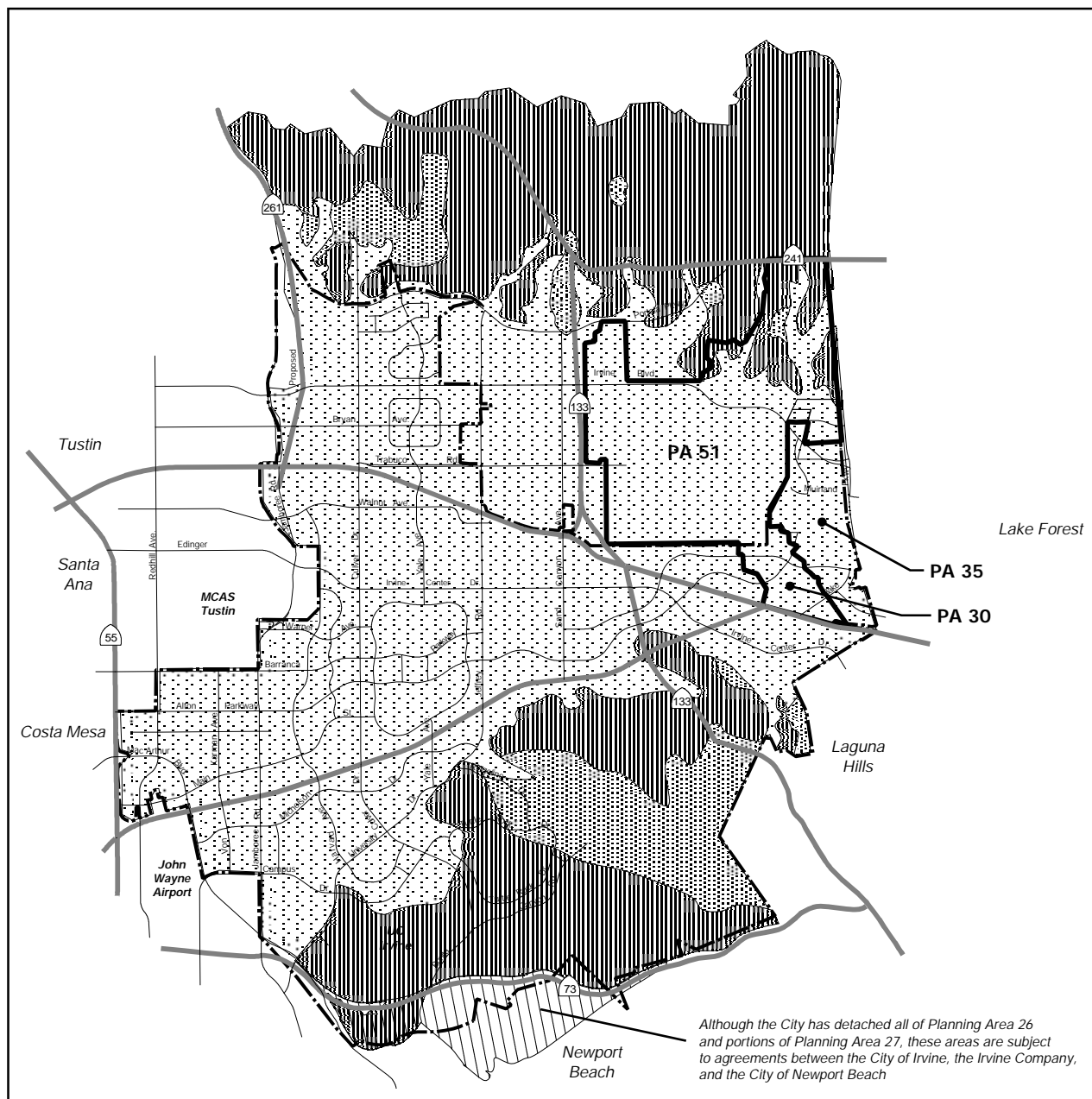
**Table 5.10-1
Paleontological Importance of Rock Units
Found Within the Project Area**

Rock Unit	Project Area Vicinity	Planning Area	Paleontological Importance
Alluvium Less than 8' in depth Greater than 8' in depth	Coastal Plain and Washes	51, 35, 30	Low Moderate
Sespe and Vaqueros Formations, Topanga and Monterey Formations, Oso Member of the Capistrano Formation, Niguel Formation, nonmarine terrace deposits	Northeastern Hills and Ridges	51	Moderate to High
Nonmarine terrace deposits	South Corner	51	Moderate
Undifferentiated marine Williams Formation	Northwestern Corner	51	High

Source: County of Orange, MCAS El Toro Community Reuse Plan
Draft Environmental Impact Report #563, August 1996

Notes: 1. The James A. Musick Jail Expansion and Operation EIR No. 564.

**Figure 5.10-1
Paleontological Sensitivity Zones**



A portion of the project area has been subject to substantial disturbance during more than 50 years as an operational military base. Base operations including ordnance storage, explosions, as well as runway and other facilities construction and operations may have previously impacted paleontological resources.

James A. Musick Jail Facility (Portion of PA 35)

James A. Musick Branch Jail is a relatively small portion of PA 35. The Musick Jail site lies on the Tustin Plain, a coastal alluvial plain. The site is located roughly northeast of the center of PA 51, near the western foothills of the northern Santa Ana Mountains. The Borrego Wash lies to the west/northwest of the jail site. As shown in Figure 5.10-1, the jail site is located in a low paleontologically sensitive zone. Areas in this zone typically have altered or geologically young rocks exposed at the surface and generally do not yield significant paleontological resources.

IRWD Parcel (Portion of PA 35)

The Irvine Ranch Water District (IRWD) parcel is also a relatively small portion of PA 35. The IRWD parcel also lies on the Tustin Plain, a coastal alluvial plain. The IRWD parcel lies roughly northeastern of the center of PA 51, near the western foothills of the northern Santa Ana Mountains. As shown in Figure 5.10-1, the IRWD parcel is located in a low paleontologically sensitive zone. Areas in this zone typically have altered or geologically young rocks exposed at the surface and generally do not yield significant paleontological resources.

5.10.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for paleontological resources.

Would the project:

1. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

5.10.3 Environmental Impact

The following analysis focuses on the potential paleontological impacts associated with implementation of the Base Plan and the Overlay Plan for the Former MCAS El Toro (PAs 51 and 30). The Musick Branch Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. Additionally, these parcels are located in a low paleontologically sensitive zone, as depicted in Figure 5.10-1, and this area is unlikely to produce fossils. As a result, implementation of the proposed project will not result in a

significant paleontological impact associated with the annexation of the James A. Musick Jail Facility and the IRWD Parcel.

Threshold 1: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Base Plan and Overlay Plan

Direct impacts to paleontological resources occur when earthwork activities, such as grading and trenching operations, cut into the geologic deposits (formations) within which fossils are buried. These impacts will occur during buildout of the project area. These direct impacts are in the form of physical destruction of fossil remains and could result in the loss of paleontological resources, including, an undetermined number of unrecorded fossil sites, associated geologic and geographic site data, and fossil bearing rocks. As shown in Table 5.10-1, future grading in the project area associated with future development has the potential to impact paleontological resources in the coastal plain and washes, northeast, northwest and southern portions of PA 51. These areas are identified as moderately to highly paleontologically sensitive. Earthmoving operations, such as grading and trenching, have the potential to impact buried paleontological resources.

The three previously recorded fossil sites in PA 51 lie within the proposed habitat preserve portion of PA 51. No development is proposed in this portion of the project area under the proposed land uses. No significant impact to these sites is anticipated from implementation of the proposed project. The proposed habitat preserve has been identified for ownership by the US Department of the Interior to complement the adjacent Natural Community Conservation Program/Habitat Conservation Program (NCCP/HCP) Reserve System (refer to Section 5.9 for a discussion of the NCCP/HCP). Any activities in this area will be under the discretion of the Department of the Interior, upon transfer of the land from the DON.

Pleistocene terrestrial vertebrates were discovered four miles from PA 30. Similar beds of Pleistocene terrestrial vertebrates may underlie PA 30. Development proposed by the OCGP Base Plan, including the transit oriented development, sports park, agriculture, and autocenter land uses, may impact beds of Pleistocene terrestrial vertebrates located in the area. According to the proposed Overlay Plan, development in this area would include low density residential, research and development, and autocenter uses, which may impact beds of Pleistocene terrestrial vertebrates.

The scientific knowledge associated with paleontological resources and formations can benefit from uncovering buried resources during development activity. For example, fresh exposure of fossil bearing rock could allow for the discovery of an undetermined number of unrecorded fossil sites and the recovery of scientifically highly important fossil remains that otherwise might not have been exposed without the earth moving. These remains and associated geologic and geographic data, instead of being lost to grading or unauthorized fossil collecting, would be preserved in an institution, where they would be available for future study by qualified investigators. There is potential that some of these remains might represent new or rare species, new geologic or geographic records and/or more complete specimens for some species than have been found previously in the fossil bearing rock unit of Orange County. These remains would provide a more comprehensive paleontological

resource inventory of the project site and the surrounding area than is now available or would have been available without the proposed project.

5.10.4 Significant Impacts

Base Plan and Overlay Plan

- P1.** Earthmoving operations such as grading and trenching has the potential to impact buried paleontological resources in the moderately to highly sensitive areas in the coastal plain and washes, northeast, northwest and southern portions of PA 51. This is considered a significant impact.

Additionally, pleistocene terrestrial vertebrates have been discovered four miles from PA 30. Similar beds of Pleistocene terrestrial vertebrates may underlie PA 30. This impact is considered significant.

5.10.5 Mitigation Measures

Base Plan and Overlay Plan

- P1.** Prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. (A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.

When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossils specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screen-washing operation on-site.

Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.

5.10.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Less than significant.

Notes and References

1. County of Orange. *MCAS El Toro Community Reuse Plan Draft EIR No. 563, Volume 1, section 4.13.1.2.* 1996.
2. City of Irvine. *GPA, ZC, and Annexation for MCAS El Toro and James A. Musick Branch Jail FEIR*, pg. 4.10-1. June 14, 1999.
3. City of Irvine. *Irvine Planning Area 30, GPA/ZC #21633-GA/#21635-ZC FEIR*, pg. 4.4-1. November 26, 1996.
4. County of Orange. *MCAS El Toro Community Reuse Plan Draft EIR No. 563, Volume 1.* 1996.
5. City of Irvine. *General Plan.* March 9, 1999.

5.11 Cultural Resources

Cultural resources include archaeological and historical resources. The CEQA Guidelines define “historical resources” in Section 15064.5. When a project will impact an archaeological site, CEQA requires a determination of whether the site is a historical resource.

The following analysis of cultural resources is based on Marine Corps Air Station El Toro Reuse Plan Technical Report J: *Cultural and Scientific Resources*, Greenwood and Associates, July 16, 1996.

The report referenced above is included as Appendix J of the County of Orange MCAS El Toro Community Reuse Plan Draft Environmental Impact Report No. 563 (DEIR 563).

5.11.1 Environmental Setting

Carbon dating indicates human habitation of the Southern California coastline began as long as 14,800 to 17,150 years ago. The first human inhabitants of this area have been described as small bands of roaming hunters, probably arriving in search of pristine hunting grounds. The majority of artifacts identified from this period consist of stone tools for hunting and butchering, with a marked absence of grinding implements. Few prehistoric sites from this period have been recorded, and there are only a handful of sites in Los Angeles and Orange counties.

By about 7,500 years ago, an increase in the use of grinding implements became visible in the archaeological record initiating a new phase in California’s prehistory. Often referred to as the Milling Stone Horizon, this period demonstrates an increase in the size and duration of prehistoric settlements. More is known about this cultural horizon because a greater number of archaeological sites from this period have been recorded, especially in the Southern California coastal region where numerous archaeological surveys have been conducted.

Between 1,500 and 2,500 years ago, the cultural groups of Southern California were subject to the intrusion of a culture that migrated west from the Great Basin area. The new culture brought new technologies and practices, as well as a new language known as Shoshonean. Shoshonean groups are believed to have been well established in Southern California a minimum of 1,200 years ago and possibly as early as 3,000 years ago. Resident coastal and inland populations were apparently displaced to the north and south by the Shoshoneans, forming a wedge between the linguistically similar Hokan-speaking Chumashan and Yuman peoples.

The Shoshoneans were the dominant culture in the Los Angeles Basin until the arrival of Spanish Missionaries in the early 16th century. Mission San Gabriel was established in 1771 and began slowly integrating the surrounding population. The Shoshonean culture inhabited portions of the project area. The project area fell within the sphere of influence of

Mission San Gabriel and the native population in this area became known as Gabrielinos. Three miles south of the project area is Aliso Creek, the dividing line between the Gabrielinos and the Juanenos, similarly named after the Mission San Juan Capistrano.

Former MCAS El Toro (PAs 51 and 30)

James Irvine, a Scotch-Irish pioneer, created the Irvine Ranch (the predecessor to The Irvine Company) between 1864 and 1876 by purchasing three distressed ranchos: San Joaquin, Santiago de Santa Ana and Lomas de Santiago. He consolidated 110,000 acres, including a portion of the project area, into what became known as the Irvine Ranches. The land was devoted primarily to agricultural production of cattle, fruits and vegetables. In 1942, a military pilot's fleet operational training facility was established through condemnation of a portion of the project area, approximately 2,340 acres of the Irvine Ranch Corporation. In the following year, the facility was commissioned as MCAS El Toro. No permanent structures existed on the property prior to those built by the military.

Historic Cultural Resources

National Register criteria for evaluation (36 CFR 60.4) state that ordinarily a property that has achieved significance within the past 50 years shall not be considered eligible for the National Register unless it is of exceptional importance. However, in 1991 Congress created the Legacy Cold War Project (Public Law No. 101-511, §8120) to be carried out by the DOD. The project's purpose is to aid in the preservation of physical and literary properties and objects from the Cold War period (from the end of World War II (WWII) to the break-up of the former Soviet Union in 1991). Because this period was mostly within the last 50 years, many Cold War Legacy sites might not otherwise be eligible for the State or National Register of Historic Places (SRHP, NRHP). Portions of PA 51 and 30 (the former MCAS El Toro) were established during WWII, and no structure earlier than this period is present at the former MCAS El Toro. Therefore, the historical significance of any structures at the former MCAS El Toro would be as part of the Cold War Legacy. However, surveys by the US Army Corps of Engineers and the DON prepared in conjunction with the closure of MCAS El Toro concluded that there were no structures eligible for designation as Cold War Legacy or for inclusion on the NRHP.

There are no features or characteristics of the project area that define or include unique ethnic cultural values. There are no known or documented religious or sacred uses associated with the project area.

Prehistoric Cultural Resources

Ten prehistoric archaeological sites and eight isolated prehistoric artifacts have been recorded in the northeastern habitat preserve portion of PA 51 (Orange County General Plan Planning Area Zone 3). The known sites occur on ridges between Borrego Canyon Wash and Agua Chino Wash. The sites appear to be ineligible for inclusion in the State's Sparse Lithic Scatters Program (Jackson, et al. 1988:1). The US Corps of Engineers, with concurrence of the State Office of Historic Preservation, recommended that seven of the recorded prehistoric sites be evaluated to determine eligibility for nomination to the NRHP. As part of the Base Realignment and Closure Cleanup Plan for MCAS El Toro further

evaluation of one additional archaeological site located in the central portion of PA 51 was recommended.

There are two prehistoric sites, CA-ORA-551 and -602, and one prehistoric isolate located within a one-half mile radius of PA 30 (potentially located in PA 51). There are no recorded prehistoric or historic sites within PA 30, although approximately 95 percent of PA 30 has yet to be surveyed.

James A. Musick Jail Facility (Portion of PA 35)

Historical/archaeological resources were not analyzed in the County of Orange James A. Musick Jail Expansion and Operation EIR No. 564. According to the City of Irvine General Plan (Figure E-1), there are no historical/archaeological resources identified on the Musick Jail site.

IRWD Parcel (Portion of PA 35)

The IRWD parcel contains two water storage reservoirs and associated pumping and distribution facilities. According to the Irvine General Plan (Figure E-1), there are no historical/archaeological resources identified on the IRWD parcel.

5.11.2 Threshold For Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for cultural resources.

Would the project:

1. *Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5 of the CEQA Guidelines;*
2. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5 of the CEQA Guidelines; or*
3. *Disturb any human remains, including those interred outside of formal cemeteries?*

5.11.3 Environmental Impact

The following analysis focuses on the potential cultural resources impacts associated with implementation of the Base Plan and the Overlay Plan for the Former MCAS El Toro (PAs 51 and 30). The Musick Branch Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. Additionally, Figure E-1 of the City of Irvine General Plan indicates there are no historical/archaeological resources on the Musick Jail site. As a result, implementation of the proposed project will not result in a significant cultural

resources impact associated with the annexation of the James A. Musick Jail Facility and the IRWD Parcel.

Threshold 1: Would the project cause a substantial adverse change in the significance of a historical resource?

Base Plan and Overlay Plan

Demolition of existing structures on the former MCAS El Toro site (PA 51) and future development of the former MCAS El Toro could potentially degrade historical resources. The DON has determined that buildings on-site are not Cold War Legacy eligible, nor are they eligible for the NRHP. No significant impact to National Register-eligible property will result from implementation of the Base Plan or Overlay Plan.

The historical museum/collection that was previously located on former MCAS El Toro in Buildings 243 to 245 and the vintage aircraft on the base has been relocated to Marine Corps Air Station Miramar (MCAS Miramar) in San Diego, California. Therefore, implementation of the Base Plan or Overlay Plan will not result in a significant impact to the museum and the vintage aircraft.

Because there are no features or characteristics of the project area, which define or include unique ethnic cultural values, the Base Plan or Overlay Plan will not result in a significant impact to unique ethnic cultural values.

Because there are no known or documented culturally significant religious or sacred uses associated with the project area, the Base Plan or Overlay Plan will not result in a significant impact to culturally significant religious or sacred uses.

In summary, development of the project area according to the Base Plan or Overlay Plan will not cause a substantial adverse change in the significance of any historical resource.

Threshold 2: Would the project cause a substantial adverse change in the significance of an archaeological resource?

Base Plan and Overlay Plan

The majority of previously documented archeological resources in the project area are located in the portion of Planning Area 51 designated as Habitat Preserve. Under both the Base Plan and the Overlay Plan, this area will be used as natural open space to protect sensitive wildlife habitat. No intensive development is proposed under the Base Plan or Overlay Plan in this area and no significant impact to this issue is anticipated. Public access will be limited in keeping with the habitat management plan (see Section 5.9 – Biological Resources).

There are two prehistoric sites, CA-ORA-551 and -602, and one prehistoric isolate located within a one-half mile radius of PA 30. There are no recorded prehistoric or historic sites within PA 30, although, approximately 95 percent of PA 30 has not been surveyed. Development is proposed in this area, and there is the potential that archaeological resources are present that may be disturbed during grading activities associated with future development of this area.

Grading activities associated with future development of the project area under the proposed Base Plan or Overlay Plan may result in a significant impact to archaeological sites in PA 51 and PA 30. Additionally, the proposed project would result in substantial soil disturbance in areas where construction is proposed. Construction activities may uncover previously unknown archaeological resources. The potential to encounter unknown archaeological resources is a significant impact.

Threshold 3: Would the project disturb any human remains, including those interred outside of formal cemeteries?

Base Plan and Overlay Plan

There are no known human remains in the project area. However, grading activities could uncover previously unknown human remains especially in PA 30 where 95 percent of the area has not been surveyed. Grading activities will result in a significant impact to this issue throughout development of the project area. Implementation of the Base Plan and the Overlay Plan has the potential to uncover previously unknown human remains, including those interred outside of formal cemeteries, and the impact is considered significant.

5.11.4 Significant Impacts

Base Plan and Overlay Plan

- Cult1.** Grading activities associated with future development of the project area may cause a substantial adverse change in the significance of an archaeological resource. Mitigation Measures Cult B1 through Cult B3 will reduce this impact to a level less than significant.
- Cult2.** Grading activities could uncover previously unknown human remains, including those interred outside of formal cemeteries. Mitigation Measure Cult B4 will reduce this impact to a level less than significant.

5.11.5 Mitigation Measures

The following measures have been developed to provide assurances that significant cultural resource impacts or potentially significant cultural resource impacts associated with the proposed project will be mitigated to a level less than significant. This assurance is obtained by verification, which would occur at subsequent levels of environmental review. Finally, in some instances, it is not possible at this program level of analysis to determine if cultural resource impacts would occur from the implementation of specific actions. For these situations, mitigation measures provide for further review at the time of specific development proposals in the project area. Increased planning detail developed at the development proposal level will clarify the specific impacts and options available for mitigation. As such, these measures are not intended to restrict the development of appropriate mitigation measures, as determined through analysis at a subsequent level of review.

Base Plan and Overlay Plan

Cult1. Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PAs 51 and 30. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

Cult2. Monitoring of excavation and grading activities associated with future development in PAs 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure Cult1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and an assessment of their importance under CEQA and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.

Cult3. Prior to the issuance of grading permits and/or building permits for any future development in PAs 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City of Irvine to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.

Cult4. Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City of Irvine to address the accidental discovery or recognition of any human remains. The program shall include the following:

There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

C The county coroner must be contacted to determine that no investigation of the cause of death is required, and

If the coroner determines the remains to be Native American:

- C *The coroner shall contact the Native American Heritage Commission within 24 hours.*
- C *The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.*
- C *The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or*
- C *Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.*
 - o *The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.*
 - o *The descendant identified fails to make a recommendation; or*
 - o *The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.*

Compliance with this measure shall be verified by the Community Development Department.

5.11.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Less than significant.

Notes And References

1. City of Irvine. *Irvine Planning Area 30, GPA/ZC #21633-GA/21635-ZC FEIR*, pg. 4.4-1. November 26, 1996.
2. Greenwood and Associates. *Marine Corps Air Station El Toro Reuse Plan Technical Report J: Cultural and Scientific Resources*. July 6, 1996.
3. County of Orange. *MCAS El Toro Community Reuse Plan DEIR No. 563, Volume 1*. 1996.
4. City of Irvine. *General Plan*. March 9, 1999.

5.12 Aesthetics

5.12.1 Environmental Setting

Project Area Viewsheds

Access to the project area is generally restricted. Public views are only available from adjacent roadways such as Irvine Boulevard, Trabuco Road, Alton Parkway, Sand Canyon Road, Barranca Parkway, I-5, SR-133, SR-241, and the Eastern Transportation Corridor. The major feature within the project area is the former MCAS El Toro property (PAs 51 and 30). Views of the former MCAS El Toro property include a variety of land uses, structures and facilities of differing types, sizes, architectural styles, and age. The structures include runways and aprons, hangars, warehouses, barracks housing, offices, commercial structures, recreational facilities, a golf course, single-family housing units, and agricultural areas. In addition, the Musick Branch Jail Facility and IRWD parcel (portions of PA 35) are located adjacent to the northeastern edge of the base. Views of the Musick Jail Facility are limited as it is surrounded by a security fence, as well as office and light industrial buildings within the bordering Irvine Spectrum and City of Lake Forest. The water storage and distribution facilities located on the IRWD parcel are visible from Irvine Boulevard. Due to the size of the entire project area, views from locations near the site are often limited to the immediate foreground area, while more distant locations afford panoramic views of the area.

There are no designated County or State scenic highways in or near the project area. However, Sand Canyon Avenue is a designated rural/natural character Scenic Highway in the City of Irvine General Plan. The General Plan also designates the Santa Ana (I-5) Freeway as an urban character Scenic Highway.

A number of residential areas near the site also have views of the project area. These include the residential areas west of Jeffrey Road in the City of Irvine, west of the project area. The residents of this area can view the western edge of the project area through the eucalyptus windrow trees on Sand Canyon Road. To the south, the residential areas of Laguna Woods, Laguna Hills and Aliso Viejo are at higher elevations than the project area and thus have panoramic views of the project area. Residences at Foothill Ranch to the northeast are also located at a higher elevation and have panoramic views of the project area.

Visual Quality

Former MCAS El Toro (PAs 51 and 30)

The physical qualities of the former MCAS El Toro property (PAs 51 and 30) depend on the land uses and structures found in various areas. The most prominent features of the central portion of the property are the aircraft runways, which, together with the connecting aprons between the runways, form a large concrete "X" on the ground when viewed from higher elevations. Turf areas are interspersed between and around the runways and aprons.

The areas north of Irvine Boulevard (PA 51) and south of Barranca Parkway (PA 30) (the northern and southern portions of the former MCAS El Toro property) are used for agriculture and are characterized by flat, open fields and low plantings. Agricultural areas are also located on the eastern section of the property along Irvine Boulevard and adjacent to the facility to the west, east, and southeast.

The eastern section of PA 51 (east of Irvine Boulevard) is a vacant rolling hillside area with one-story beige and brown single-family detached homes at the foot of the hill. This area is referred to as the Wherry Housing Area and is developed with nearly identical homes on curvilinear streets lined with mature trees. The vacant hillsides are occupied primarily by coastal sage scrub and are an extension of the hillside areas within Limestone Canyon Regional Park to the north and east. A dirt road winds through the undeveloped hillside area.

The southeastern section of PA 51 (west of the Borrego Canyon Wash and Alton Parkway) is developed with the Marine Memorial Golf Course and warehouse structures used for storage, maintenance, and operation of the facility. The golf course offers views of open grassy areas and stands of trees, while the warehouse structures are mainly cream-colored box buildings surrounded by pavement.

The northeastern section of PA 51 (west of Irvine Boulevard and Trabuco Road) is also occupied by a number of warehouse structures and paved areas around the runway and aprons. An elementary school is located within this area. A barbed wire fence surrounds the eastern edge of this area, with a few scattered trees. The land along Irvine Boulevard is used for agriculture and as an equestrian center.

The northwestern section of PA 51 (east of the Eastern Transportation Corridor) is developed with former barracks housing, commercial buildings, office structures, open fields, and recreational areas. The structures consist of one- to four-story buildings, with a mix of old and new structures, and reflecting a variety of architectural styles. Game fields, a tot lot, and picnic areas are found on the northern end and mature trees and landscaping are found throughout this area. This area has the highest intensity of development on the property. The range of land uses and structures within this area create visual variety not found in other areas of the facility.

The southwestern section of PA 51 (east of the Southern California Regional Rail Authority [SCRRA] railroad line) is developed with three aircraft hangars, warehouse buildings, storage areas, and paved areas for aircraft storage and circulation. The structures in this area are larger than most other structures found on the property and create an industrial section at the former military facility.

James A. Musick Jail Facility (Portion of PA 35)

The existing development within the Musick Jail Facility (located in PA 35) includes open areas used for agriculture on the western and southern portions of the jail site and scattered buildings at the northeastern section consisting of offices, men's and women's compounds, shops, warehouse, nursery, chicken coops, and maintenance facilities. The existing structures resemble light industrial and office buildings, similar to those found in the surrounding area. Public views of the jail facility are limited to the trees and security fencing along the perimeter of the site, and distant views of the on-site buildings.

IRWD Parcel (Portion of PA 35)

The IRWD parcel contains two water storage reservoirs and associated pumping and distribution facilities. These facilities are visible from Irvine Boulevard.

Light and Glare

Former MCAS El Toro (PAs 51 and 30)

Existing sources of light at the former MCAS El Toro property (PAs 51 and 30) include street lights along on-site roadways, runway lighting, lights along the runway aprons, parking lot lighting, and security lighting around the site and the buildings on-site. These light sources do not adversely affect adjacent land uses since only industrial, office and agricultural uses are found near the property. Residences with views of the facility are not impacted by existing light sources on the site since the residences are located at least two miles from the property. The agricultural areas to the north and south and the golf course to the east are not an existing light source. Sources of glare such as glass, metal and polished exterior building materials are not generally found on existing structures on the former MCAS El Toro property and do not create glare problems. However, the large expanses of concrete pavement and building walls on-site, as well as the overall lack of landscaping, generate some glare on adjacent uses.

James A. Musick Jail Facility (Portion of PA 35)

Exterior lighting at the jail (located in PA 35) consists of security lighting around buildings, with some light standards exceeding 16 feet in height. All lighting is directed toward buildings and not outward from the jail site. Agricultural lands surround the jail to the north and west. Structures housing light industrial uses surround the jail to the east and south. Thus, adjacent land uses are not adversely affected by lighting associated with the jail facility.

IRWD Parcel (Portion of PA 35)

On-site lighting for the IRWD parcel is provided for security reasons. The lighting is minimal and is directed toward the existing structures. Vacant land and the Musick Jail Facility surround the IRWD parcel. As a result, adjacent land uses are not adversely affected by on-site lighting.

Topography

Former MCAS El Toro (PAs 51 and 30)

The majority of the former MCAS El Toro property (PAs 51 and 30) has little topographic relief, with a slight slope (1.5 to 2.5 percent) to the west and southwest, and a gently sloping to steep hillside area at the eastern section of the site. Elevations in this portion of the project area range from approximately 200 feet above mean sea level (MSL) at the western corner of PA 51 to approximately 450 feet above MSL on Irvine Boulevard at the Wherry Housing Area and rising to over 750 feet above MSL at the eastern corner by the Foothill Transportation Corridor. The Santa Ana Mountains are north and east of the property and rise to 6,698 feet above MSL. The San Joaquin Hills south of the site rise to approximately 1,170 feet above MSL. The area south of Barranca Parkway has moderate slopes ranging from five to 20 percent. The former MCAS El Toro's general southwestern slope is interrupted by the manmade undulations at the Marine Memorial Golf Course (southeastern section) and the drainage areas along this course.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail Facility property (portion of PA 35) is relatively flat, with a slight slope to the southwest. No visually significant topographic features are present on the site.

IRWD Parcel (Portion of PA 35)

The IRWD parcel (portion of PA 35) is also relatively flat with no visually significant topographic features present on the parcel.

5.12.2 Threshold For Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for aesthetics.

Would the project:

1. *Result in the visible grading of over 5,000 cubic yards on any 20-acre portion of the project site; or visible cut and fill slope over 25 vertical feet?*
2. *Result in the obstruction of views from officially designated vista points or scenic routes?*
3. *Result in the creation of light spillover and glare effects that present a nuisance to residential land uses?*
4. *Result in the substantial alteration of the existing landform of the site or of a unique topographic feature on the site?*

5. *Substantially degrade the existing visual character or quality of the project area and its surroundings?*
6. *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historical buildings within a state scenic highway?*
7. *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

5.12.3 Environmental Impact

The following analysis focuses on the potential aesthetic impacts associated with implementation of the Base Plan and the Overlay Plan for the Former MCAS El Toro (PAs 51 and 30). The Musick Branch Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. EIR No. 564 was prepared by the County of Orange and identifies mitigation measures for aesthetic impacts that may occur with the expansion of the Musick Jail Facility. The mitigation measures address landscaping, building design, and screening walls to avoid negatively impacting neighboring areas. Should the jail be expanded in the future, it would not negatively impact land uses in the project area, as proposed land uses in this portion of PA 51 consist of habitat preserve, agricultural, and open space uses. As a result, implementation of the proposed project will not result in a significant aesthetic impact associated with the annexation of the James A. Musick Jail Facility and the IRWD Parcel.

Base Plan

Implementation of the proposed project will lead to the eventual demolition of the majority of the existing structures in the former MCAS El Toro property (PAs 51 and 30) and the possible reuse of some structures. Development sequencing will be linked to the availability of infrastructure, the completion of hazardous materials cleanup, and the removal of runways. Thus, the visual characteristics of the site will slowly change as parkland improvements are implemented, new structures are built and new roads and landscaping are provided. As defined in the OCGP Base Plan land use plan, the former MCAS El Toro property will be primarily developed with open space and recreational uses.

The northeastern section of the project area, referred to as PAZ3, is currently a generally undeveloped hillside area. This area is proposed as Habitat Preserve, and the existing open space within this area will be preserved. No changes to the visual character of the hillsides will occur under the proposed project.

The northwestern portion of PA 51 is proposed to be retained for agricultural land uses. The central and eastern portions of PA 51 will feature a park, sports park, and golf course. A wildlife corridor traverses PA 51 generally in north to south direction in the eastern portion of the area.

On the western site of PA 51, educational uses, research and development, and sports park uses are proposed.

The southern section of PA 51 and a portion of PA 30 will be developed with institutional uses and transportation facilities. Most of PA 30 consists of agriculture, sports park, and transit oriented development. The wildlife corridor traverses the planning area in a north to south direction. The southernmost portion of PA 30, south of Bake Parkway, will consist of an autocenter.

The primary land use component of the OCGP Base Plan will be open space. Open space land uses, including parks, golf courses, sports parks, and exposition center, will be provided throughout PAs 51 and 30, which will provide visual amenities to the entire area. Furthermore, this formerly restricted area will become accessible to the general public which will benefit from visual enhancements provided by the project with respect to the expanded golf course area, wildlife corridor, and central park. Landscaped parkways and pedestrian greenways will provide linkages to different areas of the community and between sectors and parks.

Overlay Plan

As defined in the OCGP Overlay Plan land use plan, the former MCAS El Toro property will be primarily developed with open space and recreational uses. Additionally, low density residential, transit oriented development, and research and development land uses would occupy substantial portions of the project area.

The northeastern section of the project area, referred to as PAZ3, is currently a generally undeveloped hillside area. This area is proposed as Habitat Preserve, and the existing open space within this area will be preserved. No changes to the visual character of the hillsides will occur under the proposed project.

The northwestern portion of PA 51 is proposed to be retained for agricultural land uses. The central and eastern portions of PA 51 will feature a park, sports park, and golf course. A wildlife corridor traverses PA 51 generally in a north to south direction in the eastern portion of the area. The southern section of PA 51 will be developed with mainly institutional and transit oriented land uses.

Most of the PA 30 consists of transit oriented development and research and development. The wildlife corridor traverses the planning area in a north to south direction. The southernmost portion of PA 30, south of Bake Parkway, will consist of an autocenter.

The primary land use component of the OCGP Overlay Plan will be open space. Open space land uses, including parks, golf courses, sports parks, and exposition center, will be provided throughout PA 51, which will provide visual amenities to the entire area. Furthermore, this formerly restricted area will become accessible to the general public which will benefit from visual enhancements provided by the project with respect to the expanded golf course area, wildlife corridor and central park. Landscaped parkways and pedestrian greenways will provide linkages to different areas of the community and between sectors and parks.

Threshold 1: *Result in the visible grading of over 5,000 cubic yards on any 20-acre portion of the project site; or visible cut and fill slope over 25 vertical feet?*

Base Plan and Overlay Plan

The portion of PA 51 proposed for development and park uses, and all of PA 30 consist of relatively flat or slightly sloping terrain, and grading activities associated with any future development of PAs 51 and 30 pursuant to the proposed GPA and Zone Change, and consistent with the Orange County Great Park land use plan, will not be expected to adversely affect existing topography of the site.

The hillside areas of PA 51 to the east (PAZ 3) will be preserved as a natural habitat area and no grading or cut and fill on slopes over 25 vertical feet will occur. The Marine Memorial Golf Course will likewise be retained and the manmade terrain on this golf course generally maintained. A portion of the existing agricultural area south of Barranca Parkway (PA 30) will be retained; however, the areas of PA 30 proposed for sports park and auto center under the Base Plan, and transit oriented development and research and development may require filling to achieve a flat terrain suitable for development. Grading, due to the implementation of the proposed project, on the flatter areas of the former MCAS El Toro facility are not expected to involve over 5,000 cubic yards on any 20-acre portion of the property since the proposed developments are expected to maintain the flat topography of the site. Only minor grading will be required to create level pads. No grading related aesthetic impacts on PAs 51 and 30 are anticipated to occur.

Threshold 2: Result in the obstruction of views from officially designated vista points or scenic routes?

Base Plan and Overlay Plan

Since there are no scenic routes in the area, no impact on the existing scenic resources of the City or the region is anticipated with new development resulting from implementation of the proposed project.

Threshold 3: Result in the creation of light spillover and glare effects that present a nuisance to residential land uses?

Base Plan and Overlay Plan

Future development of PAs 51 and 30 pursuant to the proposed GPA and Zone Change, and consistent with the Orange County Great Park land use plan, will lead to the introduction of new sources of light and glare within the project area. These sources include street lighting along planned roadways, exterior lighting (including security lighting and parking lot lighting) for various educational and institutional developments, lighting associated with auto center, and recreational sports field lighting. The project will involve development of athletic fields which will likely contain night lighting. The City has adopted a standard for athletic field lighting to minimize light spillover to adjacent property and reduce glare (City of Irvine Park Standards Manual). Section II Environmental Control requires that the luminaries used to provide light on the recreational athletic fields shall include reflectors and application technology designed to protect the environment surround the facility. However, the potential for a significant light and glare impact may occur should proposed light sources be directed into or located near existing or planned residential uses, which are sensitive to light intrusion during nighttime hours. Reflective materials and glazed

or polished exterior surfaces associated with the research and development land uses may create glare, which could cause visual nuisance residential land uses. This is considered a significant impact.

Threshold 4: Result in the substantial alteration of the existing landform of the site or of a unique topographic feature on the site?

Base Plan and Overlay Plan

No unique geologic or topographic feature exists within the project area. The majority of planned development proposed under the GPA and Zone Change, consistent with the Orange County Great Park Base Plan, will occur on the flat areas of the former MCAS El Toro facility (PAs 51 and 30). Under the proposed habitat preserve designation, in the eastern section of PA 51 the existing moderate to steep terrain and hillsides in this area will be preserved. No impact on the topography of the Santa Ana Mountains to the north and east is expected as a result of implementing the proposed project. The continued use of the Marine Memorial Golf Course will also preserve the manmade topography of the golf course area. The rolling area located south of Barranca Parkway may require filling to achieve a flat terrain for the sports park under the Base Plan, or research and development uses under the Overlay Plan. This is not expected to represent a significant impact since the surrounding properties all have flat terrain. Future development under the proposed project is expected to maintain the flat topography of the rest of the former MCAS El Toro property.

Threshold 5: Substantially degrade the existing visual character or quality of the project area and its surroundings?

Base Plan and Overlay Plan

New development proposed under the GPA and Zone Change, consistent with the Orange County Great Park Base Plan, would change the visual appearance of the former MCAS El Toro facility (PAs 51 and 30) from the current air station facilities and associated uses to that, in the western portion of the project area, of more intensive urban development. New buildings and roadways are proposed on the property, some of which may be several stories tall. These new developments would be visible to motorists along existing adjacent roadway (Sand Canyon Road) and from homes located west and at higher elevations southeast and northeast of the site. Additionally, under the Overlay Plan low density residential development is proposed for PAZ 2, located in the northern portion of the PA 51. New public roadways are planned in the project area that will increase the visibility of the area to the public. Educational, research and development, and institutional development will be readily visible within the western portion of the property. The visual characteristics of the site will slowly change as new structures are built and new roads and landscaping are provided. This change in the visual appearance of the project area has the potential to result in a significant aesthetic impact.

However, new development within PAs 51 and 30 will be required to comply with the development standards in the City's Zoning Ordinance. This entails City approval of architectural plans, landscape plans, and signage for each development to ensure new development is consistent with the City's Land Use Element, Circulation Element design policies, Zoning Ordinance, and the Landscape Ordinance and Guideline Manual of the City of Irvine, as well as surrounding land uses.

Threshold 6: *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historical buildings within a state scenic highway?*

Base Plan and Overlay Plan

There is no designated state scenic highway in the vicinity of the project area. Therefore, no impact to scenic resources within a state scenic highway would occur with the implementation of the project under the Base Plan and the Overlay Plan.

Threshold 7: *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

Base Plan and Overlay Plan

Future development of PAs 51 and 30 pursuant to the proposed GPA and Zone Change, and consistent with the Orange County Great Park land use plan, will lead to the introduction of new sources of light and glare within the project area. These sources include street lighting along planned roadways, exterior lighting (including security lighting and parking lot lighting) for various educational and institutional developments, the auto center and lighting associated with recreational sports fields. The potential for a significant light and glare impact may occur should proposed light sources be directed into or located near existing or planned residential uses, which are sensitive to light intrusion during nighttime hours. This is considered a significant impact.

5.12.4 Significant Impacts

Base Plan and Overlay Plan

- A1.** Future development of PAs 51 and 30 pursuant to the proposed GPA and Zone Change, and consistent with the Orange County Great Park land use plan, will lead to the introduction of new sources of light within the project area. These sources include street lighting along planned roadways and exterior lighting (including security lighting and parking lot lighting) for various educational and institutional developments, and lighting associated with athletic fields. The potential for a significant light impact may occur should proposed light sources be directed into or located near existing or planned residential uses, which are sensitive to light intrusion during nighttime hours. This is considered a significant impact. Implementation of Mitigation Measures A1 and A2 will reduce the impact to a level less than significant.
- A2.** Future development of PAs 51 and 30 pursuant to the proposed GPA and Zone Change, and consistent with the Orange County Great Park Base Plan, will lead to the introduction of new sources of glare within the project area. Reflective materials and glazed or polished exterior surfaces associated with the research and development land uses may create glare, which could cause visual nuisance to residential land uses. This is considered a significant impact. Implementation of

Mitigation Measures A1 and A2 will reduce the impact to a level less than significant.

5.12.5 Mitigation Measures

Base Plan and Overlay Plan

- A1. Prior to issuance of grading permits, lighting plans and signage plans for new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent residential areas occurs.
- A2. Prior to the issuance of grading permits, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.

5.12.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Less than significant.

Notes and References

None.

5.13 Population and Housing

This section incorporates by reference a general discussion of the population, housing, and employment trends cited in the City of Irvine's Northern Sphere Area General Plan Amendment and Zone Change EIR¹¹ as well data projections from the Orange County Great Park Plan and its supporting technical documents.³

5.13.1 Environmental Setting

The former MCAS El Toro is currently in caretaker status. A limited number of military and civilian staff work at the site to carry out continuing base closure and maintenance activities; however, no one lives at the base. The number of vacant dwelling units on the site is as follows: 4,380 group quarter units and 1,209 residential family units.⁴

Local and Regional Planning Projections

The project area's demographics are best examined in the context of existing and projected population for the Orange County region and the City of Irvine. Information on population, housing, and employment for the project area is available from several sources:

U.S. Census Data

The United States Bureau of the Census publishes population, household and employment data gathered through the decennial census. This data provides a record of historic growth rates in Orange County and the City of Irvine. Table 5.13-1 shows Orange County's population, housing, and employment and its rate of growth since 1980. Table 5.13-2 presents City of Irvine's population, housing, and employment and its rate of growth since 1980.

Table 5.13-1
Orange County Population, Housing, and Employment
1980 Through 2000

	1980	1990	2000
Population	1,932,709	2,410,556	2,846,289
Households	721,514	875,072	969,484
Employment	847,793*	1,301,235**	1,502,434***

Source: U.S. Centennial Census

* Orange County Progress Report, July 1980 estimate

** Composite of Census and California Employment Development Department estimates, OCP-92.

*** 2000 Census data not yet available; estimate from OCP-2000 controlled to California Employment Development Department Labor Force estimate, June 2000.

Table 5.13-2
City of Irvine Population, Housing, and Employment
1980 Through 2000

	1980	1990	2000
Population	62,134	109,706	143,072
Households	22,514	42,221	53,711
Employment	68,741*	152,441**	176,986***

Source: U.S. Centennial Census

* Orange County Progress Report, July 1980 estimate

** Composite of Census and California Employment Development Department estimates, OCP-92.

*** 2000 Census data not yet available; estimate from OCP-2000 controlled to California Employment Development Department Labor Force estimate, June 2000.

Orange County Projections

Orange County jurisdictions and public agencies develop demographic estimates and projections to provide a common foundation for regional and local planning, policymaking, and infrastructure provision. Orange County agencies have executed a Memorandum of Understanding with the Orange County Council of Governments (OCCOG) to contract with the Center for Demographic Research at California State University, Fullerton, to develop and periodically update demographic projections for Orange County. OCCOG adopted the most recent projections, entitled Orange County Projections 2000 (OCP-2000), at the Jurisdiction, Regional Statistical Area, Community Analysis Area, and Census Tract levels. In addition, the Center for Demographic Research and the Orange County Transportation Authority distribute OCP-2000 projections to small geographic areas called Traffic Analysis Zones (TAZ) for small scale planning purposes. For example, OCP-2000 TAZs can be aggregated to approximate the boundaries of the proposed project.

OCP-2000 provides the best available projections of anticipated growth for Orange County. OCP-2000 projects the amount and distribution of population, housing, and employment growth based on detailed information about growth trends, development and local land use provided by Orange County jurisdictions and public agencies; infrastructure, utility and service providers; and the private sector. The process for developing the projections is described in "Orange County Projections 2000." (California State University, Fullerton, Center for Demographic Research, September 2000).

The OCP-2000 projections correlate closely with the 2000 US Census results. Orange County's 2000 census population is within 1.2 percent of the OCP-2000 figure. The City of Irvine's OCP-2000 population for 2000 varies less than one percent from the census count. Likewise, both the City's and the County's census housing counts are less than one percent below OCP-2000. Direct comparisons of employment projections are not possible at this time, as 2000 Census employment estimates will not be released until sometime in 2003. In the interim, the Center for Demographic Research adjusts OCP projections to reflect California Employment Development Department employment projections.

Table 5.13-3 presents OCP-2000 projections for Orange County and City of Irvine population, housing and employment for the 2000 through 2025 period.

Table 5.13-3
OCP-2000 Projections for Orange County and the City of Irvine
2000 Through 2025

	2000	2005	2010	2015	2020	2025
Population						
County	2,853,757	3,031,440	3,168,942	3,270,677	3,342,829	3,416,037
Irvine	144,802	173,182	179,836	182,933	192,836	194,913
Dwelling Units						
County	978,004	1,018,873	1,056,882	1,080,430	1,096,824	1,115,823
Irvine	53,750	63,200	64,904	66,686	68,439	68,883
Employment						
County	1,502,434	1,667,778	1,796,726	1,897,350	1,975,074	2,043,665
Irvine	176,986	209,464	227,879	248,731	252,940	261,309

Source: OCP-2000, adopted by the Orange County Council of Government, June 2000.

Note: Projections are for July, 2000, 2005, 2010, 2015, 2020, and 2025.

Regional Projections

OCP-2000 projections are submitted as Orange County's input to regional growth projections prepared for the six-county Southern California region by the Southern California Association of Governments (SCAG). OCP-2000 provided the background for SCAG's adopted 2001 Regional Forecast for Orange County which is similar, but not identical, to OCP-2000 for 2025. SCAG's regional forecast modifies the OCP-2000 growth distribution to reflect regional transportation and housing policies and is not constrained by local general plans like OCP-2000.

Population Growth – Orange County

Population growth in Orange County has maintained a strong but diminishing pace in recent decades. From 1980 to 1990, population increased 47,785 annually, slowing to an average annual increase of 43,573 people during the 1990's. Orange County's current population is 2,846,289 as reported by the 2000 Census.

Based on Orange County's historic share of California's and the region's employment growth; migration and immigration trends; fertility rates; and local General Plans and zoning, OCP-2000 projects that this trend will continue at a diminished rate, with the County growing by an average of 22,491 people per year, from 2000 to 2025. Population growth will be fueled in large part by natural increase. Births are expected to account for 85 percent of the County's future population growth (The Orange County Planner, August/September 2001).

Population Growth – City of Irvine

The City of Irvine mirrors the County's growth. During the 1980's the City's population increased 77 percent, an annual average increase of 4,757 people. This rate cooled in the 1990's, yielding a 30 percent increase (3,337 annual average increase) over the decade. The 2000 Census reports that the City's current population is 143,072.

OCP-2000 projects how population growth within the County will be distributed over the next 25 years. OCP-2000 projects an annual average population increase of 2,004 between 2000 and 2025. In 2000, the City of Irvine's population represented 5.07 percent of the total County population. In 2025, this proportion is projected to climb to 5.71 percent.

Housing Growth – Orange County

Housing growth in Orange County has not matched the pace set by population growth. From 1990 to 2000, Countywide households increased 11 percent at an annual average rate of 9,441 units.

At present, Orange County has 969,484 households, with 2.9 persons per household on average; approximately 62 percent of the County's housing stock is single family units (2000 Decennial Census). The California Department of Finance estimated the January 2001 vacancy rate at 3.52 percent. As approved with input from local jurisdictions, OCP-2000 projects that the County's housing stock will increase by 137,819 units (14.1 percent) by 2025, an average rate of 5,513 dwelling units per year. Thus, the number of persons per household is projected to rise slightly to accommodate a population that is growing faster than the housing stock.

Housing Growth – City of Irvine

The City of Irvine reflects the County's housing growth. During the 1990's the City's housing increased 27 percent, at an annual average rate of 1,149 units. By 2025, OCP-2000 projects a 28 percent increase of 15,133 units (an average of 605 units per year), a housing growth rate half that experienced during the 1990's. In 2025, the City's housing units would grow to 6.2 percent of the County total despite the projected slowdown in housing production rates.

Table 5.13-4 summarizes the City's current housing stock. In 2000, the City of Irvine's dwelling units represented 5.5 percent of the total County housing stock. The City's housing stock is 64 percent single-family units, compared with 61 percent countywide. According to the California Department of Finance, January 2001 vacancy rate was 4.68 percent, above the countywide rate of 3.52 percent. The City's 2000-2005 Housing Element defines 3.1 percent as an optimal vacancy rate.

Table 5.13-4
City of Irvine 2000 Housing Units by Type

	Units	Percent of Total Units
Single-Family Detached	20,191	39.7
Single-Family Attached	12,262	24.1
Multi-Family, 2-4 Units	3,084	6.1
Multi-Family, 5 or More Units	14,307	28.1
Mobile Homes	1,000	2.0
Total Units	50,844	100.0

Source: California Department of Finance, January 2000 estimate.

Note: 2000 Census details on housing units by type is not yet available.

Housing affordability and availability have become major housing policy issues within the City, regions and state. The City of Irvine prepared the 2000-2005 Housing Element of its General Plan to provide a long-term blueprint for housing within the context of local and regional trends and housing production and housing affordability goals.

Housing affordability is a function of income and housing cost. Housing costs in Irvine have escalated steeply in recent years. Median home sales prices in the City ranged from \$304,000 to \$337,000, depending on zip code, as of August 2001 (DataQuick, August 2001). The City of Irvine's Housing Element adopted the objective of increasing affordable housing opportunities through new construction, and establishes a citywide Affordable Housing Needs goal of devoting five percent of units built for households earning less than 50 percent of the County's median family income, and five percent of units for households earning 81 to 120 percent of the County's median family income. These goals may be satisfied through on-site or off-site construction based on the availability of financial incentives (City of Irvine, 2000-2005 Housing Element, November 2000).

The Housing Element notes that the Affordable Housing Needs goal and implementation programs are needed to meet new production targets set by California's Department of Housing and Community Development to encourage each jurisdiction in the state to provide its fair share of very low, low and moderate income housing needed during the 2000-2005 time period. These numerical housing production goals are known as Regional Housing Needs Assessment (RHNA) targets. State law requires that the Housing Element of the General Plan identifies RHNA targets and document programs designed to meet the targets. To this end, the Housing Element analyzes housing needs within the City's demographic context; reviews potential market, governmental, and other constraints to meeting the City's housing needs; evaluates the resources available to meet housing needs; and finally, establishes policies and objectives to make progress in meeting its housing needs during the five-year period. The Department of Housing and Community Development certified the City's Housing Element in May 2002.

Irvine's Housing Element contains a package of goals, objectives and policies designed to meet its 2000-2005 RHNA targets as well as other housing needs in the City. Table 5.13-5 shows the City's RHNA goal of providing 10,782 additional units to meet the needs of very low, low, moderate, and upper income households in the City.

Table 5.13-5
City of Irvine Regional Housing Needs Assessment Targets
2000-2005

Household Income Category	Target
Very Low Income	1,942 units
Low Income	1,186 units
Moderate Income	2,049 units
Upper Income	5,605 units
Total	10,782 units

Source: City of Irvine, 2000-2005 Housing Element, November 2000.

Notes:

Very Low = 0-50% of Area Median Family Income (MFI)

Low = 51-80% of MFI

Moderate = 81-120% of MFI

Upper = Greater than 120% of MFI

Employment Growth – Orange County

From 1990 to 2000, countywide employment increased 15.1 percent, an average of 19,734 jobs annually. As of June 2000, Orange County has 1.5 million jobs. California's Employment Development Department estimates the current unemployment rate at 2.5 percent. OCP-2000 projects the County will continue to grow by 541,231 jobs, an average of 21,649 jobs per year through 2025. This constitutes a 36 percent increase over the 25-year period.

Employment Growth – City of Irvine

The City of Irvine's employment increased 16 percent during the 1990's, with an annual average increase of 2,555 jobs. The City's 2000 employment base was 176,986 jobs. The City's resident labor force is composed of 71,280 workers, with an unemployment rate of 1.9 percent. (California Employment Development Department, June 2000). The City of Irvine estimates that 13 percent of these workers both reside and work within the City (GPA 40 EIR: Larson, City of Irvine, 2000). Universities, bio-medical and high technology firms are the largest employers within the City.

OCP-2000 projects a 48 percent employment increase of 84,323 jobs, an annual average increase of 3,373 jobs between 2000 and 2025. In 2000, the City of Irvine's employment represented 11.8 percent of the total County employment. In 2025, Irvine is projected to garner 12.8 percent of county employment.

Jobs/Housing Ratio

The ratio of jobs to housing units in the area has environmental implications related to transportation and air quality. According to SCAG, areas having a jobs/housing ratio greater than the regional average are considered jobs-rich, while areas with ratios lower than the regional average are considered housing-rich. The SCAG regional average jobs/housing ratio was 1.25 in 1997, whereas the Orange County subregion had a jobs/housing ratio of 1.52 during the same period. The SCAG 2001 Regional Transportation Plan adopted forecast and the OCP-2000 data both indicate that the area surrounding the former MCAS El Toro and Orange County as a whole are considered jobs-rich and housing-poor. Thus, a major focus of regional planning efforts has been to improve the balance in all affected subregions in order to reduce vehicular trips, costly infrastructure improvements, and resultant air emissions.

Vehicle miles traveled (VMT) relates directly to the amount of vehicular air pollutants produced in a given region. Therefore, the Air Quality Management Plan (AQMP)⁷ adopted by the South Coast Air Quality Management District (SCAQMD) attempts to reduce VMT via trip reduction incentives and programs, including the analysis of new development to determine its effect on the subregional jobs/housing balance. According to SCAG projections, the Orange County subregion's jobs/housing balance will worsen through 2025 as the number of jobs surpasses gains in housing.

5.13.2 Threshold For Determining Significance

The CEQA Environmental Checklist, Appendix G of the CEQA Guidelines, outlines the thresholds for determining significance for population/housing.

Would the Project:

1. *Induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example through extension of roads or other infrastructure).*
2. *Displace substantial numbers of existing housing necessitating the construction of replacement housing elsewhere.*
3. *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.*

Section 15131 of the Guidelines indicates that socioeconomic impacts may be considered significant if a physical change caused by the project results in a social or economic impact, or if the economic or social impact results in a physical change in the environment. Section 21082.2 of CEQA states that "social or economic impacts which do not contribute to, or are not caused by, physical impacts on the environment . . ." do not qualify as evidence to support the finding of a potentially significant impact. Since the mere occurrence of social or economic impacts are not considered potentially significant unless causally related to a particular change in the physical environment, economic, and social impacts can only be ascribed significance if currently available analytical evidence suggests such an impact.

5.13.3 Environmental Impact

The following analysis focuses on the potential impacts associated with implementation of the Base Plan and the Overlay Plan for the Former MCAS El Toro (Pas 51 and 30). The Music Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. As a result, implementation of the proposed project will not result in a significant population and housing impact associated with the annexation of the James A. Music Jail Facility and the IRWD Parcel.

Threshold 1: Induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example through extension of roads or other infrastructure).

Base Plan

The proposed OCGP Base Plan will result in provision of housing (and related population), businesses (and related employment), and infrastructure. Direct population growth from provision of on-site housing is examined in this section. Indirect growth inducement (from provision of infrastructure and employment) is examined in Section 7.2 – Growth Inducing Impacts.

Population

The proposed Base Plan is expected to result in the provision of 225 dwelling units. Based on the City of Irvine's zoning categories planned for the site, these dwelling units could accommodate up to 500 people. This increase in population will not substantially exceed OCP-2000 projections for the site. As discussed previously, the provision of on-site housing and the associated population will be beneficial in regards to Orange County's jobs/housing ratio. No significant impact associated with this issue will occur.

Housing

The proposed Base Plan is expected to result in 225 dwelling units at buildout. The provision of these housing units will not substantially exceed projections contained in OCP-2000. This is not considered a significant impact. Since the Orange County subregion is considered to be jobs-rich and housing-poor, the provision of these housing units in terms of the subregional jobs/housing balance is considered beneficial.

Employment – Short-Term Impacts

Temporary short-term construction jobs will be created during the lifetime of the proposed project. The number and type of jobs will fluctuate over time depending on the type and size of construction projects. Since construction jobs will be created for the duration of the project buildout, consideration of all types of employment is discussed below in regards to long-term impacts for the entirety of project implementation. No significant project-related, short-term impact will occur in terms of population and housing concentrations because adequate infrastructure and public services will be required prior to construction of residential units.

Employment – Long-Term Impacts

The proposed Base Plan is expected to result in the generation of approximately 11,380 jobs on-site. These jobs will not exceed OCP-2000 projections for the site. However, the provision of these jobs will contribute to worsening Orange County's jobs/housing ratio imbalance. This impact is considered significant.

Overlay Plan

Population

The proposed Overlay Plan is expected to result in provision of 3,625 dwelling units as discussed above. Based on the City of Irvine's zoning categories planned for the site, these dwelling units could accommodate up to 9,000 people. This increase in population will not substantially exceed projections contained for the site in OCP-2000, and this impact is not considered significant. As discussed previously, the provision of on-site housing and the associated population will be beneficial in regards to Orange County's jobs/housing balance.

Housing

The proposed Overlay Plan is expected to result in 1,100 low density, 860 medium density, and 1,500 medium-high density residential dwelling units at buildout. Additionally, 165 dwelling units will be ensured for homeless providers through an agreement with the DON. The provision of these housing units will not substantially exceed projections contained in OCP-2000. Since the Orange County subregion is considered to be jobs-rich and housing-poor, the provision of these housing units in terms of the subregional jobs/housing ratio is considered beneficial. No impact associated with this issue will occur.

Employment – Short-Term Impacts

Temporary short-term construction jobs will be created during the lifetime of the proposed project. The number and type of jobs will fluctuate over time depending on the type and size of construction projects. Since construction jobs will be created for the duration of the project buildout, consideration of all types of employment are discussed in regards to long-term impacts below for the entirety of project implementation. No significant project-related, short-term impact will occur in terms of population and housing concentrations because adequate infrastructure and public services will be required prior to construction of residential units.

Employment – Long-Term Impacts

The proposed Overlay Plan is expected to result in approximately 16,510 jobs on-site. These jobs will not exceed OCP-2000 projections for the site. However, the provision of these jobs will contribute to worsening Orange County's jobs/housing imbalance. This impact is considered significant.

Other Considerations with the Base Plan and Overlay Plan

Project Plan Implementation

The primary purpose of the Orange County Great Park Base and Overlay Plans is to provide open space/park/recreational opportunities at the former MCAS El Toro. Another intention of the proposed project is to provide uses oriented toward a diverse range of jobs.

Base Closure Homeless Act Compliance

Objective C-7 of the City of Irvine Housing Element includes the preparation of policies and implementation plans for compliance with the Base Closure Community Redevelopment and Homeless Assistance Act of 1994.⁹ The County of Orange, as the designated LRA, has prepared a homeless assistance plan, which is the only such plan currently proposed for implementation at this time. The City supports this plan.

Infrastructure and Social Support Services Demanded by Increased Land Use Intensity

Despite employment and housing increases, development and infrastructure phasing will ensure that such increases are according to a plan that provides adequate physical and social support systems. Project growth has been determined by affected utility purveyors and service agencies to be compatible with existing and planned support systems (i.e., infrastructure, utilities, public services, housing, recreation, public health facilities, etc.). Housing and employment opportunities within the project area will serve to lessen vehicle trips outside of the project area and will enhance the interrelated nature of the project land uses.

Consistency With Regional Planning Projections

Table 5.13-6 shows the population, housing, and employment levels that are anticipated to result in the annexation area from development of the proposed project land uses. Relative differences among the proposed project, baseline conditions, and OCP-2000 are evident. Changes associated with the County's proposed expansion of the James A. Musick Jail are not incorporated into the figures since the proposed annexation is not determinant of the eventual outcome of that proposed expansion and will, therefore, not result in project-related changes at the jail site.

In net figures (i.e., project buildout minus baseline conditions), the proposed Base Plan would generate an estimated 11,380 new jobs; increase the project area population by approximately 500 persons; and provide up to 225 new residential units. The proposed Overlay Plan would generate an estimated 16,510 jobs; increase the project area population by approximately 9,000 persons; and provide up to 3,625 new residential units. In terms of consistency with 2001 SCAG population, housing, and employment figures, the project differences are potentially significant from a planning perspective. However, the same projections in SCAG's 1998 RTP differ from those currently adopted by SCAG. Table 5.13-7 shows 1998 and 2001 SCAG projections for future years.

**Table 5.13-6
Future Population, Housing, and Employment**

	Baseline (1999)	OCP-2020 (2025)¹	Base Plan (2040)	Overlay Plan (2040)
Population	0	5,468	538 ²	8,676 ²
Housing	1,209 residential family units and 4,380 group quarter units	2,079 dwelling units	225 multi-family residential units	3,625 single and multi- family residential units
Employment	0	28,931 jobs	11,380 jobs on-site	16,510 jobs on-site

¹ Column based on demographic projections provided by the County of Orange that assume a non-specific, mid-size aviation operation at the former MCAS El Toro for Community Analysis Area (CAA) 54. Since EIR 563, OCP-2000, and 1990 Census data do not identify specific growth estimates for the portion of the former MCAS El Toro within CAA 53 only, CAA 54 is used exclusively as the year 2025 estimate adopted in regional growth projections. Actual growth estimates for the former MCAS El Toro are slightly higher.

² Based on State Department of Finance Census 2000 per household population of 2.96 for the County of Orange.

Table 5.13-7
Variation in SCAG Projections for Orange County
1998 RTP and 2001 RTP

	2000	2010	2015
Population			
1998 RTP	2,868,000	3,105,500	3,165,400
2001 RTP	2,699,585	3,160,512	3,272,412
Projection Difference	-159,515	+55,012	+107,012
2025 Base Plan-Related Increase	500		
2025 Overlay Plan-Related Increase	9,000		
Housing			
1998 RTP	910,000	1,013,100	1,064,100
2001 RTP	917,169	1,009,370	1,035,379
Projection Difference	+7,069	-3,730	-28,721
2025 Base Plan-Related Increase	225		
2025 Overlay Plan-Related Increase	3,625		
Employment			
1998 RTP	1,381,700	1,717,400	1,882,600
2001 RTP	1,501,864	1,798,090	1,888,935
Projection Difference	+120,164	+80,690	+6,335
2025 Base Plan-Related Increase	11,380		
2025 Overlay Plan-Related Increase	16,510		

Sources: *Regional Transportation Plan 1998 and 2001*. Southern California Association of Governments.

Table 5.13-7 indicates that regional projections are dynamic and, as a compilation of local land use projections, reflect changing community views on the location and types of growth desired. The data also indicates the project's incremental effects on those projections are also variable in their significance when evaluated against those regional projections.

In addition, the environmental significance of the deviation from SCAG projections is weighed not only in terms of numerical differences but also in terms of the project's conformity with goals and policies relating to mobility, job creation, housing provision, and environmental protection.

Jobs/Housing Ratio

As noted previously, the area surrounding the former MCAS El Toro and the Orange County Subregion are considered jobs-rich and housing-poor. Therefore, SCAG seeks to encourage housing growth over job growth in the Orange County subregion. Theoretically, the relative abundance of employment and lack of housing opportunities in the Orange County subregion results in increased vehicle miles traveled (VMT) since part of the work force consists of commuters who are drawn into the Orange County region for employment.

The proposed Base Plan and Overlay Plan for the former MCAS El Toro site would substantially alter the projected employment generation characteristics of Irvine. Since the Orange County Subregion is anticipated to become increasingly jobs-rich over the next 20 years, the project-related employment would exacerbate the subregional jobs/housing imbalance. As a result, the proposed project will not improve and would only exacerbate the Orange County's overall jobs/housing imbalance and the impact is considered significant and unavoidable.

New employment opportunities on the former MCAS El Toro site would generate increased demand for a range of housing in the area as some new employees may relocate to be nearer to their jobs. According to the City of Irvine 2000-2005 Housing Element, an additional 10,782 housing units are needed to achieve the City's Regional Housing Needs Assessment (RHNA) goal. A portion of this housing demand is expected to be absorbed in existing residential projects currently being developed in the surrounding area. A portion of this induced housing growth would be absorbed in residential projects currently planned and/or under development. Additionally, the opening of new development areas as a result of completion of the Foothill and Eastern Transportation Corridors would thereby increase the potential supply of housing in the surrounding area.

A primary purpose of SCAG jobs/housing objectives is to reduce VMT and consequent congestion and air pollution. A study prepared for the California Air Resources Board (CARB) by JHK Associates in 1995 provides a well-documented methodology by which to analyze the land use effects of a given project. The report, *Transportation-Related Land Use Strategies to Minimize Motor Vehicle Emissions: An Indirect Source Research Study*, analyzes the efficiency of numerous land use planning factors that have the greatest potential for reducing VMT and mobile source emissions. The study contains a list of recommended strategies, many of which are present in both the proposed Base Plan and the Overlay Plan land use plans. The strategies listed below serve as confirmation that the land use tools and planning practices employed in the proposed project are supported by other objective planning research. A brief description of a few strategies employed in the formulation of the proposed project programs is provided below.

- C *Provide Pedestrian Facilities.* This strategy emphasizes pedestrian accessibility through the provision of convenient and direct pedestrian facilities, including sidewalks, crosswalks, and protection from fast vehicular traffic. The project plans will incorporate a network of interconnected pedestrian and biking trails, many of which are completely separated from roadway rights-of-way.
- C *Increase Density Near Transit Corridors.* This strategy consists of efforts to intensify land uses within walking distance of a transit corridor or surface transit route. This strategy is accommodated in the proposed project by the

concentration of recreation areas and employment centers in proximity to existing and planned commuter rail, bus, and transportation corridor facilities.

- C *Increase Density Near Transit Stations.* This strategy encourages efforts to intensify land uses around existing or planned high-capacity transit stations (bus and/or rail). It includes new development, infill and redevelopment, and incorporates direct and convenient pedestrian linkages, such as those planned in the project area.
- C *Encourage Mixed-Use Development.* This strategy encourages the location of compatible land uses within walking distance of each other. Mixed-use development such as that proposed in the proposed project land use plans typically results in a higher level of walking, as well as a greater potential for transit use, compared to single-use development.
- C *Strengthen Downtown and Urban Activity Centers.* The proposed project area is envisioned to serve as a commercial, employment, recreational, and cultural center that can encourage pedestrian travel within the area and also provide an important focal point for an area-wide transit system.

The above strategies, whether specifically for the purpose of reducing vehicular emissions or for creating a park/recreation destination, corroborate the land use planning principles presented in the proposed Base and Overlay Plans and will serve to offset some of the jobs/housing imbalance effects; however, the jobs/housing balance impact will remain significant and unavoidable.

Additionally, it should be noted that while the jobs/housing ratio is not met in terms of a mere calculation, when viewed from a more regional perspective the provision of additional jobs in the project area would provide jobs closer to South Orange County residents who would otherwise have to travel farther north or east to work. South Orange County Regional Statistical Areas have extremely housing-rich jobs/housing ratios. The 2000 jobs/housing ratio for RSA C-43 and RSA D-40 (See Figure 7-1 provided in Section 7.0 Cumulative Impacts) is .83 and .60, respectively. The 2020 projected job/housing ratio is 1.04 and .89, respectively.

Finally, the population-induced demand for public and private services will not be significantly adverse. Future development of the former MCAS El Toro in various different scenarios (both aviation and non-aviation reuse plans) has been consistently considered in public facilities planning for the past several years.

Housing Provisions

According to the City of Irvine 2000-2005 Housing Element, an additional 10,782 housing units are needed to achieve the City's RHNA goal. Therefore, a portion of the project's indirect housing growth will be absorbed in residential projects currently being developed or planned in the surrounding area. Based on the amount of planned and undeveloped residential land in the surrounding area, a substantial portion of this induced housing growth is expected to be absorbed in residential projects currently in the planning stages or under development. Furthermore, substantial new areas of residential development will be opened for development with the completion of several planned transportation

improvements in the County, including the Foothill Transportation Corridor (FTC) and Eastern Transportation Corridor (ETC). This effect of these transportation improvements could be to increase access to the potential supply of housing in the surrounding area.

Workforce Housing

The project will result in the generation of employment and workers are expected to live both on the project site, and in other portions of the County. Table 5.13-8 depicts the anticipated employment generated under the Base Plan and Overlay Plan and the number of workers that are expected to reside in the project area. As shown, under the Base Plan approximately 11,380 jobs will be generated and approximately 425 workers would be housed on-site. Under the Overlay Plan, approximately 16,510 jobs will be generated and approximately 6,851 workers will be housed on-site. A portion of the workers housed on-site would be expected to work within the project area.

Other workers are expected to reside in other portions of the County or in adjacent counties.

**Table 5.13-8
Project Employment Generation vs. Workers Housed On-Site**

	Base Plan	Overlay Plan
Employment	11,380	16,510 jobs
Total Workers House On-Site ¹	425	6,851
¹ Based on a factor of 1.89 workers per each housing unit.		

The City of Irvine provides a variety of ownership and rental housing opportunities for all income levels, including lower-income households. Unassisted average rental housing prices in the community range from about \$1,000 for a studio to \$1,600 for a 3-bedroom unit, while average sales prices range from about \$300,000 for a condo to \$480,000 for a single family home. As detailed in Irvine's 2000-2005 Housing Element, the City's success in providing integrated affordable housing development is evidenced by the extensive number of assisted rental projects in the community. In fact, of the more than 40,000 housing units in the City, more than 3,330 assisted rental units are currently available to very low and low income households in the City.

According to the 2000-2005 Housing Element, an additional 15,000 units, 6,647 of which would be affordable to very low- and low- income housing units, could be built within the City based on existing Zoning, redevelopment opportunities, and vacant land. This shows that the City has identified more than enough vacant and underutilized sites throughout the City to meet its Regional Housing Demand of 1,942 very low-income and 1,186 low-income units by 2005.

The Base Plan will help meet demands for housing units by allowing for the development of an additional 225 multi-family units on the project site. The Overlay Plan will help meet this demand by allowing for the development of 3,625 additional residential units on-site. Additionally, housing projects developed on the site under either the Base Plan or Overlay Plan will be required to be consistent with the City's Housing Element Affordable Housing Goal, which states that:

- Five percent of units should be affordable to households earning less than 50 percent of the County Median Family Income through rental housing.
- Five percent of the actual number of units built should be affordable as either rental or ownership housing for households earning between 51 and 80 percent of the County Median Family Income.
- Five percent of the units should be affordable to households earning between 81 and 120 percent of the County Median Family Income, satisfied through the development of ownership housing.

Surrounding housing-rich jurisdictions such as Lake Forest and Laguna Hills also provide a range of housing opportunities for workers. As shown in the Tables 5.13-9 and 5.13-10 below, surrounding Lake Forest and Laguna Hills provide a range of rental and homeownership opportunities for those working in the region. Each of these jurisdictions also have assisted units for low and very low income households and implement affordable housing programs through their adopted Housing Elements.

Table 5.13-9
Sales Prices in Irvine and Surrounding Jurisdictions

Jurisdiction	Units Sold	Average Sale Price
<i>Irvine (2001-2002)</i>		
Homes	1,744	\$480,738
Condos	1,532	\$306,478
<i>Lake Forest (1998-1999)</i>		
Homes	918	\$264,058
Condos	280	\$130,016
<i>Laguna Hills (2001-2002)</i>		
Homes	451	\$547,926
Condos	705	\$221,990

Source: City of Lake Forest General Plan, Irvine General Plan, DataQuick Services.

Table 5.13-10
Rental Prices in Irvine and Surrounding Jurisdictions

Jurisdiction	# of Units	Average Rent	Range
<i>Irvine (2000)</i>			
Studio	311	\$1,009	n.a.
1 BR	3,952	\$1,134	n.a.
2 BR	6,622	\$1,376	n.a.
3 BR	775	\$1,648	n.a.
<i>Lake Forest (1999)</i>			
Studio	35	n.a.	\$825-\$883
1 BR	590	n.a.	\$799-\$945
2 BR	795	n.a.	\$999-\$1,200
3 BR	45	n.a.	\$1,300
<i>Laguna Hills (2003)</i>			
1 BR	n.a.	n.a.	\$1,045 to \$1,166
2 BR	n.a.	n.a.	\$1,273 to \$1,410

Source: City of Irvine General Plan, City of Lake Forest General Plan, Springstreet.com, and Apartments.com.

Threshold 2: *Displace substantial numbers of existing housing necessitating the construction of replacement housing elsewhere.*

Base Plan and Overlay Plan

Military operations at the former MCAS El Toro ceased in July 1999, and direct population and employment levels on the site are now negligible. Therefore, the loss of military jobs and housing is not a project-related effect. Depending on the decisions of future property owners of the former MCAS El Toro, it is likely that some or all of the existing vacant housing stock may be demolished. However, the proposed project will provide the opportunity for additional housing on the site. The Base Plan will provide up to 225 dwelling units and the Overlay Plan will provide up to 3,625 dwelling units. Impact will be beneficial.

Threshold 3: *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.*

Base Plan and Overlay Plan

Military operations at the former MCAS El Toro ceased in July 1999, and direct population and employment levels, and the associated population, on the site are now negligible. Therefore, the displacement of people is not a project-related effect. The proposed project will provide additional housing on the site to accommodate demand for housing in Orange County and the impact will be beneficial.

5.13.4 Significant Impacts

Base Plan and Overlay Plan

A significant impact to jobs/housing ratio will occur.

5.13.5 Mitigation Measures

Base Plan and Overlay Plan

No mitigation is available to rectify conflicts with the numerical objectives of regional planning documents including the jobs/housing ratio.

5.13.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Although the proposed amendments to the City of Irvine General Plan will be incorporated into regional SCAG and County of Orange planning projections, the impact associated with jobs/housing balance will remain significant and unavoidable.

Notes and References

1. County of Orange. *MCAS El Toro Community Reuse Plan, DEIR, No. 563, Volume 1*. August 1996.
2. County of Orange. *James A. Musick Jail Expansion and Operation, Relocation of Interim Care Facility, and Southeast Sheriff's Station, DEIR, No. 564*. August 1996. County of Orange. *James A. Musick Jail Expansion and Operation - Recirculated Sections, DEIR, No. 564*. September 1998.
3. City of Irvine. *Orange County Great Park Plan*. March 2002.
4. MCAS El Toro, March 1999.
5. Orange County. *Orange County Projections - 1992 (Modified)*. Prepared by California State University Fullerton, Center for Demographic Research. No date.
6. Orange County. *Orange County Projections - 2000*. Prepared by California State University Fullerton, Center for Demographic Research. June 22, 2000.
7. South Coast Air Quality Management District. *Air Quality Management Plan (plan not accepted by EPA)*. 1997.

8. County of Orange. *MCAS El Toro Community Reuse Plan, DEIR, No. 563, Volume 1, Pgs. 4-612 to 4-619. August 1996.*
9. *Base Closure Community Redevelopment and Homeless Assistance Act of 1994. Pub. L. 103-421.*
10. County of Orange. *MCAS El Toro Community Reuse Plan, DEIR, No. 563, Volume 1, Pg. 4-624. August 1996.*
11. City of Irvine. *Northern Sphere Area General Plan Amendment and Zone Change, Draft Environmental Impact Report, Volume I. December 2001.*

5.14 Public Services and Facilities

5.14.1 LAW ENFORCEMENT

5.14.1.1 Environmental Setting

Former MCAS El Toro (PAs 51 and 30)

The DON has contracted with the Orange County Sheriff to provide law enforcement to PA 51 during the interim caretaker period until final conveyance occurs. The Sheriff provides on-site, 24-hour protection to the former base, and staffs the front gate during daytime hours. The Irvine Police Department provides law enforcement to PA 30.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail facility is operated by the Orange County Sheriff's Department. The jail has a permanently assigned staff of approximately 160 personnel that guards the jail 24 hours a day. The staff includes deputies, special officers, and correctional service technicians.

IRWD Parcel (Portion of PA 35)

The Orange County Sheriff is currently responsible for patrolling and/or responding to the IRWD parcel.

City of Irvine

The City of Irvine has its own Police Department that is headquartered at the Irvine Civic Center Complex located at One Civic Center Plaza. Irvine's Police Department also has a satellite facility located in the Irvine Spectrum Entertainment Complex. The current police facilities are adequate to handle the personnel and equipment that are employed and utilized by the department.

The Irvine Police Department provides all services normally associated with a municipal law enforcement agency including uniform patrol, investigations, crime analysis, crime prevention, K-9 patrol, Special Operations Unit, forensic investigations, accident investigation/traffic enforcement, drug abuse resistance education, and emergency management/disaster preparedness. The Department has access to contract helicopter service through Costa Mesa Police Department. Mutual aid assistance agreements exist, providing support from other Orange County law enforcement jurisdictions, state and federal agencies.

The Irvine Police Department is a full service Community Oriented Policing organization with officers trained and encouraged to solve community issues before they become

problems. The Department also supports a high profile Preventive Services Program tied closely to COP and focuses on a pro-active preventive approach to community safety. As part of a comprehensive Crime Prevention philosophy, the Department has been active the past 24 years in Advanced Physical Planning and has a state of the art Building Security Code in place. The Department has also adopted a strategy to deal with the problem of police response to false alarms. A strong False Alarm Ordinance is in place. The Irvine Police Department coordinates the City of Irvine Emergency Management Program. Focused on disaster preparedness and using the State of California Standardized Emergency Management System model, the Department maintains a written plan document and a trained citywide liaison group. A new state of the art Emergency Operations Center has recently been completed.

The City of Irvine Police Department's current response guidelines are:

- C Responding to "emergency" events within six minutes, 85 percent of the time;
- C Responding to "crimes in progress" events within 10 minutes, 85 percent of the time;
- C Responding to "less serious crimes occurring now" events within 20 minutes, 90 percent of the time; and
- C Responding to "routine calls for service" within 60 minutes, 85 percent of the time.

Currently the Irvine Police Department is meeting these response time guidelines for "emergency" events and "routine calls for service." Response times to "crimes in progress" and "less serious crimes occurring now" are only about three percent below the desired percentage. Unfilled active police officer positions may have accounted for this slight decline, as there were an abnormally high number of officers who were either on disability or retired from the department, which has resulted in vacant positions. The ratio of police to population also has been reduced from a 1999 average of 1.13 officers per 1000 residents to the current ratio of 1.09 officers. At any given time, there is a mandatory minimum of nine officers and a maximum of as many as 23 officers available to respond to calls for service anywhere in the City.

The Irvine Police Department currently does not provide service to PA 51; however, the Irvine Police Department does provide service to PA 30 and will provide service to the entire base and IRWD parcel once the area is annexed. The Irvine Police Department also has a mutual aid agreement with the County Sheriff's Department and is available to assist the Sheriff with law enforcement at the Musick Jail facility if requested by the Sheriff.

Existing Approved Plans

City of Irvine

The City of Irvine Police Department is currently researching the expansion of their facilities. It is unknown at this time when or where the substation would be built and the size of the facility. Staffing goals are adjusted annually as addressed in the City's Strategic Business Plan to ensure that the City's emergency response standards identified above are met.

Orange County Sheriff

The Orange County Sheriff has proposed to construct a 20,000 square foot station on the Musick Jail property (referred to as the Saddleback Substation). This facility would operate as a substation to serve the surrounding areas with an estimated 218 personnel and provide back-up sheriff support to the permanent jail staff. At this time, there are not immediate plans to proceed with construction of the Saddleback Substation.

5.14.1.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for law enforcement services.

Would the project:

1. *Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service ratios, response times or other performance objectives for police protection?*

5.14.1.3 Environmental Impact

As defined by the thresholds for determining significance, impacts related to the provision of law enforcement services are described below:

Threshold 1: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service ratios, response times or other performance objectives for police protection?

Base Plan

The Irvine Police Department would be responsible for providing law enforcement to the entire Great Park area and PA35, after annexation. The Police Department will be instituting Geographic Policing in the near future. This will affect the manner in which the department will service the Great Park and PA35 and subsequent staffing levels. As Geographic Policing is still in the study stages, estimates of police personnel required are based upon current demand levels coupled with anticipated calls for service. The Base Plan contains very diverse land uses, some of which are not currently within the City and therefore without a history of demand on police services.

There will be 3,390 acres of Agriculture, Habitat Preserve, Wildlife Corridor, and Riparian Corridor that will contain natural areas, walking trails, agriculture, and open space areas. This large area with its unique terrain will need to be patrolled, thus requiring equipment and methods of patrolling, (e.g., equestrian) which will be new to the Police Department. Depending upon the type of events, the sports parks, recreational and cultural facilities, could require additional police personnel beyond the normal allocated for patrol. Demand on police resources of the various land uses will be evaluated when detailed information is available during the development review process as individual projects are proposed.

Based on the Department's current staffing formula and anticipated calls for service to the project area based on proposed land uses, personnel required to service the project would be five to ten sworn police officers, one to two sworn police supervisors, three to five non-sworn support staff, two to three police vehicles, two off-road vehicles, and an equestrian unit (unknown number). Through the continued implementation of the City's Strategic Business Plan and Budgeting process, adequate provision will be made for the maintenance of acceptable law enforcement levels of service. Police protection services for the project area under the Base Plan will be funded through the use of City General Fund revenues.

The general impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR in terms of planned land use, which could accommodate a new police substation should one be constructed. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the possible future construction and operation of a substation in the northern portion of the City. Project-level environmental review, at the time the specific location of a future police substation is known, and when specific development plans have been prepared, will also be required.

James A. Musick Jail Facility (Portion of PA 35)

Annexation of the Musick Jail will not change the provider of law enforcement services to the property. Since the jail is a County correctional facility, the Orange County Sheriff will continue to provide the same level of law enforcement services to the jail after annexation of this area to the City. Additionally, the proposed project will not result in a change in land use designation for this parcel. As such, implementation of the proposed project will not generate a demand for police protection for the jail facility that would require the construction or expansion of police facilities, and no significant environmental impact as a result of the proposed project is anticipated.

The Musick Jail facility may be expanded in the future to increase inmate capacity of the jail as described in Section 3.0 of this Final Program EIR. The expansion of the jail is a County of Orange initiated action, and the expansion is not proposed as part of this project. EIR No. 564 was prepared by the County of Orange and did not identify any potential impact to law enforcement that may result from the proposed jail expansion.

IRWD Parcel (Portion of PA 35)

Once the IRWD parcel is annexed, the City of Irvine Police Department will provide police protection to this parcel at approximately the same level of service that the parcel currently receives from the County Sheriff. This public facility parcel does not have any residents and no further development of this parcel is proposed as part of the proposed project, and none is expected in the future. Annexation of this parcel will not result in the need to construct or expand police facilities, and no significant environmental impact related to the provision of police facilities is anticipated.

Overlay Plan

The Irvine Police Department would be responsible for providing law enforcement to the entire Great Park area, and PA35, after annexation. The Police Department will be instituting Geographic Policing in the near future. This will affect the manner in which the department will service the Great Park and subsequent staffing levels. As Geographic Policing is still in the study stages, estimates of police personnel required for such as park are based upon current demand levels coupled with anticipated calls for service. The Great Park Overlay Plan contains very diverse land uses, some which are not currently within the City and therefore without a history of demand on police services.

There will be 3,070 acres of Agriculture, Habitat Preserve, Wildlife Corridor, and Riparian Corridor that will contain natural areas, walking trails, agriculture, and open space areas. This large area with its unique terrain will need to be patrolled, thus requiring equipment and methods of patrolling, (i.e. equestrian) which will be new to the Police Department. Depending upon the type of events, the sports parks, recreational, and cultural facilities, could require additional police personnel beyond the normal allocated for patrol. Demand on police resources of the various land uses will be evaluated when detailed information is available during the development review process as individual projects are proposed.

Based on the department's current staffing formula and anticipated calls for service to the project area based on proposed land uses, personnel required to service the project would be 17 to 22 sworn police officers, three to five sworn police supervisors, eight to 11 non-sworn support staff, six to nine police vehicles, two off-road vehicles, and an equestrian unit (unknown number). Through the continued implementation of the City's Strategic Business Plan and Budgeting process, adequate provision will be made for the maintenance of acceptable law enforcement levels of service. Police protection services for the park itself will be funded through the use of a special park assessment under the Overlay Plan.

The general impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR in terms of planned land use, which would accommodate the construction and operation of a new police substation. Mitigation Measures required for any significant impacts identified in preceding sections of this Final

Program EIR would apply to the future construction and operation of a substation within the project area. Project-level environmental review, at the time the specific location of a future police substation is known, and when specific development plans have been prepared, will also be required.

James A. Musick Jail Facility (Portion of PA 35)

Annexation of the Musick Jail will not change the provider of law enforcement services to the property. Since the jail is a County correctional facility, the Orange County Sheriff will continue to provide the same level of law enforcement services to the jail after annexation of this area to the City. Additionally, the proposed project will not result in a change in land use designation for this parcel. As such, implementation of the proposed project will not generate a demand for police protection for the jail facility that would require the construction or expansion of police facilities, and no significant environmental impact as a result of the proposed project is anticipated.

The Musick Jail facility may be expanded in the future to increase inmate capacity of the jail as described in Section 3.0 of this Final Program EIR. The expansion of the jail is a County of Orange initiated action, and the expansion is not proposed as part of this project. EIR No. 564 was prepared by the County of Orange and did not identify any potential impact to law enforcement that may result from the proposed jail expansion.

IRWD Parcel (Portion of PA 35)

Once the IRWD parcel is annexed, the City of Irvine Police Department will provide police protection to this parcel at approximately the same level of service that the parcel currently receives from the County Sheriff. This public facility parcel does not have any residents and no further development of this parcel is proposed as part of the proposed project, and none is expected in the future. Annexation of this parcel will not result in the need to construct or expand police facilities, and no significant environmental impact related to the provision of police facilities is anticipated.

5.14.1.4 Significant Impacts

Base Plan and Overlay Plan

The general significant impacts associated with the construction and operation of public facilities have been addressed within this Final Program EIR, including the possible construction and operation of a new police substation. The need for new public facilities will be mitigated by utilizing existing City standards.

5.14.1.5 Mitigation Measures

Base Plan and Overlay Plan

Mitigation Measures identified in other sections of this Final Program EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of police facilities to serve new growth expected in the northern portion of the City.

5.14.1.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

The general impacts associated with the construction and operation of public facilities has been addressed within the Final Program EIR. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of a police substation within the project area. Project-level environmental review, at the time the specific location of a future police substation is known, and when specific development plans have been prepared, will also be required and project specific mitigation measures identified and implemented.

Notes and References

1. Comment letter from the Irvine Police Department (2002).

5.14.2 FIRE AND EMERGENCY MEDICAL SERVICES

5.14.2.1 Environmental Setting

Former MCAS El Toro (PAs 51 and 30)

The County of Orange has contracted with the Orange County Fire Authority (OCFA) to provide primary fire protection to PAs 51 and 30 during the interim caretaker period while development plans are finalized. There is one operational fire station on the former base (Station No. 20). Station No. 20 provides fire protection service to both the former base property, as well as the surrounding off-base properties. This station currently provides adequate fire protection to the former MCAS El Toro property.

The proposed annexation area is currently served by OCFA stations No. 20, 26, 36, 51, and 38. Table 5.14-1 depicts the location, equipment, and staffing of the fire stations which provide initial response to former MCAS El Toro property and the rest of the annexation area.

**Table 5.14-1
Local Fire Stations**

Facility	Equipment	Staffing
Fire Station No. 38 (Temporary) 26 Parker, Irvine	Engine Medic Van	5 personnel/shift
Fire Station No. 26 4861 Walnut Ave., Irvine	Engine Medic Van Engine (Reserve)	5 personnel/shift
Fire Station No. 36 301 E. Yale Loop, Irvine	Paramedic Assessment, Engine	3 personnel/shift
Fire Station No. 20 The Former MCAS El Toro Property	Paramedic Assessment Engine	3 personnel/shift
Fire Station No. 51 18 Cushing, Irvine Division Chief Headquarters	Paramedic Assessment Engine	4 personnel/shift

Source: OCFA, 2002.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail facility is currently served by the OCFA facilities identified in Table 5.14-1.

IRWD Parcel (Portion of PA 35)

The IRWD parcel is currently served by the OCFA facilities identified in Table 5.14-1.

City of Irvine

Fire protection is also provided to the City of Irvine by the OCFA. The OCFA provides fire protection to 22 cities within the County of Orange, as well as the unincorporated areas of the County. The OCFA has 62 stations, which include structural engines, truck companies, paramedic units, airport crash trucks, hazardous materials response team, water dropping helicopters, and other various pieces of specialized equipment. OCFA provides fire suppression, emergency medical, rescue and fire prevention, hazardous materials coordination, and wildland management services. The OCFA is one of the largest regional fire service organizations in California. OCFA's goals for the provision of fire services are the following:

- C First-in engines should arrive on-scene to medical aids and/or fires within five minutes, 80 percent of the time;
- C First-in truck companies should arrive on-scene to fires within ten minutes, 80 percent of the time; and
- C First-in paramedic companies should arrive on scene at all medical aids within eight minutes, 90 percent of the time.

There are seven OCFA fire stations located within Irvine. An additional six nearby OCFA fire stations located outside of the City limits may respond to calls within the City if necessary.

Existing Approved Plans

OCFA is planning two additional fire stations. Station No. 55 will be located on the north side of Portola Parkway between Yale Avenue and Jeffrey Road, and Station No. 47 will be located near Sand Canyon and Interstate 405. These stations are in the planning stages and are anticipated to have a staffing level of four personnel per shift. Stations No. 38 and 20 are proposed for relocation, though specific locations have not been identified.

OCFA also has in place an agreement with The Irvine Company as part of the Northern Sphere Area that should provide adequate service to all areas around MCAS El Toro if development is constructed as currently planned.

5.14.2.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for fire services and facilities.

Would the project:

1. *Result in substantial adverse physical impacts associated with the provision of new physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service ratios, response times or other performance objectives for fire protection?*

5.14.2.3 Environmental Impact

As defined by the thresholds for determining significance, impacts related to the provision of fire and emergency medical service are described below:

Threshold 1: Would the project result in substantial adverse physical impacts associated with the provision of new physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service ratios, response times or other performance objectives for fire protection?

Base Plan and Overlay Plan

PA 51 will be served by the OCFA upon annexation to the City and PA 30 will continue to be served by OCFA. Before closure, MCAS El Toro provided fire protection service from three military fire stations at the base. One of these stations is currently being reused by OCFA for Station No. 20. While OCFA is unable at this time to calculate the exact extent of new services that will be needed to support the proposed project, there is a likelihood that additional fire services infrastructure, such as additional fire stations, will be required within the former MCAS El Toro area and funds will need to be identified to design,

construct, equip, and operate the fire station(s). The existing military fire stations within the former base may be used in the short-term, but will need to be replaced with new facilities that meet OCFA standards.

A final determination of fire station needs and locations will be made at a future date when more information is known about risk, density, construction, layout, and types of occupancy. Appropriate capital improvements and resources will be required to meet anticipated fire service delivery requirements.

The proposed project will accommodate fire protection facilities within the former MCAS El Toro property. A fuel modification program will also be developed for structures adjacent to the natural open space habitat preserve to assure an adequate level of fire safety.

Consistent with OCFA practices, major developers would be required to enter into secured fire protection agreements with the OCFA prior to the issuance of the first building permits to mitigate the impact of these individual projects that will be developed pursuant to the Base Plan. Such agreements would be based upon the needs created by the project beyond the current abilities of the OCFA to service them. As with all projects, all standard conditions and guidelines will be applied to the project during the normal review process.

Since the City of Irvine is a Structural Fire Fund member, the OCFA will also receive a portion of the property taxes from the new development to help fund the required fire protection and emergency medical services. As much of the annexation area may not produce property taxes in the short- and long-term, a funding agreement must be reached between the City of Irvine and OCFA regarding the provision of fire protection and emergency medical services to the proposed annexation area.

The specific environmental impact of constructing the new fire facilities that may be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of fire protection facilities within the project area. Project-level environmental review, at the time the specific location of future facilities is known, and when specific development plans have been prepared, will also be required.

James A. Musick Jail Facility (Portion of PA 35)

After annexation, the OCFA would continue to serve the jail facility and provide the existing level of service. Any new fire protection facilities that would be constructed in and/or adjacent to PAs 51 and 30 as would be needed as a result of the Base Plan, will also serve the Musick Jail property. Additionally, the proposed project will not result in a change in land use designation for this parcel. As such, implementation of the proposed project will not generate a demand for fire and emergency medical service for the jail facility that would require the construction or expansion of fire stations, and no significant environmental impact as a result of the proposed project is anticipated.

The Musick Jail facility may be expanded in the future to increase inmate capacity of the jail as described in Section 3.0 of this Final Program EIR. This is a County of Orange initiated action, and the expansion is not proposed as part of this project. EIR No. 564 was prepared by the County of Orange and addresses the impacts to fire and emergency medical protection that may result from the proposed expansion. The Recirculated Sections of EIR No. 564 identified a potential impact to the provision of emergency medical service as a result of the increase in the number of inmates requiring emergency medical treatment. Mitigation measures identified in the Recirculated Sections required that prior to expanding the jail, the Orange County Sheriff-Coroner prove that the increased on-site medical staff will reduce the demand for emergency medical treatment to a level less than significant. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

The OCFA will continue to serve the IRWD parcel at the existing level of service after annexation. The IRWD parcel is not expected to require additional fire or emergency medical services since no new growth is planned for the parcel.

Annexation of this parcel will not result in the need to construct or expand fire protection facilities, and no significant environmental impact related to the provision of fire protection facilities is anticipated.

5.14.2.4 Significant Impacts

Base Plan and Overlay Plan

The specific significant environmental impact of constructing new fire protection facilities that will be needed to serve the Base Plan cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR, which would include the construction and operation of new fire protection facilities. The need for new public facilities will be mitigated by utilizing existing City standards.

5.14.2.5 Mitigation Measures

Base Plan and Overlay Plan

Mitigation Measures identified in other sections of this Final Program EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of fire protection facilities to serve new growth expected in the planning area.

5.14.2.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

The general impacts associated with the construction and operation of public facilities has been addressed within the Final Program EIR, which would include the construction and operation of new fire protection facilities. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of fire protection facilities within the project area. Project-level environmental review, at the time the specific location of future fire protection facilities is known, and when specific development plans have been prepared, will also be required and project specific mitigation measures identified and implemented.

Notes and References

1. Information for the fire protection section is based on information from Mick Rohde of the Orange County Fire Authority in his letter (January 7, 2002) and personal conversation (March 2002), as well as previous information provided by Nancy Foreman of the Orange County Fire Authority in her letter (January 22, 1999), Response to Comment letter (May 15, 1999), Response to Notice of Preparation (September 15, 1999), and personal conversation (September 1999).

5.14.3 PARKS AND RECREATION

5.14.3.1 Environmental Setting

Former MCAS El Toro (PAs 51 and 30)

Acting in a caretaker's role, the DON currently offers public access to a variety of existing recreational services located on PA 51 including the Marine Memorial Golf Course and equestrian stables. As there is no resident living on PAs 51 and 30, there is no on-site demand for these facilities.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail provides a playing field on site for inmates. Because the jail is a correctional facility, it does not generate a demand for public parks and recreational services.

IRWD Parcel (Portion of PA 35)

The IRWD parcel does not contain any recreational facilities. Because the parcel contains a public water facility and no residential development, the parcel does not generate a demand for public parks and recreational services.

City of Irvine

The City of Irvine presently has approximately 13 community parks (including two senior centers) totaling 262 acres, two special facilities (Bommer Canyon Cattle Camp and Central Bark) for a total of 18 acres, 28 public neighborhood parks consisting of 131 acres, with numerous private neighborhood parks and landscaped public recreational trails.

The Irvine Park Code, which conforms with the Quimby Act, requires that developers of residential subdivisions dedicate park land, or pay in-lieu fees, at the rate of two acres of community parkland and three acres of neighborhood parkland for every 1,000 new residents. The City does not have parkland requirements for non-residential development.

Existing Approved Plans

Community and neighborhood parks are currently planned in the following City of Irvine PAs: PA 17, PA 27, PA 4 and the Northern Sphere (PAs 8A, 5A, 9, and 6).

The City of Irvine trail system is comprised of a single equestrian trail and numerous biking and hiking trails. These trails provide residents various recreational and commuter opportunities. Figure 3-7, in the Project Description of this Final Program EIR, shows the City of Irvine existing trails network and how it is proposed to be amended by the proposed project.

The County of Orange Master Plan of Regional Riding and Hiking Trails (MPRRHT) identifies two regional trails in the vicinity: Serrano Creek Trail along Serrano Creek from Whiting Ranch Wilderness Park to Trabuco Road and Hicks Canyon Trail along Hicks Canyon Wash from Limestone Canyon Wilderness Park toward the Peters Canyon Trail. Figure 3-7 shows the City of Irvine existing trails network and how it is proposed to be amended by the proposed project.

The Orange County Transportation Authority adopted a Strategic Bikeways Plan in 2001. Within the project area, this Plan identifies proposed Class I Bikeways along Borrego Canyon Wash and along the AT&SF railroad line. An adjacent Class I bikeway is proposed along Sand Canyon Avenue, that would be connected to the Peters Canyon Bikeway through the proposed Venta Spur Bikeway.

The County's Bikeways Plan identifies proposed Class I bikeways along Borrego Canyon Wash from the Whiting Ranch Wilderness Park to the Irvine Transportation Center and along Jeffrey Road from I-5 north to the Hicks Canyon Bikeway at Portola Bikeway.

5.14.3.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for parks and recreational facilities.

Would the project:

1. *Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service ratios, response times or other performance objectives for parks and recreational facilities?*
2. *Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur to be accelerated?*

5.14.3.3 Environmental Impact

As defined by the thresholds for determining significance, impacts related to the provision of parks and recreational facilities are described below:

Threshold 1: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service ratios, response times or other performance objectives for parks and recreational facilities?

Base Plan

The City of Irvine will provide for the park and recreational needs of PAs 51 and 30 after annexation. Based on the park threshold described above, the buildout of PAs 51 and 30 according to proposed land uses under the proposed Base Plan will generate a demand for an additional 2.6 acres of parkland, including one acre of community park and 1.6 acres of neighborhood park. Table 5.14-2 depicts the calculations of parkland need based on the Irvine Subdivision Ordinance household size assumptions for the Base Plan. Employees working at the non-residential uses allowed under the project may also choose to use local parkland facilities. The addition of new City personnel and equipment to maintain the new parks and recreational facilities will also be required at the same ratio as existing City facilities.

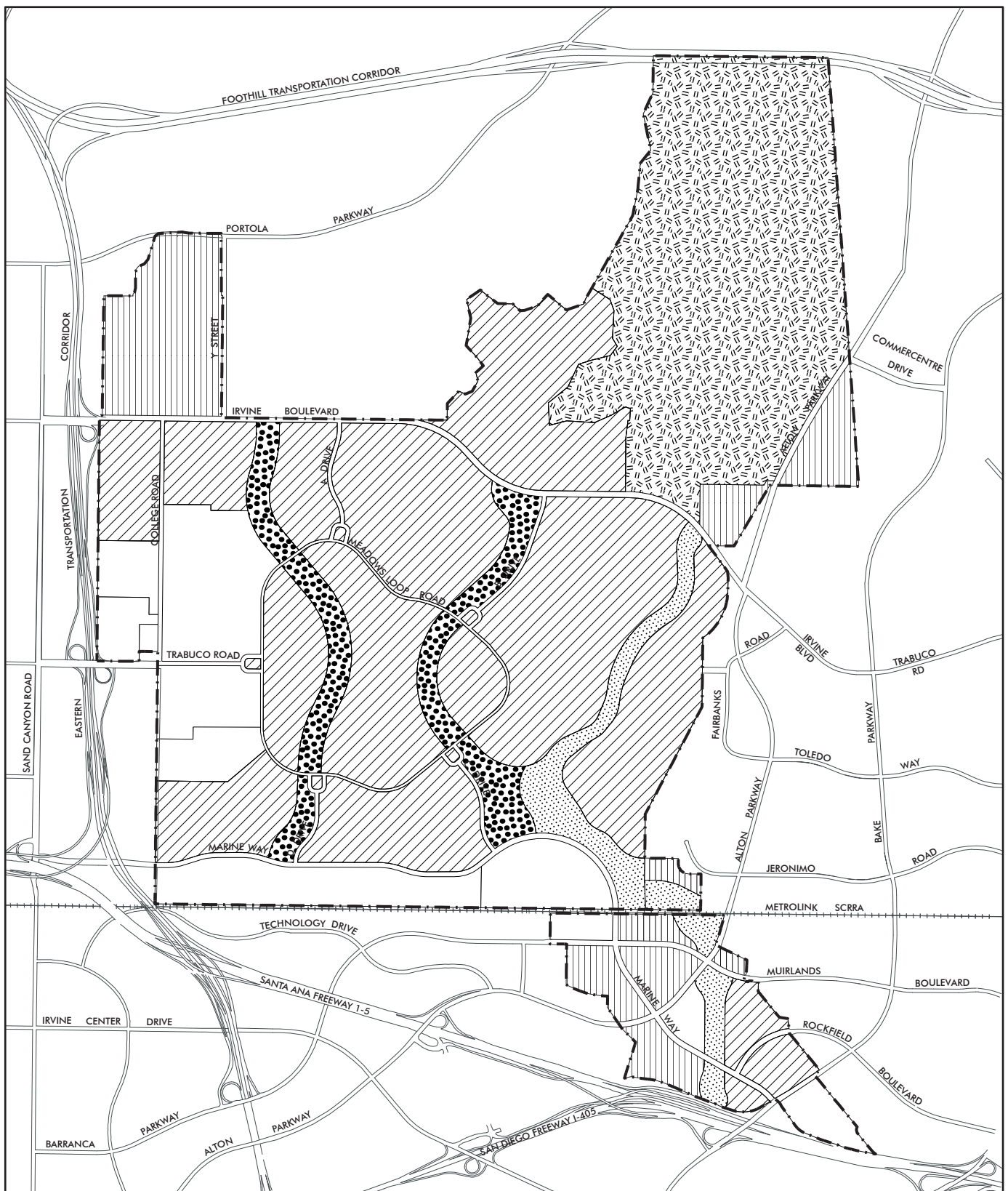
**Table 5.14-2
Base Plan Parkland Demand**

Dwelling Unit Type	# of Dwelling Units	Estimated Persons/HH	Required # of Total Parkland Acres
Low Density Residential	0	2.95	0
Medium Density Residential	60	2.60	0.8
Medium-High Density Residential	165	2.13	1.8
Total	225		2.6

According to the Base Plan, the majority of land uses in PAs 51 and 30 are proposed for open space and recreation. The Plan provides for a variety of open space features to serve the City and the surrounding region. These open space features include parks, sports parks, golf courses, habitat preserve, drainage and wildlife corridors, fairgrounds, and a cemetery. The parks and recreational features are identified in Figure 5.14-1. The parkland acreage proposed under the project will greatly exceed the existing City of Irvine's standards described above, providing a regional open space amenity consistent with Measure W. A portion of the required acres identified in Table 5.14-2 will need to go toward private neighborhood parks, primarily for pools and tot lots within close proximity of homes.

Overlay Plan

Based on the park threshold described above, the buildout of PAs 51 and 30 according to proposed land uses under the Overlay Plan will generate a demand for an additional 45 acres of parkland, including 18 acres of community park and 27 acres of neighborhood park. Table 5.14-3 depicts the calculations of parkland need based on the Irvine Subdivision Ordinance household size assumptions.



Source: Fuscoe Engineering, City of Irvine, 2002.

- · — Orange County Great Park Boundary
-  Recreational
-  Agriculture
-  Riparian Corridor
-  Wildlife Corridor
-  Habitat Preserve

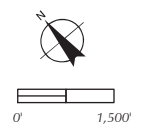


Figure 5.14-1
Recreational and Open Space Features
Base Plan

**Table 5.14-3
Overlay Plan Parkland Demand**

Dwelling Unit Type	# of Dwelling Units	Estimated Persons/HH	Required # of Total Parkland Acres
Low Density Residential	1,100	2.95	16.2
Medium Density Residential	860	2.60	11.2
Medium-High Density Residential	1,665	2.13	17.7
Total	3,625		45.1

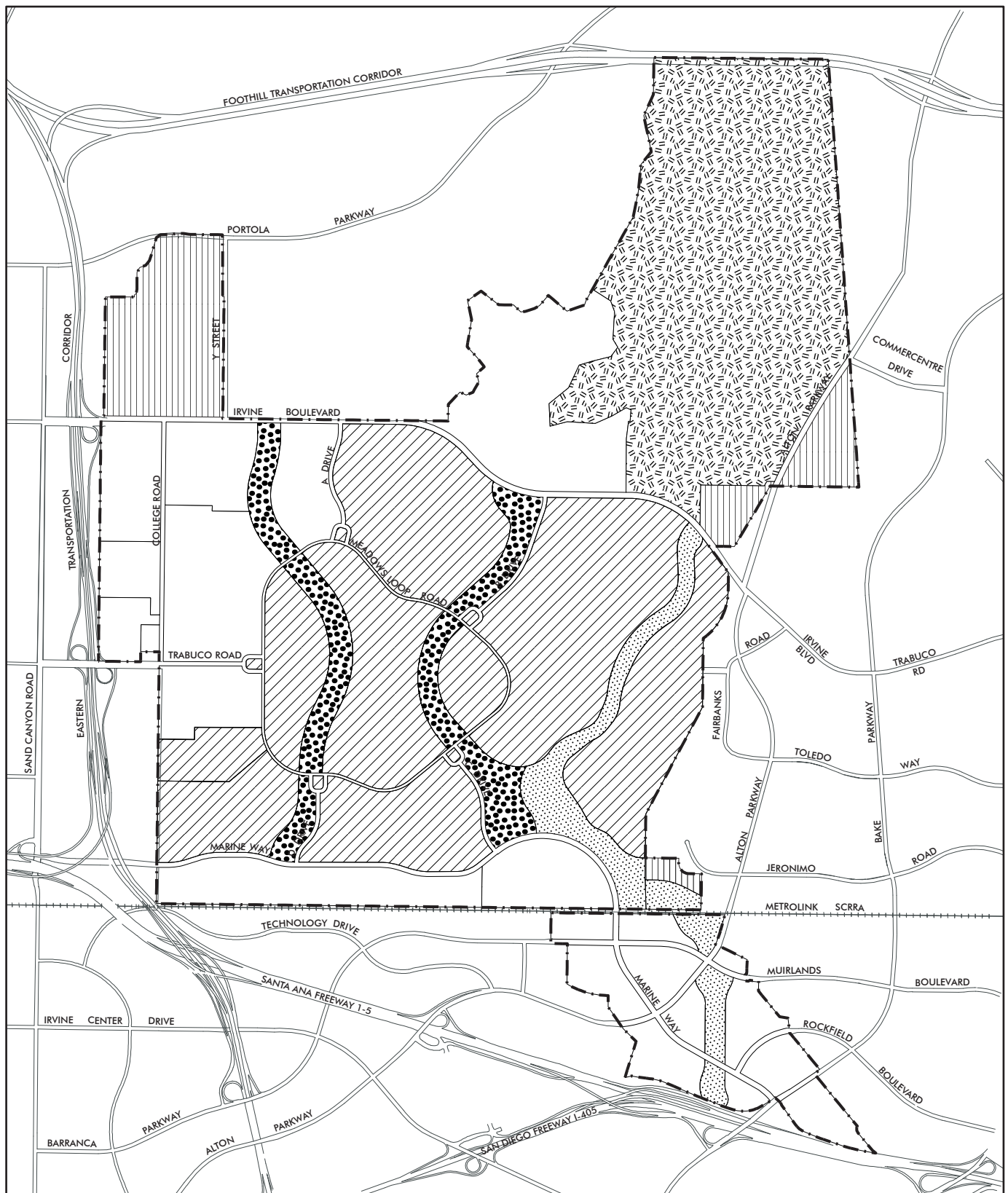
According to the Overlay Plan, the majority of land uses in PA 51 are proposed for open space and recreation. The Plan provides for a variety of open space features to serve the City and the surrounding region. These open space features include parks, sports parks, golf courses, habitat preserve, drainage and wildlife corridors, fairgrounds, and a cemetery. The parks and recreational features are identified in Figure 5.14-2. The parkland acreage proposed under the project will greatly exceed the existing City of Irvine's standards described above, providing a regional open space amenity for the benefit of all Orange County. A portion of the required acres identified in Table 5.14-3 will need to go toward private neighborhood parks, primarily for pools and tot lots within close proximity of homes.

Park and Recreational Plan

As stipulated in the Implementation Agreement Regarding the Natural Community Conservation Plan (NCCP) for the Central/Coastal Orange County Subregion of the Coastal Sage Scrub NCCP (July 1996), a Habitat Preserve will be established on approximately 974 acres in the northeastern portion of PA 51. This habitat preserve is intended to be conveyed to the US Department of the Interior to be administered by the USFWS for the preservation of coastal sage scrub and associated wildlife species. Activities within the Habitat Preserve will be restricted to those that are compatible with conservation goals, as determined by USFWS.

Two drainage corridors and one wildlife corridor are designated within the project area. One drainage corridor is located between the Marshburn and Bee Canyon Drainage Areas, while the other is located between the Bee Canyon and Agua Chino Drainage Areas. The wildlife corridor is located on the southern portion of the project area. This corridor links habitat areas north and south of the site. The wildlife corridor provides connection to the Habitat Preserve discussed above, as well as the Limestone-Whiting Wilderness Park. To the south, the corridor will connect to the Laguna Coast Wilderness Park through existing and future major open space linkages.

The Base Plan and Overlay Plan include opportunities for museums, theaters, gardens, and other cultural activities. North of the regional park located in the center of PA 51 (as shown in the Project Description Figure 3-3), there are approximately 250 acres designated for exposition center uses. PAZ 13, south of the central park, is 156 acres in size and can be used for cultural and institutional uses. The proposed project also provides for a sports park area totaling 165 acres.



Source: Fuscoe Engineering, City of Irvine, 2002.

- · — Orange County Great Park Boundary
- ▨ Recreational
- ▤ Agriculture
- ▧ Riparian Corridor
- ▩ Wildlife Corridor
- Habitat Preserve

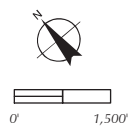


Figure 5.14-2
Recreational and Open Space Features
Overlay Plan

The project includes two golf course areas. The project incorporates the existing Marine Memorial Golf Course into a 211 acre course, with a second, larger 315 acre course proposed to the north of the existing golf course. In addition, the project includes a cemetery and other open space areas.

The project provides for a bikeways system interconnecting recreational, educational, and institutional uses to off-site trail systems enhancing the recreational opportunities for the community and the region. Both on-road (Class II) and off-road (Class I) bikeways are planned for the site, linking with the regional bikeway system. A riding and hiking trail will parallel Irvine Boulevard until it reaches the Habitat Preserve. This system also includes other non-vehicular forms of circulation, such as pedestrian corridors and sidewalks.

The specific environmental impact of constructing the new park and recreational facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new park and recreational facilities. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of new park and recreational facilities within the planning area. Project-level environmental review, at the time the specific location of new park and recreational facilities is known, and when specific development plans have been prepared, will also be required.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail will continue to be responsible for the provision and maintenance of any necessary recreational facilities located within the facility after annexation. Additionally, the Overlay Plan will not result in a change in land use designation for this parcel. As such, implementation of the proposed project will not generate a demand for park and recreational facilities that would require the construction or expansion of park and recreational facilities, and no significant environmental impact as a result of the proposed project is anticipated.

The Musick Jail Facility may be expanded in the future to increase inmate capacity of the jail as described in Section 3.0 of this Final Program EIR. The expansion of the jail is a County of Orange initiated action, and the expansion is not proposed as part of this project. EIR No. 564 was prepared by the County of Orange and no impact to parks and recreation impacts was identified. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

Irvine would provide for any parks and recreational needs for the IRWD parcel after annexation. Since the IRWD is public facility without residential development, the parcel will not create future needs for open space and parkland. As a result, annexation of the IRWD parcel will not result in a parks and recreation impact.

Threshold 2: *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur to be accelerated?*

Base Plan and Overlay Plan

Future development under the Base and Overlay Plans will result in additional population growth, and a resulting increase in demand for existing park and recreational facilities. There will not be a significant impact on the existing facilities since implementation of the proposed project will provide new recreational opportunities that are in excess of the City of Irvine's adopted standards for parks and recreation.

5.14.3.4 Significant Impacts

Base Plan and Overlay Plan

The specific significant environmental impact of constructing new recreational facilities that will be needed to serve the Base and Overlay Plans cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR, which would include the construction and operation of new recreational facilities. The need for new public facilities will be mitigated by utilizing existing City standards.

5.14.3.5 Mitigation Measures

Base Plan and Overlay Plan

Mitigation Measures identified in other sections of this Final Program EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of park and recreational facilities to serve new growth expected in the planning area.

5.14.3.6 Significant of Impacts After Mitigation

Base Plan and Overlay Plan

The general impacts associated with the construction and operation of public facilities has been addressed within the Final Program EIR, which would include the construction and operation of new park and recreational facilities. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of park and recreational facilities within the planning area. Project-level environmental review, at the time the specific location of park and

recreational facilities is known, and when specific development plans have been prepared, will also be required and project specific mitigation measures identified and implemented.

Notes and References

None.

5.14.4 SCHOOL SERVICES

5.14.4.1 Environmental Setting

Former MCAS El Toro (PAs 51 and 30)

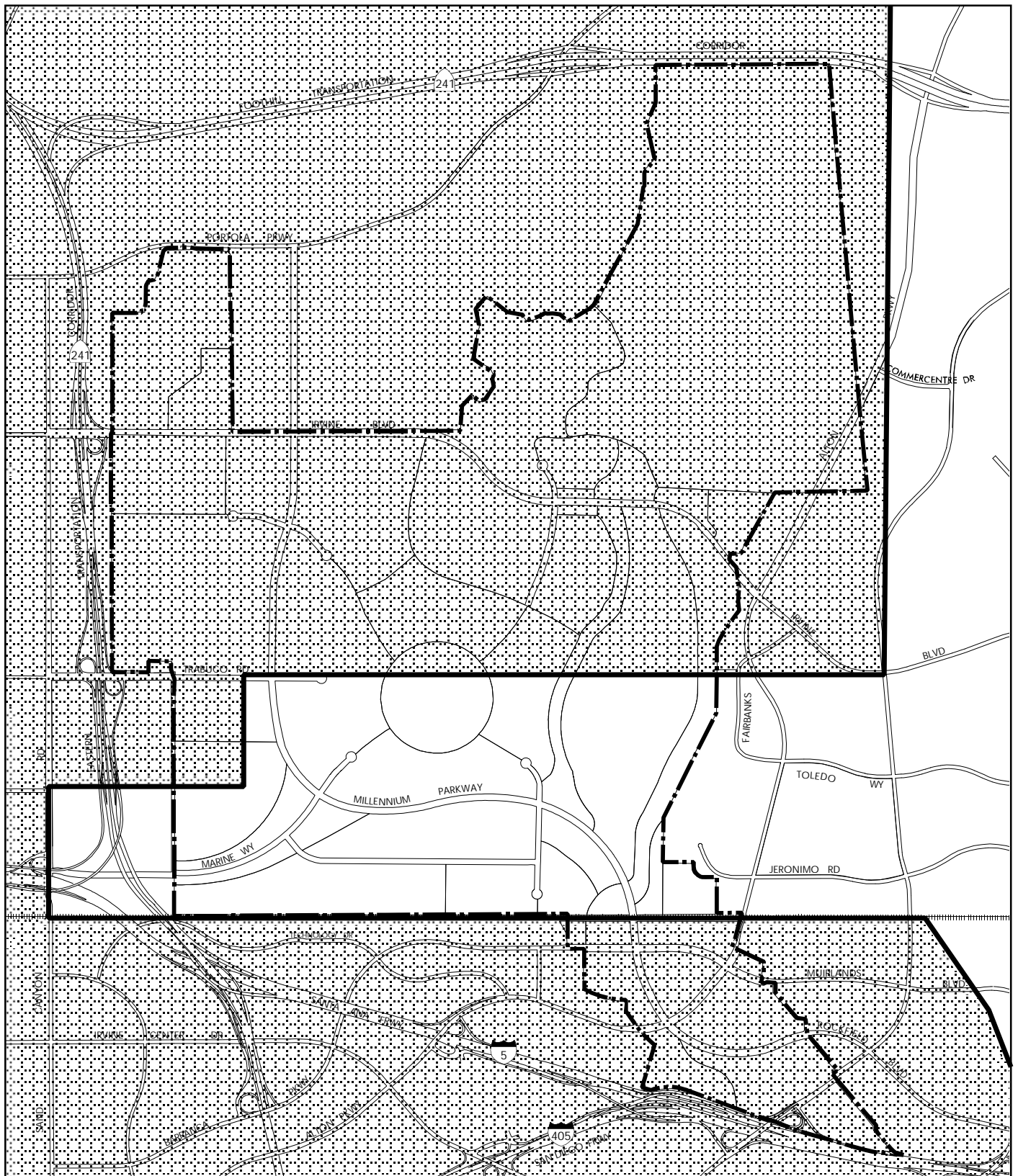
PAs 51 and 30 are within the school service boundaries of the Irvine Unified School District (IUSD) and the Saddleback Valley Unified School District (SVUSD). IUSD serves the majority of PAs 51 and 30 (northern and central sections of PA 51, and all of PA 30), with the Saddleback Valley Unified School District serving the southern section of PA 51. Figure 5.14-3 depicts the school district boundaries for the project area.

The existing El Toro Marine Elementary School at 8171 Southeast Trabuco Road at the northeastern edge of PA 51 is located on land owned by the federal government and leased to the IUSD through June 30, 2016. Prior to closure of the base in 1999, elementary school-age children at the MCAS El Toro facility attended this school. The school was built in 1949 and has a capacity for approximately 600 elementary school students. While the base was operational, middle school and high school students at the base attended the Rancho San Joaquin Middle School at 4861 Michelson Drive and the University High School at 4771 Campus Drive, respectively. Now that there are no students generated within the project area, there are no assigned schools serving the area.

The SVUSD serves the southern section of PA 51. Since this portion of PA 51 did not contain residential uses while MCAS El Toro was operational, the area is not included within any school service boundary of the district. All schools in SVUSD are currently overcrowded and relocatable classrooms have been utilized to accommodate all students. No new schools are planned in the near future.

James A. Musick Jail Facility (Portion of PA 35)

The James A. Musick Jail is not used for school-age children and inmates do not attend public or private schools outside the jail facility. Thus, the jail does not currently generate school-age students who would require school services from the Irvine Unified School District.



Irvine Unified School
District Boundary



Project Area



Saddleback Valley Unified
School District Boundary

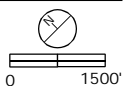


Figure 5.14-3
Irvine and Saddleback Valley
Unified School Districts

IRWD Parcel (Portion of PA 35)

The IRWD parcel is a public facility and does not contain residential development. Thus, the parcel does not generate a demand for schools and educational services.

5.14.4.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for public services and facilities.

Would the project:

1. *Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service ratios or other performance objectives for public school facilities?*

5.14.4.3 Environmental Impact

As defined by the thresholds for determining significance, impacts related to the provision of school facilities are described below:

Threshold 1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service ratios or other performance objectives for public school facilities?

Base Plan

Residential development proposed under the Base Plan includes a total of approximately 225 residential units, including 60 medium density and 165 medium-high density residential units. The majority of these units, approximately 165 to 225 units, will be within the Irvine Unified School District. The remainder, zero to 60 units will be within the Saddleback Valley School District.

The school district boundaries cross through PAZ 10, an area where residential uses are proposed. At this General Plan level of analysis, it is unknown where exactly the housing units will be placed within the planning area (i.e., whether the new units will be in IUSD or SVUSD). For analysis purposes of this Final Program EIR, the highest number of potential units is used to estimate the “worse-case” scenario for both districts. As a result, the analysis will over estimate the amount of new or expanded school facilities that will be needed to serve the project.

Irvine Unified School District (IUSD)

New development within PAs 51 and 30 has the potential to generate school-age children who would require school services from the IUSD. School-age children that would occupy the multi family units would require school services from the IUSD and would create a demand for new schools in the area. The IUSD has indicated that it is prepared to serve all K-12 students that will reside within the district boundaries. Table 5.14-4 estimates student generation by school and land use. Based on the IUSD factors, as many as 115 students could be generated.

Table 5.14-4
IUSD Estimated Students Generated by Base Plan

Student Type	Average Residential Generation Factor	Anticipated Maximum New Housing Units	Projected New Students
Elementary (K-6)	0.32	225	72
Middle (7-8)	0.07		16
High (9-12)	0.12		27
Total	0.50		115

Source: Irvine Unified School District for generation factors.

New development within this area will have to pay development fees to the IUSD. The maximum statutory school fees the District can collect for new residential development is \$2.14 per square foot. These fees will be used for the development of new schools, expansion or improvement of existing school facilities or to fund school services.

Due to the low number of students that would be generated with the buildout of the Base Plan, no new school facilities would be needed on-site. Most likely, students would be placed in existing schools and existing facilities expanded and modernized. IUSD may consider shifts in the school attendance boundaries for existing elementary, middle, and high schools when distributing the new students. This could result in existing communities within IUSD to change from their current school assignment to another District school in order to better accommodate new growth within PAs 51 and 30.

Saddleback Valley Unified School District

New development within PAs 51 and 30 has the potential to generate school-age children who would require school services from the SVUSD. School-age children that would occupy the multi family units would require school services from the SVUSD and would create a demand for new schools in the area. Based on the SVUSD factors, as many as 24 students could be generated. Table 5.14-5 depicts the number of students that may be generated within the project area.

**Table 5.14-5
SVUSD Estimated Students Generated by Base Plan**

Student Type	Average Residential Generation Factor*	Anticipated Maximum New Housing Units	Projected New Students
Elementary (K-6)	0.22	60	13
Middle (7-8)	0.056		3
High (9-12)	0.13		8
Total			24

* Student generation factors for detached residential are 0.34 for K-6, 0.065 for 7-8, and 0.16 for 9-12 and for attached residential are 0.10 for K-6, 0.046 for 7-8, and 0.10 for 9-12. An average of the two factors is used for this analysis.

Source: Saddleback Valley Unified School District for generation factors.

New development within this area will have to pay development fees to the Saddleback Unified School District in the amount of \$0.37 per square foot of non-residential development and \$2.13 per square foot of residential development to mitigate potential impacts to the district. These fees will be used for the development of new schools, expansion or improvement of existing school facilities or to fund school services.

The specific environmental impact of constructing new public educational facilities within the IUSD and SVUSD that will be needed to serve the Base Plan cannot be determined at this General Plan level of analysis. However, the general impacts associated with the construction and operation of public facilities within the project area has been addressed within this EIR, which would include the construction and operation of new educational facilities. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of new educational facilities within the planning area. Project-level environmental review, at the time the specific location of new educational facilities within the project area or expansion or modernization of existing facilities is known, and when specific development plans have been prepared, will also be required.

IRWD Parcel (Portion of PA 35)

The annexation of the IRWD parcel will not generate a demand for school services since no residential development is proposed on this parcel. As a result, annexation of the IRWD parcel will not result in an impact related to the construction and operation of public school facilities.

Overlay Plan

Residential development proposed under the Overlay Plan includes a total of approximately 3,625 residential units, including 1,100 low density, 860 medium density, and 1,665 medium-high density residential units. The majority of these units, approximately 2,680 to 2,990 units, will be within the Irvine Unified School District. The remainder, 635 to 945 units, will be within the Saddleback Valley School District.

The school district boundaries cross through two planning areas (PAZ 10 and 18) that propose residential uses. At this General Plan level of analysis, it is unknown where exactly

the housing units will be placed within each individual planning area (i.e., whether the new units will be in IUSD or SVUSD). For analysis purposes of this Final Program EIR, the highest number of potential units is used to estimate the “worse-case” scenario for both districts. As a result, the analysis will over estimate the amount of new or expanded school facilities that will be needed to serve the project.

Irvine Unified School District (IUSD)

New development within PAs 51 and 30 has the potential to generate school-age children who would require school services from the IUSD. School-age children that would occupy the single family and multi family units would require school services from the IUSD and would create a demand for new schools in the area. The IUSD has indicated that it is prepared to serve all K-12 students that will reside within the district boundaries. Table 5.14-6 estimates student generation by school and land use. Based on the IUSD factors, as many as 1,525 students could be generated.

**Table 5.14-6
IUSD Estimated Students Generated by Project**

Student Type	Average Residential Generation Factor	Anticipated Maximum New Housing Units	Projected New Students
Elementary (K-6)	0.32	2,990	957
Middle (7-8)	0.07		209
High (9-12)	0.12		359
Total	0.50		1,525

Source: Irvine Unified School District for generation factors.

Based on Table 5.14-6, the IUSD estimated the cost for typical District elementary, middle, and high schools. According to the District, the estimated acreage needed for an elementary school is 10 acres with a total building area of 45,000 square feet and the estimated acreage for a middle school is 15 acres with a total building area of 65,000 square feet. The District also estimated that an acre of land would cost \$1,000,000 to 1,500,000, resulting in a total building cost of \$218 per square foot for elementary and middle schools (not including land for Oak Creek Elementary School in 2000). According to the District, the total building area needed for a high school expansion would be 20,000 to 30,000 square feet, resulting in a total cost of \$3.2 million.

New development within this area will have to pay development fees to the IUSD. The maximum statutory school fees the District can collect for new residential development is \$2.14 per square foot. These fees will be used for the development of new schools, expansion or improvement of existing school facilities or to fund school services.

Based on the District’s initial analysis of the project, the District estimates that it will require at buildout a 13 acre K-8 site and school located central to the Overlay Plan service area, as well as funding for modernization and expansion of existing middle and high school facilities. A 13 acre school site has been identified in PA 17a. To accommodate the expected student growth from the project during buildout of the proposed project and prior to final construction of the new elementary school, IUSD may re-open the El Toro Marine Elementary School and/or assign students residing in the project area to various schools

with available capacity. The District's consultants are currently analyzing the land bordering the existing El Toro Elementary site for purposes of realigning the property lines and/or expanding the site from approximately 10-acres to 13-acres better accommodate a K-8 school. The Overlay Plan would be implemented through participation in the Development Agreement described in Section 3.0 of this EIR. The Development Agreement requires dedication of a school site to IUSD.

In the event that a new school is not built, IUSD may consider shifts in the school attendance boundaries for existing elementary, middle, and high schools. This could result in existing communities within IUSD to change from their current school assignment to another District school in order to better accommodate new growth within PAs 51 and 30.

Saddleback Valley Unified School District

New development within PAs 51 and 30 has the potential to generate school-age children who would require school services from the SVUSD. School-age children that would occupy the single family and multi family units would require school services from the SVUSD and would create a demand for new schools in the area. Based on the SVUSD factors, as many as 384 students could be generated. Table 5.14-7 depicts the number of students that may be generated within the project area.

**Table 5.14-7
SVUSD Estimated Students Generated by Project**

Student Type	Average Residential Generation Factor*	Anticipated Maximum New Housing Units	Projected New Students
Elementary (K-6)	0.22	945	208
Middle (7-8)	0.056		53
High (9-12)	0.13		123
Total			384

* Student generation factors for detached residential are 0.34 for K-6, .065 for 7-8, and .16 for 9-12 and for attached residential are 0.10 for K-6, .046 for 7-8, and .10 for 9-12. An average of the two factors is used for this analysis.

Source: Saddleback Valley Unified School District for generation factors.

New development within this area will have to pay development fees to the Saddleback Unified School District in the amount of \$0.37 per square foot of non-residential development and \$2.13 per square foot of residential development to mitigate potential impacts to the district. These fees will be used for the development of new schools, school facilities or to fund school services.

The specific environmental impact of constructing new public educational facilities within the IUSD and SVUSD that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis. However, the general impacts associated with the construction and operation of public facilities within the project area has been addressed within this Final Program EIR, which would include the construction and operation of new educational facilities. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of new educational facilities within the planning area. Project-

level environmental review, at the time the specific location of new educational facilities within the project area or expansion or modernization of existing facilities is known, and when specific development plans have been prepared, will also be required.

James A. Musick Jail Facility (Portion of PA 35)

The annexation of the site of the jail to the City of Irvine will not lead to the generation of students. Additionally, the proposed project will not result in a change in land use designation for this parcel. As such, implementation of the proposed project will not generate a demand for educational facilities for the jail facility that would require the construction or expansion of educational facilities, and no significant environmental impact as a result of the proposed project is anticipated.

The Musick Jail Facility may be expanded in the future to increase inmate capacity of the jail as described in Section 3.0 of this Final Program EIR. This is a County of Orange initiated action, and the expansion is not proposed as part of this project. The proposed expansion of the jail facility in the future is not expected to generate students from inmates or employees of the facility due to the short-term stay of inmates and the rotation of deputies to different law enforcement functions, including only temporary assignments to the jail, and EIR No. 564 did not identify any significant impacts related to the proposed jail expansion. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

The annexation of the IRWD parcel will not generate a demand for school services since no residential development is proposed on this parcel. As a result, annexation of the IRWD parcel will not result in an impact related to the construction and operation of public school facilities.

5.14.4.4 Significant Impacts

Base Plan and Overlay Plan

The specific significant environmental impact of constructing new educational facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR, which would include the construction and operation of new educational facilities. The need for new public facilities will be mitigated by utilizing existing City standards.

5.14.4.5 Mitigation Measures

Base Plan and Overlay Plan

Mitigation Measures identified in other sections of this Final Program EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of educational facilities to serve new growth expected in the planning area.

5.14.4.6 Significance of Impact After Mitigation

Base Plan and Overlay Plan

The general impacts associated with the construction and operation of public facilities has been addressed within the Final Program EIR, which would include the construction and operation of new educational facilities. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of educational facilities within the planning area. Project-level environmental review, at the time the specific location of educational facilities is known, and when specific development plans have been prepared, will also be required and project specific mitigation measures identified and implemented.

Notes and References

1. Comment letter from Don Chadd, Irvine Unified School District (October 31, 2002).
2. Personal conversation with Tom Tullar, Saddleback Valley Unified School District (December 2002).

5.15 Utilities

5.15.1 POTABLE WATER

5.15.1.1 Environmental Setting

The Irvine Ranch Water District (IRWD) is the jurisdictional agency responsible for providing plan approval and water service to the entire project area. The IRWD does not have any adopted expansion plans for the potable water system within the project area. The Metropolitan Water District of Southern California (MWD) is planning for a parallel pipeline to the Allen-McColloch Pipeline (AMP), which currently traverses the project area. The City of Irvine acknowledges that only existing infrastructure that meets current IRWD standards will be preserved for use in the future. Infrastructure considered below the IRWD standard will be replaced and/or upgraded based on IRWD recommendations during implementation of the proposed project.

Former MCAS El Toro (PAs 51 and 30)

A report, “The Orange County Great Park Program EIR Infrastructure Report” (Fusco Engineering, November, 21 2002) has been prepared for Orange County Great Park Plan. This report is provided in Appendix J of this Final Program EIR.

PAs 51 and 30 are located within Zone 3 North and Zone 4 of the IRWD water system. The original water system for the former MCAS El Toro property was designed and constructed as a stand-alone system. Currently, IRWD supplies potable water to the former base through four metered connections that connect to the IRWD Zone 3 North and Zone 4 water system. The on-site existing distribution system for the former MCAS El Toro property consists of a network of distribution system pipelines, six reservoirs, and two pump stations.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail is located within Zone 4 of the IRWD water system. The jail receives its potable water from IRWD through two connections located at the northwest corner of the site.¹

IRWD Parcel (Portion of PA 35)

The IRWD parcel contains the IRWD East Irvine Zone 4 Pumping Station and Zone 3 5.0 million-gallon potable water reservoir and 7.0 million gallon potable reservoir.

City of Irvine

The IRWD provides potable water to the entire City of Irvine. Potable water sources currently available to IRWD include water imported by MWD through the AMP, the East Orange County Feeder No. 2 (EOCF#2), and the Orange County Feeder; and groundwater

from the Irvine Subbasin/Irvine Desalter and the Dyer Road Wellfield (DWRF)/Deep Aquifer Treatment System (DATS).² The 66-inch, reinforced-concrete AMP is located in a 50-foot-wide permanent easement that traverses the project area in a generally northwest-southwest direction.

5.15.1.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for potable water.

Would the project:

1. *Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*
2. *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

5.15.1.3 Environmental Impact

As defined by the thresholds for determining significance, impacts related to the provision of potable water service are described below:

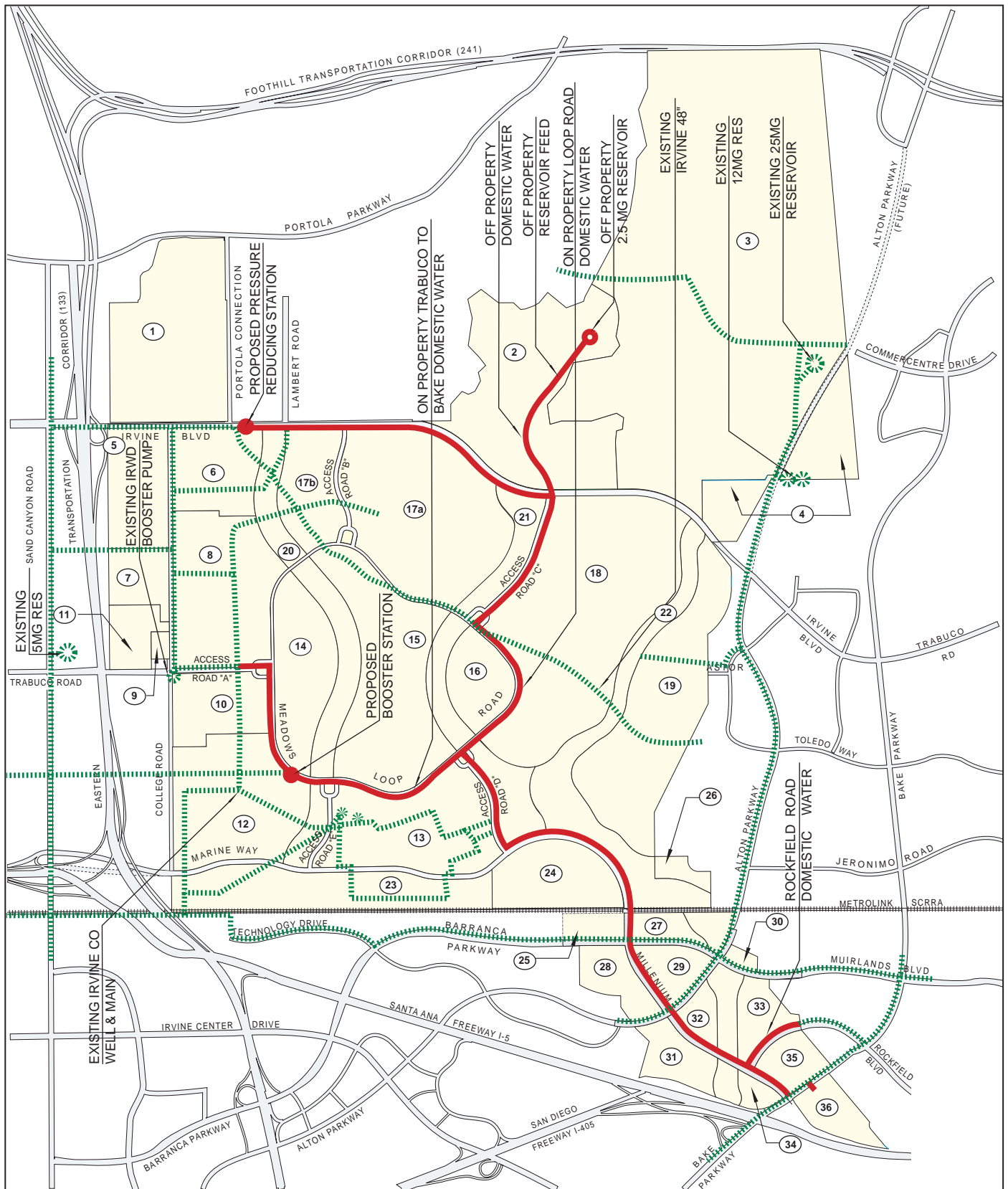
Threshold 1. Would the project require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Base Plan and Overlay Plan

Former MCAS El Toro (PAs 51 and 30)

Projected total average day buildout demand for potable water service based on the land uses proposed in the proposed project is expected to be less than the 1.75 million gallons per day (MGD) calculated for the Overlay Plan since the Base Plan proposed less intense development than the Overlay Plan. Appendix J of this Final Program EIR contains the generation assumptions that were utilized to estimate future demand for potable water service for the Overlay Plan.

The proposed backbone domestic water system for PAs 51 and 30 as proposed in the project is illustrated in Figure 5.15-1. The Base and Overlay Plans potable water system assumes that selected on-site facilities will be preserved in place and remain operational at plan build-out. The existing transmission capacity of the potable water system on-site will be expanded to serve the proposed project. The Base and Overlay Plan system expands the existing MCAS El Toro potable water system to fully integrate into the IRWD system and provide backbone service to all user areas in the project.



Source: Fuscoe Engineering, City of Irvine, 2002.

LEGEND

- Existing Domestic Water
- Proposed Domestic Water

① Parcel Number (Typical)

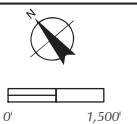


Figure 5.15-1
Potable Water System

A looped system is the conventional and preferred method for delivery of potable water supplies since multiple sources of supply make the system more reliable and flexible. The proposed looped system features multiple connections to existing potable water facilities with a network of 12-inch, 16-inch, and 24-inch diameter pipes that generally coincide with the routing of existing and proposed roadways circulating throughout the project area. Two new booster stations will need to be constructed. These stations will pump water through the proposed potable water network from Zone 3 to Zone 4. Conversely, pressure-reducing stations will return excess water to Zone 3 as necessary in response to local demand. Storage calculations using IRWD storage criteria indicated that a new Zone 4 reservoir measuring 2.5 million gallons will be necessary to balance projected potable water demand. The new reservoir is expected to be in the vicinity of the existing potable water reservoir in the "Wherry" site. Reuse of the existing Wherry reservoir is also assumed.

Additional IRWD maintenance personnel and equipment may be required to operate and maintain the proposed potable water system. The project proponent(s) of individual projects will be responsible for applicable costs associated with protection, relocation, repair, replacement, extension or expansion of water facilities.

As discussed above, the MWD has also identified that a new potable water pipeline that will be located parallel to the existing AMP is being planned within the project area. MWD will be responsible for the project-specific environmental review for that project. As project-level development occurs, the City of Irvine and MWD will review projects to ensure that they do not negatively impact the existing and planned MWD facilities and that construction of necessary water infrastructure improvements occurs prior to, or concurrent with development. Since the proposed project is a General Plan level of planning, the specific impact to the AMP cannot be determined at this time since the specific location of future development is unknown at this time. As specific projects are proposed, all existing easements will be reviewed and mitigation measures required if necessary.

The proposed project will require the expansion of potable water facilities to increase transmission capacity. The specific environmental impact of constructing new potable water facilities that will be needed to serve the proposed project cannot be determined at this program level of analysis as site specific plans for the installation of the potable water backbone system have not been prepared. However, the general impacts associated with the construction and operation of public utilities have been addressed within this EIR, which would include the construction and operation of the potable water system. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of the potable water system within the project area as this system is necessary for overall project construction. Project-level environmental review, at the time that specific development plans have been prepared will also be required.

James A. Musick Jail Facility (Portion of PA 35)

After annexation, the IRWD will continue to serve the Musick Jail facility at existing levels of service. Annexation of the jail facility will not result in the need to construct or expand potable water facilities, and no impact is anticipated.

According to EIR No. 564, in the event that the jail facility is expanded to the proposed 7,584 inmates, the existing potable water system has the capacity to service the jail. A third

connection is proposed in the jail expansion plan to provide additional reliability. No significant impacts were identified in EIR No. 564 related to potable water service. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

No additional service will be required for this parcel, therefore annexation of the project will not result in a significant environmental impact related to construction or expansion of potable water facilities.

Threshold 2: *Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

Base Plan and Overlay Plan

Former MCAS El Toro (PAs 51 and 30) ²

The proposed project's impact on water supply and the ability of the water provider to provide a water source to the project site has been assessed by the IRWD in accordance with the requirements of SB610 and SB221, both effective January 2, 2002, and the water supply assessment (WSA) contained in Appendix C complies with the most recent statutory requirements and concludes that adequate supplies are available to serve the proposed project. SB 901 requires an evaluation of the project's consistency with IRWD's most recent Urban Water Management Plan (UWMP), and an evaluation of supplies under normal, single, and multiple dry years within a 20-year projection.

On January 27, 2003 the Board of Directors of the Irvine Ranch Water District (IRWD) approved the assessment of water supply for the proposed project. The IRWD assessment of water supply is provided in Appendix C of this Final Program EIR. Based on the findings of the assessment, the IRWD has determined that a sufficient water supply is available to serve the project. The total water supplies available to IRWD during normal, single-dry and multiple-dry years within a 20-year projection will meet the project water demand of the project in addition to the demand of existing and other planned future uses, including, but not limited to, agricultural and manufacturing uses.

The status of a reliable water supply available to Southern California has recently come under question as a result of the failure to complete an agreement between MWD and the Imperial Irrigation District. This agreement would have allowed improved irrigation practices in the Imperial Valley and allowed the transfer of "saved" water from farms in the Imperial Irrigation District to other parts of Southern California. However, MWD has stated that the District will continue to meet all the region's demands for imported water in 2003, 2004, and beyond, primarily because of the investments urban Southern California has made over the past decade to conserve, diversify and stretch its portfolio of water resource options. Based on the water supply analysis prepared by IRWD, the district will have adequate water resources to meet future demand including the proposed project. IRWD has made a finding that it will have adequate water resources to meet the future water

demands of the project. No significant impact to water supply is anticipated. As a result, no significant impact resulting from the lack of availability of new water supplies is anticipated.

James A. Musick Jail Facility (Portion of PA 35)

After annexation, the IRWD will continue to serve the Musick Jail facility at existing levels of service. Annexation of the jail facility will not result in the need for additional potable water supplies, and no impact is anticipated.

According to EIR No. 564, in the event that the jail facility is expanded to the proposed 7,584 inmates, the existing potable water system has the capacity to service the jail. No significant impacts were identified in EIR No. 564 related to potable water service. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

No additional service will be required for this parcel, therefore no additional water supplies will be required. As a result, no significant impact related to the need for additional water supply will occur.

5.15.1.4 Significant Impacts

Base Plan and Overlay Plan

The specific significant environmental impact of constructing new potable water facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR, which would include the construction and operation of new potable water facilities.

5.15.1.5 Mitigation Measures

Base Plan and Overlay Plan

Mitigation Measures identified in other sections of this Final Program EIR (5.1 - 5.13) address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new potable water facilities identified in this section to serve new growth expected in the project area.

5.15.1.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

The general environmental impacts associated with the construction and operation of public utilities have been addressed within the Final Program EIR, which would include the construction and operation of new potable water facilities identified in this section. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR apply to the future construction and operation of potable water facilities within the project area. Project-level environmental review, at the time the specific plans for the potable water backbone system have been prepared, will also be required and project specific mitigation measures identified and implemented.

5.15.2 Recycled Water

5.15.2.1 Environmental Setting

IRWD is the jurisdictional agency responsible for providing plan approval and water service to the entire project area. The IRWD does not have any adopted expansion plans for the recycled water system within the project area.

Former MCAS El Toro (PAs 51 and 30)

A report, “The Orange County Great Park Program EIR Infrastructure Report” (Fusco Engineering, November, 21 2002) has been prepared for Orange County Great Park Plan. This report is provided in Appendix J of this Final Program EIR.

Recycled water is currently supplied to PAs 51 and 30 via a 12-inch IRWD Zone B pipeline that runs perpendicular to Technology Drive and connects to an eight-inch MCAS El Toro pipeline in the southwest corner of the base.

PAs 51 and 30 lies within three separate IRWD recycled water system pressure zones, Zone B East Irvine, Zone C East Irvine, and Zone D AMP East. Zone B East Irvine serves elevations from 114 to 300 feet, Zone C East Irvine serves elevations from 300 to 440, and Zone D AMP East serves elevations above 440 feet.

James A. Musick Jail Facility (Portion of PA 35)

Recycled water service to the Musick Jail is not available at this time. Historically, the Santiago Aqueduct Commission (SAC) pipeline supplied the Musick Jail facilities with untreated, imported water supply from the MWD. The untreated water was used primarily for agricultural applications. The untreated water service from the SAC pipeline has been abandoned due to pipeline damage. Repair of the pipeline damage is currently considered cost prohibitive. However, the IRWD staff has indicated that recycled water service to the Musick Jail has been considered and the IRWD Recycled Water System may be extended to

supply recycled water from the Michelson Water Reclamation Plant to the Irvine Industrial Complex and the Musick Jail in the future.

IRWD Parcel (Portion of PA 35)

The IRWD provides potable water to the parcel for use in irrigation.

City of Irvine

The IRWD provides recycled water service to the entire City of Irvine.

5.15.2.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for recycled water.

Would the project:

1. *Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

5.12.2.3 Environmental Impact

Threshold 1: Would the project require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Base Plan and Overlay Plan

Former MCAS El Toro (PAs 51 and 30)

The primary demand for recycled water within PAs 51 and 30 will be generated by the development of proposed land uses under the proposed project. The IRWD will continue to provide recycled water service, at existing levels of service, to PAs 51 and 30. IRWD has indicated in its Water Resources Master Plan that it will have sufficient capacity to meet the future recycled water requirements of Measure W Orange County Great Park Plan, which is similar to the proposed project.

On January 27, 2003 the Board of Directors of the Irvine Ranch Water District (IRWD) approved the assessment of water supply for the proposed project. The IRWD assessment of water supply is provided in Appendix C of this Final Program EIR. Based on the findings of the assessment, the IRWD has determined that a sufficient non-potable water supply is available to serve the project. The total non-potable water supplies available to IRWD during normal, single-dry and multiple-dry years within a 20-year projection will meet the project non-potable water demand of the project in addition to the demand of existing and other planned future uses, including, but not limited to, agricultural and manufacturing uses.

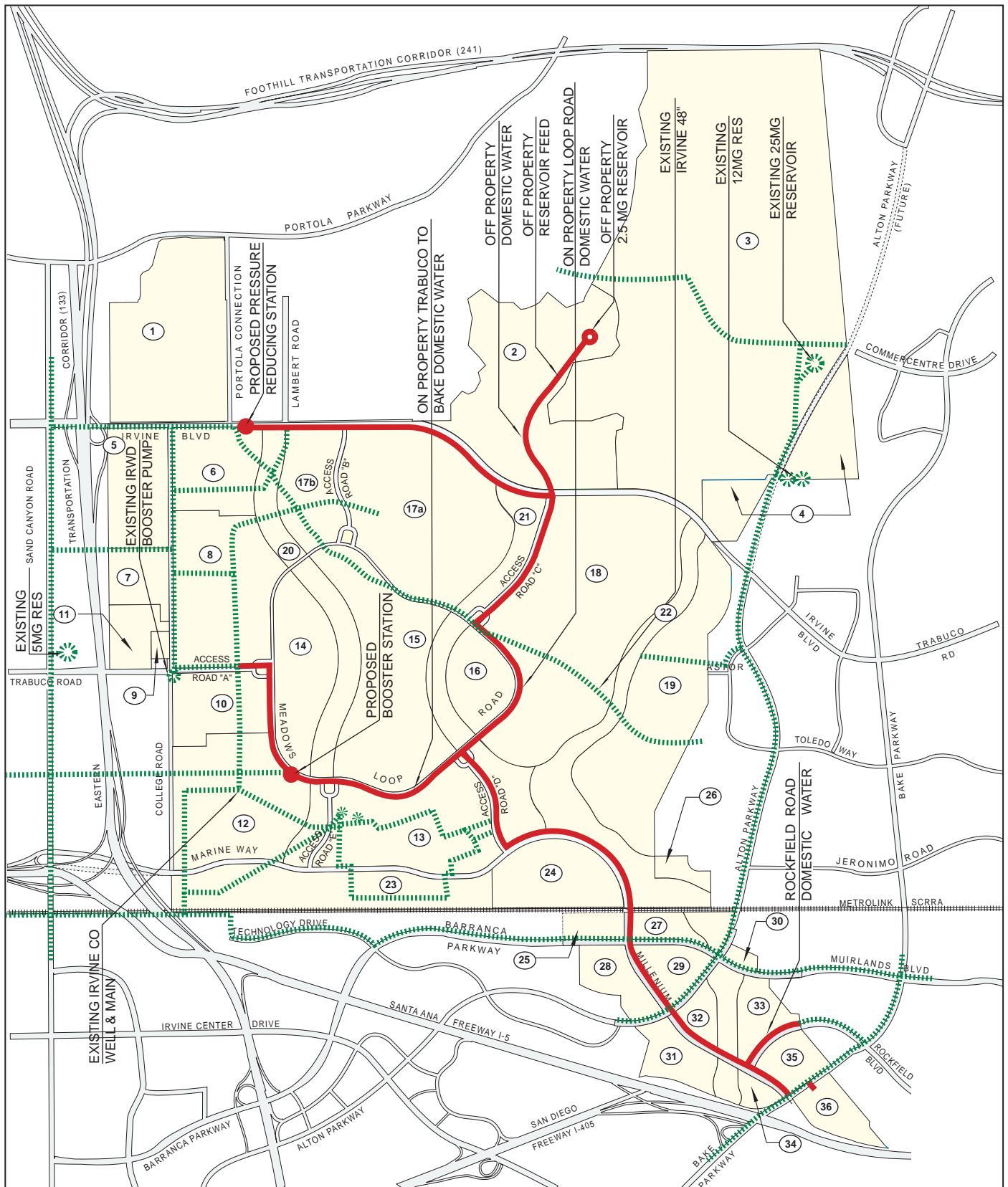
Projected average day water buildout demand for recycled water service based on the proposed land uses in PAs 51 and 30 under the Base Plan is expected to be less than the 5.6 million gallons per day (MGD) calculated for the Overlay Plan since the Base Plan is less intense. Appendix J of this Final Program EIR contains the generation assumptions that were completed to estimate the future demand for recycled water within PAs 51 and 30 under the Overlay Plan.

Implementation of the proposed project will require the expansion of recycled water transmission lines to serve the project. The recycled water system for the former MCAS El Toro property for the Base Plan and Overlay Plan is illustrated in Figure 5.15-2. The Base Plan and Overlay Plan recycled water system assumes that selected on-site facilities will be preserved in place and remain operational at buildout of the Plan. The Base Plan and Overlay Plan recycled water system design works to expand the limited existing MCAS El Toro system, fully integrating it into the IRWD system and providing backbone service to all user areas of the project site.

A looped system is the conventional and preferred method for delivery of recycled water supplies since multiple sources of supply make the system more reliable and flexible. The Base Plan and Overlay Plan recycled water system proposes an expansion of the facilities currently operated by IRWD. The proposed looped system features multiple connections to existing facilities with a network of 12-inch, 16-inch, and 24-inch diameter pipes that generally coincide with the routing of new and existing roadways circulating throughout the project. Two new booster stations will need to be constructed that will pump water through the network from Zone B through Zone C and Zone D. Conversely, pressure-reducing stations will return excess water from higher elevations to lower elevation zones as necessary in response to local demand by the project. Storage calculations using IRWD storage criteria reveal that a new Zone D reservoir measuring 2.0 million gallons will be needed to meet projected demand by the project. The reservoir is expected to be located in the vicinity of the existing potable water reservoir at the "Wherry" site. The balance of the projected demand will be met by drawing from the existing "Irvine Lake" system pipeline in the vicinity of the intersection of Irvine Boulevard and Lambert Road.

Additional IRWD maintenance personnel and equipment may be required to operate and maintain the proposed recycled water system. The project proponent(s) will be responsible for applicable costs associated with protection, relocation, repair, replacement, extension or expansion of recycled water facilities.

The specific environmental impact of constructing new recycled water facilities that will be needed to serve the proposed project cannot be determined at this program level of analysis as site specific plans for the installation of the recycled water backbone system



Source: Fuscoe Engineering, City of Irvine, 2002.

LEGEND

Existing Domestic Water

Proposed Domestic Water

Parcel Number (Typical)



0 1,500

Figure 5.15-2
Recycled Water System PAs 51 and 30

have not been prepared. However, the general impacts associated with the construction and operation of public utilities has been addressed within this Final Program EIR, which would include the construction and operation of the recycled water system. Mitigation measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of the recycled water system within the project area. Project-level environmental review, at the time that specific development plans have been prepared will also be required.

James A. Musick Jail Facility (Portion of PA 35)

IRWD will be the provider of recycled water to the jail in the event that a new recycled water connection is established. Annexation of the jail facility will not result in the need for the construction or expansion of recycled water facilities, and no impact is anticipated.

Repair of the SAC pipeline connection to provide untreated water service is not included in the proposed jail expansion plan due to the cost of repairing the pipeline connection. According to the IRWD, the property may be served with treated recycled water some time in the future. Currently recycled water is conveyed by the IRWD dual distribution system originating from the Michelson Water Reclamation Plant. IRWD is contemplating expanding this system into the Irvine Industrial Complex East area of the district in the future, which would increase the fiscal feasibility of providing recycled water to the jail facility. Similarly, with the proposed development of the PAs 51 and 30, the cost to install a new recycled water connection may decrease to a level that will allow new service to reach the jail facility.

IRWD Parcel (Portion of PA 35)

The IRWD parcel will not require additional recycled water service as a result of its annexation, therefore no significant impact related to the construction and or extension of recycled water service will occur.

5.15.2.4 Significant Impacts

Base Plan and Overlay Plan

The specific significant environmental impact of constructing new recycled water facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR, which would include the construction and operation of new recycled water facilities.

5.15.2.5 Mitigation Measures

Base Plan and Overlay Plan

Mitigation Measures identified in other sections of this Final Program EIR (5.1 - 5.13) address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new recycled water facilities identified in this section to serve new growth expected in the project area.

5.15.2.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

The general environmental impacts associated with the construction and operation of public facilities have been addressed within the Final Program EIR, which would include the construction and operation of new recycled water facilities identified in this section. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR apply to the future construction and operation of recycled water facilities within the project area. Project-level environmental review, at the time the specific plans for the recycled water backbone system have been prepared, will also be required and project specific mitigation measures identified and implemented.

5.15.3 SEWER

5.15.3.1 Environmental Setting

The Irvine Ranch Water District (IRWD) is the jurisdictional agency responsible for providing plan approval and sewer service to the entire annexation area. The IRWD does not have any adopted expansion plans at this time for sewer services serving the proposed annexation area.

Former MCAS El Toro (PAs 51 and 30)

A report, "The Orange County Great Park Program EIR Infrastructure Report" (Fusco Engineering, November, 21 2002) has been prepared for Orange County Great Park Plan. This report is provided in Appendix J of this Final Program EIR.

The primary sewer collection system that serves PAs 51 and 30 is a two-branched system with flow, mainly by gravity, from the northeast to the southwest. One lift station with two pumps is located in the southwest portion of PA 51 in Building 375. The existing sewer infrastructure system on PAs 51 and 30 consists of a series of polyvinyl chloride (PVC) and vitrified clay pipes (VCP) ranging in size from 6-inches to 15-inches in diameter.

Sewer discharge exits PAs 51 and 30 via two 12-inch lines at the southwest boundary of the base into the IRWD sewer system. The two 12-inch lines cross under the SCRRA railroad

tracks and connect with IRWD manholes southwest of the tracks. The flows then combine and exit via an 18-inch VCP pipe. The design capacity of this 18-inch pipe is about 1,200 gallons per minute (GPM). The flow continues through the IRWD Alton-Bake Parkway Trunk Sewer System to the San Diego Creek Interceptor on the north side of the San Diego (I-405) Freeway. The sewage is treated at the Michelson Wastewater Reclamation Plant.

James A. Musick Jail (Portion of PA 35)

The existing sewer system that serves the Musick Jail consists of eight- and ten-inch pipelines that connect to the external IRWD sewer system through a single 10-inch trunk sewer connection located at the southern edge of the jail property. The wastewater is treated at the Michelson Wastewater Reclamation Plant³.

IRWD Parcel (Portion of PA 35)

The IRWD parcel contains a domestic water storage and pumping facility, and does not generate sewage.

City of Irvine

The IRWD provides sewer service to the entire City of Irvine.

5.15.3.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for sewer services.

Would the project:

1. *Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*
2. *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*
3. *Exceed wastewater treatment requirements of the applicable Regional Water Quality Board?*

5.15.3.3 Environmental Impact

Threshold 1: *Would the project require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Base Plan and Overlay Plan

Former MCAS El Toro (PAs 51 and 30)

The primary demand for sewer within PAs 51 and 30 will be generated by the development of proposed land uses under the proposed project. The IRWD will continue to provide sewer service, at existing levels of service, to PAs 51 and 30. IRWD has indicated in the past that it will have sufficient capacity to meet the future sewer requirements of PAs 51 and 30 under more intense development plans (the Millennium Plan) than proposed development plan; therefore, IRWD would have adequate capacity to service the less intense Base Plan and Overlay Plan. However, additional wastewater treatment capacity may need to be purchased by the project proponents as specific development proposals come forward in PAs 51 and 30.

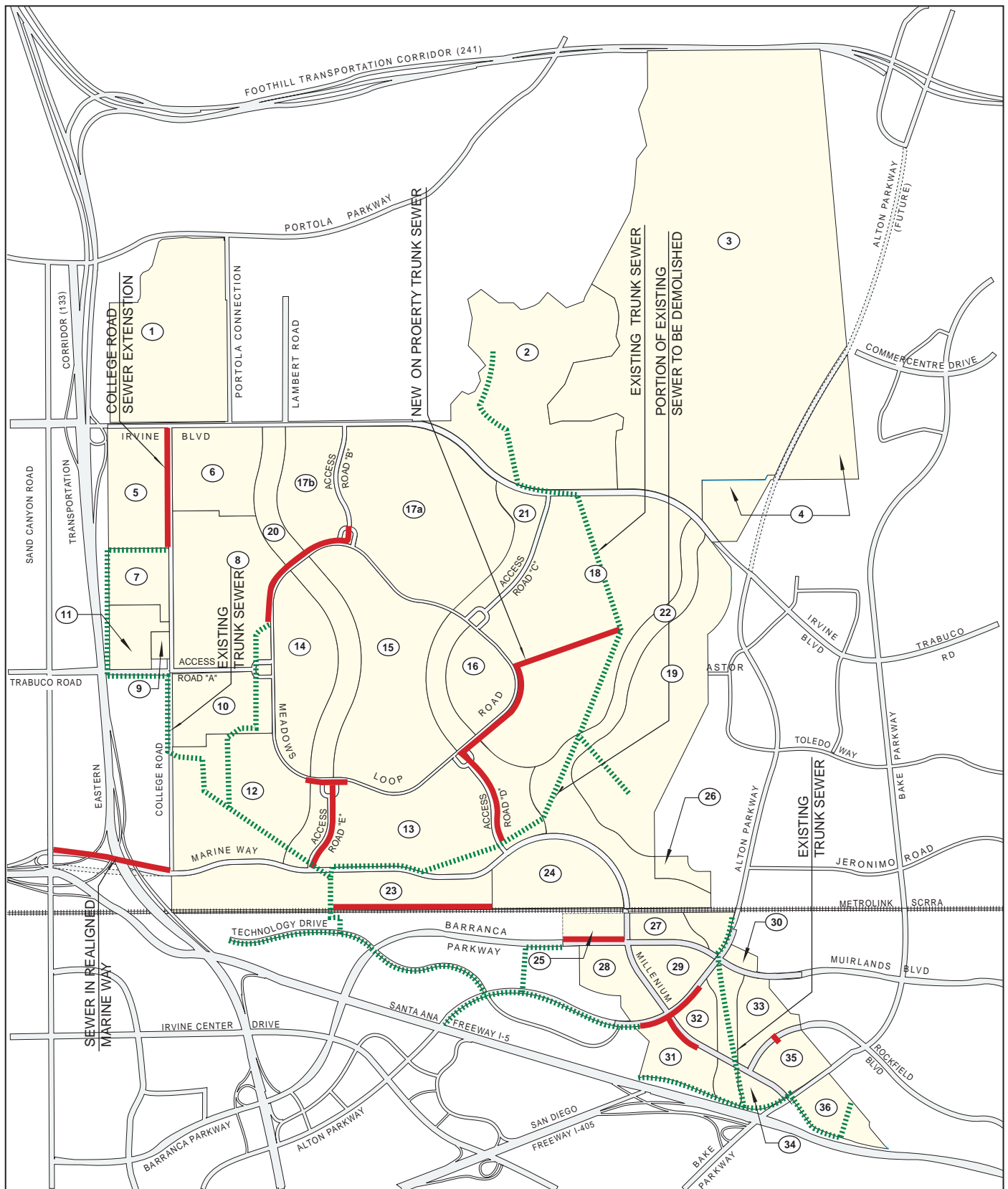
Projected buildout demand for sewer services based on the land uses proposed in the project is expected to be an average daily flow of 0.89 million gallons per day (MGD) calculated for the Overlay Plan and less than 0.89 MGD for the Base Plan, since the Base Plan is less intense. Appendix J of this Final Program EIR contains the generation assumptions that were completed to estimate the future demand for sewer within PAs 51 and 30 for the Overlay Plan.

The proposed project will require an increase of sewer transmission capacity in order to serve the project. The backbone sewer system for PAs 51 and 30 as proposed in the project is illustrated in Figure 5.15-3.

The proposed sewer system will preserve selected, existing on-site facilities in place and remain operational at plan build-out. The proposed Base Plan sewer system would expand rather than replace the existing MCAS El Toro system, fully integrating it into the IRWD system and providing backbone service to all user areas of the project. The proposed system would be transferred to IRWD control for operation and maintenance.

The new system includes extension of existing sewer lines with a series of eight-inch, ten-inch, and 12-inch diameter lines beneath the Metrolink Railroad. From there, separate flows will combine and continue to the IRWD Alton-Bake Trunk Sewer than to the San Diego Creek Interceptor Sewer on the north side of the San Diego Freeway in the vicinity of the I-5/I-405 interchange. Sewage effluent will be treated at the Michelson Wastewater Reclamation Plant.

Additional IRWD maintenance personnel and equipment may be required to operate and maintain the proposed sewer system. The project proponent(s) will be responsible for applicable costs associated with protection, relocation, repair, replacement, extension or expansion of wastewater facilities.



Source: Fuscoe Engineering, City of Irvine, 2002.

LEGEND

- Existing Sanitary Sewer
- Proposed Sanitary Sewer

① Parcel Number (Typical)

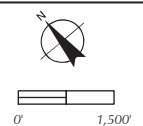


Figure 5.15-3
Sanitary Sewer System PAs 51 and 30

The specific environmental impact of constructing new sewer facilities that will be needed to serve the proposed project cannot be determined at this program level of analysis as site specific plans for the installation of the sewer backbone system have not been prepared. However, the general impacts associated with the construction and operation of public utilities has been addressed within this Final Program EIR, which would include the construction and operation of the sewer system. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of the sewer system within the project area. Project-level environmental review, at the time that specific development plans have been prepared will also be required.

James A. Musick Jail Facility (Portion of PA 35)

After annexation, IRWD will continue to serve the Musick Jail facility at its existing level of service. Annexation of the jail facility will not result in the need for the construction or expansion of sewer facilities, and no impact is anticipated.

Should the jail be expanded in the future, an average demand of 0.99 cfs, with a peak hour demand of 1.89 cfs, is expected³. The existing sewer collection system will support 3,840 inmates. Any expansion of the jail facilities to provide space for more than 3,840 inmates will require system improvements to expand the capacity of the sewer collection system serving the jail. No significant impacts were identified in EIR No. 564 related to sewer service. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

No sewer service is anticipated for this parcel since it does not generate sewage. As a result, no impact related to the construction or expansion of sewer facilities will occur.

Threshold 2: ***Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?***

Base Plan and Overlay Plan

Former MCAS El Toro (PAs 51 and 30)

The IRWD will continue to provide sewer service, at existing levels of service, to PAs 51 and 30. IRWD has indicated in the past that it will have sufficient capacity to meet the future sewer requirements of PAs 51 and 30 under more intense development plans (the Millennium Plan) than proposed development plan; therefore, IRWD would have adequate capacity to service the less intense Base Plan and Overlay Plan. However, additional wastewater treatment capacity may need to be purchased by the project proponents as specific development proposals come forward in PAs 51 and 30. Since the IRWD will be able to adequately provide sewer service to PAs 51 and 30, no significant impact related to treatment capacity is anticipated.

James A. Musick Jail Facility (Portion of PA 35)

The IRWD will continue to provide sewer service, at existing levels of service, to the Musick Jail facility. Annexation of the jail facility will not result in the exceedance of IRWD's capacity for wastewater treatment and no significant impact is anticipated. IRWD has indicated that it will be able to meet the future sewer requirements of the proposed jail expansion plan, but the improvements to the system, as described above, may need to be completed by the County of Orange, as well as purchasing additional wastewater treatment capacity. No significant impacts were identified in EIR No. 564 related to sewer service. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

As the IRWD parcel does not create a demand for sewer service and no future development is proposed for the parcel, annexation of the parcel will not result in a significant impact to the IRWD capacity for wastewater treatment.

Threshold 3: *Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Board?*

Base Plan and Overlay Plan

As discussed above, the proposed project will not result in the exceedance of the IRWD capacity to treat wastewater. IRWD is regulated by law to treat wastewater consistent with the requirements and standards of the Regional Water Quality Board. Since IRWD is required to treat wastewater at a standard consistent with the Regional Water Quality Board regulations, and the proposed project will not result in the exceedance IRWD's treatment capacity which would impede IRWD's ability to treat wastewater at a level consistent with the Regional Water Quality Board standards, no significant impact related to exceeding wastewater treatment standards is anticipated.

5.15.3.4 Significant Impacts

Base Plan and Overlay Plan

The specific significant environmental impact of constructing new wastewater facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR, which would include the construction and operation of new wastewater facilities.

5.15.3.5 Mitigation Measures

Base Plan and Overlay Plan

Mitigation Measures identified in other sections of this Final Program EIR (5.1 - 5.13) address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new wastewater facilities identified in this section to serve new growth expected in the project area.

5.15.3.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

The general environmental impacts associated with the construction and operation of public facilities have been addressed within the Final Program EIR, which include the construction and operation of new sewer facilities identified in this section. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR apply to the future construction and operation of the sewer system within the project area. Project-level environmental review, at the time specific development plans for the sewer backbone system have been prepared, will also be required and project specific mitigation measures identified and implemented.

5.15.4 SOLID WASTE

5.15.4.1 Environmental Setting

Former MCAS El Toro (PAs 51 and 30)

Solid waste is collected by private waste haulers in unincorporated areas of the County. Solid waste generated at the former MCAS El Toro property is collected by Waste Management Inc., a private solid waste hauler. Waste Management Inc. is also one of the private hauling firms permitted to work within the City of Irvine.

Solid waste collected at the former MCAS El Toro property is currently disposed of at the Frank R. Bowerman Landfill. The Bowerman Landfill is located at 11002 Bee Canyon Access Road. The County of Orange Integrated Waste Management Department (IWMD) owns and operates the facility.

James A. Musick Jail

The James A. Musick Jail currently disposes of its solid waste at the Frank R. Bowerman Landfill. Solid waste is collected by Waste Management, Inc., a private solid waste hauler.

IRWD Parcel

Since the parcel generates a minimal amount of solid waste, the IRWD collects the solid waste from the IRWD parcel. The solid waste is then disposed of at an IWMD facility.

City of Irvine

The City of Irvine's residential and village commercial communities' solid waste and recyclables are collected by Waste Management of Orange County, a private waste hauler with an exclusive contract with the City.

Solid waste produced by non-village commercial and industrial businesses is collected by one of the Irvine permitted solid waste haulers. The individual property owners select which permitted hauler the property owner will contract.

The City also offers to its residents, through Waste Management of Orange County, a curbside recycling program for glass bottles and jars, household paper products, aluminum and other metal cans, and greenwaste. All other permitted waste haulers are required to offer recycling services to their commercial customers. Construction and demolition recycling is a standard condition placed on development projects in Irvine.

Integrated Waste Management Department (IWMD)

The County of Orange IWMD owns and operates three landfills to serve the solid waste disposal needs of the County. The City of Irvine disposes of the majority of its solid wastes at the Frank R. Bowerman Landfill. The City of Irvine has a contract with IWMD to commit all of its wastes to the County landfill system (not a particular facility) until 2007. The IWMD also accepts wastes from outside Orange County. When the daily tonnage limit of a landfill is exceeded, waste imported to that facility is reduced accordingly. Thus, adequate capacity is expected to be available to serve future development in the County.

The California Integrated Waste Management Board requires that all counties have an approved Countywide Integrated Waste Management Plan (CIWMP). The Orange County IWMD's CIWMP was approved in 1996 and shows that sufficient solid waste disposal capacity is available in the County for the next 30 years, based on population projections for the area. Under AB 939, each city and county is also required to reduce 50 percent of wastes going to landfills, based on 1990 levels. Waste haulers are working with various jurisdictions on recycling programs and other measures to comply with this mandate.

A County operated Regional Collection Center for household hazardous materials is located near the intersection of Sand Canyon Avenue and Laguna Canyon Road. This center serves Irvine and the surrounding area. Sunset Environmental Industries, located near the intersection of Harvard Avenue and Warner Avenue, provides a public disposal site for

bulky items and purchases recyclables. There are several certified used oil recycling centers located in Irvine.

5.15.4.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for solid waste.

Would the project:

1. *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*
2. *Comply with federal, state, and local statutes and regulations related to solid waste?*

5.15.4.3 Environmental Impact

As defined by the thresholds for determining significance, impacts related to the disposal of solid waste are described below:

Threshold 1: Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Base Plan and Overlay Plan

Former MCAS El Toro (PAs 51 and 30)

Demolition activities, including the removal of existing runways and buildings, at PA 51 will generate debris materials that will need to be disposed at local landfills. Additionally, green waste will be produced as a result of on-going park and landscaping maintenance. As indicated earlier, the City requires construction and demolition debris recycling for new development projects in Irvine. This will allow the reuse of building materials and reduce waste volume requiring disposal. Also, California's Integrated Waste Management Act of 1989 (AB939) mandates that all cities in California divert from the landfill a minimum of 50 percent of the solid waste generated within their jurisdiction compared to base year levels. In addition, as part of AB939 compliance, a new state law (SB1374) requires that all cities implement ordinances or other measures that specifically require the diversion of 75 percent of all construction and demolition waste from landfills. Construction and demolition waste typically includes, but is not limited to, asphalt, brick, concrete, drywall, flooring, glass, gravel, metal, sand, soil, wood, and organics (greenwaste) and other landscaping debris. Therefore, to assure compliance with these statutes, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste from the demolition, dismantling, or other deconstruction of runways, buildings, structures, and other property at the former El Toro Marine Corps Air Station (MCAS) and the maintenance of parks and landscaping. This is considered a potentially significant impact.

Under the proposed project, PAs 51 and 30 will be served by a private solid waste hauler permitted by the City of Irvine. The level of service provided by the Irvine permitted hauler will be approximately the same as existing levels of service. For residential and City controlled land, Waste Management of Orange County will be responsible for the collection of solid wastes and recyclables. Those non-residential areas will be responsible for contracting with an Irvine permitted private waste hauler. Any County, State, or federally controlled lands within the area would be responsible for contracting with private waste haulers to collect their trash, and may be exempt from using a Irvine approved solid waste hauler.

Solid waste will continue to be disposed of in an IWMD facility. The IWMD has not adopted generation rates for solid waste. As shown in Table 5.15-1, using other generation rates, it is estimated that 12 tons per day of solid waste are anticipated to be generated within PAs 51 and 30 under the Base Plan. Table 5.15-2 shows that an estimated that 35 tons per day of solid waste are anticipated to be generated within PAs 51 and 30 under the Overlay Plan. Anticipated increases in solid waste generation resulting from the implementation of the proposed Base or Overlay Plans are not anticipated to exceed the capacity of IWMD facilities since the current capacity exceeds 30 years. Private solid waste hauling services will expand to meet the needs of the projected growth and development allowed under the proposed project.

**Table 5.15-1
Base Plan
Future Solid Waste Generation
Buildout Year 2025**

Land Use	Generation Factor (lbs/day/DU or KSF)	Max. Anticipated Development	Estimated Daily Generation (lbs/day)
Single Family Residential	10	60 DU	600
Multi-family Residential	7	165 DU	1,155
Non-residential	6	3,857 KSF	23,142
Total			24,897

Source: Modified by CBA from Orange County Sanitation Department and National Solid Waste Management Association.

DU= dwelling units, KSF= thousand square feet, lbs=pounds

**Table 5.15-2
Overlay Plan
Future Solid Waste Generation
Buildout Year 2025**

Land Use	Generation Factor (lbs/day/DU or KSF)	Max. Anticipated Development	Estimated Daily Generation (lbs/day)
Single Family Residential	10	1,960 DU	19,600
Multi-family Residential	7	1,665 DU	11,655
Non-residential	6	6,586 KSF	39,516
Total			70,771

Source: Modified by CBA from Orange County Sanitation Department and National Solid Waste Management Association.

DU= dwelling units, KSF= thousand square feet, lbs=pounds

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail will continue to be served by a private solid waste hauler at existing levels of service. It is possible that the jail will be exempt from the requirement of using an Irvine permitted hauler since it is a County facility. In the event that the jail is not exempt, the jail will be required to use an Irvine permitted hauler for the collection of solid waste. Solid waste collected from the jail will continue to be disposed of in an IWMD facility. Annexation of the jail facility will not result in the exceedance of IWMD's capacity for solid waste and no significant impact is anticipated.

Anticipated increases in solid waste generation resulting from County expansion plans are not anticipated to exceed the capacity of the private haulers and IWMD facilities. No significant impacts were identified in EIR No. 564 related to solid waste. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

Since no additional development is anticipated for the IRWD parcel, IRWD will continue to collect the small amount of solid waste generated on the IRWD parcel. This solid waste will continue to be disposed of at an IWMD facility. This small amount of solid waste generated at the IRWD parcel will not exceed the disposal capacity the IWMD. No impact related to exceeding the current landfill capacity will occur with the annexation of the IRWD parcel.

Threshold 2: Comply with federal, state, and local statutes and regulations related to solid waste?

Base Plan and Overlay Plan

Former MCAS El Toro (PAs 51 and 30)

Solid waste generated in PAs 51 and 30 by the Base or Overlay Plans will continue to be disposed of by permitted solid waste haulers to IWMD regulated sites that have adequate capacity and comply with federal, state and local statutes and regulations related to solid waste. In addition, the City of Irvine requires solid waste carriers to offer recycling disposal of solid waste generated in PAs 51 and 30 to help reduce the amount of solid waste disposed of in local landfills. The impact is potentially significant and mitigation is required.

James A. Musick Jail (Portion of PA 35)

Solid waste generated by the James A. Musick Jail will continue to be disposed of by a solid waste hauler to IWMD regulated sites that have adequate capacity and comply with federal, state and local statutes and regulations related to solid waste. As a result, no significant impact is anticipated.

IRWD Parcel (Portion of PA 35)

The small amount of solid waste generated by the IRWD parcel will continue to be disposed of at a IWMMD regulated site that has adequate capacity and comply with federal, state and local statutes and regulations related to solid waste. As a result, no significant impact is anticipated.

5.15.4.4 Significant Impacts

Base Plan and Overlay Plan

- SW1.** The project site may contain solid waste unsuitable for recycling or reuse. Also, the project will generate solid waste as result of demolition, operation of proposed land uses, and landscape maintenance.

5.15.4.5 Mitigation Measures

Base Plan and Overlay Plan

- SW1.** It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other deconstruction of the aged structures and property, including but not limited to buildings and runways, at the former MCAS El Toro is contaminated with lead based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the former MCAS El Toro site by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.

If it is determined by the technical evaluation that the material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as “waste-to-energy” (WTE) plants.

- SW2.** For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant must submit a written plan to the City and implement such plan to ensure that 75 percent of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.

- SW3.** For that solid waste which the technical study deems to be suitable for recycling the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75 percent of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180. ("Recycling" does not include transformation, as defined in Public Resources Code Section 40201.)
- SW4.** To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by "weight ticket" receipts from state-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.
- SW5.** For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by the landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50 percent of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.

To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.

5.15.4.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Implementation of the proposed project will not result in a significant impact related to solid waste.

5.15.5 ENERGY AND COMMUNICATIONS

5.15.5.1 Environmental Setting

Electrical Facilities and Service

Former MCAS El Toro (PAs 51 and 30)

A report, "The Orange County Great Park Program EIR Infrastructure Report" (Fuscoe Engineering, November, 21 2002) has been prepared for Orange County Great Park Plan

was prepared to design the backbone infrastructure system. This report is provided in Appendix J of this Final Program EIR.

Southern California Edison (SCE) presently serves the former MCAS El Toro property via two primary substation sites. Historically the former MCAS El Toro has received power through the California ISO-controlled 220/66 kV Santiago Substation which is interconnected to the Irvine and Limestone Substations. The Santiago Substation, is south of Irvine Center Drive on Sand Canyon Avenue. The Irvine Substation is located next to the entry gate of MCAS El Toro, at the east end of Trabuco Road. The Limestone Substation is located near Peachwood Avenue and Trabuco Road.

Since MCAS El Toro's closure in July, 1999, the majority of facilities have been closed and or idled. The DON continues to provide caretaker responsibilities for the existing buildings, structures, ancillary facilities, runways, etc. Some existing facilities are leased for various interim land uses, such as the golf course, equestrian facilities, California State University - Fullerton Extension Campus, agricultural operations, and recreational vehicle storage.

These interim land uses reflect only a limited and temporary use of the former MCAS El Toro site. As the leases for the interim activities end, the DON may renew or not renew the respective leases. With limited current usage, interim electricity consumption can be considered minimal.

The James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail facility is located within the service area of SCE, which provides service by utilizing existing 12kV underground facilities. These electrical facilities are located on the northerly and westerly boundaries of the jail facility¹.

IRWD Parcel (portion of PA 35)

The IRWD parcel is located within the SCE service area.

Natural Gas Facilities and Service

The Former MCAS El Toro Property (PAs 51 and 30)

A report, "The Orange County Great Park Program EIR Infrastructure Report" (Fuscoe Engineering, November, 21 2002) has been prepared for Orange County Great Park Plan was prepared to design the backbone infrastructure system. This report is provided in Appendix J of this Final Program EIR.

The Southern California Gas Company presently serves PAs 51 and 30. The former MCAS El Toro property is adjacent to a large diameter pipe. Along a portion of Irvine Boulevard, six-inch and eight-inch lines exist. The line in Irvine Boulevard and the adjacent parcel extends to the east of the former base and connects into existing two-inch, three-inch, and four-inch systems. The Gas Company has two-inch, four-inch, and six-inch lines located within the existing roads within the Irvine Spectrum area to the south.

The Southern California Gas Company has an option to utilize the existing 30-inch high pressure main that runs parallel to the railroad tracks between PA 51 and PA 30. This 30-inch line is rated at approximately 465 pounds per square inch (p.s.i.) and serves a portion of San Diego County.

James A. Musick Jail Facility (Portion of PA 35)

The James A. Musick Jail facility is located within The Southern California Gas Company service area.

IRWD Parcel (Portion of PA 35)

The IRWD parcel is within The Southern California Gas Company service area.

Communication Facilities and Services

Former MCAS El Toro (PAs 51 and 30)

A report, "The Orange County Great Park Program EIR Infrastructure Report" (Fusco Engineering, November, 21 2002) has been prepared for Orange County Great Park Plan was prepared to design the backbone infrastructure system. This report is provided in Appendix J of this Final Program EIR.

Pacific Bell is the present provider to PAs 51 and 30. Pacific Bell has service offices on Irvine Center Drive, south of Yale Avenue (Irvine office) and on Irvine Center Drive, west of Bake Parkway (Spectrum office). An exchange boundary runs the extent of the railroad tracks and separates the serving territory of these two offices. The Spectrum office would serve communications needs south of the tracks (the majority of PA 30), while the Irvine office would serve the majority of the former base (PA 51 and the remainder of PA 30). Fiber optic and copper lines are contained throughout the areas surrounding PAs 51 and 30.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail is located within the service area of Pacific Bell, which provides service to the facility³.

IRWD Parcel

The IRWD parcel is within the Pacific Bell service area, but does not require service since the parcel does not contain any residential or business uses.

5.15.5.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for energy.

Would the project:

1. *Result in substantial adverse physical impacts associated with the provision of new or physically altered energy and communications transmission facilities, need for new or physically altered energy and communications transmission facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service?*
2. *Result in the use of substantial amounts of fuel and/or energy?*

5.15.5.3 Environmental Impact

As defined by the thresholds for determining significance, impacts related to the provision of energy are described below:

Threshold 1: *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered energy and communication transmission facilities, need for new or physically altered energy and communications transmission facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service?*

Base Plan and Overlay Plan

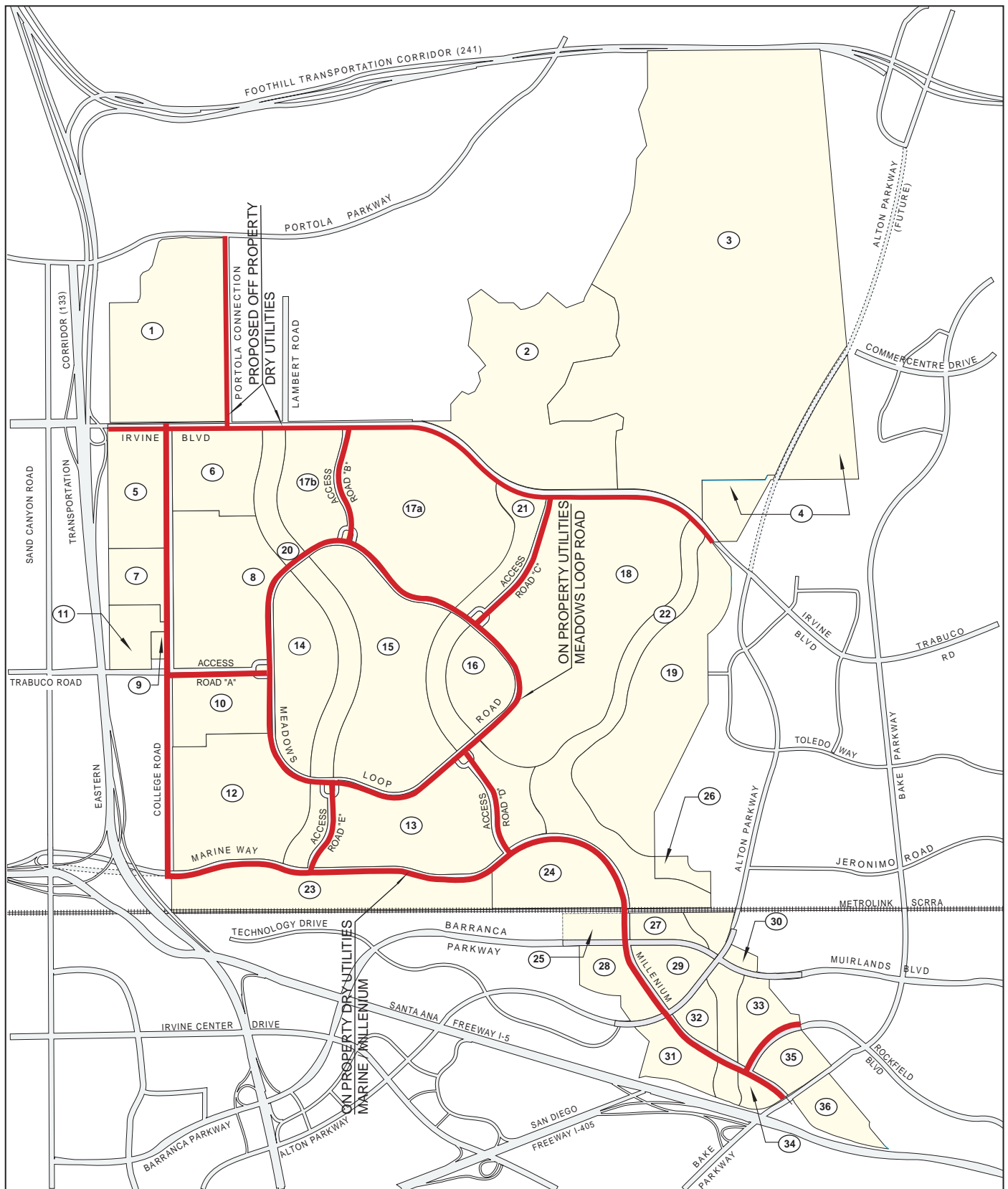
Former MCAS El Toro (PAs 51 and 30)

Proposed Electrical, Gas, and Communication System

The primary demand for electricity, gas, and communications within PAs 51 and 30 will be generated by the development of proposed land uses under the proposed project. Implementation of the proposed project will require the expansion of existing electrical, gas, and communications systems to serve the project. The proposed backbone electrical, gas, and communications system for PAs 51 and 30 is illustrated in Figure 5.15-4.

The Base Plan and Overlay Plan propose to replace the existing electrical, gas, and communication systems in their entirety. The new system will comply with modern design methods, performance standards and specifications that will make the Base Plan system compatible with its surroundings. The new system will be installed to generally coincide with the routing of new and existing roadways circulating throughout the project. Electrical lines will be required to be undergrounded pursuant to City standards.

The specific environmental impact of constructing new energy and communication transmission facilities that will be needed to serve the proposed project cannot be determined at this program level of analysis as site specific plans for the installation of the energy and communication transmission backbone system have not been prepared.



Source: Fuscoe Engineering, City of Irvine, 2002.

LEGEND

— Proposed Dry Utilities,
Power Gas and Communications

① Parcel Number (Typical)

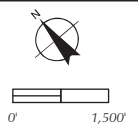


Figure 5.15-4
Dry Utilities

However, the general impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR, which would include the construction and operation of the transmission system. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of the energy and communication transmission system within the project area. Project-level environmental review, at the time that specific development plans have been prepared will also be required.

James A. Musick Jail Facility (Portion of PA 35)

After annexation, SCE, The Southern California Gas Company, and Pacific Bell will continue to serve the Musick Jail facility at existing levels of service. Annexation of the jail facility will not result in the need for the construction or expansion of additional energy or communication transmission facilities, and no impact is anticipated.

According to EIR No. 564, in the event that the jail facility is expanded to the proposed 7,584 inmates, SCE, The Southern California Gas Company, and Pacific Bell have the capacity to service the jail. No significant impacts were identified in EIR No. 564 related to energy or communication service. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

As there is no expansion plan for the IRWD parcel that would generate a demand for energy or communication service requiring the construction or expansion of energy or communication transmission facilities, annexation of the IRWD parcel will not result in a need to construct or expand energy or communication facilities. As a result, no impact related to the construction and expansion of energy and communication transmission facilities will result from the annexation of the IRWD parcel.

Threshold 2: Result in the use of substantial amounts of fuel and/or energy?

Base Plan

The Former MCAS El Toro (PAs 51 and 30)

Electrical Usage

Using the planned land uses, the Proposed Project would consume 59.1 million kWh per year (Table 5.15-3). Rather than subtract existing electricity consumption from the Base Plan's electricity consumption to determine incremental or net electricity consumption, it has been assumed that existing electricity consumption to be zero. As such, all of the proposed project's electricity consumption is considered to be incremental. Therefore, total incremental electricity consumption would be approximately 59.1 million kWh (Table 5.15-3).

The proposed project would have a peak load of 14,771 kW (Table 5.15-3). Sufficient available capacity exists at the Irvine and Limestone Substations to serve the proposed project's load estimates. However, the existing overhead 4 kV distribution system currently serving the former MCAS El Toro would be replaced with an underground 12 kV distribution system.

To place the Base Plan's electricity consumption and demand in perspective, the total net energy load in the SCE transmission service area in 2000 was 98,269 million kWh and SCE area peak demand was 18,724,000 kW (California Energy Commission (CEC), California Energy Demand 2002-2012 Forecast, Table B-3 and Table D-3). The CEC is

**Table 5.15-3
Proposed Project Electricity Demand and Consumption for Base Plan**

Land Use Type	Acres	Dwelling Units	Square Feet	Peak Load (kW)	Energy Consumption (Million kWh/Year)
Residential	15	225	-	422	1.4
Education	293	-	1,285,000	6,023	20.5
Cultural/Institutional ^(a)	578	-	1,994,500	6,141	28.7
Transportation Facilities	154	-	176,000	650	2.3
Research and Development	50	-	300,000	1,079	4.6
Retail and Office	-	-	-	-	-
Auto Center	34	-	50,000	244	0.7
Agriculture	438	-	-	-	-
Open & Recreational Space	2,946	-	51,000	212	0.9
Roadways	185	-	-	-	-
Total	4,693	225	3,856,500	14,771	59.1

(a) Cultural/Institutional residential included in Residential
Source: ASTRUM Utility Services, 2003.

also predicting that net energy for load will grow annually at 2 percent and that the area peak demand will grow at 2.4 percent (CEC, California Energy Demand 2002-2012 Forecast, Table B-3 and D-3). For the year 2012, the CEC forecasts net energy for load and area peak demand in SCE's service area to be 125,224 million kWh and 24,960,000 kW respectively (CEC, California Energy Demand 2002-2012 Forecast, Table B-3 and D-3). The proposed project's consumption of electricity is 0.05 percent and peak demand is 0.06 percent of CEC's forecast for SCE in 2012.

SCE has indicated its ability to serve the projected project, in accordance with all applicable tariff schedules which are the effective rates and rules of the Southern California Edison Company on file with and approved by the Public Utilities Commission, State of California, and subject to the receipt of such permits or authorization from public agencies may be

required for such installation. Project-related electricity demand will not significantly impact SCE's current level of service.

California Assembly Bill 1890 (AB 1890) fundamentally changed the structure of the electric industry to increase the reliance on competitive market forces. Initially, the transition appeared to be consistent with its intended purpose. However, partial deregulation of electric utilities ultimately led to what many would term as an "energy crisis" in 2000.

The "energy crisis" resulted in escalating electricity rates, limited rotating blackouts, active State participation in power purchases, severe financial distress for investor-owned utilities, and Federal Government intervention. The events leading up to the "energy crisis" were economic rather than increasing demand for electricity or the capacity to generate and deliver power.

The economic factors that helped precipitate the "energy crisis" were in part due to the requirements of AB 1890. This law required that California's three largest investor-owned utilities ("IOUs") to: (i) divest much of their generation facilities; (ii) sell the electric output from their remaining facilities to the California Power Exchange ("PX"); (iii) buy electricity exclusively from the PX; (iv) limited their ability to enter into long term power supply contracts; and (v) freeze electric rates to retail customers. During 2000, the PX's cost of wholesale electricity costs more than tripled from \$7.4 billion in 1999 to \$27.1 billion (CEC, 2002-2012 Electricity Outlook Report, page 2). Unable to increase the rates to customers, the IOUs experienced severe financial difficulties (PG&E declared bankruptcy on April 6, 2001) and energy suppliers were reluctant to provide additional power resources without payment guarantees.

Faced with the "energy crisis", the State initiated a number of steps including: (i) authorized the California Department of Water Resources to execute long term power purchase contracts; (ii) increased electric rates in 2001; (iii) offered customers financial incentives to lower consumption; (iv) initiated a public-awareness campaign advising customers to conserve electricity or shift usage to non-peak hours; (v) accelerated the permitting for new generation facilities; and (vi) participated in regulatory and legal proceedings to determine if the wholesale electricity market had been manipulated. The Federal Energy Regulatory Commission ("FERC") also imposed several changes intended to mitigate price and reliability problems, including establishing a ceiling price for wholesale electric power.

Conservation programs and new interruptible power programs created permanent peak load reductions and averted the predicted outages during the summer of 2001 (CEC, California Energy Demand 2002-2012 Electricity Outlook Report). In 2001, Californians used 8 percent less energy during peak hours than the year before. In 2002, the peak load drop was 5.4 percent through August 2002, compared to the same period in 2000. (San Diego Union-Tribune, December 15, 2002).

As of December 12, 2002, the CEC predicted that in a 1-in-2 year "normal weather" scenario for 2004, the peak hour demand for electricity in California, including a 7 percent reserve would be 58,059 MW, and in a 1-in-10 year hotter-than-normal scenario, 61,436 MW. Based on the CEC's most likely estimate for generation, it projected a range of the state-wide peak load surpluses from 584 MW (8.0 percent reserve margin) to 3,961 MW (14.3 percent reserve margin). Generation includes existing generation sources, net new

generation additions, net firm imports and demand responsive programs. (Draft Report dated December 12, 2002, Energy Analysis Office, California Energy Commission).

Since 1999, the CEC has approved 18 power plants greater than 300 MW, representing a total capacity of 11,497 MW. As of October 17, 2002, six of the 18 plants are online (totaling 3,587 MW), seven are currently under construction (totaling 4,724 MW) and five plants have put construction on hold (totaling 3,186 MW). An additional 14 power plant applications were under review by the CEC as of December 3, 2002, representing an additional 8,827 MW. Taking into account the larger Western Electricity Coordinating Council (WECC) region (formerly the Western Systems Coordinating Council), which is the regional market for electricity production that includes California, as of November 13, 2002, there was a total of 20,753 MW of new generation capacity under construction, and another 39,950 MW in various in states of the regulatory approval process. (CEC website, Electricity in California, Power Plants & Infrastructure section)

The short-term disruption of electrical energy supply of 2000 and 2001 has largely passed, though the financial effects will be felt for years to come. The State and Federal Government will continue to take a proactive role in ensuring that California has a reliable supply of electricity and the capacity to meet peak load demand in the future. Along with the above measures, the State has passed several bills intended to assist the investor-owned utilities, promote renewable and conventional generation, and encourage energy conservation. Forecasted energy supply is expected to be sufficient to meet the development requirements of the proposed project and no significant impact is anticipated.

The additional electrical load imposed by the proposed project is within the capacity of SCE. However, SCE has indicated that an additional substation and circuits will be necessary to support future growth in the vicinity (Planning Areas 1, 2, 40 and Northern Sphere). In the interim, SCE's existing facilities have sufficient circuit capacity to supply the project area once the infrastructure for the development is installed. Additional circuits will be built on an as needed basis taking into account the development schedule of proposed project. All projects in the development area would be required to incorporate energy conservation measures into their design and function. Although electrical consumption will increase as a result of cumulative developments, SCE is expanding its facilities to accommodate this growth. Since SCE can meet the increased demand for electricity, the growth in consumption is not considered significant.

Natural Gas Usage

As shown in Table 5.15-4, the development of PAs 51 and 30 under the proposed Base Plan would consume 8,345,738 cubic feet per month.

Rather than subtract existing natural gas consumption from the proposed project's anticipated consumption to determine incremental or net natural gas consumption, it has been assumed that existing natural gas consumption is zero. As such, all of the proposed project's natural gas consumption is considered to be incremental. Therefore, total incremental gas consumption would be 8,345,738 cubic feet per month (Table 5.15-4).

The new on-site gas distribution infrastructure can be connected to and served from the existing SoCal Gas infrastructure mentioned previously. The existing SoCal Gas facilities are located within and adjacent to the proposed project. The new gas distribution facilities will

typically be installed in the right-of-ways of existing and proposed streets and will be located to efficiently meet the needs of the project. The new gas distribution systems will utilize current design, construction, and operating standards to meet the energy distribution needs of the proposed project.

To place this natural gas consumption in perspective, the total natural gas consumption in the SoCal Gas service area (core and noncore customers) in 2001 was 81,608 million cubic feet per month (Southern California Gas Company, 2002 California Gas Report, page 65). The project's consumption of natural gas is 0.010 percent of SoCal Gas's 2001 consumption.

**Table 5.15-4
Future Natural Gas Usage for Base Plan
Buildout Year 2025**

Land Use Type	Acres	Dwelling Units	Square Feet	Natural Gas Consumption (cu./ft./mo)
Residential	15	225	-	902,588
Education	293	-	1,285,000	2,570,000
Cultural/Institutional ^(a)	578	-	1,994,500	3,726,000
Transportation Facilities	154	-	176,000	277,650
Research and Development	50	-	300,000	600,000
Retail and Office	-	-	-	-
Auto Center	34	-	50,000	145,000
Agriculture	438	-	-	-
Open & Recreational Space	2,946	-	51,000	124,500
Roadways	185	-	-	-
Total	4,693	225	3,856,500	8,345,738

Source: Astrum Utility Services, 2003.

(a) Cultural/Institutional residential included in Residential

Long-range planning and oversight of the numerous regulatory agencies will continue to address future energy supply needs. Gas transmission projects both planned for the future and currently under construction by the energy companies will continue to ensure adequate supplies to California and the Southern California Region. Should the CPUC or another agency take an action that may affect gas supply or delivery, then gas distribution will be provided in accordance with the revised conditions.

Natural gas supplies are sufficient to serve the project at build-out. Even with a forecasted 41 percent increase in a natural gas demand in California from 1997-2012, the California Energy Commission anticipates natural gas supplies will be adequate to meet the demand requirements for the state (California Energy Commission, Natural Gas Supply and Infrastructure Assessment, December 2002). According to the Energy Information Administration of the US Department of Energy, technically recoverable natural gas resources in the nation are estimated to be 1,614 trillion cubic feet. This is approximately 82 times the 2001 natural gas production level. (Energy Information Administration, US Crude Oil, Natural Gas, and Natural Gas Liquids Reserves 2001 Annual Report, November 2002, page 128).

The existing utility infrastructure transporting natural gas to the area and site is adequate to meet the needs of the proposed project. Since 2000, SoCal Gas has increased its natural gas receiving capacity. Its firm receiving capacity has increased 10.7 percent to 3,875 MMcf/day. SoCal Gas's firm receiving capacity in excess of demand or slack capacity is forecasted to be 22 percent in 2012. SoCal Gas has increased its ability to meet peak day requirements by using a greater portion of the Aliso Canyon and La Goleta storage facilities. (California Energy Commission, Natural Gas Supply and Infrastructure Assessment, December 2002, page 43.)

Based on the above, implementation of the proposed project will not result in a significant energy level.

James A. Musick Jail Facility (Portion of PA 35)

According to EIR No. 564, in the event that the jail facility is expanded to the proposed 7,584 inmates, SCE and The Southern California Gas Company have the capacity to service the jail. No significant impacts were identified in EIR No. 564 related to energy service. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

As there are no expansion plans for the IRWD parcel that would generate a demand for energy service, no substantial use of fuel and/or energy will occur on-site. As a result, no impact related to the substantial use of fuel and/or energy will result from the annexation of the IRWD parcel.

Overlay Plan

The Former MCAS El Toro (PAs 51 and 30)

Electrical Usage

Using the planned land uses, the Overlay Plan would consume 131.9 million kWh per year (Table 5.15-5). Rather than subtract existing electricity consumption from the Proposed Project's electricity consumption to determine incremental or net electricity consumption, it has been assumed that existing electricity consumption to be zero. As such, all of the proposed project's electricity consumption is considered to be incremental. Therefore, total incremental electricity consumption would be approximately 131.9 million kWh (Table 5.15-5).

The Overlay Plan would have a peak load of 34,978 kW (Table 5.15-5). Sufficient available capacity exists at the Irvine and Limestone Substations to serve the Proposed Project's load estimates. However, the existing overhead 4 kV distribution system currently serving the former MCAS El Toro would be replaced with an underground 12 kV distribution system.

**Table 5.15-5
Proposed Project Electricity Demand and Consumption for Overlay Plan**

Land Use Type	Acres	Dwelling Units	Square Feet	Peak Load (kW)	Energy Consumption (Million kWh/Year)
Residential	560	3,625	-	6,972	20.2
Education	273	-	1,492,594	7,096	23.9
Cultural/Institutional	256	-	1,031,000	2,900	13.2
Transportation Facilities	70	-	176,000	650	2.3
Research and Development	200	-	2,600,000	10,840	43.2
Retail and Office	48	-	375,000	2,811	14.3
Auto Center	34	-	102,000	498	1.4
Agriculture	303	-	-	-	-
Open & Recreational Space ^a	2,764	-	809,000	3,211	13.4
Roadways	185	-	-	-	-
Total	4,693	3,625	6,585,594	34,978	131.9

(a) Open & Recreational Space residential included in Residential
Source: Astrum Utility Services, 2003.

To place this electricity consumption and demand in perspective in 2000, the total net energy load in the SCE transmission service area was 98,269 million kWh and SCE area peak demand was 18,724,000 kW (California Energy Commission (CEC), California Energy Demand 2002-2012 Forecast, Table B-3 and Table D-3). The CEC is also predicting that net energy for load will grow annually at 2 percent and that the area peak demand will grow at 2.4 percent (CEC, California Energy Demand 2002-2012 Forecast, Table B-3 and D-3). For the year 2012, the CEC forecasts net energy for load and area peak demand in SCE's service area to be 125,224 million kWh and 24,960,000 kW respectively (CEC, California Energy Demand 2002-2012 Forecast, Table B-3 and D-3). The Overlay Plan consumption of electricity is 0.11 percent and peak demand is 0.14 percent of CEC's forecast for SCE in 2012.

SCE has indicated its ability to serve the projected project, in accordance with all applicable tariff schedules which are the effective rates and rules of the Southern California Edison Company on file with and approved by the Public Utilities Commission, State of California, and subject to the receipt of such permits or authorization from public agencies may be required for such installation. Project-related electricity demand will not significantly impact SCE's current level of service and no significant impact would occur.

The Base Plan provides a detailed discussion of the State's energy supply and is incorporated by reference.

The additional electrical load imposed by the Overlay Plan is within the capacity of SCE. However, SCE has indicated that an additional substation and circuits will be necessary to support future growth in the vicinity (Planning Areas 1, 2, 40 and Northern Sphere). In the interim, SCE's existing facilities have sufficient circuit capacity to supply the project area once the infrastructure for the development is installed. Additional circuits will be built on an as needed basis taking into account the development schedule of proposed project. All projects in the development area would be required to incorporate energy conservation

measures into their design and function. Although electrical consumption will increase as a result of cumulative developments, SCE is expanding its facilities to accommodate this growth. Since SCE can meet the increased demand for electricity, the growth in consumption is not considered significant.

Natural Gas Usage

Using the planned land uses, the Overlay Plan would consume 31,123,576 cubic feet per month (Table 5.15-6) of natural gas. Rather than subtract existing natural gas consumption from the Overlay Plan's anticipated consumption to determine incremental or net natural gas consumption, it has been assumed that existing natural gas consumption is zero. As such, all of the Overlay Plan's natural gas consumption is considered to be incremental. Therefore, total incremental natural gas consumption would be 31,123,576 cubic feet per month (Table 5.15-6).

**Table 5.15-6
Future Natural Gas Usage for Overlay Plan
Buildout Year 2025**

Land Use Type	Acres	Dwelling Units	Square Feet	Natural Gas Consumption (cu./ft./mo)
Residential	560	3,625	-	17,460,538
Education	273	-	1,492,594	2,985,188
Cultural/Institutional	256	-	1,031,000	2,220,200
Transportation Facilities	70	-	176,000	277,650
Research and Development	200	-	2,600,000	5,200,000
Retail and Office	48	-	375,000	1,020,000
Auto Center	34	-	102,000	295,800
Agriculture	303	-	-	-
Open & Recreational Space ^a	2,764	-	809,000	1,664,200
Roadways	185	-	-	-
Total	4,693	3,625	6,585,594	31,123,576

Source: Astrum Utility Services, 2003.

(a) Open & Recreational Space residential is included in Residential.

The new on-site gas distribution infrastructure can be connected to and served from the existing SoCal Gas infrastructure mentioned previously. The existing SoCal Gas facilities are located within and adjacent to the proposed project. The new gas distribution facilities will typically be installed in the right-of-ways of existing and proposed streets and will be located to efficiently meet the needs of the project. The new gas distribution systems will utilize current design, construction, and operating standards to meet the energy distribution needs of the proposed project. This would not create as significant impact on the environment.

To place this natural gas consumption in perspective, the total natural gas consumption in the SoCal Gas service area (core and noncore customers) in 2001 was 81,608 million cubic feet per month (Southern California Gas Company, 2002 California Gas Report, page 65).

The Overlay Plan's consumption of natural gas is 0.038 percent of Southern California Gas's 2001 total consumption.

James A. Musick Jail Facility (Portion of PA 35)

According to EIR No. 564, in the event that the jail facility is expanded to the proposed 7,584 inmates, SCE and The Southern California Gas Company have the capacity to service the jail. No significant impacts were identified in EIR No. 564 related to energy service. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

As there are no expansion plans for the IRWD parcel that would generate a demand for energy service, no substantial use of fuel and/or energy will occur on-site. As a result, no impact related to the substantial use of fuel and/or energy will result from the annexation of the IRWD parcel.

5.15.5.4 Significant Impacts

Base Plan and Overlay Plan

The specific significant environmental impact of constructing new energy and communication facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR, which would include the construction and operation of new energy and communication facilities.

No significant impact is anticipated related to substantial use of fuel and/or energy sources by the project was identified.

5.15.5.5 Mitigation Measures

Base Plan and Overlay Plan

Mitigation Measures identified in other sections of this Final Program EIR address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new energy and communication transmission facilities identified in this section to serve new growth expected in the project area.

5.15.5.6 Significance of Impact After Mitigation

Base Plan and Overlay Plan

The general environmental impacts associated with the construction and operation of public utilities have been addressed within the Final Program EIR, which would include the construction and operation of new energy and communication transmission facilities identified in this section. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR apply to the future construction and operation of the energy and communication transmission system within the project area. Project-level environmental review, at the time specific development plans for the energy and communication transmission backbone system have been prepared, will also be required and project specific mitigation measures identified and implemented.

Notes and References

1. City of Irvine. *GPA, ZC, and Annexation of MCAS El Toro and James A. Musick Branch Jail DEIR*. June 14, 1999.
2. Irvine Ranch Water District. *Irvine Ranch Water District Assessment of Water Supply for the Northern Sphere Area*. March 12, 2002.
3. County of Orange. *James A. Musick Jail Expansion and Operation, Relocation of Interim Care Facility, and Southeast Sheriff's Station DEIR, No. 564*. August 1996.

6.0 Alternatives

CEQA requires the consideration of alternative development scenarios and the analysis of impacts associated with the alternatives. Through comparison of these alternatives to the proposed project, the advantages of each can be weighed and analyzed. Section 15126.6 of the CEQA Guidelines states that an EIR, “describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.” (Section 15126.6(a)).

Additionally, Section 15126.6(e) and 15126.6(f) of the Guidelines state:

- C The specific alternative of “no project” shall also be evaluated along with its impact...If the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.
- C The range of alternatives required in an EIR is governed by a ‘rule of reason’ that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision-making.

Pursuant to the Guidelines stated above, a range of alternatives to the proposed project is considered and evaluated in this Final Program EIR. These alternatives were developed in the course of project planning and environmental review. The discussion in this section provides:

1. A description of alternatives considered;
2. An analysis of whether the alternatives meet most of the objectives of the project (described in Section 1.0 of this Final Program EIR); and
3. A comparative analysis of the alternatives under consideration and the proposed project. The focus of this analysis is to determine if alternatives are capable of eliminating or reducing the significant environmental effects of the project to a less than significant level.

Alternatives Initially Considered but Rejected From Further Consideration

Millennium Plan

In June 1999, the City of Irvine considered an annexation, General Plan amendment, and zone change for the project area based on the proposed land uses of the El Toro Reuse Planning Authority Millennium Plan.¹ The Millennium Plan proposed over 21,000,000 square feet of non-residential development and 5,897 dwelling units. Unlike the Orange County Great Park, the Millennium Plan did not propose a wildlife corridor through the project area. Additionally, the proposed central park was not large enough to meet plan objectives of implementing a diverse urban park with active and passive recreational amenities consistent with the recent passage of Measure W. Implementation of the Millennium Plan, as originally proposed, would create greater impacts than the proposed project in most of the environmental categories including traffic, air quality, noise, geology and seismicity, hydrology and water quality, agricultural resources, biological resources, paleontological resources, cultural resources, aesthetics, population/housing and public services, facilities and utilities. Also, because of its intensity it would not be as compatible with the surrounding communities. As such, the Millennium Plan is rejected from further consideration.

Alternative Location

This chapter does not include a consideration of alternative locations to the proposed project. Section 15126(f) (2) of the CEQA Guidelines states, in part, that the “key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR.” Development of the proposed project at an alternative location would likely result in similar and, in some cases, greater impacts than those identified in this Final Program EIR. Furthermore, it has been determined that no feasible alternative locations exist considering the fact that the project is the reuse of the former MCAS El Toro.

Aviation Reuse

The project site was previously proposed by the County of Orange to be reused as a commercial airport. Under the aviation reuse plan, the site would be developed with a full international passenger and cargo service airport with a projected 2020 service level of approximately 28.8 million annual passengers (MAP). The aviation reuse plan would include a terminal area and associated facilities, aircraft parking areas, and cargo facilities. Non-aviation uses included in the aviation reuse plan include habitat, open space, and recreation land uses, as well as several public facilities. (EIR #573)

¹ The City of Irvine previously considered implementing the Millennium Plan land use plan for the project site. However, the Millennium Plan was not adopted by the City and was subsequently followed by the Millennium Plan II. The Millennium Plan II was adopted for the City and represents the City's General Plan land uses for the project site.

According to the analysis of potential environmental impacts contained in EIR #573, implementation of this, or similar, aviation reuse plan will result in a greater impacts to land use, traffic/circulation, air quality, noise, public health and safety, geology and seismicity, hydrology and water quality, agricultural resources, biological resources, aesthetics, population/housing, public services and facilities, and utilities.

An aviation reuse plan would not meet the primary objectives of the proposed project. Also, the spirit and intent of the recently passed Measure W, by the county voters would not be met. As such, this alternative is rejected from further consideration.

Agricultural Preservation

The Agricultural Preservation Alternative assumes that all of the existing agriculture on site will be permanently retained for agricultural production. The primary difference between this alternative and the proposed project is that this alternative would preserve all of PA 30 for agricultural production (in addition to the existing agricultural area located north of Irvine Boulevard in PAZ 1, which is proposed to be preserved under the project). Additionally, the area north and south of Irvine Boulevard in PAZ 4 and a portion of PAZ 18 would be preserved. The remainder of PA 51 would be developed according to the proposed project.

The feasibility of preserving agricultural resources in perpetuity is addressed in detail in Section 5.8 – Agricultural Resources of this Final Program EIR. The long-term viability of agricultural production in Orange County continues to deteriorate. As described in Section 5.8, factors that impact the viability of agricultural uses include: 1) the cost of land; 2) the cost of water; 3) the cost of labor; 4) property taxes; 5) the impact of urbanization; 6) competition; and 7) the impact of environmental regulation. The retention of more area of the site in agricultural use than is proposed under the plan is considered to be infeasible due to the constraints on the continued long-term viability of large scale agriculture in the area. These constraints, particularly the economic constraints and constraints due to increased environmental regulation, will become greater over time. Despite any City actions to zone additional land for agricultural uses on-site, the City does not have the authority to require landowners to continue farming operations on land that is zoned for agricultural use. The retention of agricultural land use designations on the site will not, therefore, necessarily result in the continuation of agricultural uses. Moreover, a reduction in the development of the site would impede the City from achieving the voter's and the City's objectives for the site in a fiscally sound manner.

As noted above, the proposed project will retain a portion of the site in agricultural use, and agricultural uses may continue on other portions of the site until such time that development is to occur. These proposed long-term and interim uses; however, do not mitigate the significant impact of the conversion of significant farmland and existing agricultural land to non-agricultural uses. As such, this alternative is rejected from further consideration.

Alternatives Under Consideration

The alternatives considered in this EIR are summarized in Table 6-1 and include:

1. No Project/Measure W PA 51/Millennium Plan II PA 30
2. Existing City of Irvine General Plan (Millennium Plan II Land Uses)
3. Measure W PA 51/Millennium Plan II PA 30 - Modified
4. Alternative Land Use Plan – University Village
5. Increased Residential Alternative

Table 6-1
Comparison of Project Alternatives to Proposed Project

Impact Category	Alternative 6.1 No Project/Measure W PA 51/Millennium Plan II PA 30	Alternative 6.2 Existing City of Irvine General Plan (Millennium Plan II Land Uses)	Alternative 6.3 Measure W PA51/ Millennium Plan II PA30 - Modified	Alternative 6.4 Alternative Land Use Plan – University Village	Alternative 6.5 Increased Residential Alternative
Land Use	Similar	Similar	Similar	Similar	Similar
Traffic/Circulation	Less	Greater	Less	Greater	Greater
Air Quality	Less	Greater	Less	Greater	Greater
Noise	Less	Greater	Less	Greater	Greater
Public Health and Safety	Similar	Similar	Similar	Similar	Similar
Geology and Seismicity	Less	Greater	Less	Similar	Greater
Hydrology and Water Quality	Less	Greater	Less	Similar	Greater
Agricultural Resources	Similar	Greater	Similar	Similar	Similar
Biological Resources	Less	Greater	Less	Similar	Similar
Paleontological Resources	Less	Greater	Less	Similar	Similar
Cultural Resources	Less	Greater	Less	Similar	Similar
Aesthetics	Less	Greater	Less	Similar	Greater
Population/Housing	Less	Greater	Less	Less	Less
Public Services and Facilities	Less	Greater	Less	Greater	Greater
Utilities	Less	Greater	Less	Similar	Greater
Conclusion	Superior	Inferior	Superior	Inferior	Inferior

Less = impact of project alternative is less than impact of proposed project.

Similar = impact of project alternative is similar to impact of proposed project.

Greater = impact of project alternative is greater than impact of proposed project.

6.1 NO PROJECT/MEASURE W PA 51/MILLENNIUM PLAN II PA 30

CEQA requires analysis of the No Project Alternative (Public Resources Code Section 15126). According to Section 15126.6(e) of the CEQA Guidelines, “the specific alternative of ‘no project’ shall also be evaluated along with its impact. The ‘no project’ analysis shall discuss the existing conditions at the time the notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.”

Description of Alternative

The No Project/Measure W PA 51/Millennium Plan II PA 30 assumes that the former base would eventually be redeveloped according to the general provisions of Measure W for PA 51, which is the unincorporated portion of the base, and Millennium Plan II for PA 30, which is the portion of the base located within the City of Irvine. Table 6-2 provides a statistical summary of the potential development associated with this alternative. To develop this comparison, the Great Park concept plan was relied on to project land uses in PA 51. PA 30 land uses were based on the adopted City of Irvine General Plan and zoning. As depicted, approximately 5,203,000 square feet of non-residential development, 165 dwelling units, and 7,637 students would occur under this alternative. Approximately 3,535 acres would be devoted to open space, recreation, and agricultural uses. This compares to a maximum of 3,625 dwelling units, 6,585,594 square feet of non-residential, and 7,637 students that could occur under the proposed project.

Land Use

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in a similar land use impact as the proposed project. This alternative would implement the mandate of the voter approved Measure W for development of PA 51 with park uses. Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would have a similar impact as the proposed project regarding conflicts with the County of Orange Master Plan of Arterial Highways and the existing Airport Environs Land Use Plan (AELUP), Air Installation Compatible Use Zones (AICUZ), and Policy Implementation Line (PIL) since non-aviation reuse of the former base conflicts with these existing plans. No other land use conflict would occur under this alternative.

Traffic/Circulation

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of a traffic/circulation impact associated with the proposed project. Under this alternative, approximately 5,203,000 square feet of non-residential development would occur, 7,637 additional students in the area would be expected, and

Table 6-2
Existing City of Irvine General Plan Land Uses
(Millennium Plan II Land Use Plan)

Land Use Categories				
General Plan Land Use Category	Zoning District (using City of Irvine Districts)	Zoning Number	Max. sq. ft.	Max. d.u.'s
PA 51				
County of Orange	Exclusive Agriculture	1.1	–	–
County of Orange	Recreation	1.5	–	–
County of Orange	Preservation	1.4	–	–
County of Orange	Recreation	1.5	–	–
County of Orange	Recreation	1.5	26,000	
County of Orange	Institutional	6.1	1,285,000	7,637 students
County of Orange	Medical and Science	5.5	300,000	
County of Orange	Recreation	1.5	963,500	165
County of Orange	Recreation	1.5	25,000	
County of Orange	Recreation	1.5	–	–
County of Orange	Preservation	1.4	–	–
County of Orange	Institutional	6.1	300,000 Inst. 122,500 OCTA 263,000 Warehousing	
County of Orange	Institutional	6.1		375 parking spaces
Total PA 51			3,285,000	165 du's 7,637 students
PA 35				
Institutional – Public Facility	Institutional (already pre-zoned)	6.1	N/A (jail, water facility)	–
Total PA 35				–
PA 30				
Institutional	Institutional	6.1	–	–
Preservation	Preservation	1.4	–	–
Community Commercial	Vehicle-Related Commercial	4.3B	201,000	–
Commercial Recreation	Commercial Recreation-Arena/Stadium	4.4	85,000 seats	–
Recreation	Recreation – Outdoor Sports	1.5	41,000	–
Research and Industrial	Medical and Science	5.5	1,676,000	–
Total PA 30			1,918,000	–
Project Area Total			5,203,000	165 du's 7,637 students

165 dwelling units would be constructed. This is compared to 6,585,594 square feet of non-residential development, 7,800 students, and 3,625 dwelling units that could occur under the proposed project (pursuant to the Overlay Plan). Development of PA51 according to Measure W land uses would generate approximately 83,347 average daily trip (ADT) and development of PA30 according to the Millennium Plan II land uses would generate approximately 34,750 ADT.⁵ As such, the total trips generated by this alternative is 118,097 ADT. This compares to 148,000 trips generated by the project according to the Overlay Plan.

Air Quality

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of an air quality impact associated with the proposed project as the level of development and corresponding trip generation would be less. Mobile source air quality emissions are estimated to be approximately 20 percent less than the project, as the trips generated by this alternative are approximately 20 percent less than the project.

Noise

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of a noise impact as the proposed project, as the overall amount of development and vehicular trips on surrounding roadways would be less.

Public Health and Safety

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in a similar public health and safety impact as the proposed project. This alternative would cause portions of PA51 containing existing structures to be developed, resulting in the need to demolish existing structures. Development would occur in those areas containing remediation sites. However, the impact associated with structures and population being located adjacent to wildland fire hazard area would be less.

Geology and Seismicity

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of a geology and seismic impact associated with seismic ground shaking, soil erosion or loss of topsoil, and expansive soils since there would be less overall development within the project area.

Hydrology and Water Quality

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of a hydrology and water quality impact as the proposed project. Most of the development would be concentrated in PA30, and, as compared to the proposed project, significantly less development and impervious surfaces would occur within PA51. Additionally, under this alternative, the proposed drainage corridors would be implemented as is proposed under the project.

Agricultural Resources

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in a similar impact related to the loss of agriculture. This alternative would preserve the same amount of acreage of agriculture as is proposed under the Overlay Plan.

Biological Resources

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of an impact than the proposed project in regards to potential conflicts with the City of Irvine Urban Forestry Ordinance, since less development would occur under the alternative. Also, because less of the site would be converted to urban uses, potential biological impacts would be reduced. As with the proposed project, this alternative would allow for the creation of drainage corridors through the project site that could allow for wetland creation, and this alternative would provide the same wildlife corridor alignment as the proposed project.

Paleontological Resources

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of an impact to paleontological resources than the proposed project. Under this alternative, development would be concentrated primarily in PA30, with substantially less development occurring in PA51 as compared to the project. Therefore, the potential for this alternative to directly or indirectly destroy a unique paleontological resource or unique geologic feature is less than the project.

Cultural Resources

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of an impact to cultural resources than the proposed project. Under this alternative, development would be concentrated primarily in PA30, with substantially less development occurring in PA51 as compared to the project. Therefore, the potential for this alternative to directly impact cultural resources is less than the project.

Aesthetics

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of an aesthetic impact related to light and glare than the project since there would be less intensive development occurring within PA51 than is proposed under the project.

Population/Housing

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of a population/housing impact related to the jobs/housing balance as the proposed project as there would be less employment generating land uses. In regards to inducing population growth in the area, this alternative would have a similar impact as the proposed project since it would generate jobs and new residential opportunities that would attract new residents to the area.

Public Services and Facilities

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of an impact than the project related to the construction or expansion of public facilities. This alternative would result in less of a demand for school facilities and parks, as only approximately 165 dwelling units would be allowed under this alternative as compared to 3,625 dwelling units that would occur under the proposed project.

Utilities

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in a similar impact related to the construction or expansion of utilities as a similar backbone system would be required to support this alternative, although the sizing and layout may vary to reflect the alternative configuration of land uses. Because less development would occur, overall energy consumption would be less than the project.

Conclusion

This alternative is environmentally superior to the proposed project. This alternative would result in less impacts to traffic/circulation, air quality, noise, geology/soils, hydrology/water quality, biological resources, paleontological resources, cultural resources, public services and utilities. Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in a similar impact to land use, public health and safety, and agricultural resources. The alternative meets the following project objectives identified in Section 3.0 – Project Description of this Final Program EIR:

2. Convert the former MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.
5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.

6.2 EXISTING CITY OF IRVINE GENERAL PLAN (Millennium Plan II Land Uses)

This alternative assumes that the project area would not be developed according to the proposed General Plan Amendment (GPA) and Zone Change. Instead, the project area would be developed with land uses consistent with the existing City of Irvine General Plan and Zoning of the property which was previously approved by the City of Irvine under the Millennium Plan II project.

Description of Alternative

The Existing City of Irvine General Plan Alternative (Millennium Plan II Land Uses) assumes that the former base would eventually be redeveloped according to the Millennium Plan II land use plan. Figure 6-1 depicts the City of Irvine adopted land uses for PAs 51 and 30 and Table 6-3 lists the land use summary. As depicted, the existing City of Irvine General Plan land use designations of the project area would allow a total of 15,773,000 square feet of non-residential uses and 3,216 maximum dwelling units. This compares to a maximum of 3,625 dwelling units and 6,585,594 square feet of non-residential uses that could be developed according to the Overlay Plan.

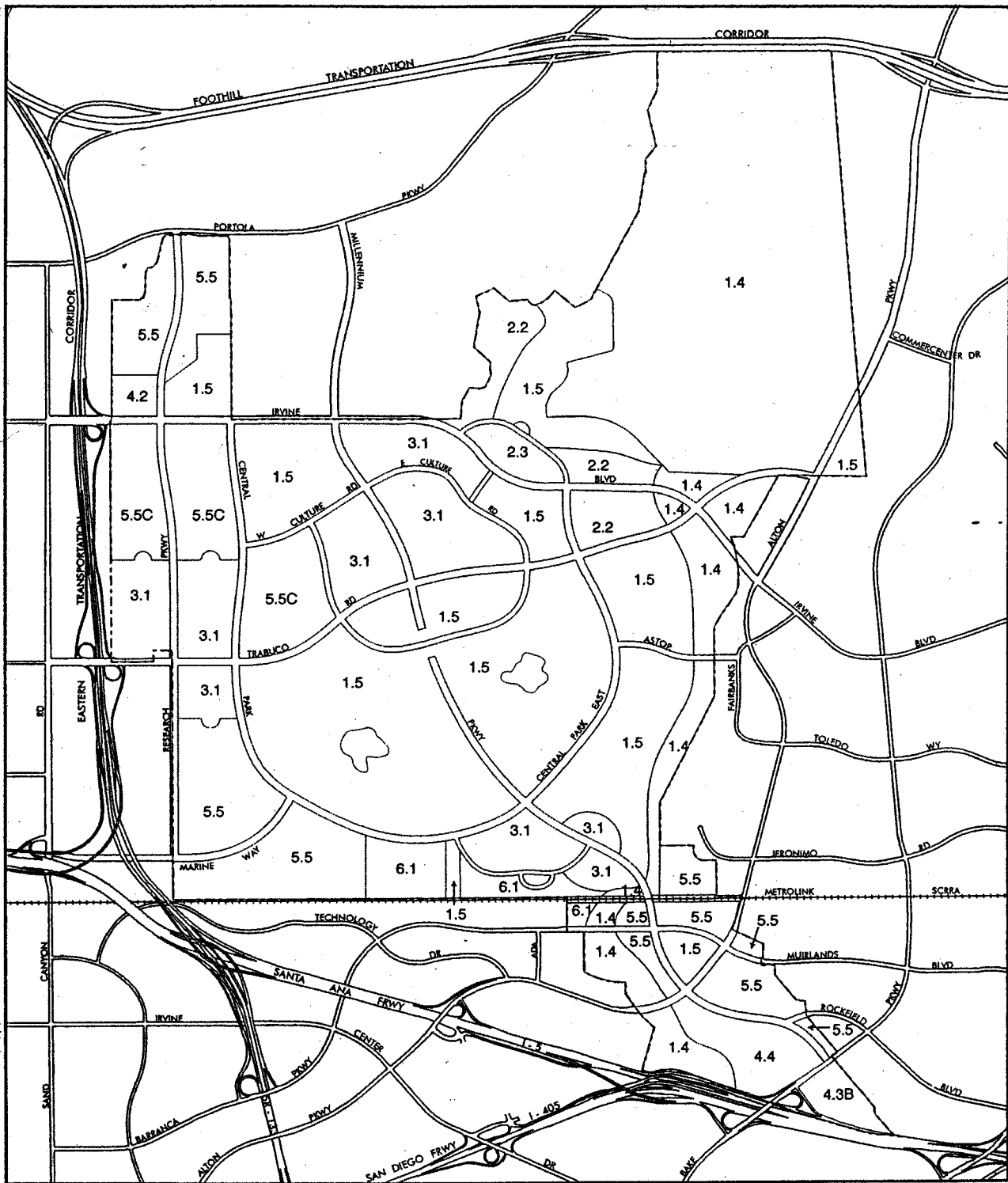
Land uses that could occur under this alternative include preservation, recreation, low and medium density residential, multi-use, community commercial, research and industrial, and institutional.

Land Use

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a similar land use impact as the proposed project. This alternative would implement, to some degree, the intent of the voter approved Measure W for development of PA 51 with park uses as a large portion of PA 51 is designated for recreation uses under the Millennium Plan II. This alternative would result in similar land use impacts related to conflicts with the County of Orange Master Plan of Arterial Highways and the existing Airport Environs Land Use Plan (AELUP), Air Installation Compatible Use Zones (AICUZ), and Policy Implementation Line (PIL), since the proposed development would conflict with these existing plans. This alternative would not impact off-site land uses.

Traffic/Circulation

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a substantially greater traffic/circulation impact than the proposed project. The Existing General Plan Alternative would result in a greater amount of traffic generated within the project area as the development intensity of the Millennium Plan II is greater than the proposed project. The Existing General Plan (Millennium Plan II Land Uses) Alternative is anticipated to generate approximately 228,000 ADT while the proposed project is anticipated to result in the generation of approximately 91,000 to 148,000 ADT. This alternative would place a significantly greater demand on the roadway system, in turn, impacting a larger area, and requiring more roadway infrastructure improvements.



Zone #	General Plan Land Use Category	Zoning District	Zone #	General Plan Land Use Category	Zoning District
1.4	Preservation	Preservation	4.4	Commercial Recreation	Commercial Recreation
1.5	Recreation	Recreation	5.5	Research and Industrial	Medical and Science
2.2	Low Density	Low Density Residential	5.5C	Research and Industrial	ERT Campus
2.3	Medium Low Density	Medium Low Density Residential	6.1	Institutional	Institutional
3.1	Multi-Use	Multi-Use			
4.2	Community Commercial	Community Commercial			
4.3B	Community Commercial	Vehicle-Related Commercial			

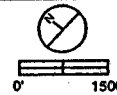


Figure 6-1
Alternative 6.2
Millenium Plan II Land Use

Table 6-3
Existing City of Irvine General Plan Land Uses
(Millennium Plan II Land Use Plan)

Land Use Categories				
General Plan Land Use Category	Zoning District	Zoning Number	Max. sq. ft.	Max. d.u.'s
PA 51				
Preservation	Preservation	1.4	-	-
Recreation	Recreation	1.5	519,000	-
Low Density	Low Density Residential	2.2	-	772
Medium Density	Medium Density Residential	2.3	-	176
Multi-Use	Multi-Use	3.1	4,463,000	2,313
Community Commercial	Community Commercial	4.2	177,000	-
Research and Industrial	Medical and Science	5.5	4,566,000	-
Research and Industrial	ERT Campus	5.5C	3,615,000	-
Institutional	Institutional	6.1	513,000	-
Total PA 51			13,853,000	3,261
PA 35				
Institutional – Public Facility	Institutional (already pre-zoned)	6.1	N/A (jail, water facility)	-
Total PA 35				-
PA 30				
Institutional	Institutional	6.1	-	-
Preservation	Preservation	1.4	-	-
Community Commercial	Vehicle-Related Commercial	4.3B	201,000	-
Commercial Recreation	Commercial Recreation-Arena/Stadium	4.4	85,000 seats	-
Recreation	Recreation – Outdoor Sports	1.5	41,000	-
Research and Industrial	Medical and Science	5.5	1,676,000	-
Total PA 30			1,918,000	-
Project Area Total			15,773,000	3,261

Air Quality

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a greater air quality impact than the proposed project since this alternative would have significantly more construction, development, and corresponding levels of traffic, resulting in substantially more construction and operational (both mobile and stationary) emissions than would occur under the project. The Existing General Plan (Millennium Plan II Land Uses) Alternative is anticipated to generate approximately 228,000 ADT while the proposed project is anticipated to result in approximately 91,000 to 148,000 ADT. The Millennium Plan II project would generate unmitigated emissions amounting to approximately 1.56 tons per day of ROG, 2.10 tons per day of NO_x, 8.83 tons per day of CO, and 0.75 tons per day of PM₁₀.¹ This is compared to the unmitigated emissions estimate for the proposed project (Overlay Plan) which are estimated at approximately .66 tons per day of ROG, .06 tons per day of NO_x, 1.38 tons per day of CO, and .21 tons per day of PM₁₀.

Noise

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a greater noise impact than the proposed project since this alternative would generate greater traffic within the project area and greater traffic noise. Unlike the proposed project, this alternative would result in a significant traffic-generated noise impact for the segment of Trabuco Road between Bake Parkway and Lake Forest Drive.² As indicated in Section 5.4 – Noise of this Final Program EIR, no impact would occur at this location under the proposed project.

Public Health and Safety

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a similar impact as the proposed project related to the disturbance of structures with asbestos-containing building materials or lead based paints. Buildings would be demolished under this alternative, and mitigation would be required to ensure that the building materials are properly handled and disposed. Implementation of this alternative would also result in a similar impact related to the potential health risks from remediation activities. Remediation would need to occur consistent with the health risk standards of the existing General Plan land uses. This alternative would also result in a similar impact related to wildland fire hazards as development would occur adjacent to a wildland fire hazard area in the northeastern portion of PA 51.

Geology and Seismicity

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a greater geology and seismic impact associated with seismic ground shaking, soil erosion or loss of topsoil, and expansive soils since there would be substantially more development within the project area. There would also be an increase in the number of residents and workers/employees impacted by seismic groundshaking and an increase in the amount of property and people subject to risk.

Hydrology and Water Quality

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a greater hydrology and water quality impact than the proposed project

related, as substantially more development would occur than the proposed project. With more development, the rate and amount of surface runoff would be greater than under the Orange County Great Park plan. Additionally, this alternative would not involve the creation of natural drainage corridors as proposed under the project.

Agricultural Resources

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a greater impact related to the loss and conversion of agricultural resources. Under existing General Plan designations, no portion of the project site would be retained for agricultural uses in perpetuity, whereas, the proposed project would preserve approximately 438 acres of agricultural land under the Base Plan, and 303 acres of agricultural land under the Overlay Plan.

Biological Resources

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a greater impact than the proposed project with respect to potential conflicts with the City of Irvine Urban Forestry Ordinance as development would occur that would impact existing trees within the project area. This alternative would result in the creation of a wildlife corridor on the eastern boundary of the project area; however, the wildlife corridor would be more constrained by adjacent land uses than the wildlife corridor proposed under the project. This alternative would not involve the creation of natural drainage corridors through the project site that offer the opportunity for wetland creation. Additionally, because no agricultural lands would be preserved and less parkland would be developed, the potential raptor foraging area within the project site would be less than the project.

Paleontological Resources

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in potentially a greater impact to paleontological resources than the proposed project. Because much more development would occur, the potential for disturbing paleontological resources as a result of grading activity is greater.

Cultural Resources

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in potentially a greater impact to cultural resources than the proposed project. Because much more development would occur, the potential for disturbing cultural resources as a result of grading activity and development is greater.

Aesthetics

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a greater aesthetic impact than the proposed project as this alternative would allow significantly more development which has the potential to increase the light and glare produced in the project area and cause a change to the visual quality of the project area. Additionally, less park and open space uses would be provided.

Population/Housing

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would provide approximately 3,261 housing units. However, this alternative would also provide approximately 30,000 to 35,000 jobs in the project area which would exacerbate the jobs/housing imbalance to a greater degree than the proposed project. In regards to inducing population growth in the area, this alternative would have a greater impact than the proposed project since it would generate significantly more jobs that would attract new residents to the area and increase pressure for the construction of additional housing.

Public Services and Facilities

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a greater impact related to the construction and expansion of public facilities, as there would be significantly more demand placed on these facilities from residential and non-residential development. This alternative would generate a similar for police, requiring approximately 20 sworn police officers, 2 sworn police supervisors, 2 non-sworn support staff, and 4 marked police vehicles. The alternative would generate approximately 2,251 students within the Irvine Unified School District;³ this is approximately 726 students more than the proposed project.

Utilities

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a greater impact related to the construction or expansion of utilities as significantly more development would occur within PAs 51 and 30 that would require new or expanded utilities. The daily potable water demand under this alternative is 3.3 million gallons per day. The daily sewer generation is 2.9 million gallons per day;⁴ this is approximately 1.55 million gallons per day more water and 2 million gallons per day more sewage than the proposed project.

Conclusion

This alternative is environmentally inferior to the proposed project. Implementation of the Existing City of Irvine General Plan (Millennium Plan II Land Uses) Alternative would result in greater impacts to traffic/circulation, air quality, noise, geology and seismicity, hydrology and water quality, agricultural resources, biological resources, paleontological resources, cultural resources, aesthetics, population/housing, public services and facilities, and utilities than the proposed project. This alternative would result in similar impacts to land use and public health and safety as the proposed project. The alternative meets the following project objectives identified in *Section 3.0 Project Description* of this Final Program EIR:

1. Annex the former MCAS El Toro site and adjacent lands within the City's Sphere of Influence.
4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.
5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.

6. Respond positively and effectively to the DON's decision to sell the property to private interests by allowing private development of some land while ensuring the implementation of park and open space amenities.

6.3 MEASURE W PA 51/MILLENNIUM PLAN PA 30-Modified

Description of Alternative

The Measure W PA 51/Millennium Plan II PA 30-Modified assumes that the former base would eventually be redeveloped according to the general provisions of Measure W for PA 51, which is the unincorporated portion of the base, and modified land uses of the Millennium Plan II for PA 30, which is the portion of the base located within the City of Irvine. Table 6-4 provides a statistical summary of the potential development associated with this alternative. To develop this comparison, the Great Park concept plan was relied on to project land uses in PA 51. PA 30 land uses were generally based on the adopted General Plan and zoning; however, the Research and Industrial use was decreased by 1,190,000 square feet, and 500 residential units were added. As depicted, approximately 4,013,000 square feet of non-residential development, 665 dwelling units, and 7,637 students would occur under this alternative. Approximately 3,535 acres would be devoted to open space, recreation, and agricultural uses. This compares to a maximum of 3,625 dwelling units, 6,585,594 square feet of non-residential, and 7,637 students that could occur under the proposed project.

Land Use

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in a similar land use impact as the proposed project. This alternative would implement the mandate of the voter approved Measure W for development of PA 51 with park uses. Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would have a similar impact as the proposed project regarding conflicts with the County of Orange Master Plan of Arterial Highways and the existing Airport Environs Land Use Plan (AELUP), Air Installation Compatible Use Zones (AICUZ), and Policy Implementation Line (PIL) since non-aviation reuse of the former base conflicts with these existing plans. No other land use conflict would occur under this alternative.

Table 6-4
Measure W PA 51/Millennium Plan II PA 30 - Modified

Land Use Categories				
General Plan Land Use Category	Zoning District (using City of Irvine Districts)	Zoning Number	Max. sq. ft.	Max. d.u.'s
PA 51				
County of Orange	Exclusive Agriculture	1.1	–	–
County of Orange	Recreation	1.5	–	–
County of Orange	Preservation	1.4	–	–
County of Orange	Recreation	1.5	–	–
County of Orange	Recreation	1.5	26,000	
County of Orange	Institutional	6.1	1,285,000	7,637 students
County of Orange	Medical and Science	5.5	300,000	
County of Orange	Recreation	1.5	963,500	165
County of Orange	Recreation	1.5	25,000	
County of Orange	Recreation	1.5	–	–
County of Orange	Preservation	1.4	–	–
County of Orange	Institutional	6.1	300,000 Inst. 122,500 OCTA 263,000 Warehousing	
County of Orange	Institutional	6.1		375 parking spaces
Total PA 51			3,285,000	165 du's 7,637 students
PA 35				
Institutional – Public Facility	Institutional (already pre-zoned)	6.1	N/A (jail, water facility)	–
Total PA 35				–
PA 30				
Institutional	Institutional	6.1	–	–
Preservation	Preservation	1.4	–	–
Community Commercial	Vehicle-Related Commercial	4.3B	201,000	–
Commercial Recreation	Commercial Recreation-Arena/Stadium	4.4	85,000 seats	–
Recreation	Recreation – Outdoor Sports	1.5	41,000	–
Research and Industrial	Medical and Science	5.5	486,000	–
Medium Density	Medium Density Residential	2.3	–	500
Total PA 30			728,000	–
Project Area Total			4,013,000	665 du's 7,637 students

Traffic/Circulation

Implementation of the Measure W PA51/Millennium Plan II PA30 – Modified Alternative would result in less of a traffic/circulation impact associated with the proposed project. Under this alternative, approximately 4,013,000 square feet of non-residential development would occur, 7,637 additional students in the area would be expected, and 665 dwelling units would be constructed. This is compared to 6,585,594 square feet of non-residential development, 7,800 students, and 3,625 dwelling units that could occur under the proposed project (pursuant to the Overlay Plan). Development of PA51 according to Measure W land uses would generate approximately 83,347 ADT and development of PA30 according to land uses in this alternative would generate approximately 28,513 ADT.⁵ As such, the total trips generated by this alternative is 111,860 ADT. This compares to 148,000 trips generated by the project according to the Overlay Plan.

Air Quality

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of an air quality impact associated with the proposed project as the level of development and corresponding trip generation would be less. Mobile source air quality emissions are estimated to be approximately 25 percent less than the project, as the trips generated by this alternative are approximately 25 percent less than the project.

Noise

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of a noise impact as the proposed project, as the overall amount of development and vehicular trips on surrounding roadways would be less.

Public Health and Safety

Implementation of the Measure W PA51/Millennium Plan II PA30 – Modified Alternative would result in a similar public health and safety impact as the proposed project. This alternative would cause portions of PA 51 containing existing structures to be developed, resulting in the need to demolish existing structures. Development would occur in those areas containing remediation sites. However, the impact associated with structures and population being located adjacent to wildland fire hazard area would be less.

Geology and Seismicity

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of a geology and seismic impact associated with seismic ground shaking, soil erosion or loss of topsoil, and expansive soils since there would be less overall development within the project area.

Hydrology and Water Quality

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of a hydrology and water quality impact as the proposed project. Most of the development would be concentrated in PA30, and, as compared to the proposed project, significantly less development and impervious surfaces would occur within PA 51.

Additionally, under this alternative, the proposed drainage corridors would be implemented as is proposed under the project.

Agricultural Resources

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in a similar impact related to the loss of agriculture. This alternative would preserve the same amount of acreage of agriculture as is proposed under the Overlay Plan.

Biological Resources

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of an impact than the proposed project in regards to potential conflicts with the City of Irvine Urban Forestry Ordinance, since less development would occur under the alternative. Also, because less of the site would be converted to urban uses, potential biological impacts would be reduced. As with the proposed project, this alternative would allow for the creation of drainage corridors through the project site that could allow for wetland creation, and this alternative would provide the same wildlife corridor alignment as the proposed project.

Paleontological Resources

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of an impact to paleontological resources than the proposed project. Under this alternative, development would be concentrated primarily in PA30, with substantially less development occurring in PA51 as compared to the project. Therefore, the potential for this alternative to directly or indirectly destroy a unique paleontological resource or unique geologic feature is less than the project.

Cultural Resources

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of an impact to cultural resources than the proposed project. Under this alternative, development would be concentrated primarily in PA30, with substantially less development occurring in PA51 as compared to the project. Therefore, the potential for this alternative to directly impact cultural resources is less than the project.

Aesthetics

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of an aesthetic impact related to light and glare than the project since there would be less intensive development occurring within PA 51 than is proposed under the project.

Population/Housing

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of a population/housing impact related to the jobs/housing balance as the proposed project as there would be less employment generating land uses. In regards

to inducing population growth in the area, this alternative would have a similar impact as the proposed project since it would generate jobs and new residential opportunities that would attract new residents to the area.

Public Services and Facilities

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of an impact than the project related to the construction or expansion of public facilities. This alternative would result in less of a demand for school facilities and parks, as only approximately 665 dwelling units would be allowed under this alternative as compared to 3,625 dwelling units that would occur under the proposed project.

Utilities

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in a similar impact related to the construction or expansion of utilities as a similar backbone system would be required to support this alternative, although the sizing and layout may vary to reflect the alternative configuration of land uses. Because less development would occur, overall energy consumption would be less than the project.

Conclusion

This alternative is environmentally superior to the proposed project. This alternative would result in less impacts to traffic/circulation, air quality, noise, geology/soils, hydrology/water quality, biological resources, paleontological resources, cultural resources, public services and utilities. Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in a similar impact to land use, public health and safety, and agricultural resources. The alternative meets the following project objectives identified in Section 3.0 – Project Description of this Final Program EIR:

3. Convert the former MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.
5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.

6.4 ALTERNATIVE LAND USE PLAN – University Village

Description of Alternative

The Alternative Land Use Plan – University Village, generally involves redesignation of Planning Area Zone (PAZ) 5 from Research and Development (R&D) to Medium High

Density Residential (MHDR). The student population of the proposed university is increased from 7,800 to 15,000, including approximately 1,500 dorm rooms on PAZ 7. Figure 6-2 depicts the Alternative Land Use Plan – University Village. Table 6-5 provides the development data for this alternative. As compared to the Overlay Plan, the changes are as follows:

PAZ 5 – Land Use changes from R&D to MHDR. Square feet change from 1,000,000 to 0. Dwelling units change from 0 to 1,580.

PAZ 7 – Students increase from 1,306 to 2,512. Square footage changes from 243,302 to 467,900. 1,500 residence hall rooms are added.

PAZ 8 – Students increase from 5,570 to 10,711. Square footage changes from 1,037,234 to 1,994,735.

PAZ 9 – Students increase from 172 to 331. Square footage changes from 32,013 to 61,566.

PAZ 10 – Students increase from 752 to 1,446. Square footage changes from 140,045 to 269,248.

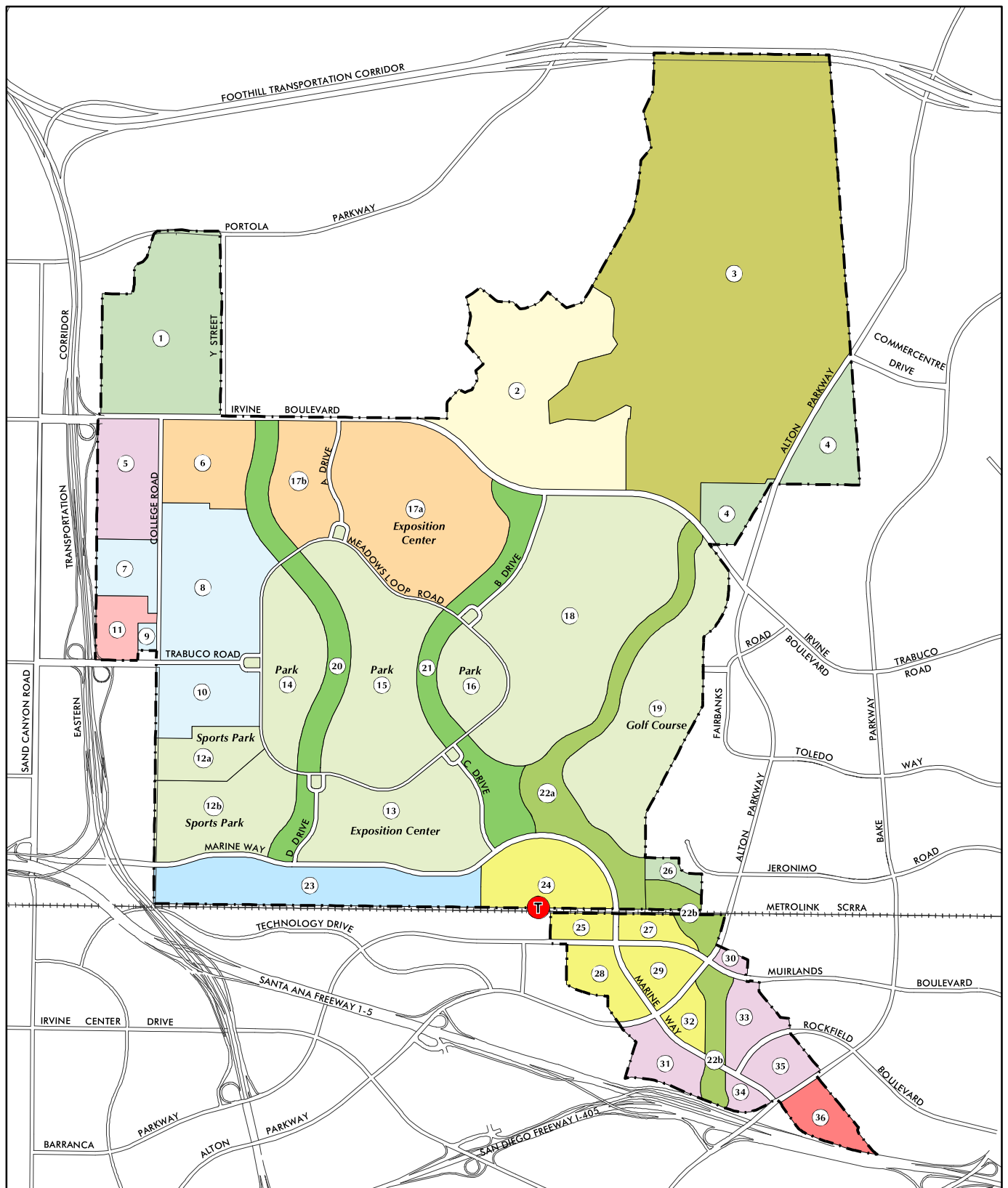
The unincorporated area would be annexed into the City. No new development is proposed for the Musick Jail and IRWD properties, though the County of Orange may decide to expand the jail according to the proposed jail expansion plans.

Land Use

Implementation of the Alternative Land Use Plan – University Village would have a similar impact as the proposed project regarding conflicts with the County of Orange Master Plan of Arterial Highways and the existing Airport Environs Land Use Plan (AELUP), Air Installation Compatible Use Zones (AICUZ), and Policy Implementation Line (PIL) since non-aviation reuse of the former base conflicts with these existing plans. As with the project, this alternative would not impact off-site land uses.

Traffic/Circulation

Implementation of the Alternative Land Use Plan – University Village would result in a greater traffic/circulation impact than the proposed project. More development would occur under this alternative than would occur under the proposed project including an increase in the student population of the university. Total vehicular trip generation would be roughly 161,000 ADT as compared to 148,000 ADT generated by the Overlay Plan.



--- Orange County Great Park Boundary

Education

Institutional

Low Density Residential

Medium Density Residential

Transit Oriented Development

Research and Development

Retail

Auto Center

Cemetery

Agriculture

Riparian Corridor

Wildlife Corridor

Habitat Preserve

Open Space

(17c) Planning Area Zone

T Irvine Transportation Center



0' 1,500'

Figure 6-3
Alternative 6.5
Increased Residential Alternative

Table 6-5
Development Data for University Village Alternative 2025

PAZ and Use Description	Acres		Dwelling Units		Square Feet		Other Details	
	Quantity	Type	Quantity	Type	Quantity	Type	Quantity	Type
1 Open Space Agriculture	200	Agriculture						
Subtotal Area 1:	200							
2 Low Density Residential	270	Low Density Residential	850	Single-Family Residential				
Subtotal Area 2:	270		850					
3 Open Space / Habitat Preserve	974	Habitat Preserve						
Subtotal Area 3:	974							
4 Agriculture	90	Agriculture						Portions may be used for low flow wildlife corrid. connection to Borrego Cyn Wash
Subtotal Area 4:	90							
5 Medium High Density Residential	79	Medium High Density Residential	1,580	Multiple-Family Residential				
Subtotal Area 5:	79		1,580					
6 Medium Density Residential	80	Medium Density Residential	800	Senior Housing				
Subtotal Area 6:	80		800					
7 Education	38	College/University			467,900	College/University (Sq. Footage expanded based on ratio (186 sf per student) and new student total)	2,512 Students 1,500 Residence Hall Rooms (Students split between zones on a size-proportional basis)	
Subtotal Area 7:	38				467,900			
8 Education	162	College/University			1,994,735	College/University	10,711 Students	
Subtotal Area 8:	162				1,994,735			
9 Education	5	College/University			61,566	College/University	331 Students	
Subtotal Area 9:	5				61,566			
10 Education	15	Medium Density Residential	60	Multiple-Family Residential	269,248	College/University	1,446 Students	
Subtotal Area 10:	70	55 College/University	60		269,248			
11 Retail	33	Retail			225,000	Retail		
Subtotal Area 11:	33				225,000			
12a Open Space Sports Park	50	Sports Park						
Subtotal Area 12a:	50							
12b Open Space Sports Park	115	Sports Park			26,000	Sports Park		
Subtotal Area 12b:	115				26,000			
13 Open Space Exposition Center	156	Cultural/Institutional			468,000	Museum/Library Facilities		
Subtotal Area 13:	156				468,000			
14 Open Space Park	103	Open Space / Park						
Subtotal Area 14:	103							
15 Open Space Park	208	Open Space / Park						
Subtotal Area 15:	208							
16 Open Space Park	56	Open Space / Park						
Subtotal Area 16:	56							
17a Open Space Exposition Center	236	Fairgrounds/Commercial Rec	165	Multiple-Family Residential	708,000	Fairgrounds/Exposition Halls	Includes Equestrian Stables	
Subtotal Area 17a:	249	13 Elementary School	165		40,000	Elementary School	650 Students	
17b Open Space Cemetery	73	Cemetery			30,000	Mausoleum		
Subtotal Area 17b:	73				20,000	Mortuary		
18 Open Space Golf Course w/ Residential Overlay	315	Golf Course	250	Single-Family Residential	25,000	Clubhouse and Driving Range	27 Golf Course Holes	
Subtotal Area 18:	365	50 Low Density Residential	250		25,000			

Table 6-5 (continued)
Development Data for University Village Alternative 2025

PAZ and Use Description	Acres		Dwelling Units		Square Feet		Other Details	
	Quantity	Type	Quantity	Type	Quantity	Type	Quantity	Type
19 Open Space Golf Course	211	Golf Course					18 Golf Course Holes	
Subtotal Area 19:	211							
20 Drainage Corridor	114	Drainage Corridor						
Subtotal Area 20:	114							
21 Drainage Corridor	115	Drainage Corridor						
Subtotal Area 21:	115							
22a Drainage / Wildlife Corridor Planning Area 51	118	Wildlife Corridor						
Subtotal Area 22a:	118							
22b Drainage / Wildlife Corridor Planning Area 30	61	Wildlife Corridor						
Subtotal Area 22b:	61							
23 Institutional	100 Institutional 35 OCTA Facility				300,000 Institutional 122,500 OCTA Facility 263,000 McKinney Act Warehousing		Includes Salvation Army (45,000 Bldg 360), St. Vincent De Paul (127,000 warehouse Bldg 319, 11,000 commercial kitchen Bldg 322), Orange County Community Housing Corporation (70,000 warehouse Bldg 360), Families Forward (10,000 admin Bldg 360)	
Subtotal Area 23:	135				685,500			
24 Transit Oriented Development	8 Station-Related Public Uses 6 TOD Open Space Amenities 6 Retail 61 Medium-High Density Residential		635 Multiple-Family Residential		45,000 Retail		375 Parking Spaces In Structure Schools are permitted uses	
Subtotal Area 24:	81		635		45,000			
25 Transit Oriented Development	7 Station-Related Public Uses 1 TOD Open Space Amenities 5 Office 5 Medium-High Density Residential		50 Multiple-Family Residential		75,000 Office		Schools are permitted uses	
Subtotal Area 25:	18		50		75,000			
26 Open Space / Agriculture	13 Agriculture							
Subtotal Area 26:	13							
27 Transit Oriented Development	2 TOD Open Space Amenities 17 Medium-High Density Residential		170 Multiple-Family Residential				Schools are permitted uses	
Subtotal Area 27:	19		170					
28 Transit Oriented Development	3 TOD Open Space Amenities 2 Retail 33 Medium-High Density Residential		345 Multiple-Family Residential		15,000 Retail		Schools are permitted uses	
Subtotal Area 28:	38		345		15,000			
29 Transit Oriented Development	3 TOD Open Space Amenities 2 Retail 29 Medium-High Density Residential		300 Multiple-Family Residential		15,000 Retail		Schools are permitted uses	
Subtotal Area 29:	34		300		15,000			
30 Research and Development	6 Research and Development				80,000 Research and Development			
Subtotal Area 30:	6				80,000			
31 Research and Development	38 Research and Development				500,000 Research and Development			
Subtotal Area 31:	38				500,000			
32 Transit Oriented Development	10 Remote Airport Terminal 10 Remote Airport Maintenance				9,000 Remote Airport Terminal 44,500 Remote Airport Maintenance		675 Parking Spaces Parking and shuttle facility for LAX and Ontario	
Subtotal Area 32:	20				53,500			
33 Research and Development	35 Research and Development				460,000 Research and Development			
Subtotal Area 33:	35				460,000			

Table 6-5 (continued)
Development Data for University Village Alternative 2025

PAZ and Use Description	Acres		Dwelling Units		Square Feet		Other Details	
	Quantity	Type	Quantity	Type	Quantity	Type	Quantity	Type
34								
Research and Development	11	Research and Development			150,000	Research and Development		
Subtotal Area 34:	11				150,000			
35								
Research and Development	31	Research and Development			410,000	Research and Development		
Subtotal Area 35:	31				410,000			
36								
Auto	34	Auto Sales, Parking and Storage			102,000	Auto Sales, Parking and Storage		
Subtotal Area 36:	34				102,000			
37								
Musick Jail and IRWD Parcel	113	Musick Jail and IRWD Parcel						
Subtotal Area 37:	113							
Net Total:	4,621		5,205		6,926,449			
Roadways:	185		-		-			
Gross Total:	4,806		5,205		6,926,449			
Planning Area 51 (Proposed annexation, General Plan Amendment, pre-Zoning and Zoning)								
Net Total:	4,150		4,340		5,065,949			
Roadways:	145		-		-			
Gross Total:	4,295		4,340		5,065,949			
Planning Area 30 (Proposed General Plan Amendment and Zone Change)								
Net Total:	358		865		1,860,500			
Roadways:	40		-		-			
Gross Total:	398		865		1,860,500			
Planning Area 35 (Proposed annexation)								
Net Total:	113		-		-			
Roadways:	-		-		-			
Gross Total:	113		-		-			
Project area currently outside the City of Irvine								
Net Total:	4,247		4,340		5,065,949			
Roadways:	145		-		-			
Gross Total:	4,392		4,340		5,065,949			
Project area currently within the City of Irvine								
Net Total:	374		865		1,860,500			
Roadways:	40		-		-			
Gross Total:	414		865		1,860,500			

Air Quality

Implementation of the Alternative Land Use Plan – University Village would result in a greater air quality impact than the project. This alternative would place housing (1,580 dwelling units) in proximity to the proposed university, thereby, potentially reducing commuter trip lengths and associated air emissions; however, the increase in permitted student population would result in an additional 13,117 vehicle trips generated within the project area. As such, the mobile emissions would be approximately eight percent higher than the proposed project.

Noise

Implementation of the Alternative Land Use Plan – University Village would result in a greater noise impact than the proposed project, as the overall amount of vehicular trips on surrounding roadways would be greater.

Public Health and Safety

Implementation of the Alternative Land Use Plan – University Village would result in a similar public health and safety impact as the proposed project. As with the proposed project, this alternative would result in all of the area within PA 51 containing existing structures to be developed, resulting in the need to demolish existing structures. Development would occur in those areas containing remediation sites and structures and population would be located adjacent to wildland fire hazard area.

Geology and Seismicity

Implementation of the Alternative Land Use Plan – University Village would result in a similar geology and seismic impact associated with seismic ground shaking, soil erosion or loss of topsoil, and expansive soils since there would generally be a similar amount of overall development within the project area.

Hydrology and Water Quality

Implementation of the Alternative Land Use Plan – University Village would result in a similar hydrology and water quality impact as the proposed project. Under this alternative, the proposed drainage corridors would be implemented as is proposed under the project.

Agricultural Resources

Implementation of the Alternative Land Use Plan – University Village would result in a similar impact as the proposed project related to the loss of agriculture. This alternative would preserve the same amount of acreage of agriculture as is proposed under the Overlay Plan.

Biological Resources

Implementation of the Alternative Land Use Plan – University Village would result in a similar impact to the proposed project in regards to potential conflicts with the City of Irvine

Urban Forestry Ordinance, since the area of the project site that is developed would be similar to the project. As with the proposed project, this alternative would allow for the creation of drainage corridors through the project site that could allow for wetland creation, and this alternative would provide the same wildlife corridor alignment as the proposed project.

Paleontological Resources

Implementation of the Alternative Land Use Plan – University Village would result in a similar impact to paleontological resources as the proposed project. Under this alternative, development would occur in the same areas as would occur under the proposed project, therefore the potential for this alternative to directly or indirectly destroy a unique paleontological resource or unique geologic feature is similar to the proposed project.

Cultural Resources

Implementation of the Alternative Land Use Plan – University Village would result in a similar impact to cultural resources as the proposed project. Under this alternative, development would occur in the same areas as would occur under the proposed project, therefore the potential for this alternative to impact cultural resources is similar to the proposed project.

Aesthetics

Implementation of the Alternative Land Use Plan – University Village would result in a similar light and glare as the project since the area of the project site that is developed would be similar. The impact related to the change in visual quality of the project area would also be similar as development would occur in the same areas as proposed under the project.

Population/Housing

Implementation of the Alternative Land Use Plan – University Village would result in less of a population/housing impact related to the jobs/housing balance than the proposed project. There would be a reduction in the overall amount of employment generating land uses, and an increase in housing units with the change in PAZ 5 to residential. In regards to inducing population growth in the area, this alternative would have a similar impact as the proposed project since it would generate jobs and new residential opportunities that would attract new residents to the area.

Public Services and Facilities

Implementation of the Alternative Land Use Plan – University Village would result in a greater impact than the project related to the construction or expansion of public facilities. This alternative would significantly increase the demand for school facilities and parks, as approximately 1,580 additional dwelling units and 1,500 dorm rooms, and the corresponding population would be allowed under this alternative as compared to the proposed project.

Utilities

Implementation of the Alternative Land Use Plan – University Village would result in similar impacts related to the construction or expansion of utilities as a similar backbone system would be required to support this alternative, although the sizing and layout may vary to reflect the alternative configuration of land uses.

Conclusion

This alternative is environmentally inferior to the proposed project. Implementation of the Alternative Land Use Plan – University Village would result in greater impacts to traffic/circulation, air quality, noise and public services and utilities. The impact to land use, public health and safety, geology and seismicity, hydrology and water quality, agricultural resources, biological resources, paleontological resources, cultural resources, and aesthetics would be similar to the proposed project. The alternative will result in less of an impact to population/housing. The alternative meets all of the following project objectives identified in Section 3.0 – Project Description of this Final Program EIR:

1. Annex the former MCAS El Toro site and adjacent lands within the City's Sphere of Influence.
2. Convert the former MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
3. Amend the General Plan and Zoning Ordinance to implement proposed Orange County Great Park land use designations.
4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.
5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.
6. Respond positively and effectively to the DON's decision to sell the property to private interests by allowing private development of some land while ensuring the implementation of park and open space amenities.

6.5 INCREASED RESIDENTIAL ALTERNATIVE

Description of Alternative

This alternative would increase the amount of residential units provided in the project area. Under this alternative, the land uses proposed within PAZs 17a and 17b would be changed as shown in Table 6-6.

**Table 6-6
Increased Residential Alternative**

PAZ/Acreage	Project Land Use	Alternative Land Use	Development Potential
17a/236	Commercial Recreation	Medium High Residential	3,540 d.u.'s
17b/73	Cemetery	Medium High Residential	1,095 d.u.'s
TOTAL/310			4,635

The medium high density residential units would be comprised of approximately 3,476 single-family residential units and 1,159 multi-family residential units. All other land uses would be the same as proposed under the Overlay Plan. Figure 6-3 depicts the Increased Residential Alternative.

Land Use

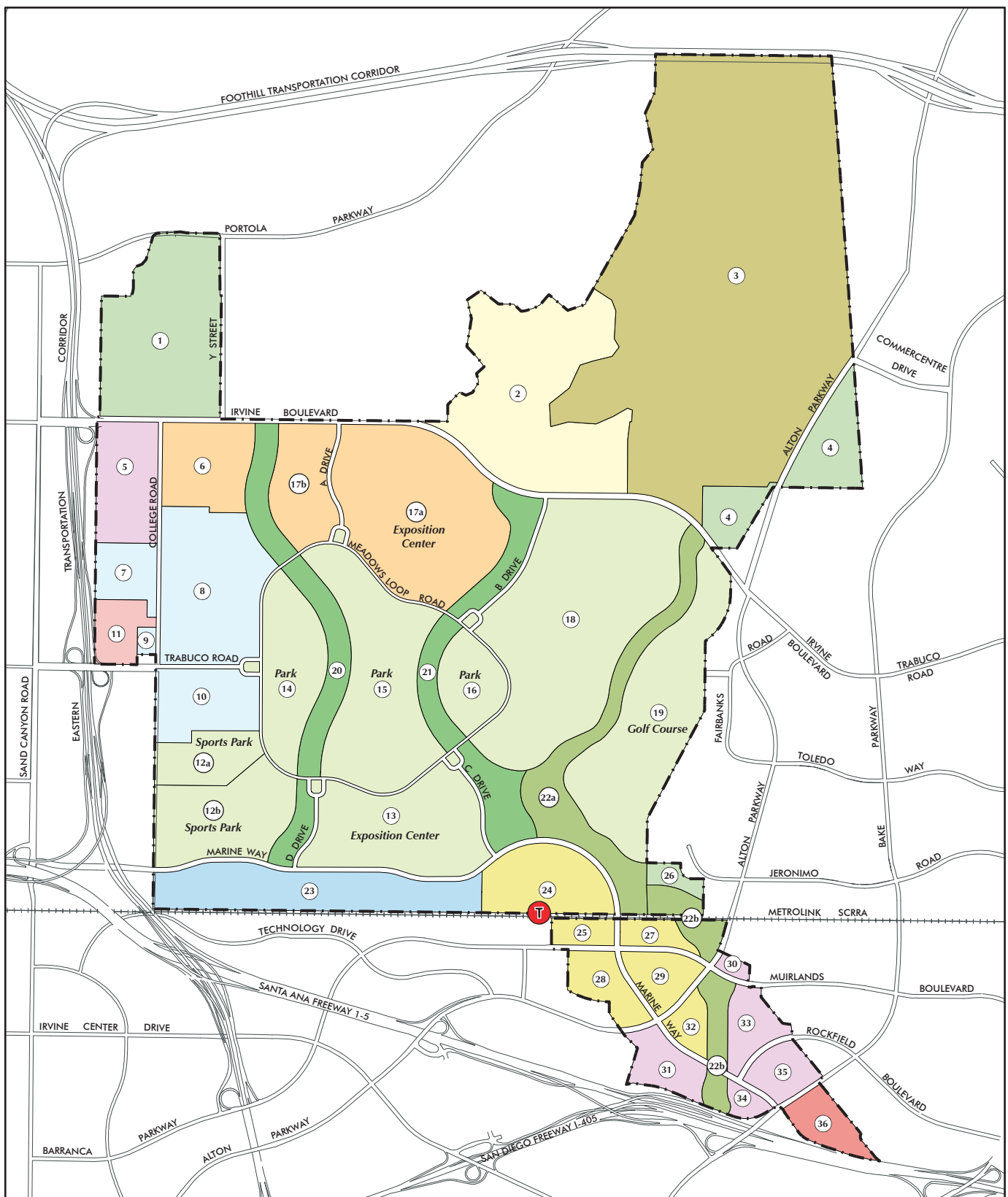
Implementation of the Increased Residential Alternative will have a similar impact as the proposed project regarding conflicts with the County of Orange Master Plan of Arterial Highways and the existing Airport Environs Land Use Plan (AELUP), Air Installation Compatible Use Zones (AICUZ), and Policy Implementation Line (PIL) since non-aviation reuse of the former base conflicts with these existing plans. As with the project, this alternative would not impact off-site land uses.

Traffic/Circulation

Implementation of the Increased Residential Alternative will result in a greater traffic/circulation impact than the proposed project. The increase of 4,635 residential dwelling units would generate approximately 37,010 daily trips (3,476 single-family dwelling units would generate approximately 28,733 daily trips and 1,159 multi-family dwelling units would generate approximately 8,277 daily trips). The commercial recreation and cemetery land uses as proposed under the project would generate approximately 5,867 daily trips. Therefore, implementation of this alternative would represent an increase in 31,143 ADT over the proposed project.

Air Quality

Implementation of the Increased Residential Alternative will result in a greater air quality impact than the proposed project as more development would occur, resulting in greater construction and operational emissions. The trip generation of this alternative is substantially greater (31,143 ADT) than the proposed project; therefore, the mobile air quality emissions generated by this alternative would be greater.



- | | | | |
|--|---|---|--|
| <ul style="list-style-type: none"> Orange County Great Park Boundary Education Institutional Low Density Residential Medium Density Residential Transit Oriented Development | <ul style="list-style-type: none"> Research and Development Retail Auto Center Cemetery Agriculture Riparian Corridor | <ul style="list-style-type: none"> Wildlife Corridor Habitat Preserve Open Space | <ul style="list-style-type: none"> 17c Planning Area Zone T Irvine Transportation Center |
|--|---|---|--|

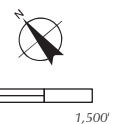


Figure 6-3
Alternative 6.5
Increased Residential Alternative

Noise

Implementation of the Increased Residential Alternative will result in a greater noise impact than the proposed project. This alternative would result in the generation of approximately 31,143 additional ADT than the proposed project, which would be distributed on the surrounding roadway system, and increasing the traffic noise levels along these roadways.

Public Health and Safety

Implementation of the Increased Residential Alternative will result in a similar public health and safety impact to the proposed project. As with the proposed project, this alternative would result in all of the area within PA 51 containing existing structures to be developed, resulting in the need to demolish existing structures. Development will occur in those areas containing remediation sites and structures and population will be located adjacent to wildland fire hazard area.

Geology and Seismicity

Implementation of the Increased Residential Alternative will result in a greater geology and seismic impact associated with seismic ground shaking, soil erosion or loss of topsoil, and expansive soils, as there will be a greater amount of overall development within the project area.

Hydrology and Water Quality

Implementation of the Increased Residential Alternative will result in a greater impact associated with hydrology and water quality than the proposed project. A greater amount of development and impervious surfaces would occur under this alternative as the proposed cemetery use in PAZ 17b would be developed with residential uses.

Agricultural Resources

Implementation of the Increased Residential Alternative will result in a similar impact to agricultural resources as the proposed project. Under this alternative, the same areas of the project site that are currently used for agricultural production would be developed with an alternative land use. Likewise, as with the proposed project, PAZ 1 would be retained for agricultural use.

Biological Resources

Implementation of the Increased Residential Alternative will result in a similar impact as the proposed project in regards to potential conflicts with the City of Irvine Urban Forestry Ordinance. Although a different land use is proposed for PAZ's 17a and 17b, the potential for disturbance to biological resources would be similar. Also, this alternative would allow for the implementation of the proposed wildlife corridor, as is proposed under the project.

Paleontological Resources

Implementation of the Increased Residential Alternative will result in a similar impact to paleontological resources as the same area of the project site would be disturbed by development activity as would occur under the proposed project. As with the proposed project, future development under this alternative has less potential to directly or indirectly destroy a unique paleontological resource or unique geologic feature.

Cultural Resources

Implementation of the Increased Residential Alternative will result in a similar impact to cultural resources as the same area of the project site would be disturbed by development activity as would occur under the proposed project.

Aesthetics

Implementation of the Increased Residential Alternative will result in a greater aesthetic impact related to light and glare than the project since there will be an overall increase in the amount of development occurring within the project area.

Population/Housing

Implementation of the Increased Residential Alternative will result in less of a population/housing impact related to the jobs/housing balance than the proposed project. This alternative would reduce the overall amount of employment generating land uses by approximately 236 acres and would increase the number of residential units by 1,010 dwelling units as compared to the project. As such, the alternative would reduce the project's contribution to the jobs housing imbalance. While the alternative would reduce the impact, it would remain significant and unavoidable.

Public Services and Facilities

Implementation of the Increased Residential Alternative will result in a greater impact related to the construction or expansion of public facilities as significantly more residential units would be constructed on the project site. The impact related to the construction of new school facilities will also be greater than the proposed project as there will be a greater amount of residential units and corresponding student generation.

Utilities

Implementation of the Increased Residential Alternative will result in a greater impact related to the construction or expansion of utilities as the increased residential uses would likely require a larger utility backbone system to support the alternative.

Conclusion

This alternative is environmentally superior to the proposed project with respect to the impact to population/housing. However, implementation of the Increased Residential

Alternative will result in a greater impact to traffic/circulation, air quality, noise, geology and seismicity, hydrology and water quality, aesthetics, and public services and facilities/utilities than the proposed project. This alternative will result in similar impacts to land use, public health and safety, agricultural resources, biological resources, paleontological resources and cultural resources as would occur under the proposed project. The alternative meets the following project objectives identified in Section 3.0 – Project Description of this Final Program EIR:

1. Annex the former MCAS El Toro site and adjacent lands within the City's Sphere of Influence.
2. Convert the former MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.
5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.
6. Respond positively and effectively to the DON's decision to sell the property to private interests by allowing private development of some land while ensuring the implementation of park and open space amenities.

Notes and References

1. City of Irvine. Annexation No. 17, General Plan Amendment 39399-GA, Zone Change/Pre-Zoning 39400-ZC, Final EIR (February 2000).
2. Ibid.
3. Ibid.
4. Ibid.
5. Ibid.

7.0 Analysis of Long-Term Effects

The CEQA requires the discussion of the cumulative impacts, growth-inducing impacts, and long-term impacts of a proposed project. The following sections address these issues as they relate to implementation of the Orange County Great Park project.

7.1 CUMULATIVE IMPACTS

The CEQA Guidelines define cumulative effects as “two or more individual effects that, when considered together, are considerable or which compound or increase other environmental impacts.” The CEQA Guidelines further state that the individual effects can be the various changes related to a single project or the changes involved in a number of other closely related past, present, and reasonable foreseeable probable future projects (Section 15355). The CEQA Guidelines allow for the use of two alternative methods to determine the scope of projects for the cumulative impact analysis:

- List Method - A list of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the control of the agency.
- Regional Growth Projections Method - A summary of projections contained in an adopted general plan or related planning document which is designed to evaluate regional or area wide conditions (Section 15130).

For the purpose of this Final Program EIR, the Regional Growth Projections Method has been utilized for analysis of cumulative impacts. The cumulative analysis is based on buildout assumptions identified in the Center for Demographic Research’s *Orange County Projections 2000*.

Orange County Projections 2000

Cumulative impacts related to the proposed project will encompass environmental changes resulting from the combined effects of the proposed project and other existing or planned land uses in and around the project area. This cumulative analysis takes into consideration buildout of local and regional general plans as well as population forecasts for the County of Orange and the region as a whole (as shown in Table 7-1 and Figure 7-1).

Major projects included within the buildout assumptions and this cumulative analysis include: Eastern Transportation Corridor (ETC); Alton Parkway Extension; Foothill Transportation Corridor North (FTC); Saddleback Meadows; Foothill Aliso Commercial Center; Natural Community Conservation Plan (NCCP); MCAS Tustin Reuse Plan; James A. Musick Facility; Planning Area 17; Planning Area 27; Planning Area 40; Northern Sphere;

Woodbridge General Plan Amendment (Planning Area 15); and the Irvine Ranch Land Reserve.

**Table 7-1
Cumulative Regional Growth Projections**

Geographic Area*	2000			2025			% Change Population	% Change Housing	% Change Employment
	Population	Housing Units**	Employment	Population	Housing Units**	Employment			
RSA A	209,759	73,625	124,387	245,103	79,126	142,069	16.9%	7.5%	14.2%
RSA B	198,069	64,980	104,377	275,920	90,233	136,783	39.3%	38.9%	31.0%
RSA C	251,981	88,480	81,146	363,236	127,490	134,528	44.2%	44.1%	65.8%
RSA D	292,366	126,509	125,880	339,012	137,557	175,477	16.0%	8.7%	39.4%
RSA E	165,226	61,095	179,046	249,044	88,441	341,921	50.7%	44.8%	91.0%
RSA F	195,024	83,930	192,196	229,557	93,066	229,040	17.7%	10.9%	19.2%
RSA G	540,157	148,326	288,149	591,152	152,228	340,318	9.4%	2.6%	18.1%
RSA H	448,855	135,552	173,702	504,219	141,808	219,477	12.3%	4.6%	26.4%
RSA I	373,958	137,174	144,173	421,566	144,868	184,309	12.7%	5.6%	27.8%
RSA J	178,362	58,333	89,378	197,228	61,006	139,743	10.6%	4.6%	56.4%
Orange County	2,853,757	978,004	1,502,434	3,416,037	1,115,823	2,043,665	19.7%	14.1%	36.0%
SCAG Region***	16,827,152	5,376,096	7,413,135	22,625,384	7,415,911	9,947,153	34.5%	37.9%	34.2%

* RSA = Regional Statistical Area as defined by OCP 2000 - See Figure 7-1.

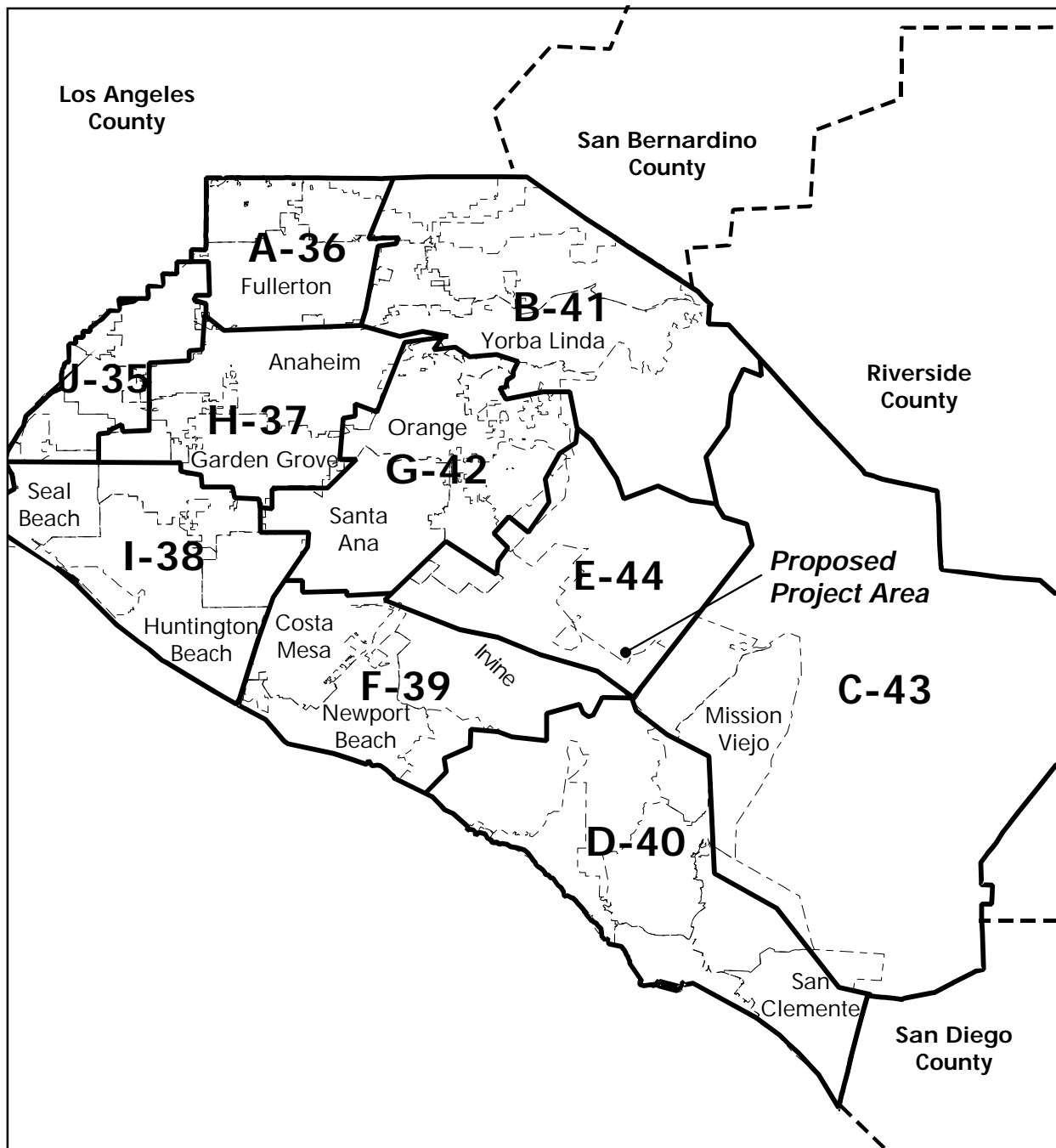
** OCP 2000 calculates housing units, while SCAG Projections calculate households.

*** SCAG region includes Orange, Los Angeles, San Bernardino, Riverside, Ventura and Imperial counties.

Since SCAG Projections for Orange County and OCP 2000 projections differ, totals may be different.

Source: *Orange County Projections 2000*. Prepared by California State University at Fullerton, Center for Demographic Research. June 22, 2000.

SCAG 2001 RTP Growth Forecast.



Source: California State University, Fullerton

- Regional Statistical Area Boundaries
- - - -** City Boundaries
- - - ·** County Boundaries

D-40 RSA Number



Not to Scale

Figure 7-1
Orange County
Regional Statistical Areas

Cumulative Impact Analysis

Land Use

The geographic scope for land use includes Orange County as depicted on Figure 7-1, with a focus on projects occurring around the former MCAS El Toro. Development under the proposed project will occur according to the City of Irvine's Land Use Element. The proposed project is intended to result in beneficial land use impacts by providing non-aviation reuse of the former MCAS El Toro and implement a Great Park Plan. The proposed project designates the 974-acre Habitat Preserve to ensure that development within the project area is compatible with the established Orange County Natural Community Conservation Program (NCCP). Furthermore, the proposed project will not result in any land uses or circulation routes that might physically divide established communities either within the City or in other adjacent areas. Future development of cumulative projects will comply with the adopted land use standards, policies and ordinances, and will be compatible with land uses in the areas surrounding the project site. Development for related projects and areas surrounding the site will be governed by policies, implementation measures, and programs to ensure orderly urban development. This will ensure that no significant cumulative land use impact will occur. In addition, none of these projects would require the disruption or division of the physical arrangement of an existing community. As such, cumulative land use impacts are not considered significant.

Traffic

The geographic scope for traffic includes cumulative growth projections for Orange County including the projects described above. The 2025 and Post 2025 analyses contained in Section 5.2 – Transportation/Traffic assess the traffic impacts of all cumulative development anticipated by the Year 2025 and beyond. As shown in these analyses, all intersections and roadway/freeway/tollway/ramp segments will operate at acceptable levels of service with the existing or planned improvements. However, it has been assumed in the traffic analysis that the cumulative impact of project traffic along with other regional growth at the identified ramp and freeway locations will be mitigated through a combination of regional programs that are the responsibility of other agencies. If these programs are not implemented by the agencies with the responsibility to do so, the cumulative freeway/tollway ramp impacts would remain significant and unavoidable. As a result, the proposed project will result in a cumulatively significant traffic impact that may remain significant and unavoidable.

Air Quality

The geographic scope for air quality includes the South Coast Air Basin (SCAB) and the traffic study area defined in Section 5.2. The SCAB is depicted in Figure 5.3-1 in Section 5.3. In 2000, the annual maximum concentrations of ozone (O_3), carbon monoxide (CO), particulate matter (PM_{10}), and sulfates (SO_x) exceeded both Federal and State standards in some or all areas in the SCAB. However, standards for nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (Pb) were not exceeded. A summary of measured criteria pollutant concentrations at the Saddleback air quality monitoring station (located at the former MCAS El Toro) for selected years between 1995 and 2000 are shown in Table 5.3-3 in Section 5.3.

NO₂ concentrations are not measured at this station; however, no station in Orange County has recorded an exceedance of NO₂ standards since at least 1990.

Although air quality tends to vary year to year due primarily to meteorological conditions, air quality at the Saddleback monitoring station appears to be improving (which generally has been the case throughout the SCAB). The primary long-term air quality impacts from development of the proposed project will result from operational emissions from area sources and motor vehicles. Projected SCAB emission estimates for the year 2025 and the estimated average mitigated operation emissions for the proposed project for the year 2025 are presented in the table below. From the estimates presented, it is evident that emissions from the project are less than one percent of the total projected SCAB emissions.

Projected Emission Estimates For SCAB From the 1997 AQMP Compared to Emission Estimates For the Project Area

Emission Estimates (tons/day)						
Pollutant	Projected 1997 AQMP Emissions		Base Plan (2025)		Overlay Plan (2025)	
	Year 2007*	Year 2025**	Unmitigated Emissions	Mitigated Emissions	Unmitigated Emissions	Mitigated Emissions
ROG	786	591	0.47	0.42	1.25	1.15
NO _x	714	419.5	0.40	0.35	0.70	0.60
CO	3,530	1,745	3.96	3.40	7.84	6.85
PM ₁₀	456	496	0.33	0.28	0.73	0.64

* 2007 Emission estimates are linearly extrapolated based on 2000 to 2006 emission trends in 1997 AQMP.

**2025 Emission estimates are linearly extrapolated based on 2000 to 2010 emission trends in 1997 AQMP.

Source: <http://www.aqmd.gov/aqmp/97aqmp/chapters/m-chap3>

Projected Emission Estimates for Base in the 1997 AQMP and Emission Estimates for the Proposed Project

Pollutant	Base Plan		Overlay Plan	
	Year 2007* (percent)	Year 2025** (percent)	Year 2007* (percent)	Year 2025** (percent)
ROG	0.05	0.07	0.15	0.19
NO _x	0.05	0.08	0.08	0.14
CO	0.10	0.20	0.19	0.39
PM ₁₀	0.06	0.06	0.14	0.13

* 2007 Emission estimates are linearly extrapolated based on 2000 to 2006 emission trends in 1997 AQMP.

**2025 Emission estimates are linearly extrapolated based on 2000 to 2010 emission trends in 1997 AQMP.

Source: <http://www.aqmd.gov/aqmp/97aqmp/chapters/m-chap3>

Emissions due to development in the proposed project will exceed SCAQMD thresholds of significance for oxides of nitrogen and reactive organic gases during construction (short-term impact) and for oxides of nitrogen, reactive organic gases, carbon monoxide, and

particulate matter less than ten microns in diameter (PM10) during operation from area source and vehicular emissions (long-term impact for both interim year and buildout year). Together, construction and operation emissions will also exceed applicable thresholds of significance. Although construction activities for the related projects may not overlap, the environmental analysis of this Final Program EIR assumes that they would. Operation emissions in conjunction with related projects and other emissions in the SCAB will also coincide. Since air quality in the SCAB does not comply with federal or state standards, these emissions will contribute to a cumulatively significant impact on air quality. Similar to project-specific impact, no feasible mitigation measures exist to reduce this cumulative impact to a level of less than significant because any project of substantial size will result in this impact.

The proposed project is not expected to result in other unmitigable air quality impacts, such as those related to carbon monoxide hotspots (see Section 5.3). Pursuant to the CEQA Guidelines (Section 15130), no other cumulative impact related to air quality will result.

Noise

The geographic scope for noise includes growth projections for Orange County and the traffic study area defined in Section 5.2. The proposed project will contribute to vehicular-generated noise along roadways in the vicinity of the site. All future cumulative projects, including the proposed project, must take future noise levels into account when siting sensitive receptors and include appropriate mitigation for on- and off-site impacts. Existing ordinances and regulations will ensure that project-specific on- and off-site impacts will be less-than-significant.

Noise generated from activities on the proposed project site will contribute to ambient noise in the surrounding area. However, since noise energy dissipates with distance, the extent of increases in noise will be limited to areas near the site. As discussed in Section 5.4, no impact related to on- and off-site noise generation has been identified. No other noise-related impacts, such as for groundborne vibration, are identified herein. Therefore, pursuant to the CEQA Guidelines (Section 15130), no significant cumulative impact related to noise will result.

Public Health and Safety

The geographic scope for public health and safety includes growth projections for Orange County with an emphasis on the area immediately surrounding the former MCAS El Toro. As discussed in Section 5.5, structures on the project site and portions of the project site are contaminated with hazardous materials by past military activities, such as asbestos and lead-based paint. Other hazards exist on the site, such as hazardous material deposits. Although the DON is required to remediate on-site hazardous materials and other hazards prior to conveyance, the proposed project will facilitate this cleanup, resulting in a beneficial impact. Future cumulative development that utilizes hazardous materials will be required to comply with all regulations pertaining to handling, storing, and disposing hazardous materials. The development of other cumulative projects has the potential to expose persons to hazards or hazardous materials; however, as with the proposed project, mitigation measures can be implemented to address the presence of hazards and hazardous materials on a site specific basis. The combined effect of the development and operation of cumulative projects is not cumulatively significant, as potential hazards are limited to each specific site, and each

project will need to comply with City, State, and federal regulations and policies adopted to protect the public from hazards, which will ensure that the cumulative public health and safety impact remains at a level less than significant.

Geology and Seismicity

The geographic scope for geology and seismicity includes growth projections for Orange County within the framework of the regional geologic setting. Regional geology is depicted on Figure 5.6-1. Most of the soils on the site are well-suited for urban development, including construction. All on-site impacts related to soils, such as erosion, loss of topsoil and expansive soils, must be mitigated prior to development pursuant to the City's General Plan and implementing zoning ordinance.

The level of seismic activity expected in the project area will be similar to the County as well as other regions of Southern California. The exposure of people or structures to risk of loss, injury, or death will not be substantial or adverse because potential for seismic activity is similar to elsewhere in the region. All development at the former MCAS El Toro and new development in the region in general will be required to be constructed to withstand probable seismic forces, including seismic-related ground failure like liquefaction. As cumulative projects are constructed, more people and structures will be exposed to seismic hazards due to earthquakes. Other geotechnical constraints, such as expansive soils and landslides may present hazards to cumulative development. Adherence to site specific geotechnical recommendations, building codes, and applicable grading ordinances will reduce potential cumulative geotechnical impacts to a level less than significant.

Hydrology and Water Quality

The geographic scope for hydrology and water quality includes growth projections for Orange County within the context of the Santa Ana River watershed (including the San Diego Creek watershed) and the Orange County aquifer. The proposed project will result in changes to on-site land uses. Although in some areas the amount of impervious surfaces will increase, a portion of the open space provided by the Orange County Great Park Plan will be utilized for drainage facilities that would offset this increase. All on-site development will be required to analyze on-site runoff to ensure that adequate infrastructure is provided to convey that runoff to local and regional facilities. The existing Flood Control Master Plan for San Diego Creek (Master Plan) assumed certain cumulative development, including urban reuse of the former MCAS El Toro. As projects are proposed within the watershed that do not conform to the growth and land use assumptions contained in the Master Plan, detailed hydrology studies will be required to analyze additional flood control improvement that will be required for that development to proceed. The provision of drainage corridors as a component of the project as well as mitigation measures contained in this Final Program EIR will ensure that project-specific impact will be less than significant. The cumulative impact on drainage and flood control facilities within the Santa Ana River watershed and Orange County aquifer will be less than significant.

The proposed project and cumulative development will be required to comply with all local and regional plans regulating water quality, including total maximum daily loads (TMDLs) for the Newport Bay watershed, the Drainage Area Master Plan (DAMP) for Orange County, NPDES permits, and implementing ordinances adopted by the City of Irvine. Project-related water quality impacts will not differ substantially from current conditions as existing channels

are all improved/channelized and are proposed to remain the same under the Orange County Great Park Plan. Sediment loads currently carried by these channels may decrease in the future due to recently installed detention basins in Bee Canyon, Round Canyon, and the Marshburn Basin. Additionally, to improve water quality within the San Diego Creek watershed, natural drainage corridors will be included in the Great Park Plan. In addition, the Irvine Ranch Water District (IRWD) is proposing to develop water quality wetlands within the project area. The wetlands are planned to be located along the Bee Canyon Channel, Aqua Chinon Channel, Serrano Creek, and the Upper San Diego Creek. Since existing regulatory programs exist to improve local surface water quality, project-specific impacts will be less than significant. Regional BMPs such as the TMDL programs, the DAMP, the MSW Permit, the regional sediment basins, and the San Joaquin Marsh program have been designed under the assumption that the San Diego Creek watershed would continue to become more urbanized. The regional control measures anticipate a reduction in overall agricultural land uses, with their high levels of pollutant runoff, and an increase in urban uses, with an associated increase in runoff volumes. The regional control measures would absorb any cumulative adverse effects of the proposed development. To the extent that the project would improve water quality, that benefit would be shared by the watershed.

The TMDL program is designed to identify all those constituents that adversely impact the beneficial uses of a particular water body, and then to identify the appropriate reduction in pollutant concentrations and/or loadings needed so that the water body can attain its beneficial uses as identified in the Basin Plan.

Other projects in the area would be expected to be reviewed by local and regional jurisdictions regarding project approvals; therefore, they would presumably comply with the same regulatory surface water quality requirements as the proposed project. Compliance with these regulations would ensure the cumulative impact remains less than significant.

Agricultural Resources

The geographic scope for agricultural resources includes Orange County and the growth expected within the County. The encroachment of urban areas on agricultural lands is a long and continued trend in Orange County. Though it is difficult to quantify the amount of agricultural land that is under development pressure within the County, it is evident that such pressure exists and will continue to with or without implementation of the project. The rising cost of irrigation, increased land values, labor costs, and damage from vandalism have made it difficult to maintain a successful large scale agricultural operation. The conversion of agricultural land to urban uses is an important policy decision that is ultimately left to each jurisdiction. In order to address the cumulative loss of agricultural land within Irvine, the City has established an Agricultural Legacy Program, which intends to retain certain sites within Irvine for metro farming activities. Despite the fact that the project will help implement the City's Agricultural Legacy Program by retaining agricultural uses on-site, the loss of the remaining agricultural land is a cumulatively significant loss of local and regional agriculture. The project will result in a cumulatively significant and unavoidable impact associated with the loss of agriculture. For a discussion of regional mitigation measures considered to mitigate project impacts but determined to be infeasible, please see Section 5.8 – Agricultural Resources of this Final Program EIR.

Biological Resources

The geographic scope for biological resources includes the Natural Community Conservation Plan (NCCP) Planning Area in conjunction with growth projections for Orange County. The City of Irvine and jurisdictions within the NCCP Planning Area will continue to develop in accordance with the adopted General Plans of the respective jurisdictions. The primary cumulative impact on biological resources is the fragmentation of ecosystems resulting from the incremental loss of native habitats. As fragmentation continues, the remaining ecosystems will become more isolates and fragmented. The result will be that connectivity between patches of habitat and the wildlife populations they support will be lost. The proposed project designates the 974-acre Habitat Preserve to ensure that development within the project area is compatible with the established Orange County Natural Community Conservation Program (NCCP). Furthermore, the project proposes a major wildlife corridor that would connect two preservation areas in the County, the Lomas Ridge and San Joaquin Hills. This wildlife corridor is proposed where there is currently no link between these areas.

The establishment of the Nature Reserve of Orange County, a 37,000 acre reserve that was approved on July 17, 1996, will provide regional biological benefits that would be unlikely to occur with a piecemeal conservation strategy. The Nature Reserve was designed to prevent the incremental loss of native habitat and the fragmentation of ecosystems, as well as to compensate for impacts of individual projects. Establishment of the Reserve System will protect approximately forty Identified Species, including three Target Species (gnatcatcher, Cactus wren, and orange-throated whiptail lizard), which are the focus of the NCCP planning, and use the CSS and related habitat. The implementation of the NCCP, dedication of lands, and endowment by the participating landowners mitigate impacts of proposed and future development on covered habitats and identified species. The City of Irvine participates in this and the NCCP program, and requires development to be in accordance with the NCCP. As a result, cumulative biological impacts are mitigated to a level less than significant.

Paleontological Resources

The geographic scope for paleontological resources includes growth projections for Orange County with a focus on the immediate area surrounding the former MCAS El Toro. Implementation of the City's standard conditions of approval, which includes requirements to ensure that paleontological resources are not impacted from development, and mitigation required by this Final Program EIR will ensure that impacts to paleontological resources in the project area are mitigated. This mitigation includes requirements for certification of the site by a registered paleontologist prior to issuance of grading permits and measures to recover fossils if they are discovered during grading. Such procedures are generally standard in the region, and will be applied elsewhere when appropriate. Implementation of these measures as specific cumulative projects are proposed and developed will ensure the potential cumulative impact to paleontological resources is less than significant.

Cultural Resources

The geographic scope for cultural resources includes growth projections for Orange County with a focus on the immediate area surrounding the former MCAS El Toro. Implementation of mitigation measures identified in Section 5.11 – Cultural Resources will reduce potential project impacts on cultural resources to less-than-significant levels. Although other projects in the region will result in significant impacts on cultural resources, existing structures at the former MCAS El Toro do not contribute to any substantial historic or cultural district in the region. There are no features or characteristics of the project area that define or include unique ethnic cultural values and no known or documented religious or sacred uses associated with the site or the region. Development of cumulative projects has the potential to impact archaeological resources. The cumulative impact to cultural resources can be mitigated through data recovery and avoidance of important cultural resources.

Aesthetics

The geographic scope for aesthetics includes growth projections for Orange County with a focus on the immediate area surrounding the former MCAS El Toro. The proposed project site is located in a rapidly urbanizing portion of southern Orange County where changes to the aesthetic environment abound. Specifically, new development in the area will alter the natural terrain and result in artificial topography. Alteration of the natural topography from the proposed project will be limited, and mitigation measures contained in this Final Program EIR (see Section 5.12 – Aesthetics) will ensure that project-level impacts as a result of this change will be less than significant. Existing City policies regarding visual quality, such as requiring site design review, will also work to ensure high aesthetic quality of future development. Substantial amounts of open space will be retained as well. The cumulative impact is considered less than significant.

Population and Housing

The geographic scope for population and housing includes Orange County and the growth projections for the County. Figure 7-1 depicts the Orange County Regional Statistical Areas. Other cumulative projects generally have been accounted for in these growth projections; however, future unknown development may also result in an exceedance of projections. Based on future projections, the Orange County Subregion is anticipated to become increasingly jobs-rich over the next 20 years. The proposed Base Plan and Overlay Plan for the former MCAS El Toro site would substantially add to employment generation characteristics of Irvine and the region. Since, the project-related employment would exacerbate the cumulative subregional jobs/housing imbalance, the cumulative population and housing impact is considered significant and unavoidable.

Public Services and Facilities

The geographic scope for public services and facilities includes growth projections for Orange County with a focus on the immediate area surrounding the former MCAS El Toro. Future regional growth will result in increased demand for public services and facilities, including law enforcement, fire protection and emergency medical services, park and recreational facilities and programs, and schools. Service providers will continue to evaluate levels of service desired and potential funding sources to meet this demand.

The proposed project will result in increased demand for public services and facilities and will contribute to the need to construct these facilities and operate such services. The Orange County Great Park Plan includes those facilities that will need to be constructed as a result of demand from on-site development. As such, the environmental impacts of constructing and operating these public facilities and services as a result of cumulative demand has been evaluated in this Final Program EIR, and no additional impact will occur.

Utilities

The geographic scope for utilities includes growth projections for Orange County with a focus on the immediate area surrounding the former MCAS El Toro. Future regional growth will result in increased demand for utilities, including water facilities and services, wastewater facilities and services, solid waste disposal, energy utilities, and communications. Utility providers will continue to evaluate levels of service desired and potential funding sources to meet this demand. Utility services are available for the proposed project and the proposed project includes general designs for utility systems.

The proposed project will result in increased demand for utilities and will contribute to the need to construct and operate these utilities. The Orange County Great Park Plan includes those utilities that will need to be constructed as a result of demand from on-site development. As such, the environmental impacts of constructing and operating utilities as a result of cumulative demand has been evaluated in this Final Program EIR, and no further impact will occur.

7.2 GROWTH INDUCING IMPACTS

Section 15126.2(d) of the CEQA Guidelines states that the EIR address the growth-inducing impact of the proposed project. Specifically, the EIR must “discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects that would remove obstacles to population growth....[i]ncreases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects.” The EIR must also “discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.”

Impact Analysis

Growth-inducing impacts can be either direct or indirect, as described below.

Direct Impacts

Direct growth-inducing impacts are generally associated with the provision of urban services, such as utilities, improved roadways, and police protection, to an undeveloped or

rural area. The provision of these services allows new development to occur more easily, and can induce landowners to convert their property to urban or more intense urban uses. Other direct impacts include substantial economic expansion and the related multiplier effects that ripple through the economy and produce more growth and regulatory changes brought about that might result in physical changes off-site.

Infrastructure Expansion

The former MCAS El Toro site is largely developed, and changes in land uses as proposed under the proposed project will involve the demolition of existing structures, construction of new development, and the provision of new roadways and infrastructure systems to serve this development. Areas on the northern and southern sections of the site that are currently in agricultural use are planned to be developed with urban land uses. In addition, there are adjacent agricultural areas and underutilized sites near the former MCAS El Toro (to the northwest, northeast, and southeast) that may be induced by the proposed project to develop in the future. However, the proposed project is primarily conversion of the former MCAS El Toro to park/open space/recreation uses that will not contribute to conversion of adjacent agricultural areas to urban areas.

The roadway and infrastructure improvements that will accompany future development under the proposed project may improve access to nearby vacant areas (over 1,000 acres located north of the site and designated for low-density residential development) and increase pass-by traffic. The provision of infrastructure improvements under the proposed project may also decrease the costs associated with extending or improving the existing infrastructure to these vacant sites and, therefore, make future development less costly and more expedient for developers.

The proposed roadways will provide traffic access through the site. These roadways may make the surrounding area more attractive to investors, property owners and future residents and, thus, induce development in these areas. Therefore, the proposed project may facilitate development in these nearby vacant areas by making them more attractive residential sites or commercial and industrial centers.

Environmental impact associated with growth-inducing infrastructure expansion will be assessed in accordance with CEQA as such new infrastructure projects are proposed. Mitigation for significant environmental impacts associated with such projects will be the responsibility of those projects.

Economic Growth

The proposed project is designed to develop the former MCAS El Toro facility with primarily open space/recreational, commercial, research and development, and institutional uses.

The planned residential development on the site is expected to partially accommodate housing demand that will be created by employees on-site wanting to reside near their places of work. These housing units, in addition to the estimated 55,000 housing units planned, but not yet built, in the County, will increase the housing stock of Orange County.

The project is primarily focused on providing park/open space/recreation opportunities. These land uses will not generate a significant number of jobs. The planned land uses under

the proposed project that would attract jobs to the area, include research and development, institutional, and educational. With the exception of research and development, these sectors are not considered economic drivers. Thus, the proposed project promotes economic growth; however, that is not the goal of the project.

The presence of a qualified labor force in the region and the high demand for research and development and office space in Orange County led to the provision of adequate space for these sectors under the proposed project. The provision of a university campus on the site to support and develop this labor force is planned to attract high technology industries that demand a highly skilled labor force.

Environmental impact associated with growth-inducing economic development, (such as demand for industrial facilities, increased traffic, noise and air quality impacts) will be assessed in accordance with CEQA as such new projects are proposed. Since it is unclear at this time how growth-inducing economic development may affect growth in the area, it is not possible to quantify potentially significant impacts or identify mitigation measures to reduce such impacts to less-than-significant levels. Mitigation for significant environmental impacts associated with such projects will be the responsibility of those projects.

Removal of Development Restrictions

Since 1981 the recognized planning document for land use in the environs of the former MCAS El Toro has been the 1981 Air Installation Compatibility Use Zones (AICUZ) study. As part of this study, noise and accident potential zones were developed for areas surrounding the former MCAS El Toro property. A land use compatibility matrix and applicable land use and zoning strategies were developed in an effort to achieve and maintain compatible land uses near the former MCAS El Toro site. The Noise Element of the Orange County General Plan establishes the 65 dB(A) CNEL contour contained in the 1981 AICUZ as the Policy Implementation Line (PIL) in which new residential construction is not permitted, although exceptions may exist for neighborhood infill conditions. At the time of development of the 1981 AICUZ, some residential development had already occurred within what will become the 65 dB(A) CNEL contour.

Since 1973, the City of Irvine has incorporated such factors as noise and accident potential into its General Plan, zoning, and development policies. In 1980, the City and the Marine Corps entered into a Memorandum of Understanding (MOU) that established the AICUZ study as the “basic planning resource in conjunction with the amendment of the City’s adopted General plan in so far as it relates to aircraft noise and hazard.”

Consistent with the passage of Measure W by Orange County voters and the County of Orange plans for the project site, the proposed project does not include aviation uses on the site, and thus will allow removal of development restrictions associated with the aircraft clear zones and flight patterns and the noise-restricted areas around the former MCAS El Toro. Previously development-restricted areas in the City, adjacent cities, and unincorporated areas in the County of Orange could develop with residential and other land uses, at higher densities, and at higher building heights. Such a scenario could allow new development in the surrounding area that would not have been possible if the aviation uses remained on the site.

Since it is unclear at this time how the removal of these development restrictions may affect growth in the area, it is not possible to quantify potentially significant impacts or identify mitigation measures to reduce such impacts to less-than-significant levels. Furthermore, these development restrictions are imposed by a variety of jurisdictions, and the City cannot guarantee implementation of mitigation measures outside of its jurisdiction. Therefore, no feasible mitigation is available to reduce this potentially significant impact.

Indirect Impacts

Indirect or secondary growth-inducing impacts consist of growth induced by additional demand for housing, goods, and support services associated with population and employment increases caused by or attracted to the area.

The adoption and implementation of the proposed project will allow for the intensification of urban land uses on-site and will create short-term construction employment, as well as long-term employment in research and development, institutional, and educational land uses. Additional employment opportunities in the City will be partially met by the local labor force, although individuals from areas outside the region may relocate to the County to be near these jobs. These off-site employees may, in turn, create additional demand for housing. While planned residential development on the site is expected to accommodate some of this demand, adjacent residential areas are expected to experience an increase in demand due to the availability of jobs on the site. As indicated earlier, some 55,000 housing units have yet to be built in planned developments in the surrounding area. These units are expected to meet demand resulting from new jobs on-site.

The jobs and households on-site will also create demand for goods and services in the area. This demand may be met by the existing Irvine Spectrum development and new commercial, recreational, and retail uses that will be developed on-site, as well as in the surrounding area. Providing the goods and services needed to support new development on-site will lead to increases in demand for housing and support services, which in turn will induce additional growth in the City and the surrounding area. Thus, new development under the proposed project is expected to produce a multiplying pattern of development, investment, and growth in the community.

Roadway improvements, infrastructure systems, and provision of public services in the area may encourage residential, commercial, and industrial construction in adjacent areas, which will increase local population and employment bases. The intensification of land uses will foster growth and increases in utility consumption, as well as in demand for public services. Construction of capital improvements that are needed to support development will affect the pace of growth in the project area. The availability of adequate utilities and infrastructure in the area is expected to indirectly serve to promote development of adjacent areas.

The reduction of land in the project area in agricultural production, will have the indirect effect of increasing development pressure and accelerating the loss of the remainder of the agricultural land within the area. A net decrease in farmland under cultivation in an area has a consequent increase in agricultural production costs such as transportation and labor. Agricultural activities tend to be incompatible with urban and suburban neighbors because of factors such as dust, odors, pesticide use and machinery noise associated with normal farming operations. Farmers may also experience increased costs associated with garbage

dumping on their property, theft of produce and equipment, vandalism of equipment, and increased traffic on roads used to move equipment between fields. Development within the project area may reduce the attractiveness of continued production on nearby farmlands, and may increase the financial rewards of taking land out of agricultural use.

However, conversion of agricultural land to urban uses is a long and continuing trend in Orange County. Though it is difficult to quantify the amount of agricultural land that is under development pressure within the County, it is unarguable that such pressure exists and will continue with or without implementation of the proposed project. As a result, while there are existing pressures that would result in the conversion of agricultural land within and adjacent to the project area with or without implementation of the proposed project, it is expected that the conversion of agricultural land within the project area will serve to indirectly promote the conversion and development of agricultural land within the area.

7.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126 of the CEQA Guidelines states, in part, that the EIR should address “significant irreversible environmental changes which would be caused by the project should it be implemented. Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or non-use thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.”

Impact Analysis

Annexation of the former MCAS El Toro site, the Musick jail site, and the IRWD parcel will increase the land area within the jurisdictional boundaries of the City of Irvine. No new development on the Musick jail site or the IRWD parcel is proposed as part of the annexation. Thus, no irreversible environmental changes are expected with the annexation of these two sites. The following analysis focuses on the environmental changes that are anticipated with new development planned on the former MCAS El Toro site under the proposed project.

Adoption of the proposed project will result in the redevelopment of the site, including demolition of most of the existing on-site structures. The proposed project proposes construction of a variety of new structures and facilities; provision of new infrastructure systems; and provision of public facilities and other public improvements to serve future development in the area. New structures built under the proposed project will represent a long-term commitment to park/open space/recreational, research and development, and institutional uses proposed on the site. This new development at the former MCAS El Toro site will preclude aviation and military uses. Thus, irreversible and long-term effects associated with the proposed project implementation include new research and

development and institutional development on the site, as well as new roadways, storm drain facilities, water system, sewer system, and other facilities that will support planned development. Because the proposed project will be implemented over a long period (20 years or more), certain environmental impacts associated with future development projects will be incremental and cumulative over the long-term.

Primary Impacts

Implementation of the proposed project will result in an irreversible commitment of non-renewable and renewable resources, including land, construction materials, aggregate materials, water, and energy resources.

Incremental loss of agricultural land and undeveloped/underdeveloped areas on site will occur. Aside from the conversion of the agricultural areas, runways, taxiways and aprons, and underdeveloped sections of the site to more intensive urban uses, the project site does not possess significant on-site mineral, energy, oil, or cultural resources that will be adversely affected by new development under the proposed project (see Section 5). The existing runways will be recycled for use in construction project roadways and other features requiring aggregate materials. The proposed habitat reserve along the eastern edge of the site will be preserved to protect biological resources in this area.

Construction activities carried out to implement the proposed project will require a wide variety of construction materials, including such non-renewable resources as sand, gravel, and steel, and renewable resources such as lumber. Resources committed during construction are unlikely to be recovered, even after the 50- to 75-year life span of the physical structures is reached. The amount of resources that will be committed is not considered significant relative to available resources in the region and considering the incremental phasing of development within the proposed 20+-year time frame. Furthermore, this use of resources is not considered wasteful nor will it be substantial relative to other urban development at a similar scale in the region.

Water and energy resources will also be irretrievably committed during construction of various developments planned on site. Once constructed, ongoing maintenance of structures built in the project area will result in further commitment of water and energy resources in the form of fuel, natural gas, and electricity. These commitments represent long-term obligations that will accompany future development activities. Utility providers have indicated that available resources and facilities are adequate to serve future development under the proposed project.

Specific development projects that are constructed under the proposed project represent a commitment to the improvements and land uses planned in the area. The provision of new infrastructure, roadways, and public facilities on-site will also enhance the physical environment through the elimination of existing, older infrastructure systems. The City of Irvine and other affected agencies will maintain roadways, parks, and other public facilities on-site and serving the site. This will entail financial, personnel, and facility resources from service providers.

The proposed project is intended to redevelop the former MCAS El Toro site with a variety of land uses that will reflect similar development in the City and desired by the City; to ensure the adequate provision of public services and infrastructure; and to prevent the

adverse impacts associated with haphazard development. Annexation of the former MCAS El Toro site will be consistent with City policies regarding land annexation and related provision of infrastructure within its Sphere of Influence. This annexation will also allow the City of Irvine to regulate redevelopment efforts at the site.

In summary, annexation of the former MCAS El Toro site, Musick Jail site, and IRWD parcel and implementation of the proposed project will involve the following irreversible environmental changes:

- New development under the proposed project will lead to the loss of agricultural land on-site. These existing agricultural areas are planned for the development of the wildlife corridor, open space/park, and sports park uses.
- The project involves the commitment of approximately 4,738 acres (former MCAS El Toro) to land uses proposed under the proposed project, resulting in the elimination of existing on-site development. Some structures ("The Castle", former bachelor housing) and uses (golf course, habitat preserve) may be retained, and some may serve as interim facilities until permanent facilities are constructed (i.e., El Toro Marine School and some existing office buildings, some of which have been retrofitted for other uses).
- New vehicle trips on proposed and surrounding roadways will be generated by new development under the proposed project. Planned roadways on-site are expected to provide access into the site and allow changes in traffic patterns due to the alternative routes provided on-site.
- Vehicle trips generated by new development under the proposed project will result in increases in air pollutants, including criteria air pollutants, associated with vehicle exhaust. Greater pollutant emissions are also expected from new stationary sources that may be built within the project area.
- New development under the proposed project will introduce long-term noise from vehicles traveling to and from the project site. The vehicular noise will add to ambient noise levels on-site and in the surrounding area. New sources of stationary noise are also expected from future development and on-site activities.
- The project will require the commitment of energy, water, and other natural resources for the construction and operation of new development. However, existing resources are available to meet the projected demand and utility providers can serve new development under the proposed project without adverse impacts.
- Implementation of the proposed project will involve demolition of existing structures that have asbestos-containing materials and lead-based paint and the disposal of other hazardous materials on the site. Abandonment of water wells and fuel tanks will also occur, along with the remediation of identified contaminated soils. Thus, elimination of existing public health and safety hazards will accompany the proposed project.
- Implementation of the proposed project will result in an increase in the demand for utilities and will require the extension of existing infrastructure to individual lots on

the site. An increase in demand for public services and facilities operated by the City of Irvine and affected service agencies will also occur. This demand can be served by facilities and staffing of public service agencies.

- The proposed project will lead to demolition of existing structures on site, the construction of new structures, and changes in the visual quality of the site. New light sources will be introduced to the environment. These changes will not result in significant adverse impacts after mitigation.
- The preclusion of an airport and airport uses in accordance with Measure W, which was passed by Orange County voters in 2002.

Secondary Impacts

Annexation of the proposed project area and its implementation will alter the pattern of on-site development through development of a primarily park/open space in the area and demolition of existing military facilities. New development planned under the proposed project will involve the provision of new roadways and infrastructure systems to serve individual lots and projects on-site. The proposed project will provide an extensive circulation network on-site and will divide the existing site into smaller planning areas for future development. While the former MCAS El Toro is not open to public access, the proposed project will provide public access to most of the site, as well as allow vehicles and people to pass through the site.

In the post-buildout period, when planned land uses change or areas are redeveloped within the project area, public service facilities and infrastructure that are constructed under the proposed project will continue to permit on-site urban development. These public improvements will also allow the site and the surrounding area to develop and accommodate additional population growth well beyond buildout of the project area. Recycling of land uses in and around the project area will be subject to City of Irvine General Plan policies for planned growth, phased development, and provision of public facilities and services. Therefore, no environmentally significant secondary impacts are anticipated to result from project implementation.

7.4 UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL EFFECTS

Based on the data and conclusions in Section 5 of this Final Program EIR, annexation of the former MCAS El Toro, Musick Jail and IRWD parcel and new development projects that will be implemented under the proposed project may result in significant unavoidable traffic/circulation, air quality, agricultural resources and population/housing impacts that cannot be fully mitigated. Implementation of the recommended mitigation measures will reduce all other impacts to less-than-significant levels.

Traffic/Circulation

The 2025 and post 2025 analyses indicates that all intersections and roadway/freeway/tollway/ramp segments will operate acceptable levels of service with the existing or planned

improvements. However, it has been assumed in the traffic analysis that the cumulative impact of project traffic along with other regional growth at the identified ramp and freeway locations will be mitigated through a combination of regional programs that are the responsibility of other agencies. If these programs are not implemented by the agencies with the responsibility to do so, the cumulative freeway/tollway ramp impacts would remain significant and unavoidable.

Air Quality

SCAQMD thresholds for oxides of nitrogen and reactive organic gases will be exceeded during construction activities on the site. Operational emissions (stationary and vehicular) will exceed SCAQMD thresholds for criteria pollutants, including oxides of nitrogen, reactive organic gases, and carbon monoxide from year 2007 through the post 2025 development level. Given the size of the proposed project, these impacts are not surprising. No feasible mitigation measures exist to reduce these impacts to less-than-significant levels.

Agricultural Resources

The proposed project will result in the permanent loss of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance (important farmland) to non-agricultural use within the project area. The project will accelerate the permanent loss of important agricultural land to non-agricultural use in the project vicinity as well. Appropriate amounts of agricultural and open space lands to be preserved are determined through City land use policy decisions. Mitigation measures in Section 5.8 will reduce the impact of the project on agricultural resources by encouraging agriculture as an interim land use pending development. However, impacts to agricultural resources will remain significant and unavoidable.

Population and Housing

The proposed Base Plan and Overlay Plan for the former MCAS El Toro site would substantially add to employment generation characteristics of Irvine and the region. Since, the project-related employment would exacerbate the subregional jobs/housing imbalance, the population and housing impact is considered significant and unavoidable. No feasible mitigation has been identified that would reduce this impact to a level less than significant.

7.4 AREAS OF LESS THAN SIGNIFICANT IMPACT

Based on the analysis contained in Section 5, environmental impacts from the proposed project will be less than significant without mitigation or will be less than significant with mitigation for the following issue areas:

- Land Use
- Paleontological Resources
- Noise

- Cultural Resources
- Public Health and Safety
- Aesthetics
- Geology and Seismicity
- Hydrology and Water Quality
- Public Services and Facilities (includes Recreation)
- Biological Resources
- Utilities

8.0 References

A. Persons Responsible for Preparation of the EIR

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Responsibility: Preparation of Traffic Impact Analysis, Orange County Great Park
Plan Traffic Impact Analysis, Urban Crossroad, Inc., November 2002.

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Responsibility: Preparation of an Air Quality and Noise Assessment, Orange County
Great Park, March 15, 2002.

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Responsibility: Preparation of Hydrology and Utilities Analysis.

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ASTRUM Utility Services
462 Stevens Avenue, Suite 308
Solana Beach, CA 92075

Responsibility: Preparation of Energy Analysis.

B. Persons and Organizations Contacted

1. Comment letter from the Irvine Police Department (2002).
2. Information for the fire protection section is based on information from Mick Rohde of the Orange County Fire Authority in his letter (January 7, 2002) and personal conversation (March 2002), as well as previous information provided by Nancy Foreman of the Orange County Fire Authority in her letter (January 22, 1999), Response to Comment letter (May 15, 1999), Response to Notice of Preparation (September 15, 1999), and personal conversation (September 1999).
3. Comment letter from Don Chadd, Irvine Unified School District (October 31, 2002).
4. Personal conversation with Tom Tullar, Saddleback Valley Unified School District (December 2002).
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C. Documents

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9.0 Responses to Comments

Comments and Responses to Public and Other Agency Comments

The Orange County Great Park Draft EIR was circulated for public review for a period of 45 days extending from February 19, 2003 to April 4, 2003. The Draft EIR was distributed to a variety of public agencies and individuals.

In accordance with CEQA Guidelines Section 15088, the City of Irvine has evaluated the comments on environmental issues received from those agencies/parties and has prepared written responses to each pertinent comment relating to the adequacy of the environmental analysis contained in the Draft EIR. There has been good faith, reasoned analysis in response to comments, rather than conclusionary statements unsupported by factual information.

The agencies, organizations, and interested persons listed on the “Response to Comments Index” submitted comments on the Draft EIR during the public review period. Each comment submitted in writing is included, along with a written response where determined necessary. Each comment letter is identified with a letter in the upper right corner of the first page of the letter. The individual comments have been given reference numbers, which appear in the right margin next to the bracketed comment. For example, Letter A will have comment numbers A1, A2, etc.

In response to comments received, certain revisions have been made in the Final Program EIR. All revisions are marked in ~~strikeout~~/underline format. These revisions to the Final Program EIR are generally minor text changes that do not constitute significant additional information that changes the outcome of the environmental analysis or require recirculation of the document (Guidelines Section 15088.5). All such changes are noted in the responses to comments.

The agencies, organizations, and individuals that submitted comments on the Draft EIR are identified in Table 9-1 Responses to Comments Index. The comment letters and responses are provided on the following pages.

**Table 9-1
Responses to Comments Index**

Commentor	Letter Reference
Federal Agencies	
US Fish and Wildlife Service	BB1 – BB21
State Agencies	
Office of Planning and Research	A1
Public Utilities Commission	C1 – C2
Department of Toxic Substances Control	L1
Regional Water Quality Control Board, Santa Ana Region	P1 – P8
Department of Transportation	S1 – S7
Department of Fish and Game	BB1 – BB21
Department of Conservation	CC1 – CC3
Department of Toxic Substances Control	DD1 – DD14
Department of Transportation	II1 – II22
Local Agencies	
City of Laguna Woods	D1 – D9
City of Mission Viejo	E1
Irvine Ranch Water District	G1 – G11
Orange County Planning and Development Services Dept.	H1 – H86
Airport Land Use Commission for Orange County	I1 – I13
Orange County Fire Authority	J1 – J26
Transportation Corridor Agencies	N1 – N4
Southern California Association of Governments	O1
Irvine Ranch Water District	Q1
Orange County Transportation Agency	V1 – V20
City of Tustin	X1 – X21
City of Lake Forest	Z1 – Z5
Irvine Unified School District	AA1 – AA8
City of Laguna Hill	EE1 – EE2
University of California, Irvine	FF1
Local Agency Formation Commission Orange County	GG1 – GG5
Metropolitan Water District of Southern California	JJ1 – JJ2
Organizations	
The New Millennium Group, Inc.	B1 – B7
North Irvine Villages Association	F1 – F71
Chevalier, Allen & Lichman, LLP	M1 – M94
Laguna Canyon Foundation	T1
The Kennedy Commission	HH1 – HH3
Public Law Center	KK1 – KK3
Individuals	
Ann Watt	K1 – K7
Donald Nyre	R1 – R19
Rae Gabelich	U1 – U2
Rex Ricks	W1 – W54
Don Stewart	Y1 – Y6

Response to Comment A1

This letter acknowledges that the City has complied with the State Clearinghouse review requirements for the EIR pursuant to the California Environmental Quality Act. No further response is required.

Response to Comment B1

The EIR is the environmental document pursuant to CEQA that identifies, analyzes and discloses potential environmental impacts and mitigation measures for the Orange County Great Park Plan. The Orange County Great Park Plan is consistent with the intent of Measure W since it allocates approximately 84 percent of the total land area of the former MCAS El Toro to open space, recreational, institutional, educational, cultural, and other public uses. Measure B was an advisory measure passed by the voters in November of 2002. The EIR does not analyze the impacts of the provisions of Measure B. Furthermore, because Measure B was passed as a County initiative, it does not have any legal effect with respect to actions taken by the City of Irvine with respect to lands within, or annexed to, the City. Section 5.5 of the EIR *Public Health and Safety* discusses the issues related to contamination on the base property and the various determinations and actions taken and planned to be taken by the responsible parties and regulatory agencies. Further, arguments for or against ballot measures published in voter pamphlets are not part of the language of the ballot measures subject to voters' action and therefore, are not in any way binding if the ballot measure passes. As such, the proponent's arguments for Measure B are not a binding mandate.

Response to Comment B2

The meteorological station used in the EIR is administered by the AQMD with wind velocity data generated, verified, and published by that public agency. The station referenced in Section 5.3 *Air Quality* is located on the project site, and is consequently represents the best source of on-site wind velocity data for air quality purposes. According to the website maintained by the AQMD (and referenced in the EIR on page 5.3-1), this data is neither erroneous nor obsolete.

Response to Comment B3

The proposed zoning regulations will allow for development on a similar scale as existing residential, industrial, office, and commercial buildings in the City of Irvine.

The objectives of the proposed project are defined on page 3-29 of the EIR. The project objectives are not to develop an aviation use at the former MCAS El Toro. As described in the EIR, the voter-approved Measure W initiative amended the County General Plan for the area of the base north of the Southern California Regional Rail Authority (SCRRA) Metrolink rail line (PA 51) to designate the unincorporated land for park, open space and other uses, removing the designation of the site as a commercial airport from the County General Plan (EIR, p. 1-2). Therefore, a detailed analysis of an aviation reuse alternative is not permitted under the Orange County General Plan and is not required under CEQA because an aviation reuse of the site does not meet the basic objectives of the project. Furthermore, on 25 February 2003, the Orange County Board of Supervisors, acting as the El Toro Local Redevelopment Authority, rescinded the Airport System Master Plan, thus removing an airport at the former MCAS El Toro from all County plans.

Response to Comment B4

As stated in Response to Comment B3, Measure W amended the County General Plan to remove the designation of the site as a commercial airport. Therefore, implementation of a commercial airport at this location is not consistent with the County General Plan nor is it consistent with most of the basic objectives of the project.

Section 6.0 Alternatives of the EIR addresses a reasonable range of alternatives to the proposed project as required by the CEQA Guidelines.

Response to Comment B5

This comment does not address the adequacy of the EIR nor does it raise an environmental issue with respect to the proposed project. While the City recognizes there are heightened security concerns regarding airports in general, there is no evidence to indicate that construction of a new airport, at any location, would alleviate security concerns at the existing John Wayne Airport.

Response to Comment B6

It is beyond the scope of the EIR to consider potential impacts of a non-aviation plan on existing residential communities contiguous to the Los Angeles International Airport, Ontario International Airport, Long Beach International Airport and Santa Ana (John Wayne) International Airport. As stated in Response to Comment B3, the proposed project objectives meet the spirit and intent of Measure W, which changed the County General Plan designation for the former MCAS El Toro from airport to non-aviation uses. This EIR analyzes the potential impacts of Annexation, General Plan Amendment and Zoning of the former base property and not those of Measure W. Furthermore, on 25 February 2003, the Orange County Board of Supervisors, acting as the El Toro Local Redevelopment Authority, rescinded the Airport System Master Plan, thus removing an airport at the former MCAS El Toro Airport from all County plans.

Refer to Final Environmental Impact Report No. 573 *For the Civilian Reuse of MCAS El Toro and the Airport System Master Plan for John Wayne Airport and Proposed Orange County International Airport* for information pertaining to reports and supporting data from studies conducted for that EIR.

Response to Comment B7

The Orange County Great Park plan proposes several features that will address on-site water quality control and flood protection. These project features provide a unique opportunity for water quality and flood protection to be addressed on a regional level and in a comprehensive manner. The proposed water quality and flood control concept plan is shown on Figure 5.7-2 of the EIR. A description of the concept plan is provided on pages 5.7-16 through 5.7-22 of the EIR. The EIR identifies future potential permit requirements for project implementation, including Section 404 Permit(s) from the U.S. Army Corps of Engineers (EIR, p. 3-30). A Section 404 permit(s) will be obtained as necessary, as future projects are proposed within the project area. In the context of the size of the entire site, there is a relatively small amount of existing wetland habitat which is generally limited to the Borrego channel and San Diego Creek. The mitigation of potential impacts to wetland habitat as a result of project implementation will be addressed through the Section 404 permit process. The construction of the proposed 179-acre wildlife corridor will provide significant opportunity for the creation and enhancement of viable wetland habitats within the project area. Drainage improvements and flood control facilities will also be created on-site through the daylighting of the Bee Canyon and Agua Chinon channels.

Response to Comment C1

Page 3-31 of the EIR has been revised to include the California Public Utilities Commission under "Actions and Approvals of Other Agencies." The modified text reads:

- California Department of Fish and Game-Approvals related to wildlife corridor and habitat areas
- Federal Department of the Interior (DOI) Fish and Wildlife Agency
- Southern California Regional Rail Authority (SCRRA)
- Orange County Transportation Authority (OCTA) – Revisions to the County Master Plan of Arterial Highways (MPAH)
- Irvine Unified School District
- Saddleback Unified School District
- California Public Utilities Commission – Highway Rail Crossings

Response to Comment C2

Comment noted. The City will notify and coordinate with the CPUC as appropriate, with respect to any future trails planning on or adjacent to the railroad right-of-way.

Response to Comment D1

The traffic analysis is based on the most current regional growth projections that have been adopted by the County of Orange which incorporates the most current projections for all the cities in the County. The concept of trip banking in Laguna Woods, related to available trips on Moulton Parkway, was not considered, as the traffic model addresses regional traffic impacts.

Response to Comment D2

The difference in daily traffic volumes cited in this comment is most likely due to the collection of traffic count data at different times. The 20 percent variation is quite possibly due to day to day variation in traffic conditions or changes in traffic patterns that occur as various roadway improvements are implemented. It does not affect the findings and conclusions of the Traffic Impact Analysis because project impacts and resulting mitigation are all based on more detailed analysis of peak hour conditions.

Response to Comment D3

The traffic analysis is based on the most current regional growth projections that have been adopted by the County of Orange which incorporates the most current projections for all the cities in the County. No roadway or intersection improvements attributable to the Laguna Hills Mall were included in the Great Park traffic study. Therefore, the analysis is inherently conservative, as any additional improvements may result in a decrease in the Great Park project traffic impacts that were identified. Mitigation Measure Trans. 6 is consistent with the El Toro Roadway and Landscape Improvement project.

Response to Comment D4

Concurrently with the proposed project, the City of Irvine is considering adoption of the North Irvine Transportation Improvement (NITM) program. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events. Traffic mitigation improvements within the City of Laguna Woods and other areas outside of Irvine will receive fair-share funding from the NITM program.

The City of Irvine recognizes that as the agency with jurisdiction over the intersections and as the lead agency for the construction of intersection improvements must concur with the proposed mitigation measures if those mitigation measures are to be implemented.

Response to Comment D5

The DON intends to incorporate temporary institutional controls in remediating IRP Sites 16 and 24 on the base. The Record of Decision for Site 24 states that “the Environmental Restriction Covenant and Agreement(s) will include information summarizing the remedial actions at Site 24 and provisions for terminating or modifying the Environmental Restriction Covenant and Agreement(s) when cleanup levels established in this ROD have been achieved and the remedial equipment has been removed.” Refer to the *Final Record of Decision, Operable Unit 1, Site 18 – Regional Volatile Organic Compound Groundwater Plume, Operable Unit 2A, Site 24 – VOC Source Area, Former MCAS El Toro, California* (Bechtel National, Inc. 2002) for additional information. The Record of Decision for Site 16 is expected to contain a similar process for removal of temporary restrictions. Responsibility for development and enforcement of the temporary restrictions rests exclusively with the DON and the applicable state agencies depending on the nature of the controls. The City has no authority over the federal process to implement Institutional Controls at the former

MCAS EL Toro regardless of mitigation measures proposed in the EIR. See also the attached letter from the DON dated 25 April 2003, describing the public sale plan, including Findings of Suitability to Transfer and Lease in Furtherance of Conveyance processes as well as the methodology of imposing, monitoring, and removing environmental remediation restrictions.

Response to Comment D6

The City will adopt rules, policies, and regulations as needed that will supplement the implementation of the temporary institutional controls by the DON and other agencies. The City's approach will be similar to and consistent with rules, policies, and regulations in use to control development and construction activities and enforced in a similar manner. Until the institutional controls are adopted by the DON via an Environmental Restriction Covenant and Agreement(s), the City cannot identify with certainty the specific rules, policies, and regulations that will be needed. Refer to Response to Comment D5 for an example of regulations that control development and construction activities.

Response to Comment D7

The City is cognizant of the potential for stormwater impacts from contaminated sites. However, at both Sites 16 and 24, the remediation activities are focused on treating contaminated groundwater. Because hazardous materials are not present at the surface of the site, there is minimal potential for stormwater to create a hazardous materials runoff. At Site 16, remediation of subsurface soil may be required, but it is expected to be completed prior to a fee conveyance to another party. Also refer to Response to Comment D8.

Response to Comment D8

Individual projects within the project area will be responsible for the development and implementation of specific Storm Water Pollution Prevention Plans (SWPPPs) and Water Quality Management Plans (WQMPs) to address the potential pollutants of concern based on the location, size, and type of development and proposed operations. Site specific BMPs and structural controls will be identified for each individual project based on the need to target specific potential sources of pollution. Implementation of Mitigation Measures H/WQ 1 and H/WQ 2 (EIR, pages 5.7-24, 25) will ensure that these uses are implemented in accordance with local and state regulatory requirements.

Response to Comment D9

The City of Irvine agrees that implementation of a regional approach to stormwater management is preferred. To further this goal, the City's proposed Orange County Great Park drainage plan concept provides for the creation of large, natural drainage features that are designed to address regional water quality and flood control in a comprehensive manner. The proposed natural drainage corridors will function in a manner so as to control surface water flows and maintain and/or improve surface water quality, for stormwaters that emanate from both on-site development and development that occurs in surrounding areas. As described in the EIR, the drainage corridor concept is consistent with and facilitates the regional flood control master plan adopted by the Orange County Public Facilities and Resources Department, The Irvine Company, and the cities of Tustin and Irvine. In addition, regional water quality issues are proposed to be addressed by the project through the construction of "natural treatment system" (NTS) basins within the proposed natural drainage corridors. The IRWD has issued a draft Master Plan and draft EIR on this program. Figure 5.7-2 of the EIR identifies the location of the proposed drainage corridors and potential NTS water quality basins.

Response to Comment E1

Comment noted.

Response to Comment F1

This comment does not note any specific sections or tables requiring revision. The references to appendices and volumes identified in the EIR Section 5.2 *Traffic/Circulation* have been reviewed and revised appropriately. Additionally, the other EIR sections have been updated to correspond the correct lettering of appendices, as appropriate.

Response to Comment F2

The Jeffrey Road extension is not part of this project. Both the Jeffrey Road extension and the SR 133/Trabuco Road interchange are included in the North Irvine Transportation Model (NITM) program and are prioritized for construction in the NITM program based on the comprehensive NITM program traffic study. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events.

Response to Comment F3

The normal practice in the City of Irvine has been a threshold criterion of 0.02 for major arterials, not 0.01 as stated in the comment. The 0.03 threshold is used for Congestion Management Plan (CMP) roadways to ensure consistency with the Orange County Congestion Management Plan.

Response to Comment F4

The freeway mainline and ramp peak hour analysis is included in the EIR pages 5.2-35, 5.2-36 and Appendix G. Furthermore, freeway congestion does in fact influence the traffic volume forecasts in the Traffic Impact Analysis. The Irvine Transportation Analysis Model (ITAM) takes congestion effects into account and distributes traffic to the most desirable/least congested route. Also refer to Response to Comment F24.

Response to Comment F5

Improvements associated with Trabuco Road and Irvine Boulevard have been included in the Great Park Traffic Impact Analysis and the NITM program, along with the Northern Sphere development itself. The mitigation measures for the Northern Sphere have been adopted by the City of Irvine as required mitigation measures. These improvements will also be conditions of approval for subdivisions processed within the Northern Sphere.

The financial difficulties of the State do not affect the funding source for the I-5 Freeway/Culver Drive interchange improvements. The funding source is Measure "M" funds derived from County tax revenue resulting from a sales tax increase approved by Orange County voters; as a result, the Measure M funds are not controlled by the State.

Response to Comment F6

The phasing listed is correct. The Portola Parkway to SR-241 segment should not be included. Refer to Response to Comment F2. Since the Trabuco Road/SR-133 interchange is funded but may not be completed until after 2025, it is appropriate to show the improvement operational in the post-2025 timeframe.

Response to Comment F7

The EIR correctly states that unfunded buildout roadway segment improvements are summarized in Table 4-3 of Appendix G. Regardless of the title of the table, the table accurately identifies unfunded future roadway improvements.

Response to Comment F8

The traffic associated with the unfunded, full expansion of the Musick Jail site is not included in the City of Irvine's current ITAM. However, based on the Musick Jail final EIR traffic analysis, the proposed expansion is expected to generate 4,253 additional trips on a daily basis. The additional 4,253 trips represent an increase of less than one percent compared to the other known development projects (e.g., Northern Sphere and Planning Area 40/Spectrum 8) that were explicitly included in the traffic analysis. The percentage is even smaller when all development anticipated within the study area (both within the City of Irvine and adjacent jurisdictions) is considered. Therefore, these additional trips are not considered significant. In addition, the Musick Jail expansion project is also required to mitigate any significant traffic impacts it may cause or contribute to.

Response to Comment F9

The segment of the I-5 Freeway referenced in the comment carries seven percent of the project traffic, not 10 percent as stated in the comment. The results contained in the Figure 5.2-17 take into account traffic redistribution effects. For instance, trips that leave the project site may be balanced by the South County work trips that now go to project provided employment opportunities rather than further north to the Irvine Business Complex.

Response to Comment F10

Within the EIR Section 5.2 *Traffic/Circulation*, references to Volume III Appendix K have been updated to references to Volume II Appendix G, where appropriate.

Response to Comment F11

The assumption that other mitigation measures are possible and not undesirable is based upon information from Caltrans, OCTA, and SCAG as embodied in the Regional Transportation Plan, wherein alternative improvements such as enhanced traffic service, TGM programs, etc. will serve to reduce freeway congestion. An example of an alternative improvement would be to provide additional mainline capacity.

Response to Comment F12

As shown in the EIR and supporting Traffic Impact Analysis (Appendix G, Tables 7-12 through 7-25), the project related traffic drops below the significance threshold at the Jeffrey Road interchange.

Response to Comment F13

The NITM Program includes engineering concept plans for freeway and corridor improvements. The engineering and right of way analysis completed as part of the NITM program has determined that the proposed mitigation measures are feasible.

Response to Comment F14

The comment suggests that Irvine Boulevard or Bryan Road might be impacted further west than the western limit of the study area. The traffic study analysis shows that neither the Culver Drive at Irvine Boulevard nor the Culver Drive at Bryan Avenue intersections are impacted by the project as shown on Tables 7-34, 7-37, and 7-40 of Appendix G of the EIR.

Response to Comment F15

The Traffic Impact Analysis includes all of the locations identified in the comment. The I-5 Freeway Northbound on- and off-ramps at Trabuco Road are analyzed as a single

intersection in the traffic study rather than two separate locations as implied in the comment. The second intersection is located at Trabuco Road/Culver Drive.

Response to Comment F16

Irvine Center Drive and Irvine Boulevard within the study area are examples of CMP roadways. Exhibit 9-A in Appendix G of the EIR specifically identifies CMP facilities within the study area.

Response to Comment F17

Irvine Boulevard within the study area is a CMP roadway and was analyzed using a significance threshold of three percent in the traffic study.

Response to Comment F18

The performance threshold for Irvine Boulevard is LOS "E" rather than LOS "D". Using the 2000 Highway Capacity Manual, the additional roadway performance increase in delay allowed is up to 25-seconds in the peak hour.

Response to Comment F19

The City of Irvine's approved analysis methodology is the intersection capacity utilization (ICU) methodology. Although the ICU methodology does not specifically include any provision for the effects of pedestrian activities, the assumed capacity of 1,700 vehicles per lane per hour (vphpl) is less than the ideal capacity of 1,900 vphpl that are used in more detailed analysis methodologies. One factor that could account for the more conservative capacity per lane is the effect of pedestrian activities.

Response to Comment F20

There is no Table 2-23 in the Traffic Impact Analysis (Appendix G of this EIR). It is assumed that the comment refers to Table 2-1 (Daily Roadway Capacity Assumptions). The capacities for freeways greater than 10 lanes were not explicitly listed on Table 2-1. However, the following capacities were identified in the analysis contained in Section 7:

<u>Lanes</u>	<u>Capacity (vehicles per day)</u>
12	250,000
14	290,000
16	330,000
18	370,000

Response to Comment F21

The traffic count data throughout the City of Irvine was collected in 2002. Only a small amount of traffic count data in the already developed areas of the adjacent cities to the east of the City of Irvine utilized existing conditions data from 2000 or 2001. Furthermore, such daily data has no effect on the future conditions traffic volume forecasts or analysis. Finally, the project impacts are identified and mitigation has been developed on the basis of the more detailed peak hour traffic data and analysis.

Response to Comment F22

The volume refers to the segment from the I-5 Freeway northbound on- and off-ramps to Yale Avenue.

Response to Comment F23

The capacity listed is a general planning capacity and reflects three northbound lanes and four southbound lanes (for a total of seven lanes). It is appropriate to use this capacity in the analysis, as the fourth southbound through-lane has most likely been constructed in response to actual traffic patterns and presumably serves the requirements of the greatest traffic volume. The Traffic Impact Analysis peak hour assessment of conditions at the actual intersection of Culver Drive at Trabuco Road takes into account merging into three southbound lanes.

Response to Comment F24

The traffic forecasts have been developed using the Irvine Transportation Analysis Model (ITAM), Version 3.01. The ITAM takes congestion effects into account, and congestion influences the assignment of traffic to the freeway and surrounding roadway system. It should be noted the generalized planning level freeway mainline capacities in the ITAM model are far lower than the volumes (exceeding 2,300 vehicles per hour) that have been observed on busy freeways in southern California.

Response to Comment F25

This data was inadvertently omitted from the existing conditions summary table only. The analysis results are included in Appendix F of the Traffic Impact Analysis (Page F-5) which is included as Appendix G of this EIR and indicate that the existing ICU values at this location are 0.58 in the AM peak hour and 0.82 (LOS "D") in the PM peak hour.

Response to Comment F26

The footnote means that the SR-133/Trabuco Road interchange was not treated as a funded 2007-2025 improvement in the EIR and was not included in the primary Traffic Impact Analysis. A special issues analysis examining the benefits/impacts of including this interchange for 2025 conditions was also included in the Traffic Impact Analysis.

Response to Comment F27

There is no change in the number of lanes shown on the I-5 Freeway north of Sand Canyon on the exhibits in the EIR or the supporting Traffic Impact Analysis. The segment of the I-5 Freeway north of Sand Canyon is shown as a 14-lane freeway ("14F") for existing conditions (Exhibit 3-A in the Traffic Impact Analysis and Figure 5.2-4 in the EIR); 2007 Conditions (Exhibit 4-A in the Traffic Impact Analysis and Figure 5.2-10 in the EIR); 2025 Conditions (Exhibit 4-C in the Traffic Impact Analysis and Figure 5.2-12 in the EIR); and Post-2025 Conditions (Exhibit 4-E in the Traffic Impact Analysis and Figure 5.2-15 in the EIR).

Response to Comment F28

It is incorrect to assume that the use of socioeconomic data (SED) rates results in generally lower traffic volumes. Traffic models validated using land use data or SED have both been shown to match (validate to) existing traffic volumes quite well. The adopted ITAM, version 3.01, uses socioeconomic data as a basis for analysis.

Response to Comment F29

The students included in the Great Park Traffic Impact Analysis were all treated as commuter students, thus generating the highest possible number of trips to and from the project. The model can handle both commuter students and resident (non-institutionalized group quarters) students. The analysis assumed 4,000 students in the 2007 analysis for both the Base Plan and the Overlay Plan. The analysis assumed 7,637 students in 2025 for the Base Plan and 7,800 students in 2025 for the Overlay Plan. This represents a change of 3,637

(Base Plan) to 3,800 (Overlay Plan) students from 2007 to 2025. The source of this data is the Great Park project description.

Response to Comment F30

The types of activities described in the comment are accounted for in the trip rates for residential land uses (see Table 5-10). These types of activities are potentially included as non-home based productions (Other-to-Other or O-O) or as attractions (Home-to-Work/H-W or Other-to-Other/O-O).

Response to Comment F31

The numbers of students are based on the Great Park project description. The hours of travel have been derived from the regional travel demand model and correspond closely to home-work trips, which exhibit a heavy concentration in the peak hours of traffic. Staff and maintenance workers were derived directly from the number of students (see Table 5-9 of Appendix G to the EIR, land use to socioeconomic data conversion factors). There is no distinction between residents and commuter students made in the ITE Trip Generation Manual. ITAM does differentiate between commuter and resident students, and the Traffic Impact Analysis assumed the worse case scenario of all commuter students.

The trip generation rate for students is reasonable. The project was assumed to include only commuter students. Not every student travels to a college campus everyday. Nor does every student drive a single occupant vehicle to school. Finally, the data being referenced is land use based student trip generation, which was provided for informational purposes only and does not relate to the primary traffic impact analysis.

Response to Comment F32

The comment refers to the trip distribution exhibits. These exhibits present the percentage of project traffic, not actual traffic volumes. The percentage of trips oriented to the west is likely to drop over time, as the largest undeveloped areas of Orange County are located east of the project and will be more likely to interact with the Great Park project further out in time (e.g., 2025 versus 2007). The second part of the comment also mistakes the project trip distribution percentages for actual project volumes.

Response to Comment F33

The extents of the study area are appropriate. The study clearly identifies areawide congestion on the freeway system. The Traffic Impact Analysis has verified that the project's potentially significant impacts extend no further west than Jeffrey Road. The Traffic Impact Analysis (Appendix G of the EIR) informs the reader of the project impacts. The ITAM model, version 3.01, takes into account on-going development.

Response to Comment F34

Although the Great Park traffic study included all Northern Sphere roadway improvements identified as mitigation measures, improvements that were "project features" (including the referenced improvement) were inadvertently omitted. This does not affect the findings and conclusions of the Great Park traffic study, other than to potentially reduce the required mitigation. The NITM Program does take the referenced improvement into account.

Response to Comment F35

In accordance with the adopted City Traffic Study Guidelines, the subject roadway segment is not long enough to warrant separate analysis as a roadway segment. The more detailed peak hour analysis completed for the intersections of Culver Drive at Trabuco Road and

Culver Drive at the I-5 Freeway southbound ramps more accurately depicts the actual lane requirements for the segment of Culver Drive between these two intersections. The reason no peak hour segment analysis was performed for Culver Drive from Trabuco Drive to Walnut is that the daily roadway segment analysis for the subject segments was below the 0.02 impact significance criteria.

Response to Comment F36

The mainline freeways are already deficient under existing conditions. It is the responsibility of the regional agencies to address these deficiencies. Pursuant to City policy, the City of Irvine is working in close coordination with Caltrans regarding the improvements needed to mitigate identified project impacts. The City of Irvine does not control freeway improvements and cannot guarantee the implementation of the identified mitigation measures. For that reason, the EIR conservatively concludes that the impacts remain significant and unmitigated. Refer to Response to Comment F24 regarding the impact of freeway congestion on trip distribution.

Response to Comment F37

In accordance with the Caltrans standards, the Type 7 ramp most accurately defines the subject ramp. The Traffic Impact Analysis has identified a deficiency and mitigation to reduce the project impact to insignificant levels has also been identified, regardless of the initial ramp configuration.

Response to Comment F38

The geometric configuration referred to in the comment is actually shown in the ITAM model as Walnut Avenue. The ramp itself conforms to Caltrans standards and the analysis has been completed at an appropriate level of detail and accuracy. The movement of trucks is explicitly considered in Caltrans design standards.

Response to Comment F39

Refer to Response to Comment F24. The NITM Program is the implementing mechanism for the freeway ramp mitigation at the proposed SR-133/Trabuco Road interchange. This improvement will reduce traffic congestion at the I-5 Freeway/Sand Canyon Avenue interchange by providing an alternative means of freeway access. Therefore, no additional traffic diversions as theorized in the comment are anticipated.

Response to Comment F40

Refer to Response to Comment F36. The City of Irvine is working with Caltrans to implement mitigation related to the Great Park project where project impacts have been identified. The commentor is addressing areawide congestion issues. Because the City of Irvine does not control freeway improvements and cannot guarantee the implementation of the identified mitigation measures, the impacts remain significant and unmitigated, as described in the Traffic Impact Analysis.

Response to Comment F41

Comment noted. In accordance with the City's adopted traffic study guidelines, the threshold for significance of traffic impacts is a 0.02 increase in the volume-to-capacity ratio caused by the project. The identified roadway segment was measured to have a volume-to-capacity increase of less than 0.02 and thus no further analysis was required.

Response to Comment F42

No mitigation is required because the project does not worsen the ICU value by 0.02 or more. In fact, the Great Park project actually results in a decrease in ICU in some instances.

Response to Comment F43

Comment noted. The discussion in the Great Park traffic study is intended to address pedestrian and bicycle circulation issues directly related to the project site. Future bicycle connections through PA9A or within the SCRRA right-of-way are not a part of this project. Refer to Response to Comment F59.

Response to Comment F44

Although the westbound approach (Bryan Avenue) currently has two lanes in each direction, the table referenced in the comment (Table 3 in Appendix G of the EIR) incorrectly indicates three westbound through lanes and will be corrected in the final EIR. The City's Traffic Impact Analysis for existing and buildout conditions assumed the existing two lanes in each direction. Table F-44 is included in the Appendix to this Response to Comments document; this table shows the corrected 2007 and 2025 traffic conditions and indicates that no significant traffic impacts occur.

Response to Comment F45

The comment is correct, the ">" symbol indicates a right turn "overlap" or green arrow that allows simultaneous movement with the associated left turn movement (e.g., northbound right turns and westbound left turns, etc.).

Response to Comment F46

Based on the NITM Program engineering concept drawings, the east-side of Yale Avenue would be widened by 6 feet or less to accommodate the proposed improvement. No widening on the west-side of Yale Avenue, where the landscape is located, is anticipated.

Response to Comment F47

The NITM analysis has further investigated this location and the improvement noted in the EIR has been modified. The improvement required will be funded by NITM. The current engineered proposal to provide acceptable levels of service at this location would not include a free westbound right turn lane at this location. A dual westbound right turn lane configuration would be accomplished by widening the north side of Trabuco Road approximately 12 feet. Slight widenings of Culver Drive will also be required to accommodate the 3rd northbound through lane. The improvement required will be funded by NITM.

Response to Comment F48

The third EB-through lane identified for Irvine Boulevard at Jeffrey Road could be accomplished by widening the north side of Irvine Boulevard.

Response to Comment F49

Comment noted. The timing of these improvements may in fact occur in conjunction with the PA-8A development, but is not related to the Great Park impacts or mitigation requirements.

Response to Comment F50

Based on the Orange County Public Library (OCPL) capacity standards and an anticipated population of 7,681, under the Great Park overlay an additional 1,536 square feet of floor space and 11,522 volumes will be required to serve the project. Since the average size of a library facility is 10,000, construction of a new facility would not be warranted. To meet the

demand the Heritage Park facility could possibly be expanded in conjunction with demand created by other projects. The project area will continue to be served by the El Toro Branch facility and the new Foothill Ranch facility. Since a portion of property taxes are specifically allocated for capital improvement and operating costs for the County public library system, additional residents will make a financial contribution to expand and/or construct new library facilities.

Response to Comment F51

The Foothill and Eastern Transportation corridors are currently used by a substantial number of commuters. It is expected that tolls will be removed from the Foothill and Eastern Transportation Corridors in the future (i.e., post 2025). Also, buildout of the region would not occur for another 20-25 years. Regardless of whether or not tolls are collected, the completion of the Foothill and Eastern Transportation corridors will improve accessibility to new distant residential developments. Traffic impacts are addressed in the Traffic Impact Analysis in Appendix G of this EIR.

Response to Comment F52

New development within the surrounding area, including but not limited to, the Spectrum 8 and Northern Sphere projects, will include the development of additional residential dwelling units and provide housing opportunities. Therefore, a portion of future housing demand will be absorbed by these developments. The EIR does not premise the conclusions regarding population and housing impacts on the ability of other developments to provide housing. The EIR has concluded that the proposed project will result in a significant unavoidable impact associated with jobs/housing balance. Also refer to Response to Comment HH1.

The City agrees that, in general, residential uses create a greater demand on city services while generating less revenue, whereas non-residential uses (commercial and employment based uses) create less of a demand on services and generate more revenue for the City. These basic fiscal principles are evaluated for each General Plan amendment proposed within the City, including the Orange County Great Park plan and the information is provided to the City Council.

A white paper was developed to further evaluate key issues raised by the Spectrum 8 draft EIR population and housing analysis. The *Population/Housing Issues in Planning Area 40* (Carla Walecka, March 2003) concludes that, in a broader context, southern Orange County is a housing-rich community and the jobs/housing imbalance is not the only methodology that applies to regional growth forecasts. Growth impacts resulting from the proposed project have been substantially anticipated by adopted city, county, and regional growth forecasts. The referenced document states that:

“Professional literature and research customarily examine jobs/housing relationships at a subregional or county scale, not at the project or city scale...the [Spectrum 8] project is very beneficial because it balances the housing-rich nature of southern Orange County. Without jobs [in central Orange County], south Orange County residents would have to travel farther north or east for job opportunities. This would result in greater imbalance between jobs and housing opportunities, and exacerbate congestion and associated air pollution.”

The City of Irvine concurs with the conclusions stated in the Spectrum 8 EIR and further evaluated in the *Population/Housing in Planning Area 40* document (Carla Walecka, March 2003).

Response to Comment F53

As stated on page 5.14-2 of this EIR, the standard response times promoted by the City of Irvine Police Department are considered appropriate for the community. As stated in the EIR on page 5.14-2, the City of Irvine's Police Department response guidelines state:

- Responding to "emergency" events within six minutes, 85 percent of the time.
- Responding to "crimes in progress" events within 10 minutes, 85 percent of the time.
- Responding to "less serious crimes occurring now" events within 20 minutes, 90 percent of the time.
- Responding to "routine calls for service" events within 60 minutes, 85 percent of the time.

These response times are established by the City's Strategic Business Plan to ensure that appropriate resource levels are required for the Public Safety Department.

Response to Comment F54

Estimates of police personnel required for the Great Park are based upon current demand levels coupled with anticipated call for service based on the specific land uses in the plan rather than an officer-per-resident standard. Based on the City of Irvine's Police Department current staffing formula, the proposed project would require between 17 and 22 sworn police officers, three to five sworn police supervisors, and eight to 11 non-sworn support staff. Funding required for these new police personnel would be provided through a special assessment levied against the property owners within the project area.

Response to Comment F55

Following annexation, the entire project area will be within the City's corporate boundary and within the jurisdiction of the City of Irvine Police Department. Sharing the cost of policing the Great Park with the County of Orange is a policy issue. The fiscal plan for the OCGP Plan proposes fees and assessments to fund police services for the public park portions (i.e., Sportspark, Meadows Park, Exposition Area South, and the drainage and wildlife corridors). Special assessments will be applied to new development within the project area remaining on the tax rolls after the dedication of public use areas identified in the Great Park Plan.

Response to Comment F56

Refer to Response to Comment F53. Proposed additional police personnel numbers are based on the City of Irvine Police Department's staffing formula; anticipated calls for service to the project area are determined by the Police Department based on historical data regarding the proposed land uses.

Response to Comment F57

The comment regarding "mitigation measures" refers to the construction and/or operation of public facilities within the project area. Construction impacts related to the development of public facilities within the project area are likely to be short-term events; operation impacts are considered long-term events. Construction and operation impacts associated

with public facilities are considered under in Sections 5.1 *Land Use*; 5.2 *Traffic and Circulation*; 5.3 *Air Quality*; and 5.4 *Noise*.

Response to Comment F58

Comment noted. Section 5.14.2.1 *Public Services and Facilities Environmental Setting* has been amended to read:

“OCFA is planning two additional fire stations. Station No. 55 will be located ~~in Northwood~~ on the north side of Portola Parkway between Yale and Jeffrey, and Station No. 47 will be located near Sand Canyon and Interstate 405.”

Response to Comment F59

The final alignment of the Venta Spur connection through PA9, specifically in the area east of Sand Canyon, has not been determined. Figure 3-7 has been corrected to show a Class I trail along the north side of Trabuco Road, from the Eastern Transportation Corridor to the Meadows Loop Road.

Response to Comment F60

Comment noted. The actual parkland dedication requirement will be calculated during the review of subdivision maps for future residential developments, using the most current City of Irvine standard. It should be noted that community parkland dedication requirements will be deemed satisfied with the commitment to participate in the Development Agreement. The total amount of parkland in the project far exceeds the minimum required by the existing or proposed standard.

Response to Comment F61

Refer to Response to Comment F50. The square footage assigned to PAZ13 for museum/library facilities is necessary to determine traffic and other environmental impacts of the proposed project. The determination of how that square footage will ultimately be developed is dependent upon future opportunities and funding sources for these types of public facilities.

Response to Comment F62

The EIR bases its water demand analysis on the greatest demand, which is the Overlay Plan, as it proposes the greatest level of development under the proposed project. Refer to the attached IRWD comment letter (specifically comment G4) which confirms that the water district would utilize the Overlay Plan as representing the “worst case scenario” for water demand. Refer also to the IRWD Water Supply Assessment (Appendix C of the EIR) for further information about water supply.

Response to Comment F63

The Orange County IWMD’s CIWMP was approved in 1996 and shows that sufficient solid waste disposal capacity is available in the County for approximately 25 years, based on population projections for the area. Considering the potential for expansion by the County does not imply that current and near-future capacity is lacking.

The Regional Landfill Options for Orange County (RELOOC) is a long-term 40-year plan that is part of the County’s effort to assure that the countywide landfill system remains adequate, solvent, and efficient in the long term. Sufficient local capacity for Irvine at Bowerman

Landfill and the other County disposal sites is not in doubt in the short to mid-term even without implementation of RELOOC. In the longer term, RELOOC provides sufficient contingencies should they become necessary to manage additional solid waste from future anticipated countywide development. Refer to Response to Comment H49.

Response to Comment F64

Refer to Responses to Comments F63 and H48. Although the IWMD system has capacity for approximately 25 years, the District anticipates that the Bowerman Landfill will reach capacity by 2022. The ability to accommodate waste at other facilities is being planned by the IWMD.

Response to Comment F65

Comment noted. A primary goal of City policy will continue to be maintaining compliance with the California Integrated Waste Management Act (AB939), requiring good faith effort to divert 50 percent of total solid waste from landfills. Contrary to the assertion that recycling goals for the project are “unambitious and meaningless,” the specific goal of this project to recycle 75 percent of construction and demolition debris commits the City to a much more ambitious effort than the minimum required by state law.

Regarding recycling (diversion) rate calculations, the City cannot exclude any materials generated by the project that, if landfilled, would be counted as disposal and therefore detrimental to the City’s overall diversion rate and its compliance with AB939. Any material that would be counted as disposal at the landfill should be calculated and credited to the City as diversion if it is recycled.

Response to Comment F66

Comment noted. Mitigation Measure SW 5 (page 5.15-24 of the EIR) has been amended to read:

“For green waste, the project applicant must submit a written plan to the City and implement such a plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City-authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50 percent of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.”

Response to Comment F67

As with the development of any new project, modifications to existing electric systems would be necessary. Such is the case with the proposed project. As stated in Section 5.15.5.3 *Utilities Environmental Impact*:

“...the proposed project would consume 59.1 million kilowatt hours per year....The proposed project would have a peak load of 14,771 kilowatts. Sufficient available capacity exists at the Irvine and Limestone Substations to serve the proposed project’s load estimates. However, the existing overhead 4 kilovolt distribution system currently serving the former MCAS El Toro would be replaced with an underground 12 kilovolt distribution system....The additional electrical load imposed by the proposed project is within the capacity of SCE.”

The EIR states on page 5.15-27 that the Base and Overlay Plans propose to replace the existing electrical system in its entirety, complying with modern design methods, performance standards, and specifications. The new system will be installed to generally coincide with the routing of new and existing roadways. Electrical lines will be required to be underground pursuant to City standards. The specifics of the new electric distribution system and the necessary environmental evaluation will be determined as site specific plans for the installation are prepared.

Response to Comment F68

The proposed project will be served from the 12kV distribution lines that interconnect with the existing SCE 66/12kV Irvine Substation, directly outside the gate of the former MCAS El Toro. This substation has sufficient capacity to serve the proposed project. Sub-transmission lines interconnect this substation to the existing SCE 230/66kV Santiago substation and the 66/12 kV Bryan Substation. SCE has indicated that no additional sub-transmission lines are planned to increase the capacity at the Irvine substation.

Refer to Response to Comment F67 for information pertaining to the modification of existing electrical systems resulting from implementation of the proposed project. Modifications deemed necessary to the electrical system will be considered as specific development proposals are initiated. Section 5.15.5.3 *Utilities Environmental Impact* states:

“...new [electrical] system will be installed to generally coincide with the routing of new and existing roadways circulating throughout the project. Electrical lines will be required to be underground pursuant to City standards.”

The EIR states on page 5.15-29 that sufficient available capacity exists at the substations serving the proposed project and “that the existing overhead 4kV distribution system currently serving the MCAS El Toro would be replaced with an underground 12 kV distribution system.” No analysis has indicated that a new transmission line greater than 12 kV will be required to serve the proposed project. The specifics of the new electric distribution system and the necessary environmental evaluation will be determined as site specific plans for the installation are prepared.

Response to Comment F69

SCE generally uses a peak load standard of 50,000 kW for "significant impact". The proposed project's maximum estimated electrical demand is 35,000 kW.

The CEQA Environmental Checklist, Appendix G, outlines the Thresholds for Determining Significance for energy. As stated in Section 5.15.5.2 *Utilities Threshold for Determining Significance*:

“Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered energy and communication transmission facilities, need for new or physically altered energy and communication transmission facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable levels of service?”

The City defines a significant impact to the current level of electric service for the project to be requiring more electrical energy than SCE has the stated ability to provide. The Threshold for Determining Significance is answered in full in Section 5.15.5.3 *Utilities Environmental Impact*.

Section 5.15.5.3 *Utilities Electrical Facilities and Service* discusses the expansion of the electrical system to serve the project. The EIR states on page 5.15-30 that the proposed project's consumption of electricity is 0.05 percent and peak demand is 0.06 percent of the California Energy Commission's forecast for Southern California Edison (SCE) in 2012. Furthermore, SCE has indicated its ability to serve the projected project in accordance with all applicable tariff schedules.

Response to Comment F70

Section 5.15.5.3 *Utilities Electrical Facilities and Service* discusses the expansion of the electrical system to serve the project. The comment discusses the adequacy of generation and transmission systems and incentives and disincentives to investment in electrical system infrastructure on a statewide basis. These comments are considered beyond the scope of the proposed project. SCE indicates that there is no transmission congestion within the project area.

Response to Comment F71

SCE has sufficient transmission capacity to provide power to the project. Refer to Responses to Comments F67 through F69 for information pertaining to the modification of existing electrical systems resulting from implementation of the proposed project. Analysis indicates that a new transmission line greater than 12 kV will not be required to serve the proposed project. Any other SCE system enhancements would be required to obtain the necessary licensing/regulatory approvals and would not impact the proposed project.

Response to Comment G1

Comment noted.

Response to Comment G2

The first paragraph on EIR page 5.15-5 is amended to read:

“The proposed project’s impact on water supply and the ability of the water provider to provide a water source to the project site has been assessed by the IRWD in accordance with the requirement of ~~SB901~~ SB610 and SB221, both effective 2 January 2002, and the water supply assessment (WSA) contained in Appendix C complies with the most recent statutory requirements and concludes that adequate supplies are available to serve the proposed project.”

Response to Comment G3

Comment noted. The record is hereby incorporated by reference.

Response to Comment G4

Comments noted.

Response to Comment G5

Comment noted.

Response to Comment G6

Comment noted.

Response to Comment G7

Comment noted.

Response to Comment G8

The assumption should be clarified that only existing infrastructure that meets IRWD standards will be preserved for future use.

Response to Comment G9

The EIR is amended to correctly indicate that potable water is and will be used to irrigate the IRWD parcel.

Response to Comment G10

Comments noted.

Response to Comment G11

Comment noted.

Response to Comment H1

The proposed zoning for the property consisting of the Base Plan and the Overlay Plan is fully described in the “Introduction”, “Project Description” and “Land Use” sections of the EIR. As described in those sections, the proposed zoning consists of a Base Plan which provides a lower intensity and density of development and a higher proportion of land dedicated to open space and public uses. The Overlay Plan provides a higher intensity and density of development if the property owners enter into a Development Agreement with the City of Irvine (Appendix D of the EIR) requiring, among other provisions, dedication of land for open space and public uses and payment of fees for the provision and maintenance of the public infrastructure.

The parcels to be dedicated to the County of Orange through the Development Agreement are labeled as PAZ23 with General Plan and zoning designation of Institutional (Inst/Inst – 6.1/6.1) and PAZ4 with General Plan and zoning designation of Agriculture in both Base and Overlay plans. The development intensity for these sub-areas is also identical under both Base and Overlay plans. This information is provided in Tables 3-3 and 3-4 of the EIR.

The EIR provides a clear description of the “project” stating that the commonly used overlay zoning tool has been utilized for the project site. The EIR also clearly states that the Overlay Plan represents the maximum density and intensity of development proposed. All sections of the EIR analyze the potential impacts of both the Base Plan and the Overlay Plan and identify mitigation measures for each plan.

Response to Comment H2

The Great Park EIR assesses potential impacts of proposed uses for the entire former MCAS El Toro owned by the federal government and administered by the DON. The DON has been supplied with the proposed land plan and the EIR. The DON agreed that the land plan is consistent with their Record of Decision and their intent to sell the property at public auction. The DON has also agreed with the provision of the Great Park Development Agreement that requires, among other things, the dedication of 100-acres of property from the property owner to the County upon the election of receiving the development rights of the Overlay Plan. The EIR assumes certain development intensities that are consistent with the intentions of the landowner (DON) and the expectations of the City of Irvine. The EIR also assumes development intensities for the 100-acres that may be dedicated to the County, consistent with the list of uses provided in the Property Tax Transfer and Pre-Annexation Agreement in Section 2.2.4. Although the County refers to previously proposed land plans and the County’s 1996 EIR, these documents are not consistent with the current intentions of the landowner (DON) or the City of Irvine and are not relevant to this EIR. If the County becomes the owner of the 100-acres, it can then assess development intensities provided in the program EIR and evaluate its specific development plans for the site. No specific development plans for the site by the County have been provided to the City, nor is the County a landowner of the property. Any development proposed by the County, if it becomes a landowner in the future, which is not consistent with the proposed plan and EIR, will require additional environmental evaluation.

The City recognizes that the County’s development of governmental uses on the 100-acres is not subject to City zoning or building controls. The City also recognizes that its land use assumptions for the 100-acres are an estimate based upon no current County plan, and that any trip limits used in the Traffic Impact Analysis for the Great Park project do not restrict the County’s use of the 100-acres for governmental purposes. Finally, the City recognizes

that, as the County defines its project and proposed uses for the 100-acres, the County will analyze traffic and other impacts from this project as required by law.

Response to Comment H3

Comment noted. While the EIR evaluated the Musick Jail Facility for its contribution of impacts to the project, the Final EIR will reflect that the Musick Jail Facility will not be included in the City of Irvine's annexation proposal.

Response to Comment H4

Comment noted. Mitigation Measure H/WQ 3 (EIR page 5.7-26) has been amended to read:

"Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrology and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department."

Response to Comment H5

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in "accordance with OCFCD Methodologies...as well as any additional guidelines in effect at the time of the project design" which includes utilizing the appropriate Manning's "n" value for the conveyance type. Approval from the OCFCD will be obtained prior to any construction activity on the proposed drainage corridors.

Response to Comment H6

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in "accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design" would include analyzing as applicable the effects of sediment deposition, meandering, scour, erosion and bank stability with appropriate recommendations for slope protection. Approval from the OCFCD will be obtained prior to any construction activity on the proposed drainage corridors.

Response to Comment H7

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in "accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design" includes addressing drainage/flooding issues related to proposed development. Approval from the OCFCD will be obtained prior to any construction activity on the proposed Bee Canyon and Agua Chinon drainage corridors.

Response to Comment H8

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in "accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design" would include studying diversions with appropriate justification and mitigation. Approval from the OCFCD will be obtained prior to any construction activity on the proposed Agua Chinon drainage corridor and the proposed Borrego wildlife corridor.

Response to Comment H9

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in “accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design” would include addressing the concerns raised in this comment. Approval from the OCFCD will be obtained prior to any construction activity on the proposed Borrego Channel and Serrano Creek corridors.

Response to Comment H10

Comment noted. Prior to concept design or preliminary engineering it will be necessary to receive approval from the Manager, Flood Control Division. Initial meetings have occurred regarding the drainage plan.

Response to Comment H11

Maintenance responsibility for the proposed flood control facilities has not been determined. The question of maintenance responsibility will need to be addressed during the preliminary design process. Maintenance will be, in part, the County of Orange’s responsibility for some facilities, and the City of Irvine’s responsibility for other facilities, depending on the ultimate design solution implemented.

Response to Comment H12

Mitigation Measure H/WQ 3 addresses preparing detailed studies in accordance with...“the Flood Control Master Plan for San Diego Creek (FCMPSD).” Refer to Response to Comment H4.

Response to Comment H13

Refer to Response to Comment H11.

Response to Comment H14

Refer to Response to Comment H11.

Response to Comment H15

Mitigation Measure H/WQ 4 addresses the potential impact of project construction and flood control improvements occurring in tandem. Approval from the OCFCD will be obtained prior to any construction activity.

Response to Comment H16

The Natural Treatment System (NTS) basin proposed to be placed in Marshburn Basin is a part of the Irvine Ranch Water District NTS system and not of this proposed project. Because the basin will be upstream of the development area, the basin is not a part of the project design.

Response to Comment H17

The hydrologic and hydraulic analysis referenced in mitigation measure H/WQ 03/B3 are to be performed in “accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design” includes reconciling Master Plan facilities (e.g., raceway stormdrain) in relationship to the project requirements.

Response to Comment H18

Adequacy of existing facilities should be analyzed based on ultimate discharges as provided by the OCFCD. Mitigation Measure H/WQ 3 would include this type of analysis. Refer to Response to Comment H4.

Response to Comment H19

Mitigation Measure H/WQ 4 addresses the LOMR process.

Response to Comment H20

Any work within OCFCD or County of Orange right of way will require encroachment permits. The submittal process for an encroachment permit would occur at the time construction drawings are available for submittal.

Response to Comment H21

A significant amount of open space and recreational opportunities comparable to the type of activities associated with County regional parks will be provided within PA 51 of the project site. As described in Section 3.0 and illustrated on Figure 3-1 of the EIR, PA 51 is proposed to be annexed into the City. Upon annexation, this portion of the project area will be subject to City of Irvine General Plan land use and zoning designations. There is no equivalent “regional park” land use designation or zoning district in the City. Therefore, no portion of the project site has been designated as “regional park” although the functionality of proposed park areas will be very similar to various existing parks in the County’s regional parks system. Tables 3-3 and 3-4 of the EIR provide a statistical summary of open space and recreational acreage proposed within the project area.

Response to Comment H22

Refer to Response to Comment T1. As described in Section 5.9 *Biological Resources*, a wildlife corridor is proposed where one currently does not exist. Figures 1-2, 1-3 and 5.9-2 of the EIR depict the proposed wildlife corridor alignment. As shown, a majority of the wildlife corridor traverses passive uses, such as the golf course and park uses which are not anticipated to generate significant noise levels. In fact, the alignment of the wildlife corridor was shifted west, away from existing industrial uses located immediately east of the base, in part with consideration of potential indirect effects from these existing off-site uses. Within PA 30, the alignment of the corridor is fixed between the underpass of the SCRRRA railroad tracks and the I-5 Freeway/I-405 Freeway undercrossing. In this area, indirect effects are likely to be of more concern to the functionality of the wildlife corridor.

The EIR describes guidelines that will be incorporated into the implementation of the corridor. Specifically, as described in Section 5.9 *Biological Resources*:

“The revegetation/restoration plan would need to address various issues to increase the viability of the proposed corridor and will need to be prepared based on the following criteria:

Reduce the amount of noise pollution and urban influence. Sight and sound barriers need to be constructed at the edges of the corridor to help create a secluded, natural setting. Barriers may range from artificial sound walls to natural diversions such as hedges and tree lines” (EIR, page 5.9-22).

With respect to Planning Area Zone 2, under the proposed Overlay Plan PAZ 2 is proposed for residential development; however, this portion of the project site is currently developed with residential uses associated with the former base (refer to Figure 1-4 of the EIR). Any

reuse or redevelopment of PAZ 2 with residential uses would not likely increase the level of noise impacts on the adjacent habitat preserve.

Response to Comment H23

Implementation of the proposed project will not create an impact to any existing wildlife corridors. Therefore, the provision of a linear corridor through Planning Area Zone 2 (PAZ 2) is not a mitigation measure required to mitigate any significant impact associated with the proposed project.

The City agrees that maintaining connectivity to regional habitat preserve areas is desirable. As such, the City has proposed the wildlife corridor as a major feature of the proposed project. The primary goal of the wildlife corridor is to provide a viable connection between the Habitat Preserve Area (which, in turn, is connected to the NCCP Preserve Area) with the Laguna Coast Wilderness Park to the south. The alignment of the corridor has been carefully planned with significant input from various wildlife entities and stakeholders.

Response to Comment H24

With respect to Planning Area Zone 2, under the proposed Overlay Plan PAZ 2 is proposed for residential development; however, this portion of the project site is currently developed with residential uses associated with the former base (refer to Figure 1-4 of the EIR). Any reuse or redevelopment of PAZ 2 with residential uses would not likely increase the level of lighting impacts on the adjacent habitat preserve.

Response to Comment H25

The proposed Conservation Zone widths have been planned to achieve the maximum widths feasible. However, the proposed wildlife corridor is constrained in several areas as a result of many factors including existing development, roadways, and topographical conditions. The functionality of the wildlife corridor is not solely dependent upon width, and in areas where the width becomes more restrictive more care would need to be taken to implement measures to reduce the potential for edge effects and ensure that the corridor is attractive for wildlife.

Response to Comment H26

Tables 3-3 and 3-4 of the EIR depict a statistical summary of potential project development, including park acreages. Page 5.9-16 of the EIR has been corrected as follows:

“In addition, under the Base Plan, low to moderate quality foraging habitat (comparable to the existing agricultural fields) in the form of the approximately 576 acres of proposed golf course, ~~988~~ 716 acres of parkland, 438 acres of agriculture, 179 acres of wildlife corridor, and 229 acres of drainage/riparian corridor (~~2,410~~ 2,138 acres total) will be available after the completion of the project.”

Response to Comment H27

Tables 3-3 and 3-4 of the EIR depict a statistical summary of potential project development, including park acreages. Page 5.9-16 of the EIR has been corrected as follows:

“Under the Overlay Plan, low to moderate quality foraging habitat (comparable to existing agricultural fields) in the form of approximately 526 acres of proposed golf course, ~~547~~ 382 acres of parkland, 303 acres of agriculture, 179 acres of wildlife corridor, and 229 acres of drainage/riparian corridor (~~4,784~~ 1,619 acres total) will be available after the completion of the project.”

Response to Comment H28

Page 5.9-18 of the EIR has been corrected as follows:

“The wildlife corridor provides connection to the ~~995~~ 975-acre habitat preserve, as well as the Limestone-Whiting Wilderness Park.”

Response to Comment H29

The City has a policy of encouraging alternative modes of transportation, including bicycling. The City of Irvine General Plan Circulation Element Policies establish various goals and implementation measures for this purpose. As such, the City of Irvine has one of the most advanced bike trails systems in Orange County. The proposed plan links the entire Planning Area 51 through Class I and II bicycle trails as well as a hiking and riding trail system. The Class I trails have been designed to link the recreational, educational and culture uses within the Great Park. In addition, the City’s Bicycle Transportation Plan is scheduled to be updated in 2005. Bike trail alignments, amenities, and grade separations will be discussed in that update.

Response to Comment H30

The County Master Plan of Regional Riding and Hiking Trails does not show the connection between the Serrano Creek and Hicks Canyon Trails alluded to in the comment. The Riding and Hiking Trail link that is being deleted is shown on the City of Irvine Trails Network Plan only. The link being deleted has been determined to be infeasible due to existing industrial development along the proposed route through PA 35, the inability to use the existing flood control improvement at Bake Parkway for the trail undercrossing, and other route specific impediments.

Response to Comment H31

The County of Orange’s proposed Borrego Canyon bikeway traverses the NCCP/HCP that remains in federal control and is considered to be habitat for sensitive and endangered species. As such, the City has chosen not to show the proposed connection. The project does not propose to add this trail connection. A Class I off-street bikeway will be located in the proposed drainage swale that carries Agua Chinon drainage between Irvine Boulevard and the Irvine Transportation Center. The County should consider realigning its proposed Borrego Canyon bikeway to join this trail or using the proposed Class II bikeway along the future Alton Parkway extension as an alternate route for bicyclists.

Response to Comment H32

Page 5.14-18 of the EIR has been revised as follows:

“Both on-road (~~Class I~~ Class II) and off-road (Class I ~~Class II~~) bikeways are planned for the site, linking the site with the regional bikeway system.”

Refer to Responses to Comments H35 through H38 with respect to regional trail connections.

Response to Comment H33

The EIR does address policies and programs supporting alternative modes of transportation. This EIR has followed CEQA Guidelines (Appendix G) as the guide to select Significance Thresholds. While the proposed trail system may differ in some areas with other plans, it

does propose an extensive bike trail system that links the project internally and to the regional system. On page 5.2-63, the EIR presents the opportunities offered by the proposed project's recreational, educational, and transit-oriented uses for an enhanced bike trail network. The EIR also states that connections should be considered to Portola Parkway as well as encouraging additional trails for a more extensively linked network. As the project reaches its implementation stages, there will be opportunities for these considerations. Refer to Responses to Comments H29 through H31.

Response to Comment H34

The subheading "Trails and Bikeways" has been added between the fourth and fifth paragraphs on page 5.2-62 of the EIR.

Response to Comment H35

Cyclists of all levels will be able to use the proposed trail system for recreational and transportation purposes within the opportunities that the network will provide. As a community with an extensively designed and used bike trail system, the City of Irvine continually plans and develops additional trails, as well as linkages and amenities to enhance these opportunities. As stated in the EIR, the City of Irvine will continue to encourage such enhancements through the planning and implementation stages of the project. Refer to Response to Comment H29.

Response to Comment H36

Comment noted. The design of the Irvine Transportation Center includes the opportunity to link to Barranca and ultimately Alton Parkway via bicycle.

Response to Comment H37

The City of Irvine General Plan Circulation Element has established policies to connect the City's trails to the regional trail network. The Great Park plan will provide opportunities for the expansion of the trail system. As stated in the EIR, the City will continue to encourage such enhancements throughout the planning and implementation stages of the project.

Response to Comment H38

Figure 3-7 (EIR page 3-23) represents the trail system envisioned in the proposed project. The Great Park Plan includes vast areas of open space, recreational uses, as well as institutional and educational uses which will require detailed planning and design during the subsequent phases of the project. The enhancement of the trail system will be part of the detailed planning process for those land uses, and can be integrated with the opportunities offered by those plans.

Response to Comment H39

Comment noted. Refer to Responses to Comments H29 and H38.

Response to Comment H40

The suggestion for inclusion of the Class I bikeway network into the Transportation Management Plan (TMP) will be considered. The TMP is not, however, intended to construct or maintain bikeways. The City of Irvine will coordinate with the County of Orange's Harbors, Beaches, and Parks during the implementation phase of the project for information about the bike trails that could be included in the TMP.

Response to Comment H41

Comment noted. The potential for grade-separated crossings will be identified during the later phases of more specific planning and implementation of the project.

Response to Comment H42

Figure 3-7 (EIR page 3-23) depicts the Great Park Plan Trail Network. Staging areas and details will be identified during the later phases of more specific planning and implementation of the project.

Response to Comment H43

The EIR addresses the proposed General Plan and zoning for the project site. At this time, the Equestrian Center is a permitted land use within the proposed General Plan and zoning designation for the existing site. The property will transfer to private ownership through the DON sale. The future property owner will determine the viability of an equestrian use at that time.

Response to Comment H44

The City of Irvine appreciates the offer to make a presentation on bikeways and trails planning to the County of Oranges, Harbors, Beaches, and Parks and the Orange County Regional Recreational Trails Advisory Committee.

Response to Comment H45

Mitigation Measures C1 through C4 address cultural resources; Mitigation Measure P1 (see Section 5.10 Paleontological Resources) addresses the potential for paleontological resource finds.

Any cultural resources discovered as a result of implementation of Mitigation Measures C1 through C3 would be curated at an acceptable archaeological repository within the County. Fees for storage and curation would be the responsibility of the developer/applicant for individual projects.

Response to Comment H46

Because 95 percent of PA 30 has not been surveyed, Mitigation Measure C1 requires an initial survey report which would include a records search, literature review, and walkover survey. A testing report will be required if the results of the initial survey report indicate the potential for cultural resources to be present on that portion of the project site subject to the cultural survey.

Response to Comment H47

Refer to Response to Comment H45.

Response to Comment H48

As described in the EIR, the County of Orange IWMD owns and operates three landfills to serve the solid waste disposal needs of the County. The City disposes the majority of its solid wastes at the Bowerman landfill. When the daily tonnage limit of one of the three IWMD landfills is exceeded, waste imported to that facility is reduced accordingly, and the excess tonnage is disposed of at one of the other facilities. The IWMD accepts wastes from outside of Orange County. Project refuse can be disposed of within any one of the three landfills in the County landfill system. The currently permitted maximum daily tonnage at the Bowerman landfill is 7,263, which is adjusted to increase by 1.75 percent per year with a maximum of 8,500 tons per day. Currently, the landfill accepts approximately 6,700 tons

per day. Under the proposed Overlay Plan, the project would generate approximately 35 tons per day of solid waste. Thus the project would increase the tonnage received by the Bowerman landfill to approximately 6,735 tons per day, which is well below the existing 7,263 tons per day and the future 8,500 tons per day limit of the landfill.

Response to Comment H49

The Bowerman currently accepts additional landfill waste from outside Orange County. Should the cumulative effect of development within the Central Region watershed cause the daily tonnage ceiling to be exceeded, the waste being imported will be reduced by an amount sufficient to stay within tonnage limits.

Additionally, the California Integrated Waste Management Board requires that all counties have an approved Countywide Integrated Waste Management Plan (CIWMP). To be approved, the CIWMP must demonstrate sufficient solid waste disposal capacity for at least 15 years, or identify additional available capacity outside the County's jurisdiction. Orange County's CIWMP, approved in 1995, estimates future solid waste disposal demand based on countywide population projections adopted by the Board of Supervisors. IWMD's database estimates that the Orange County landfill system has capacity for approximately 25-years; therefore no significant cumulative solid waste impacts are anticipated. Continuation of local government efforts required under AB 939 to divert wastes from the County's landfills will also reduce the magnitude of cumulative impacts.

RELOOC is an acronym for "Regional Landfill Options for Orange County." The RELOOC program is a 40-year strategic plan under preparation by the County IWMD, and is proposed to ensure that waste generated by the County is safely disposed of and that the County's future disposal needs are met. The County IWMD is currently in the process of conducting the environmental review for the RELOOC program, with the EIR anticipated to be released in spring 2003.

The County's waste disposal system includes three landfills, 20 former refuse disposal stations, and four household regional hazardous waste collection centers. The RELOOC implementation strategy is based on a "Phased Option" approach to managing solid waste disposal in the County, consisting of Phase 1 Short Term Strategies and Phase 2 Long-Term Strategies. Phase 1 strategies include, among others, fully utilizing the capacity of existing landfills before seeking new site or alternative waste disposal methods. This would be achieved by maximizing operational efficiency at existing landfills (e.g., compacting refuse), increasing landfill capacity of the Frank R. Bowerman and Olinda Alpha landfills, and proactively encouraging recycling. Phase 2 strategies include determining if there is a need to increase the daily amount of solid waste permitted at the Prima Deschecha landfill, identification of strategies, including new technology, to maximize solid waste disposal capacity, and completion of a feasibility study of expanding the Bowerman landfill into the adjacent Round Canyon after the Bowerman landfill reaches capacity.

Response to Comment H50

Refer to Response to Comment H49.

Response to Comment H51

Refer to Responses to Comments F65, F66, and H49.

Response to Comment H52

Refer to Response to Comment H49.

Response to Comment H53

For both the Base Plan and Overlay Plan, only future roadway improvements with an identified funding source have been included for 2007 and 2025 conditions. Only the post-2025 (General Plan buildout) scenario includes unfunded improvements. This reflects circulation needs and development levels consistent with and required for General Plan buildout conditions only and is appropriate in this context.

Response to Comment H54

All of the intersections identified in the comment were in fact included in the Great Park Traffic Impact Analysis.

Response to Comment H55

Refer to Response to Comment H2. The “trip cap” approach is an appropriate mechanism for ensuring that future development conforms to the Great Park project description. As part of the North Irvine Transportation Improvement Program (NITM), each development proposal must submit a traffic analysis demonstrating consistency with the planned trip cap. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events.

Response to Comment H56

This is unnecessary since the minor differences in the ICU assumptions between the City of Irvine and other jurisdictions, if any, would not affect the findings and conclusions of the Great Park Traffic Impact Analysis.

Response to Comment H57

Refer to Response to Comment H55.

Response to Comment H58

The Traffic Impact Analysis evaluates peak hour mainline freeway conditions for all land use scenarios. The peak hour mainline freeway conditions are presented in the EIR on pages 5.2-35 and 5.2-36 (Base Plan) and pages 5.2-53 and 5.2-54 (Overlay Plan) (see specific references to Appendix G).

Response to Comment H59

Ongoing studies and analysis (monitoring) in accordance with the NITM program will continue to ensure that mitigation measures are implemented in a timely and appropriate manner.

Response to Comment H60

Comment noted. The MPAH amendment process has been specifically identified as a required project mitigation measure. The City of Irvine has initiated a request to OCTA for the review of the proposed MPAH amendments.

Response to Comment H61

Although an industrial reuse was contemplated during the initial efforts to clean up the base, the remediation strategies put in place allow for other reuses. The DON, with the concurrence of the other members of the Base Cleanup Team, considers all “no further action” sites and all remediated sites at the base to be available for unrestricted uses. Therefore, the use of such sites is consistent with the land uses proposed in the Great Park Plan. At locations that are to be used for schools (K-12), additional evaluation of the sites by DTSC is required by law.

Considerations for remedial actions objectives are provided in 40 CFR 300.430(e)(2)(i) that states, “remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response.” The Department of the Navy (DON) will be responsible for remediation of the former MCAS El Toro to these exposure levels. The DON has stated that some land-use controls (i.e., easements, covenants, institutional controls, ordinances, etc.) will be required in order to restrict public access on approximately seven Installation Restoration Plan (IRP) sites. The DON will employ limited land use controls at IRP sites 2, 3, 5, 16, 17, 18, 24; the use of such controls has yet to be determined for IRP sites 1, 8, 11, and 12. This action has been deemed necessary until the IRP sites in question can be remediated to the above mentioned acceptable exposure levels.

Section 3.0 *Project Description Actions and Approvals of Other Agencies* has been amended to reflect the requirement that DTSC approve the acquisition and/or development of property for public schools. The added additional language reads as follows:

“California Department of Toxic Substances Control (DTSC) – Approval of acquisition and/or development of property for public schools based on hazardous materials evaluation.”

Response to Comment H62

In the April 2003 Draft Final EBS, the DON identifies approximately 84 percent of the base as suitable for transfer through a fee conveyance. The DON considers areas that are suitable for transfer to be available for unrestricted uses. The percentage of transferable property has increased since 1995 due to additional investigation and sampling performed in 2002 and 2003 as part of the EBS update. Additionally, numerous areas have received “no further action” concurrence from the site regulators since 1995, thus increasing the acreage suitable for transfer from the original estimate of 67 percent. Refer to the *Final Environmental Baseline Survey, Former MCAS El Toro, California* (Earth Tech, Inc. April 2003) for additional information.

Approximately 84 percent of the former air station property is suitable for transfer by deed without remediation or land-use controls. Most of the remaining 16 percent of the former air station consists of areas with subsurface groundwater contamination and may be transferred to private control through a lease in furtherance of conveyance until the remediation is complete and fee title can be conveyed. Land-use controls, as defined in Response to Comment H61, for such groundwater contamination will be limited to prohibitions on the extraction and use of groundwater and limited surface controls to protect monitoring and remediation equipment.

Response to Comment H63

Additional remediation plans are not required, as specific land use designations (i.e., residential, industrial, park, or recreation) are irrelevant. Per 40 CFR 300.430(e)(2)(i), "remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response." The DON is required to remediate the site to these exposure levels. Analysis of supplemental remediation costs, if any, are not required by CEQA. The cost and responsibility of remediation rests with the DON. Refer to Response to Comment H61.

Response to Comment H64

Refer to Responses to Comments H61 and H63.

Response to Comment H65

The City of Irvine's Solvent Study identified a potential conduit of contamination, the base sanitary sewer system, and analyzed the maximum potential releases that could have occurred based on a review of historical records and engineering practices. The City submitted the report to the DON for consideration of alternate sources for contamination on the base. In response, the DON gave careful consideration to the rationale and logic of the report, conducted extensive testing of a likely source (Building 307, the base laundry and dry cleaning facility located within IRP Site 24), and concluded that the potential releases were most likely very limited. While the City of Irvine concurs with the DON's conclusions, based on its evaluation of Building 307, the City recognizes that there is a potential, albeit small, for hidden releases of solvents and other hazardous substances. Mitigation Measure HH 5 puts in place a process for responding to potential unidentified contamination when it is encountered during any construction activities on the base. The April 2003 Draft Final EBS released by the DON addresses concerns brought up in the City of Irvine's Solvent Study. Refer to the City of Irvine's letter of response dated 21 March 2003 attached in the Appendix.

Response to Comment H66

It is the responsibility of the DON along with the rest of the members of the Base Cleanup Team (including USEPA, DTSC, and RWQCB) to review evidence of contamination presented by any and all parties, including those identified by the commentor. In the April 2003 Draft Final EBS, the DON reviews all of the evidence presented by other parties for potential additional locations of concern, including the City of Irvine's Solvent Study. The DON performed studies to address issues raised in the Solvent Study and the conclusions are presented in the April 2003 Draft Final EBS. While many potential locations of concern do not warrant further investigation, the DON considers 76 locations to require evaluation for potential releases. Those sites that pose a significant risk to health and safety will be subject to remediation sufficient to allow a fee conveyance of the site for unrestricted uses.

Response to Comment H67

Refer to Response to Comment H65. The EIR will be revised to note that the DON evaluated potential soil contamination adjacent to runways and under certain runway extensions in the April 2003 Draft Final EBS. There date is no evidence that there are significant levels of unknown contaminants in these areas. The City of Irvine believes that the DON's April 2003 Draft Final EBS addresses all concerns brought up in the GeoSyntech report and the City of Irvine's Solvents Study. Refer to the City of Irvine's letter of response dated 21 March 2003 attached in the Appendix.

Response to Comment H68

The April 2003 Draft Final EBS released by the DON addresses and responds to concerns brought up in the County's environmental site assessment (the GeoSyntech report). Per the Base Realignment and Closure Business Plan for MCAS El Toro (March 2000) and the April 2003 Draft Final EBS, the DON states that approximately 84 percent of the former air station is environmentally suitable for transfer by deed without remediation or land use restriction. Most of the remaining 16 percent consists of areas with subsurface groundwater contamination and may be transferred through a lease in furtherance of conveyance. Some portions of the land area remaining to be remediated will have restricted public access via land use controls until remediation is complete. The DON does not propose to remediate the site to a specific land use designation (i.e., industrial, residential, park, or recreation) as the federal regulations codified under 40 CFR 300.430(e)(2)(i) designate acceptable exposure levels regardless of proposed land use. Refer to Response to Comment H66.

Response to Comment H69

At the time of the review of the County's EIR 563 and 573 processes, the clean-up of the former MCAS El Toro was not far along, therefore the City identified a number of issues that it believed should be addressed prior to going forward with reuse. Subsequently, the DON completed a substantial portion of its investigations and decisions about remediation such that there are relatively few unknowns regarding contamination at this time. Consequently, it is not necessary to revisit issues that the DON has addressed.

Response to Comment H70

The DON recently released an updated baseline environmental analysis of the former air station (Draft Final EBS April 2003). There is no evidence to date indicating the presence of pools of solvents in the bedding of the existing sewer alignments. Refer to Response to Comment H65.

Response to Comment H71

Refer to Responses to Comments H65 and H70. Air quality and traffic impacts attributable to construction activities for both the Base Plan and Overlay Plan, including grading activities, were modeled using the URBEMIS 2001 and the Irvine Transportation Analysis Model (presented in Section 5.3 *Air Quality* and Section 5.4 *Traffic/Circulation*), respectively.

Response to Comment H72

Comment noted. Mitigation Measure HH5 requires that applicants for grading permits within the boundaries of Site 24 prepare a worker health and safety plan that acknowledges the presence of residual VOCs in soil and groundwater at Site 24 and provides adequate measures to protect worker health and safety. Land use controls, as outlined in Response to Comment H61, will be employed at IRP Site 24 in order to prevent extraction or use of contaminated groundwater without prior approval, to protect the integrity of the remedial actions (e.g., protect extraction and treatment equipment and monitoring wells), and to allow access to the site for equipment operation, maintenance, and monitoring. Also refer to Responses to Comments H65 and H77.

Response to Comment H73

The DON evaluated the potential for contamination associated with the piping that ran between an on-base plating shop and an industrial wastewater treatment facility and determined that contamination did not exist. Refer to Responses to Comments H65 and H66.

Response to Comment H74

The vast majority of tanks have been removed under the supervision of the appropriate regulatory agencies. The few tanks that have been or will be abandoned in place will be rendered inert under the supervision of the appropriate regulatory agencies. The information on the status of the storage tanks located on the project site has been updated to reflect the April 2003 Draft Final EBS. Section 5.5.1 *Public Health and Safety Environmental Setting* (5.5-9) has been amended to read:

"Based on the April 2003 Draft Final EBS, a total of 404 USTs were in use at the former air station. Of these USTs, 357 have been remediated and received findings of "no further action." Of a total of 39 ASTs used in support of the military mission at the former MCAS El Toro, 36 have been remediated and received findings of "no further action."

Response to Comment H75

Comment noted. Access to monitoring wells will be protected by restrictions placed on the property prior to sale by the DON. Mitigation Measure HH 6 will be added to Section 5.5.5 *Public Health and Safety Mitigation Measures* to read as follows:

"The City or Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells located on the former MCAS El Toro in a geographic information systems database (GIS). The City will review all permit applications on the former air station for well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to wells will be limited to authorized personnel."

Response to Comment H76

The use of significant quantities of CFC/HCFC refrigerants is not required for implementation of the proposed project. Compliance with SCAQMD rule 1415 requires the capture and recovery of refrigerants resulting in insignificant impacts to the environment.

Response to Comment H77

Although grading operations are not expected to result in the release or disturbance of asbestos or lead, demolition of existing structures may result in such releases. Section 5.5.5 *Public Health and Safety Mitigation Measures* (5.5-27) states:

"Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities."

Response to Comment H78

The DON is required to complete all necessary remedial actions before fee title to the former MCAS El Toro is transferred from federal ownership. The DON may transfer control of those portions of the property not found suitable for transfer of fee title though a lease in furtherance of conveyance. Even after the fee title is transferred, the federal government is required to conduct further remediation if additional contamination caused by DON actions is discovered or if a remedy fails to perform adequately. Federal law also provides that the

DON may be required to indemnify the new owners or certain other parties for liabilities arising from claims for personal injury or property damage resulting from the release or threatened release of any hazardous substances, pollutants or contaminants, or petroleum or petroleum derivatives attributable to DON activities on military installations. Refer to the following letters that are attached in the Appendix to this Response to Comments document: H.T. Johnson, Assistant Secretary of the Navy, Installations and Environment, Letter to the Editor, Los Angeles Times, 5 August 2002; and the letter to the City of Irvine from the DON dated 25 April 2003. Also see the "DOD Policy on Responsibility for Additional Environmental Cleanup after Transfer of Real Property" electronically at: [http://www.dtic.mil/envirodod/Policies/BRAC/brac_flu.htm].

Response to Comment H79

All hazardous wastes generated in the course of the proposed project will be managed in compliance with regulatory requirements and sent to a licensed hazardous waste facility, thereby minimizing risks and rendering impacts to public health and safety less than significant.

Response to Comment H80

Section 5.3 *Air Quality* and Section 5.4 *Traffic/Circulation* of the EIR address the issue of human health impacts resulting from diesel exhaust particulates.

Response to Comment H81

Existing users of pesticides and fertilizers at the base, agricultural leaseholders and landscape maintenance staff, must meet regulatory requirements for the storage, application, and disposal of registered pesticides. Proposed uses will be similar. Compliance with regulatory requirements will minimize both exposures to pesticides and the potential risk of accidental releases resulting in less than significant impacts to public health and safety.

Response to Comment H82

Only SCAQMD-compliant paints and coatings are legally available for use in the proposed project. Compliant coatings minimize the use and release of VOCs resulting in less than significant impacts to public health and safety.

Response to Comment H83

Non-point source pollution and related TMDLs are addressed in Section 5.7 *Hydrology/Water Quality*. Mitigation Measures H/WQ 1 states:

"A Storm Water Pollution Prevention Plan and Water Quality Management Plan are to be prepared [prior to project implementation]. A Notice of Intent for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project areas. This requirement will be met to the satisfaction of the City Engineer for: a) any disturbance of one-acre or more of soil...b) General Dewatering NPDES Permit of the Santa Ana RWQCB, and c) provisions of the Countywide Permit....As future projects are planned, designed, and constructed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed."

Monitoring protocols implemented as part of the BMPs and other Permits identified in this Mitigation Measure would require quantification of non-point source pollution loading as part of the TMDLs identified for the Newport Bay watershed.

Response to Comment H84

Refer to Response to Comment H83.

Response to Comment H85

Air quality emissions are presented and analyzed in Section 5.3 *Air Quality*. Growth inducement due to the proposed project is addressed in Section 7.2 *Growth Inducing Impacts*.

Response to Comment H86

Information pertaining to the consistency between the proposed project and the SCAQMD's AQMP and SIP is presented in Section 5.3 *Air Quality*.

Response to Comment I1

This comment recites the primary components of the proposed project.

Response to Comment I2

Refer to Responses to Comments I3 through I13.

Response to Comment I3

Page 3-30 of the EIR has been corrected as follows:

~~Orange County~~ Airport Land Use Commission (ALUC) ~~for Orange County -~~
~~Amendment Revision~~ of the Airport Environs Land Use Plan (AELUP), dated 1995.

This correction has also been made in other applicable sections of the document.

Response to Comment I4

Page 5.1-5 of the EIR has been modified to include the text of Policy J-1.d as follows:

Policy J-1.d address hazards associated with aircraft operations. Policy J-1.d states, "Use the most current available Airport Environs Land Use Plan (AELUP) as a planning resource for evaluating aircraft operations, land use compatibility and land use intensity."

Response to Comment I5

Page 5.1-6 of the EIR has been modified as follows:

The Airport Land Use Commission for Orange County Airport Land Use Commission (ALUC) prepares a comprehensive land use plan and regulates land uses for each public and military airport. The ALUC adopted the has Airport Environs Land Use Plans for (AELUP) covering the former MCAS El Toro, the former MCAS Tustin, John Wayne Airport (JWA) (adopted 2002), Armed Forces Reserve Center Los Alamitos, and Fullerton Municipal Airport (2002), Joint Forces Training Base Los Alamitos (2002), Heliports projects (2002) and for MCAS El Toro (adopted 1995) ... Figures found in Appendix D of the 1995 AELUP depict the noise and safety zones for MCAS El Toro. Figure 5.1-1 depicts the APZs for the former MCAS El Toro as shown in the 1995 AELUP.

The MCAS El Toro property is still owned by the Federal government. The 1995 AELUP applicable to that property remains in effect and has not been amended. California Public Utilities Code Section 21670, et. seq. requires that local General Plans and Zoning be consistent with the land use compatibility plan (AELUP). The Public Utilities Code provides a method whereby a local jurisdiction may override an Airport Land Use Commission finding of inconsistency with the AELUP.

Response to Comment I6

Page 5.1-15 of the EIR has been revised as follows:

The land use, safety, and noise restricted areas as identified in the AELUP, AICUZ, and the PIL for the former MCAS El Toro facility are no longer impacted by aircraft noise from military air operations now that the base has closed for military use. The MCAS El Toro property is still owned by the Federal government. The 1995 AELUP applicable to that property remains in effect and has not been amended. California Public Utilities Code Section 21670, et. seq. requires that local General Plans and

Zoning be consistent with the land use compatibility plan (AELUP). The Public Utilities Code provides a method whereby a local jurisdiction may override an Airport Land Use Commission (ALUC) finding of inconsistency with the AELUP.

Response to Comment I7

Refer to Responses to Comments I9 and I10.

Response to Comment I8

Reference 6 on page 5.1-27 of the EIR has been revised as follows:

Orange County Airport Land Use Commission for Orange County. Airport Environs Land Use Plan, adopted November 1995. 1975-90.

Response to Comment I9

Page 5.1-15 of the EIR states that the proposed project, “would not result in a significant land use compatibility impact, even though it would conflict with the adopted AELUP.” This language is consistent with the language contained in Section 6.0 Alternatives.

Response to Comment I10

On 17 April 2003, the ALUC formally acknowledged that the ALUC has no statutory jurisdiction over the proposed project. Further, according to the ALUC’s 17 April 2003 staff report, ALUC staff has reviewed the project and finds no AELUP issues.

In the 17 April 2003 staff report the ALUC has also stated that the ALUC does have jurisdiction within the AELUP surrounding the former military airfield. The Orange County Great Park EIR recognizes the potential for growth-inducing impacts as a result of the removal of development restrictions within the AELUP areas surrounding the former base (e.g., EIR, page 7-13). However, Measure W changed the County of Orange’s General Plan to delete any airport development opportunity at the former MCAS El Toro and the DON, in its Record of Decision, chose a non-aviation reuse plan. Consequently, changes in land use restrictions are based on that voter-approved initiative and subsequent DON decisions, not on this project, which modifies the Irvine General Plan designations from a more intensive non-aviation use (known as “Millennium Plan II, adopted in February 2000) to the less intensive, park-oriented non-aviation use proposed by the Great Park project. Many of the areas referenced by the commentor are located within other jurisdictions (primarily the City of Lake Forest and newly incorporated Aliso Viejo). The City of Lake Forest is currently in the preliminary stages of preparing a land use study of the subject area. The City of Aliso Viejo has just recently initiated preparation of a General Plan. It is anticipated that any future proposal by any jurisdiction with lands currently located within the AELUP would be required to evaluate, with specificity, the potential environmental impacts associated with adoption of any proposed land use changes. This information would then be available to the ALUC when amending the AELUP as it relates to that jurisdiction.

Response to Comment I11

Refer to Response to Comment I10. There is no need to include growth-inducing impacts as a significant unavoidable impact of the proposed project.

Response to Comment I12

Page 8-5 of the EIR has been corrected as follows:

~~Orange County~~ Airport Land Use Commission for Orange County, Airport Environs
Land Use Plan, 1995. ~~1975-1990~~.

Response to Comment I13

The documentation referenced by the commentor will be provided to the Airport Land Use Commission as requested.

Response to Comment J1

Comment noted.

Response to Comment J2

Coordination between project developers and the Fire Authority, as with other service providers, is a requirement of development of this type and magnitude. Any necessary agreements regarding fire protection services will occur in accord with established procedures.

Response to Comment J3

Refer to Response to Comment J2.

Response to Comment J4

Comment noted.

Response to Comment J5

Comment noted. See Section 5.5 *Public Health and Safety* for information pertaining to hazardous materials related to agricultural and military activities.

Response to Comment J6

Comments noted. See Section 5.5 *Public Health and Safety* for information pertaining to wildland fires.

Response to Comment J7

Development standards of the type noted are either legal requirements or will be negotiated and established during the review and approval process for the master development plans or other approvals given by the City.

Response to Comment J8

Any further reduction of the surplus area will be determined by the General Services Administration. The effect of future government ownership and operations in areas proposed to remain in government control will need to be assessed once the specific areas are established.

Response to Comment J9

Refer to Response to Comment H65. The commitment by the DON is to convey land based on the federal regulations codified under 40 CFR 300.430(e)(2)(i); the regulations designate acceptable exposure levels suitable for the proposed reuse of the former air station. If an unknown hazard appears during construction, appropriate responses will be taken by the City in coordination with the DON and the Fire Authority and other responsible agencies. Refer to the April 2003 Draft Final EBS for additional information on the status of underground storage tanks, pipelines, and other specified information. See Section 5.5 *Public Health and Safety* for information pertaining to hazardous materials and wastes. Mitigation Measure HH 5 states:

“Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. The applicant and/or property owner that discovers

contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director Community Development of the City of Irvine in a timely manner.”

Response to Comment J10

Comment noted.

Response to Comment J11

Comment noted.

Response to Comment J12

Comment noted.

Response to Comment J13

Comment noted.

Response to Comment J14

Comments noted.

Response to Comment J15

The location of IRP sites are identified on Figure 5.5-1 (EIR page 5.5-8).

Response to Comment J16

The project is a General Plan amendment, zone change, development agreement, and annexation. The detailed information discussed in the comment will be available in the design phase.

Response to Comment J17

Coordination with OCFA will occur during the design phase and during the project approval process, consistent with City standard procedures.

Response to Comment J18

Refer to Response to Comment J17.

Response to Comment J19

Comment unclear due to partial sentence provided as comment.

Response to Comment J20

Regulation of agricultural chemicals application and storage will continue for land proposed to be retained for agricultural use.

Response to Comment J21

Comment noted.

Response to Comment J22

Fire protection agreements are a requirement prior to development. This issue is also referenced in the Urban Services Plan (provided as an attachment to this document).

Response to Comment J23

Comment noted. Fire service was considered in establishing maximum water demand and subsequent backbone infrastructure sizing.

Response to Comment J24

OCFA will be listed as an Action Agency in the EIR on pages 3-30/3-31.

Response to Comment J25

Corrections will be made in the final EIR as noted.

Response to Comment J26

Refer to Responses to Comments J1 through J25.

Response to Comment K1

The elements and development characteristics of the proposed project are specifically defined in Section 3.0 *Project Description*. The analysis of potential environmental impacts is based on the development and operation of the project as defined in Section 3.0.

The City has proposed a concept plan that will meet the spirit and intent of Measure W while maintaining a fiscally-balanced plan. Annexation of PA 51 is proposed in order to ensure the City can control the logical development of the property, and to maintain high service levels for public service and utility providers. Although the project site will be incorporated into the City of Irvine, the proposed uses are regional in nature and are intended to benefit and serve all residents of the County.

Response to Comment K2

This comment references the adequacy of the DON's Environmental Impact Statement (EIS) and the Record of Decision for the Disposal of the former MCAS El Toro issued by the DON and co-signers of the Federal Facilities Agreement. This comment does not address the adequacy of the Orange County Great Park EIR.

Response to Comment K3

The DON has analyzed a non-aviation alternative in its EIS for the Disposal and Reuse of the former MCAS El Toro. The Orange County Great Park project, however, is proposed by the City of Irvine. The City is designated as the "lead agency" under CEQA, and in this capacity, is responsible for preparation and certification of an EIR that addresses the potential environmental impacts associated with implementation of the proposed project as defined in Section 3.0 of the EIR. The DON is not required to prepare an EIR for the proposed project as a range of alternatives were previously addressed in the DON's EIS for the federal action. The Orange County Great Park project is proposed by the City of Irvine and does not involve a federal action beyond the disposal of the property which is addressed in the federal EIS.

Response to Comment K4

Section 7.1 *Cumulative Impacts* of the EIR analyzes the potential environmental impacts associated with the development of the proposed project in conjunction with the projected growth in the region, including the Northern Sphere. This cumulative impact analysis includes analyses of impacts to traffic, air quality and energy.

With respect to aviation, implementation of the proposed project does not involve a use that would impact existing airports and aviation activity. The proposed project is the reuse of a former military air base which is currently not utilized for any type of aviation use. The Measure W initiative changed the County of Orange's General Plan and deleted the airport designation for the former MCAS El Toro. Furthermore, on 25 February 2003 the Orange County Board of Supervisors, acting as the El Toro Local Redevelopment Authority, rescinded the El Toro Airport System Master Plan, thus removing an airport at MCAS El Toro from all County plans.

Response to Comment K5

This comment addresses the adequacy of the Final Environmental Impact Statement and Record of Decision issued by the DON for the closure of the former MCAS El Toro. This comment does not address the adequacy of the Orange County Great Park EIR and no further response is necessary.

Response to Comment K6

As described in Section 5.5 *Public Health and Safety* of the EIR, the DON will be responsible for clean-up and remediation activities on the base. Page 5.5-11 of the EIR states, "Under CERCLA, contaminated federal property cannot be transferred until all necessary remedial actions have been taken or a remediation system is operating properly and successfully. Cleanup responsibility remains with the DOD until the property is fully remediated. Therefore, some of the former air station property cannot be transferred immediately." Additionally, "As established by BRAC III, the DON will continue its environmental restoration activities after installation disposal. Sites that require continuing monitoring and remediation will receive continuing investigation/remediation beyond installation closure, which occurred in July 1999." (EIR, page 5.5-15) Additionally, Mitigation Measures HH1 through HH5 are proposed to ensure that no significant impact associated with the presence of hazardous materials or contamination occurs with implementation of the proposed project. Refer to Responses to Comments H61 and M26 for information pertaining to the DON's remediation requirements.

Response to Comment K7

Refer to Response to Comment K1.

Response to Comment L1

Refer to Responses to Comments DD1 through DD14, which respond to the Department of Toxic Substances Control comment letter on the EIR.

Response to Comment M1

Refer to Responses to Comments M2 through M95 which respond to each comment raised by the commentor.

Response to Comment M2

This comment correctly summarizes the primary components of the proposed project, as described in the EIR. However, the City does not agree with the commentor's statement that the Great Park is not a feasible reuse of the project site and that the magnitude of the proposed land uses are understated. The proposed uses are considered feasible in terms of constructability as well as a fiscal standpoint. Proposed uses have been carefully considered so as to achieve a fiscally balanced plan while maintaining the spirit and intent of Measure W.

The proposed project characteristics are described in detail in Section 3.0 *Project Description*. The EIR focuses on the Overlay Plan as it presents the highest level of potential impact in order to ensure mitigation at the highest level. Tables 3-3 and 3-4 provide a detailed summary of the potential maximum development potential of the project according to both the Base Plan and Overlay Plan.

Response to Comment M3

The proposed Orange County Great Park land uses are proposed within City of Irvine Planning Areas (PAs) 30 and 51. Lands within PA 51 are not subject to Measure W while they remain under the jurisdiction of the County of Orange. To the extent that these lands are not annexed under the Great Park Plan, there will be no impact to the County's General Plan and zoning. However, PA 30 is located within the jurisdictional boundary of the City, and is not subject to Measure W. Generally, the more intensive land uses are proposed within PA 30. Comparatively, the Overlay Plan is more intense than the Base Plan, which are clearly depicted in Tables 3-3 and 3-4 of the EIR. However, the Overlay Plan allows for a similar amount of the open space, park, recreational and public uses within PA 51 as could occur under the Base Plan.

The City does not concur that the Overlay Plan constitutes "massive development" as inferred by the commentor. Regardless of whether land uses are developed according to the Base Plan or the Overlay Plan, the spirit and intent of Measure W will be met with implementation of the proposed project, for that portion of the project site currently subject to Measure W. In either case, the development potential of the Base Plan and the Overlay Plan are clearly illustrated in Tables 3-3 and 3-4 of the EIR.

Response to Comment M4

As stated in the EIR, "the purpose of the project is to assure that reuse of El Toro is consistent with the intent of Measure W approved by the voters in March, 2002 while responding to the decision of the federal government to sell the land". The proposed zoning with the Base Plan and Overlay Plan assures the fulfillment of this purpose, regardless of the option chosen by the buyers of the property. While the option of the Overlay Plan provides a potential higher return to the developers in exchange for providing the land and infrastructure for the public uses, the Base Plan, through the regulation of the permitted land uses, also assures that the land will be developed for open space, recreation, educational, and cultural facilities, agriculture, and other park-like uses. Project applicants may opt to develop under the Base Plan and forego the increased intensity and development rights that are available through the Development Agreement and Overlay Plan.

Response to Comment M5

The former air station will be divided into four parcels for sale by the DON. The requirement through the Development Agreement for land dedication and maintenance fee participation under the Overlay Plan option assures that the public uses are implemented. Conversely, under the Base Plan the land use regulations will be the mechanism for the implementation of the park and open space uses. Under the Base Plan, public funding is not required because park and open space lands are not required to be dedicated.

Response to Comment M6

The zoning allows the development of the Great Park under both options. With the Overlay Plan the Great Park will be implemented through land dedication and fee contributions, and the City (or its designee), in turn, will be the developer of those public uses. Under the Base Plan, the owner of the property will develop the land based on the designated land uses, including the open space, recreational, educational and cultural facilities, agriculture, and other park-like uses, since those are the permitted land uses provided by the Base Plan option.

Response to Comment M7

The EIR analyzed the potential impacts of the Overlay Plan as the maximum buildout of the Plan, including the Development Agreement as an integral part of the Overlay Plan option. If a buyer declines to enter into the Development Agreement, the property would have the General Plan and zoning designation provided in the Base Plan. Any subsequent increase in the density and intensity would require the preparation of a General Plan Amendment, zone change, and the required environmental documentation addressing both project-specific and cumulative impacts.

Response to Comment M8

The City of Irvine is not involved with the sale of land parcels; the DON has publicly stated that it will sell all parcels of the former MCAS El Toro concurrently. As the owner of the property, the DON has indicated that it will divide the land into the four parcels as indicated on the attached figures. The EIR provides an analysis of the project's potential impacts based upon the maximum amount of development allowed under the Base Plan and Overlay Plan regardless of the manner in which the DON sells the property. (Note: The four referenced parcel figures are included in the Appendix to this Response to Comments document).

Response to Comment M9

The proposed maximum development intensity of the project is defined in Section 3.0 *Project Description*. The City does not propose to exceed the level of development beyond that defined in Section 3.0 and analyzed in the EIR. The development potential is based on densities and intensities achievable under the proposed General Plan land uses and zoning designations, subject to the specific density and intensity caps that are explicit in the proposed project. Any proposed increase in the level of development beyond that described and analyzed in the EIR would require the preparation of subsequent or supplemental environmental documentation to address the potential environmental impacts of such a proposal. The land use densities of the proposed project, as with land use densities for all similar proposed projects in Irvine, are based on and controlled by the maximum allowable development intensity. As such, the density range establishes the framework for analysis within the limits of the maximum development intensity.

Response to Comment M10

The proposed project sets specific maximum levels of density and intensity and the City of Irvine has no intention of changing these levels. Refer to Response to Comment M9.

Response to Comment M11

Comment noted.

Response to Comment M12

The EIR discusses all potential environmental effects of the Overlay Plan which is the maximum buildout scenario as defined in the project description. The City of Irvine has no intention of adding development intensity beyond that which is presented in the EIR. Refer to Responses to Comments M9 and M10.

Response to Comment M13

Refer to Responses to Comments M9 and M10

Response to Comment M14

Per the Overlay Plan, the maximum number of dwelling units in PAZ2 is set at 850, notwithstanding the number of units that could be calculated using the maximum range of the zoning designation. The maximum intensity of development for both the Base and Overlay Plans is specifically depicted in Tables 3-3 and 3-4 of the EIR. Refer to Response to Comment M9.

Response to Comment M15

Refer to Response to Comment M9.

Response to Comment M16

Comment noted.

Response to Comment M17

The air quality impact analysis contained in Section 5.3.3 *Air Quality Environmental Impacts* is adequately assesses the air quality impacts of runway removal as part of the overall project construction. In order to confirm the validity of the initial URBEMIS 2001 model, additional analysis of the airport runway model was completed. As part of this additional analysis, it was determined that the URBEMIS 2001 site grading PM₁₀ fugitive emissions calculations are based on the emission factor prepared by the CARB for construction activities, that include: limited-to-heavy trenching activities; limited-to-heavy earth moving activities by scrapers; road pre-paving activities; paving activities; road grading; scraper excavations; general construction of pads, framing, landscaping, etc.; and drilling, blasting, compaction, and trucking of excavated and fill material. The secondary set of URBEMIS 2001 model runs were performed with the demolition tab enabled. The results of the initial URBEMIS 2001 model run and the secondary URBEMIS 2001 calculations are presented as Table M-1 in the Appendix of this Response to Comments document. The results of the secondary URBEMIS 2001 calculations show that unmitigated PM₁₀ emissions increased to approximately 458-tons per year as compared to 451-tons per year using the initial URBEMIS 2001 data. This represents an increase of less than seven tons, or 1.4 percent of the total unmitigated PM₁₀ emissions. The difference is statistically insignificant and the additional analysis is provided to confirm that the initial analysis adequately assesses the air quality impacts of runway removal as part of the overall project construction. Section 5.3.3 will be amended with the addition of the secondary URBEMIS 2001 calculations and qualitative description.

The Mitigation Measures proposed will apply to all construction activities, including demolition and removal of the runways as well as grading and excavation. Mitigation Measure AQ2 has been amended to read:

“Prior to the commencement of construction activities required to demolish and/or remove existing DON infrastructure, including runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The ~~plans~~ plan shall identify implementation procedures for each of the following emission reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.”

Response to Comment M18

Refer to Response to Comment M17. Section 5.3.3 *Air Quality Environmental Impacts* states:

“Both the Base Plan and Overlay Plan propose the development of the entire 4,693-acre base within a 19-year (2007-2025) time frame. For estimation of air emissions, it was assumed that either plan is subdivided into two phases based on utility and extent of the development...For the estimation of air quality emissions from construction of the various facilities, construction activity is assumed to last for a period of three years during each phase. This assumption conservatively accounts for both demolition and grading/excavation activities as major sources of construction-related emissions. The URBEMIS 2001 model is used for estimating construction emissions for all stages of development...Due to the limited availability of specific data regarding construction activities and equipment requirements, the URBEMIS 2001 model default options were used.”

Response to Comment M19

The DON will not transfer fee title to the property of the former MCAS El Toro until the parcels have been remediated to acceptable exposure levels; property not meeting acceptable exposure levels will not transfer or may be transferred to private control through a lease in furtherance of conveyance until the remediation is complete. The EIR will be revised to note that the DON, in the April 2003 Draft Final EIS, evaluated potential soil contamination adjacent to runways and underneath certain runway extensions. In addition, Mitigation Measure HH 5 puts in place a process for responding to potential unidentified contamination were it to be encountered during any construction activity on the former MCAS El Toro. Also refer to Response to Comment M24.

Response to Comment M20

Refer to Responses to Comments M17 and M19 for potential contamination issues associated with runways. Potential impacts to air quality related to the removal of runways, tarmac, and related infrastructure were modeled using URBEMIS 2001 and is presented in Section 5.3 *Air Quality*.

Response to Comment M21

Refer to Responses to Comments M16 through M20. Referenced analysis has been conducted and findings presented in the EIR.

Response to Comment M22

This comment incorrectly assumes that the proposed project provides the authority to develop an additional 14,000 acres of land. Even if the proposed project is not approved and implemented, based on Measure W, the Orange County General Plan precludes development of an airport on the former MCAS El Toro and thereby removes previous land use restrictions due to aircraft operations. Even in the absence of the proposed project development would have to adhere to the non-aviation designation of the site based on the provisions of Measure W. The project proposes to change the City of Irvine General Plan and zoning designations for the project site from one non-aviation land use plan (e.g., the Millennium Plan, adopted in February 2000) to another non-aviation land use plan, designated the Great Park Plan.

The cumulative analysis provided in Section 7.1 of the EIR is consistent with the provisions of CEQA and the CEQA Guidelines. As stated in the EIR, the CEQA Guidelines allow for the analysis of cumulative impacts to utilize the Regional Growth Projections Method. According to CEQA Guidelines Section 15130, the Regional Growth Projections Method can be a summary of projections contained in an adopted general plan or related planning document which is designed to evaluate regional or area wide conditions. As described in the EIR (EIR, page 7-1), the Regional Growth Projections Method has been utilized for analysis of cumulative impacts. The cumulative analysis is based on buildout assumptions identified in the Center for Demographic Research's *Orange County Projections 2000*. This cumulative analysis takes into consideration buildout of local and regional general plans as well as population forecasts for the County of Orange and the region as a whole (as shown in Figure 7-1 and Table 7-1) (EIR, page 7-1). The EIR is consistent with the CEQA Guidelines provisions for the use of the Regional Growth Projections Method in the evaluation of cumulative impacts, as the OCP-2000 projections are adopted based on regional growth estimates utilized by various jurisdictions throughout the County.

Furthermore, the commentor appears to confuse the intent of CEQA Guideline Section 15130(b)(1)(B)(2) with respect to "probable future projects." CEQA Guideline Section 15130(b)(1)(B)(2) addresses the list approach for analysis of cumulative impacts. As previously stated, the Orange County Great Park EIR does not rely on the list approach for the analysis of cumulative impacts. Also, CEQA Guideline Section 15130(b)(1)(B)(2) does not apply to the 14,000 acres of land referenced by the commentor as it does not meet the criteria of the Guideline. Specifically: 1) the 14,000 acres is not the subject of an application requiring an agency approval which has been received at the time the notice of preparation was released; 2) the 14,000 acres is not a project identified in an adopted capital improvements program, general plan, regional transportation plan, or other similar plan; 3) the 14,000 acres is not a project anticipated at a later phase of a previously approved project; and 4) the 14,000 acres is not a public agency project for which money has been budgeted." Also refer to Response to Comment I10.

With respect to the City of Lake Forest, the City's adopted General Plan was both reviewed and has been included in the preparation of the Orange County Great Park EIR. Land use assumptions for cumulative growth include the adopted land uses of the City of Lake Forest General Plan. The City of Lake Forest has recently amended its General Plan to remove references to the aviation-use of the airport, and to delete references to the noise contours and AICUZ boundaries formerly associated with the base operations. However, no land use changes were adopted as part of this recently approved General Plan amendment. Also, no land use changes have been identified or are proposed by the City at this time. The City has just recently solicited proposals to initiate a land use study that would examine potential land use changes within the areas previously restricted by aviation use of the

former base. No formal land use change recommendations are expected until sometime in 2004. Because the nature, extent, and timing of potential land use changes that could occur in this area have not been determined, any additional analysis, beyond that provided in the EIR, would be speculative.

With respect to the City of Aliso Viejo, the City is a newly incorporated City and does not have an adopted General Plan. The City is currently in the preliminary stages of preparing a General Plan, which is expected to be adopted in late 2003 or 2004, well beyond the timeframe associated with the Orange County Great Park EIR. Rather than engage in speculation as to the nature, extent, and timing of potential land use changes that could occur in this newly incorporated jurisdiction, the Orange County Great Park EIR relies upon adopted growth projections as allowed by the CEQA Guidelines for the Regional Growth Projections Method.

The analysis of the 14,000-acres is addressed in the EIR, to the degree that the project would cause growth-inducing impacts in the City of Irvine and surrounding jurisdictions (EIR, page 7-13). The EIR concludes that the growth-inducing impacts are significant.

Response to Comment M23

The EIR describes the project's potential contribution to regional air emissions and provides a comparison of these emissions to the projected air emissions within the basin as a whole. The EIR does not rely upon this comparison as the basis for determining the significance of the project's air quality impacts. Rather, this comparison is made to assess the magnitude of the proposed project's impact on the region as a whole. While the EIR states that the project will have a negligible impact on the overall air quality within the SCAB, the EIR concludes that, "due to the size of the project, certain impacts that result from development will be "unavoidable" as these impacts cannot be completely mitigated and most of these changes are irreversible. This is considered a significant unavoidable impact, although the overall effect on air quality within the Basin for the life of the proposed project is estimated at less than one half of one percent." (EIR, page 5.3-55).

With respect to the EIR's conclusion of cumulative air quality impacts, the EIR's conclusion of significance is based on the cumulative impact associated with the regional growth projected pursuant to OCP-2000. The EIR concludes that area-wide emissions as a result of cumulative development pursuant to OCP-2000 projections are considered significant. As stated in the EIR, "operation emissions in conjunction with related projects and other emissions in the Basin will also coincide. Since air quality in the SCAB does not comply with federal or state standards, these emissions will contribute to a cumulatively significant impact on air quality," (EIR, page 7-6). The tables provided in the discussion of cumulative air quality impacts provide a quantification of pollutant emissions estimates for the year 2025 based on the adopted 1997 Air Quality Management Plan. Also, regional emissions projections are graphically depicted in Figure 5.3-2 of the EIR.

The potential cumulative impacts with respect to CO hotspots are also quantified and evaluated in Section 5.3 *Air Quality*. Table 5.3-29 depicts the CALINE 4.0 8-hour Carbon Monoxide Modeling Results for Post-2025, and demonstrates that no project-specific or cumulative Carbon Monoxide Hot Spot will result.

Response to Comment M24

The EIR includes data and analysis from the DON and other sources of information and uses these sources to draw conclusions for potential impacts to public health and safety. The

federal government is required to remediate the site to acceptable exposure levels. As part of its obligation to remediate, the DON continues to monitor the site and publish results of its monitoring and remediation efforts. The April 2003 Draft Final EBS is the most relevant evaluation of continuing remediation efforts; it identifies an additional 76 new potential release locations, all of which require further evaluation for potential releases to the environment and subsequent remediation, if required. The April 2003 Draft Final EBS catalogs the types of sites and distinguishes between those that require no further action, those that require further evaluation, those that require implementation of response actions, and those that require completion of ongoing response actions. The DON will not transfer fee title to the property of the former MCAS El Toro until the parcels have been remediated to acceptable exposure levels; property not meeting acceptable exposure levels will not transfer or may be transferred to private control through a lease in furtherance of conveyance until the remediation is complete. Property not transferred in fee title by the DON can only be developed with institutional controls established by the DON until remediation is complete and the fee title is complete. The April 2003 Draft Final EBS concludes that of the 3,738-acres of base property that are expected to become available for transfer, approximately 84 percent are environmentally suitable for transfer of fee title at the present time. The EIR will be revised to incorporate the latest information available in the April 2003 Draft Final EBS.

Response to Comment M25

Refer to Response to Comment M24.

Response to Comment M26

There is no indication that recordkeeping by the DON differed significantly from recordkeeping in private industry during the period the base was in operation. Uses of hazardous materials are well-documented, as are facility plans and operating procedures. While quantities of wastes may not have been well-documented in the period prior to the advent and enforcement of RCRA at the base, that is also the case in the private sector. The extensive process of records reviews, visual inspections, and interviews has created as thorough a record of hazardous materials use and disposal practices as exists. The DON and the regulatory agencies participating in the Federal Facilities Agreement concur that the protocol for investigating the base is sound, that the vast majority of potential contamination locations at the base have been identified, and that significant areas of unidentified contamination are not likely to be found. The City is concerned that there may be small areas of unidentified contamination and that these may be encountered during grading and construction activities. Mitigation Measure HH 5 addresses this potential by requiring applicants for grading permits to prepare a protocol plan that will guide responses to the discovery of unknown contamination. Furthermore, the DON is required to complete all necessary remedial actions before title to the former MCAS El Toro is transferred from federal ownership. Even after the title is transferred, the federal government is required to conduct further remediation if additional contamination caused by DON actions is discovered or if a remedy fails to perform adequately. Federal law also provides that DON may be required to indemnify the new owners or certain other parties for liabilities arising from claims for personal injury or property damage resulting from the release or threatened release of any hazardous substances, pollutants or contaminants, or petroleum or petroleum derivatives attributable to DON activities on military installations. Refer to the following letters that are attached in the Appendix to this Response to Comments document: H.T. Johnson, Assistant Secretary of the Navy, Installations and Environment, Letter to the Editor, Los Angeles Times, 5 August 2002; and the letter to the City of Irvine from the DON dated

25 April 2003. Also see the "DOD Policy on Responsibility for Additional Environmental Cleanup after Transfer of Real Property" electronically at:
[http://www.dtic.mil/envirodod/Policies/BRAC/brac_flu.htm].

GeoSyntec based its evaluation on the use of PRGs (preliminary remediation goals) for identified contaminants. As the U.S. Environmental Protection Agency notes:

"Preliminary Remediation Goals (PRGs) are tools for evaluating and cleaning up contaminated sites. They are risk-based concentrations that are intended to assist risk assessors and others in initial screening-level evaluations of environmental measurements. The PRGs contained in the Region 9 PRG Table are generic; they are calculated without site specific information. However, they may be re-calculated using site specific data.

PRGs should be viewed as Agency guidelines, not legally enforceable standards. They are used for site "screening" and as initial cleanup goals if applicable. PRGs are not de facto cleanup standards and should not be applied as such. However, they are helpful in providing long-term targets to use during the analysis of different remedial alternatives. By developing PRGs early in the decision-making process, design staff may be able to streamline the consideration of remedial alternatives. " EPA, Region 9, Superfund Program:
[<http://www.epa.gov/region09/waste/sfund/prg/index.htm>].

The City supports the use of PRGs in the screening process, but recognizes that site specific characteristics may result in the adoption and implementation of cleanup goals that protect public health and safety without achieving the PRGs. The City will review the specific sites mentioned in the comment and address them in the final EIR.

Considerations for remedial actions objectives are provided in 40 CFR 300.430(e)(2)(i) that states, "remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response." This means that the DON will be responsible for remediation of the former MCAS El Toro to these exposure levels prior to the transfer of the fee title to the property. The DON has stated that some land-use controls (i.e., easements, covenants, institutional controls, ordinances, etc.) will be required in order to restrict public access on approximately seven Installation Restoration Plan (IRP) sites if those properties are transferred through a lease in furtherance of conveyance. The DON will employ limited land use controls at IRP sites 2, 3, 5, 16, 17, 18, 24; the use of such controls has yet to be determined for IRP sites 1, 8, 11, and 12. This action has been deemed necessary until the IRP sites in question can be remediated to the above mentioned acceptable exposure levels.

Response to Comment M27

Refer to Response to Comment H65. The DON has conducted a revised EBS of the remaining acreage at the former air station (April 2003 Draft Final EBS). The DON has sufficiently analyzed the existing locations of concern and has addressed recommendations for additional potential locations of concern set forth in the City of Irvine's Solvents Study (January 2000) and the GeoSyntec report commissioned by the County of Orange (November 2001). The Solvents Study and GeoSyntec report predate the March 2003

letter from the City of Irvine; the April 2003 Draft Final EBS conducted by the DON sufficiently addresses environmental concerns at former MCAS EL Toro. The City of Irvine has concluded that the assessment of the potential release locations is fair and appropriate.

Response to Comment M28

While the DON did not identify any specific spills or releases prior to 1983 (documentation of waste management practices improved dramatically following the implementation of RCRA beginning in the early 1980s), it acknowledged practices that resulted in releases that most likely caused the contamination problems at the base. These practices included disposal of hazardous materials and wastes to sewers, primarily storm sewer drains, disposal of hazardous wastes in base landfills, use of hazardous materials and wastes in controlling dust on roads and impermeable surfaces, uncontrolled runoff of hazardous wastes, lack of monitoring of underground storage tanks and storage facilities, and the use of hazardous materials and wastes for training of emergency response personnel. The DON's analysis of these practices led to its list of potential locations of concern (LOCs), evaluation of the LOCs, and responses where required. Where other parties, including the City of Irvine, the Restoration Advisory Board, the County of Orange, and the regulatory agencies involved in the base cleanup, have identified other potential locations of concerns, the Navy has responded with additional investigation. In some cases, the Navy, with the concurrence of the regulatory agencies, has concluded that releases did not occur or were not of sufficient magnitude to warrant further evaluation or remediation. For example, in response to the City's Solvent Study, the DON investigated Building 307, the Laundry and Dry Cleaning facility for the base. In its Final Technical Memorandum, the DON concluded that significant releases did not occur at that location and further investigation was not needed. In other cases, the DON has pursued additional evaluation as in the case of the discovery of radium dials at IRP Site 2, which prompted a thorough historical radiological analysis and a radiological survey of much of the base. This evaluation is ongoing. In sum, the City of Irvine considers the DON's process to be responsive to input from interested parties and to be sufficiently comprehensive.

Response to Comment M29

The DON responded to the GeoSyntec report in the April 2003 Draft Final EBS and concurred with seven of the 339 sites recommended for further action or assessment. The remaining 332 sites were either previously assessed, are currently being assessed, or will be assessed in the near future, have closure NFA letters signed by a regulatory agency or are recommended for NFA and are pending regulatory concurrence, or are considered to not require further action or assessment. Regulatory agencies concur with the DON's assessment of the GeoSyntec Report. The DON's April 2003 Draft Final EBS identifies new potential release locations that require further investigation, but does not identify conclusively any significant new risks to public health and safety, nor does it substantially alter conclusions drawn in the EIR.

Response to Comment M30

Refer to Responses to Comments M27 and M29 for information regarding the DON's April 2003 Draft Final EBS and information pertinent to the GeoSyntec report.

Response to Comment M31

Refer to Response to Comment M26. The City of Irvine will continue to review and monitor the base cleanup as it progresses. The City expects the DON to evaluate the seven

GeoSyntec recommended new sites with which it concurs regarding the need for further evaluation, along with the other 69 new locations of concern, in a manner that follows regulatory requirements and guidelines and meets the highest of professional standards. At any sites that require remediation to protect public health and safety, the City expects that the DON will meet agreed upon remediation goals that will ultimately result in the transfer of fee title to the property in a condition suitable for unrestricted use.

Response to Comment M32

The DON has publicly stated that it will indemnify new land owners of former air station property in order to mitigate potential soil contamination that is attributable to historic DON operations. Refer to Response to Comment H67. Also refer to Responses to Comments M27 and M29 for information regarding the DON's April 2003 Draft Final EBS and information pertinent to the GeoSyntec report.

Response to Comment M33

Refer to Response to Comment M26. Also refer to Responses to Comments M27 and M29 for information regarding the DON's April 2003 Draft Final EBS and information pertinent to the GeoSyntec report.

Response to Comment M34

Refer to Response to Comment M26. There is no evidence that the Overlay Plan, due to its greater development, will result in greater human contact with contaminated or potentially contaminated soil. For both the Base Plan and the Overlay Plan, the greatest potential impact to public health and safety is the risk of exposure to unidentified contamination, rather than the risk of contact with known contaminated soil or groundwater. Whether currently identified or not, the DON is obligated to remediate the former MCAS El Toro to acceptable exposure levels. Mitigation Measure HH 5 addresses the potential for exposure and reduces the risk to below a threshold of significance.

Response to Comment M35

Refer to Response to Comment M34. The two examples cited in the letter are addressed through Mitigation Measure HH 5. The radiological anomaly found at IRP Site 2 (radium dial) was found on the surface of the site. Perchlorates were identified as part of the required regular groundwater monitoring at the base. In the case of the radiological anomaly, HH 5 requires the preparation of a protocol plan to guide responses to the discovery of unexpected contamination. The plan must include a response to the discovery of a radiological entity as well as more common toxic contaminants. Were the DON to identify additional contaminants of concern in particular geographic locations, protocol plans may be revised. Mitigation Measure HH 5 is amended to read:

"Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities."

While the DON is reasonably certain that they have identified all potential locations of concern at the former MCAS El Toro, they are prepared to respond to any future

identification of potential contamination following transfer of the fee title to the property. This is a prudent approach where complete certainty is not possible.

Response to Comment M36

Refer to Responses to Comments H65, H67, and M27 for information regarding the City of Irvine's Solvents Study. Refer to Response to Comment M26 for information pertaining to protection of human health and the environment from known or suspected carcinogens, including TCE.

Response to Comment M37

Refer to Responses to Comments H65, H67, and M26 for information regarding the City of Irvine's Solvents Study.

Response to Comment M38

See Response to Comment H65. The DON responded to the City of Irvine Solvent Study in the April 2003 Draft Final EBS. In its response, the DON concludes that the City of Irvine Solvent's Study methodology was faulty in regards to the magnitude of solvent use and potential releases via the sanitary sewer system and that the likelihood of releases was small. The DON concluded that the lack of significant releases associated with Building 307, the Laundry and Dry Cleaning Facility, supported its prior conclusion that the sanitary sewer system is not a significant conduit of contamination to subsurface soil or groundwater.

Response to Comment M39

See Responses to Comments H65 and M38.

Response to Comment M40

See Responses to Comments H65 and M38. The April 2003 Draft Final EBS specifically evaluated the City of Irvine Solvent's Study and concluded that the methodology presented in the study was faulty. Upon review of the April 2003 Draft Final EBS, the City of Irvine now accepts this assessment.

Response to Comment M41

See Response to Comment H65, M38, and M40.

Response to Comment M42

There is no evidence to suggest that unknown contaminated soils are likely to be discovered during excavation of the project site. Refer to Response to Comment M26 for information pertaining to the protection of human health and the environment from known or suspected carcinogens. Per the Mitigation Measures outlined in Section 5.6.5 *Geology and Seismicity Mitigation Measures*:

"Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site...The purpose of the subsurface evaluation is to further evaluate the subsurface conditions in the area..."

In the unlikely event that unidentified contaminants are discovered, the EIR provides an appropriate Mitigation Measure to deal with this scenario. Section 5.5.5 *Public Health and Safety Mitigation Measures* has been amended and read as follows:

“Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities.”

Response to Comment M43

Refer to Responses to Comments M35 and M42. There is no evidence to suggest that unknown contaminated soils are likely to be discovered during excavation of the project site. The former MCAS El Toro will be remediated to an exposure level acceptable to human health and the environment. Mitigation Measure HH 5 addresses this potential issue by requiring grading permit applicants to prepare a protocol plan that responds to unidentified contamination. Refer to the document *Reusing Cleaned Up Superfund Sites: Recreational Use of Land Above Hazardous Waste Contaminant Areas* – EPA Office of Emergency Response (March 2001) for technical information on how sites with waste contaminated areas have been safely reused for recreational purposes while ensuring the integrity and protectiveness of the remedy are maintained.

Response to Comment M44

Refer to Responses to Comments H65, M35, M38, M40, M42, and M43.

Response to Comment M45

Refer to Responses to Comments H65, M35, M38, M40, M42, and M43. The City of Irvine accepts the DON’s conclusion in the April 2003 Draft Final EBS that widespread unidentified contamination is not likely to exist at the base. However, if unidentified contamination is discovered, Mitigation Measure HH 5 has been amended and responds to the potential for such localized unidentified contamination to exist and be encountered during grading activities.

Response to Comment M46

Refer to Responses to Comments H65, M35, M38, M40, M42, and M43. The DON is required to complete all necessary remedial actions before the fee title to the former MCAS El Toro is transferred from federal ownership. Even after the title is transferred, the federal government is required to conduct further remediation if additional contamination caused by DON actions is discovered or if a remedy fails to perform adequately. Federal law also provides that DON may be required to indemnify the new owners or certain other parties for liabilities arising from claims for personal injury or property damage resulting from the release or threatened release of any hazardous substances, pollutants or contaminants, or petroleum or petroleum derivatives attributable to DON activities on military installations. Refer to the following letters that are attached in the Appendix to this Response to Comments document: H.T. Johnson, Assistant Secretary of the Navy, Installations and Environment, Letter to the Editor, Los Angeles Times, 5 August 2002; and the letter to the City of Irvine from the DON dated 25 April 2003. Also see the “DOD Policy on Responsibility for Additional Environmental Cleanup after Transfer of Real Property” electronically at:

[http://www.dtic.mil/envirodod/Policies/BRAC/brac_flu.htm]. Using the proposed Mitigation Measure GS2 will require geotechnical assessment for specific development prior to construction; construction delays using this methodology will likely not occur.

Response to Comment M47

Refer to Response to Comment M46.

Response to Comment M48

Refer to Responses to Comments H78 and M46. The DON is required to complete all necessary remedial actions before the fee title to the former MCAS El Toro is transferred from federal ownership. Even after the title is transferred, the federal government is required to conduct further remediation if additional contamination caused by DON actions is discovered or if a remedy fails to perform adequately. Federal law also provides that DON may be required to indemnify the new owners or certain other parties for liabilities arising from claims for personal injury or property damage resulting from the release or threatened release of any hazardous substances, pollutants or contaminants, or petroleum or petroleum derivatives attributable to DON activities on military installations. Refer to the following letters that are attached in the Appendix to this Response to Comments document: H.T. Johnson, Assistant Secretary of the Navy, Installations and Environment, Letter to the Editor, Los Angeles Times, 5 August 2002; and the letter to the City of Irvine from the DON dated 25 April 2003. Also see the "DOD Policy on Responsibility for Additional Environmental Cleanup after Transfer of Real Property" electronically at: [http://www.dtic.mil/envirodod/Policies/BRAC/brac_flu.htm].

Response to Comment M49

Refer to Response to Comment M46. The comment acknowledges that federal law requires the DON to remediate any contamination attributable to their actions and indemnify the community from its effects; there is no basis to speculate that the DON will not comply with the law. While the purpose of an EIR is to evaluate environmental and not economic impacts, no economic consequences would result due to the DON's indemnification.

Response to Comment M50

Refer to Responses to Comments H65, M26, M35, M43, and M46.

Response to Comment M51

Refer to Responses to Comments H65, M35, M38, M40, M42, M43, and M46.

Response to Comment M52

Refer to Responses to Comments H65, M26, M35, M43, M44, and M46. The DON's initial 1995 EBS and April 2003 Draft Final EBS outline specific areas of soil contamination that will require remediation prior to ownership transfer. The DON has stated that some land-use controls (i.e., easements, covenants, institutional controls, ordinances, etc.) will be required in order to restrict public access on approximately seven Installation Restoration Plan (IRP) sites. The DON will employ limited land use controls at IRP Sites 2, 3, 5, 16, 17, 18, 24; the use of such controls has yet to be determined for IRP Sites 1, 8, 11, and 12. This action has been deemed necessary until the IRP Sites in question can be remediated to the above mentioned acceptable exposure levels.

Response to Comment M53

Refer to Responses to Comments M54 through M58.

Response to Comment M54

The study included explicit phase and analysis for 2007 conditions (short-term), 2025 (long-term), and post-2025 (General Plan buildout) conditions. This is consistent with

requirements of the City of Irvine Traffic Impact Analysis guidelines. The 2007 analysis was included specifically to identify necessary phasing of short-term and long-term improvements. The City of Irvine has also developed an implementing mechanism in the form of the North Irvine Transportation improvement Mitigation (NITM) program. Ongoing monitoring of study area conditions, as a feature of the NITM program, is in the form of an interim and 5-year review.

Response to Comment M55

The EIR, in conjunction with NITM, provides significant detail regarding the timing of construction of necessary roadways, and links development to the completion of the roadways. The information regarding the timing of construction of facilities presented in the referenced tables was obtained directly from the agency responsible for each improvement or the environmental document that required associated with each improvement. Construction of those improvements in the subject tables that are related to future development is tied to the development as required mitigation measures, and/or conditions of approval, that must be constructed in conjunction with the specified development. The tables referred to in the comment represent the best knowledge available regarding the timing of future development and anticipated roadway improvements.

Response to Comment M56

Refer to Responses to Comments M54 and M55. The EIR and NITM provide for comprehensive phasing for all necessary traffic improvement. For non-NITM improvements, Mitigation Measure Trans 4 specifically requires their construction by the developers of the Great Park, with construction phased in relation to Great Park development. The non-NITM improvements are designed to mitigate the specific impacts for which these improvements are required in the EIR. With respect to NITM improvements, the NITM program allocates funding responsibility for all improvements on a proportioned basis between Great Park and other properties generating traffic that necessitate the improvement. NITM also sets forth a phasing program for construction.

Response to Comment M57

Refer to Response to Comment M56.

Response to Comment M58

Refer to Response to Comment M56.

Response to Comment M59

The statement that no peak hour impacts were identified is incorrect. The segment of University Drive between the I-405 southbound ramps and Michelson Drive was identified for 2025 conditions as a roadway segment where an additional southbound through lane was required. The results of the daily and peak roadway segment analysis, in conjunction with the peak hour intersection analysis, did in fact accurately and adequately identify potential project impacts and required mitigation measures (mid-block or through travel lanes).

The key difference between the roadway segment daily and peak hour analysis is that the daily capacities assume a variety of impediments to capacity, including the presence of cross-street intersections that consume a substantial proportion of available capacity. The peak hour capacities are focused on identifying the potential need for mid-block travel lanes based on unimpeded mid-block conditions.

The basic assumptions of the daily segment analysis and the peak hour segment analysis are different, corresponding to the different purposes of the two types of analysis. The daily segment analysis is intended to be utilized as a very general measure of roadway performance and includes the potential capacity reductions due to mid-block intersections. The peak hour segment analysis is intended to evaluate the specific need for mid-block travel lanes in the absence of cross-street interference.

Response to Comment M60

Refer to Response to Comment M59.

Response to Comment M61

The policy addressed in the comment is an already existing rather than proposed General Plan policy. The proposed project merely makes PA 30 subject to Policy B-1 of the General Plan Circulation Element. The application of the existing policy to PA 30 has been specifically analyzed in the EIR and the analysis concludes that the application of this policy allows for LOS E at two intersections (EIR Page 5.2-58). It is the prerogative of the City of Irvine to establish appropriate performance standards within its local jurisdiction.

Response to Comment M62

Refer to Response to Comment M61. The issue of thresholds of significance (impact) is separate from the concept of the local jurisdiction's right to establish the appropriate performance standard for the community.

Response to Comment M63

The comment deals with additional analysis provided by the EIR to examine future conditions if the City approves the General Plan Amendment and Zone Change for PA 40 (the "probably future project"). This project was previously approved but subjected to a litigation challenge. The PA 40 impacts and PA 40's responsibility to fund its proportionate share of traffic mitigation are set forth in the NITM program. Application of the NITM program will generate sufficient fees to timely fund construction of all traffic improvements necessary for the development of the Great Park, PA 40, and the remainder of undeveloped north Irvine.

Response to Comment M64

The Great Park Traffic Impact Analysis does take into account all anticipated growth in traffic for surrounding communities and the entire region, based on adopted growth forecasts for the entire County of Orange and surrounding region. The area model (ITAM) includes existing development and regional growth projections for Orange County and the relevant portions of Los Angeles County, Riverside County, San Bernardino County, and Ventura County, as well as projected increases in interactions with the surrounding areas via the regional roadway system.

Response to Comment M65

The Traffic Impact Analysis executive summary is simply a summary of the proposed mitigation program; they are discussed in greater detail on page 5.2-71 of the EIR. That analysis concludes that if such programs were not implemented by the responsible regional agencies the cumulative impacts would be significant and unavoidable. Also refer to Responses to Comments F36 and S6.

Response to Comment M66

The sources referenced in the comment represent specific funding sources that are responsible for implementing the roadway improvements identified in the Traffic Impact Analysis developed for the EIR. The funding sources generally fall into two categories; the first funding source category is development projects that have been approved. The implementation mechanism/assurance of funding is the specific condition of approval requiring that the improvement be constructed in conjunction with the approved development project. The second funding source category is local agencies that have included specific improvements within their capital improvement program. Projects are only included in the local agency capital improvement program when they are associated with a specific funding source identified by the local agency.

Response to Comment M67

Land use based trip rates and socioeconomic data (SED) based trip rates simply reflect two different but commonly accepted approaches to evaluating traffic. There are underlying differences in the ways that land use based models and SED based models are used to forecast future traffic. Traffic models validated using land use data or SED have both been shown to match (validate to) existing traffic volumes quite well. Traffic forecasts for the Great Park Traffic Impact Analysis that match the regional SED driven forecasts are now a mandatory modeling consistency requirements based on stated and federal legislation. The ITAM model incorporates the conversion from one approach to the other and has been validated to existing traffic volumes.

Response to Comment M68

A key difference between land use based and SED based models is how they treat “linked” trips. A land use based model treats linked trips as two shorter individual trips. A SED based model treats the same linked trip as a longer single trip. The land use model has higher trip generation because it assumes that longer trips have stops and computes one longer trip as multiple shorter trips. As a result, the 6,256 trips under the land use model is a different way of expressing the same number of trips under the SED because they are both based on the same vehicle miles traveled per day.

Response to Comment M69

Refer Responses to Comments M54 to M58.

Response to Comment M70

Both direct and indirect potentially significant noise impacts are discussed in detail in the EIR. Section 5.4.3 *Noise Environment Impacts* discusses noise impacts relating to project construction activities, post-construction, traffic noise, project land use noise, and off-project area noise. Refer to the EIR, pages 5.3-22 through 5.3-34, as well as the Environmental Noise Assessment technical report (Appendix H of the EIR), for presentation of noise data and a comprehensive discussion of potential noise impacts. Traffic noise impacts were analyzed and determined based on current, accepted FHWA and Caltrans modeling methods, as well as compatibility guidelines established by the local county and city jurisdictions. Beyond this program level analysis, more detailed traffic noise assessments may be conducted as specific projects are developed.

Response to Comment M71

Noise impacts related to traffic generated by the project both on- and off-site are discussed in Section 5.4.3 *Noise Environmental Impacts* from traffic volume data presented in Section 5.2.3 *Traffic/Circulation Environmental Impacts*. The potential traffic noise impacts on noise-

sensitive receptors due to the Great Park Plan were evaluated in accordance with methodologies established by the FHWA and CALTRANS, as well as compatibility guidelines established by the local county and city jurisdictions. Beyond this program level analysis, more detailed traffic noise assessments may be conducted as specific projects are developed. Mitigation Measure Trans 1 does not indirectly confirm the conclusion surmised in Comment M71; part of the purpose of requiring a project applicant to apply for annexation to the Irvine Spectrum TMA is to address traffic, air and noise impacts. Mitigation Measure Trans 1 further states that should this annexation application not be approved, a TMA shall be developed and implemented for the project. Additionally, the EIR concludes that traffic impacts resulting from the proposed project would be reduced to a less than significant level with implementation of the identified Mitigation Measures.

Response to Comment M72

The comment is in reference to residential development located in the transit-oriented development area which is designed to be in close proximity to the Urban Transportation Center and railway. Section 5.4.1 *Noise Environmental Setting* states:

“The Irvine Transportation Center, a major multi-modal transit center linking bus, commuter rail, and Amtrak rail services, is located along the southern edge of the project area, adjacent to the Southern California Regional Rail Authority railroad.”

California Building Standards establish uniform minimum noise insulation performance standards to protect persons from the effects of excessive noise in multi-family dwellings. Furthermore, as stated in Section 5.4 *Noise California Building Standards*:

“Interior noise levels attributable to exterior noise source must not exceed 45dBA in an habitable room...When the exterior noise levels cause interior noise levels to exceed 45dBA, the building must be designed to prevent the transmission of exterior noise....The California Building Standards will apply to...habitable dwellings other than detached single-family homes within the project site.”

Response to Comment M73

Refer to Responses to Comments M70 through M72.

Response to Comment M74

Comment 74 is responded to in Responses to Comments M75 through M79.

Response to Comment M75

Refer to Figure 5.7-1 for drainage areas and topography information. Per the EIR, a Flood Control Master Plan has been adopted by the City of Irvine, the City of Tustin, the Irvine Company, and the Orange County Environmental Management Agency and is currently being implemented in phases by these agencies. The phasing of flood control system improvements in PAs 51 and 30 will be coordinated with street-phasing schedule so that stormdrains are installed prior to or in concert with road construction. The City's DAMP requires that BMPs be implemented in order to reduce increased runoff to stormdrains. The EIR concludes that the potential for flooding to occur both on- and off-site as a result of future development of the project area is considered a significant impact. To this end, Mitigation Measure H/WQ4 is provided to reduce that potential impact to one of less than significant.

Response to Comment M76

As described in the EIR, the project site is located within the San Diego Creek watershed. No formal delineation of the 100-year flood plain has been prepared by FEMA for the project site as it has been under federal ownership. However, as described in the EIR, the "Flood Control Master Plan for San Diego Creek" (John M. Tettemer and Associates, 1989) identified a range of flood control improvements for the San Diego Creek watershed that would control flood peaks based on a 100-year flood (EIR page 5.7-4). The proposed project will provide for the construction of drainage improvements that are consistent with the Flood Control Master Plan. While the EIR states that some flood control deficiencies remain in the existing condition, any potential flood control deficiencies would be corrected through the implementation of the drainage improvements identified on Figure 5.7-2 Proposed Drainage System of the EIR and through implementation of Mitigation Measures H/WQ 3 and H/WQ 4.

As described in the EIR, developers with property located in the newly delineated 100-year floodplain will be required to construct such improvements as necessary to remove the property from the 100-year floodplain and to prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the flood control facilities.

Response to Comment M77

Refer to Response to Comment M76.

Response to Comment M78

This comment incorrectly recites text from EIR page 5.7-6. The EIR does analyze the potential impacts resulting from stormwater volume, identifies appropriate mitigation measures, and addresses how well they will reduce the impacts to a level less than significant (see EIR pages 5.7-13 through 5.7-26).

As described in the EIR, as part of site planning for the reuse of the former MCAS El Toro, a hydrology study for the 100-year storm event was prepared. Design discharges were developed, and Table 5.7-3 of the EIR provides a quantified summary of the peak flows. (EIR, page 5.7-15, 16) A drainage concept plan has been prepared for the project which addresses stormwater flows on the project site. The locations and sizes of drainage pipes and the proposed drainage channels were determined based upon the level of anticipated runoff from various land uses so as to maintain and improve the existing level of flood control service within the project area.

Response to Comment M79

The requirement for Section 404 Permit and related wetlands and dredge/fill permits are a component of the project; the EIR identifies future potential permit requirements for project implementation, including the potential need to obtain a Section 404 Permit from the US Army Corps of Engineers (EIR, p. 3-30). Issues related to dredge and fill of regulated waters is also addressed on 5.9-17 with specific mitigation cited on page 5.9-25. Permits will be obtained as necessary as future projects are proposed within the project area. There is only a small amount of wetland habitat located on the project site. The provision of large "daylighted" earthen drainage corridors in addition to the proposed wildlife corridor will provide ample opportunity for the development of viable wetland habitats within the project area.

Response to Comment M80

Refer to Response to Comment M22. The development of the 14,000-acres previously contained in the AICUZ is not affected by this project.

Response to Comment M81

Refer to Response to Comment M22.

Response to Comment M82

The proposed project will accommodate regional drainage control facilities. The project does not rely upon flood control systems already in place to mitigate potential impacts; rather, the EIR analyzes water quality impacts and the project proposes a comprehensive approach to addressing drainage control through the provision of drainage and flood control facilities on-site that will accommodate both project-specific runoff volumes as well as provide for regional flood control facilities. Refer to EIR pages 5.7-13 through 5.7-26.

Response to Comment M83

This comment introduces Comments M17 and M87 through M94.

Response to Comment M84

Refer to Response to Comment M17.

Response to Comment M85

Refer to Response to Comment M17. The existing analysis in the EIR evaluates both demolition and construction impacts.

Response to Comment M86

Refer to Responses to Comments M17 and M85.

Response to Comment M87

To provide a reasonable means to estimate air construction emissions in the EIR, it was assumed that either plan (Base and Overlay Plan) is divided into two phases based on the reasonable utility and extent of development being considered at this stage of the project. The first phase is assumed to last ten years (2007-2016) and the second phase is assumed to last the remaining nine years (2017-2025). For each phase, construction activity was assumed to last for a period of three-years, but spread out over a four-year schedule for emission estimation purposes. At this stage of the project, the aforementioned phased methodology of estimating air construction emissions is a reasonable approach considering the level of broad environmental impact analysis. The air quality impact remains the same whether demolition and construction occurs over two, three-year time periods or a single twenty-year time period; the quantity of the construction-related air emissions does not change whether the construction occurs over a shorter or longer timeframe. By analyzing over a shorter time period the EIR evaluates the more intense development scenario for these emissions.

Response to Comment M88

Refer to Response to Comment M87.

Response to Comment M89

The comment misapprehends the restrictions set forth in the proposed General Plan amendment; the numerical limits for allowable uses within the Great Park are the maximum allowed intensity level. Refer to Responses to Comments M9 and M87. The air quality analysis presented in the EIR is based on the buildout limits of the Overlay Plan and the Base Plan.

Response to Comment M90

Refer to Response to Comment M89.

Response to Comment M91

Section 5.3.5 of the EIR outlines several proposed construction and operational air quality impact mitigation measures that are recommended by the South Coast Air Quality Management District (SCAQMD) that may be implemented during the various phases of the project. Mitigation Measures AQ1 through AQ4 are outlined on pages 5.3-53 through 5.3-55 and will be implemented during various phases of the project.

Response to Comment M92

The comment is in error; see Mitigation Measures AQ1 and AQ2 on pages 5.3-53 and 5.3-54 in the EIR. Refer to Response to Comment M91.

Response to Comment M93

Refer to Responses to Comments H67, H77, and M87.

Response to Comment M94

Refer to Responses to Comments H67, H77, and M19.

Response to Comment N1

Comment noted. Traffic studies prepared in conjunction with specific development applications within the project site will be forwarded to the TCA for review as appropriate.

Response to Comment N2

Comment noted.

Response to Comment N3

Comment noted.

Response to Comment N4

Comment noted.

Response to Comment O1

Comment noted. This letter concludes that the EIR includes a discussion of the proposed project's consistency with SCAG policies and applicable regional plans, which were outlined in the SCAG's November 6, 2002 letter on the Notice of Preparation for the EIR.

Response to Comment P1

The City of Irvine proposes the construction of natural drainage corridors as a major project feature in order to achieve drainage control as well as water quality, biological, and aesthetic benefits associated with wetland/riparian restoration. To that extent the City anticipates restoration efforts will involve, among other disciplines, urban stream restoration specialists. The City envisions that these areas will be planted with native species to the extent practicable.

Response to Comment P2

The City of Irvine recognizes that site-specific best management practices (BMPs) implemented for each specific construction project will need to comply with RWQCB NPDES requirements. As required by Mitigation Measure H/WQ 2, prior to issuance of a grading permit for site specific development, evidence shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TMDL) Implementation Plan adopted for this watershed.

Response to Comment P3

The City of Irvine intends to reconstruct the currently underground Bee Canyon Channel and Agua Chinon Channel into natural drainage corridors. However, it is not likely that any new flood plain delineations prepared for the project area will reflect historic zones of flooding, as they will need to reflect the existing and proposed hydrological condition within the project area, not historic conditions.

Response to Comment P4

As depicted in Figure 5.7-2 of the EIR, four potential Irvine Ranch Water District (IRWD) NTS Water Quality Basins are proposed within the project area. One basin is proposed at the northern portion of the project site (PAZ 1) within the Marshburn Basin, while the remaining three are proposed at the “downstream” end of the two drainage corridors, and the wildlife corridor. The placement of the NTS facilities allow for regional water quality to be addressed by the IRWD in its environmental assessment of their NTS project. However, the City of Irvine will also provide, as necessary to meet NPDES requirements, structural and non-structural BMPs on a site-specific basis to ensure that polluted runoff is minimized.

Response to Comment P5

Development is not proposed within the Serrano Creek; however, some drainage improvements are proposed within this area as part of the overall drainage concept plan. While implementation of the proposed project will result in some isolated wetland impacts, the overall quality and value of wetland habitat is anticipated to be significantly enhanced by the proposed natural drainage corridors.

Response to Comment P6

It is anticipated that the “Q” will change as a result of project development. For example, currently undergrounded drainage systems that are proposed to be daylighted and restored as part of the project would experience a change in Q as these areas will become vegetated, with a meandering alignment and varying topographic conditions. Also, these drainages will be designed to accommodate additional runoff created by new development within the project area. However, all drainage facilities are proposed so as to avoid impacts to downstream and/or off-site facilities.

Response to Comment P7

Comment noted.

Response to Comment P8

Comment noted.

Response to Comment Q1

For the Final EIR, the IRWD letter dated 4 April 2003 will be added to Appendix C of the EIR along with the supplemental material provided as part of this document. This supplement confirms the validity and does not materially affect the conclusions reached in the WSA prepared for the subject project.

Response to Comment R1

A traffic study area for the purpose of assessing the project's potential traffic impacts has been defined, and is illustrated in Figure 5.2-1 of the EIR. The limits of the study area are defined by the amount of trips resulting from the proposed project and the potential to impact circulation systems. As shown in Figure 5.2-1, the trip distribution of the proposed project would not extend into areas of Newport Beach and Huntington Beach, and a significant amount of traffic is not expected to utilize Pacific Coast Highway.

Response to Comment R2

Refer to Response to Comment R1.

Response to Comment R3

Estimating the number of airline passengers generated by the proposed project and determining which airports these passengers would utilize is speculative. Additionally, this information does not represent a potential environmental impact.

Response to Comment R4

The amount of urban runoff generated by the project that will be recycled or used for irrigation has not been quantified. Normally, urban runoff is not recycled and directly utilized for irrigation purposes. Reclaimed water, which is sewage that has been substantially treated, is the primary water source utilized for irrigation purposes in the City. However, the proposed project will provide unique project features that will offer opportunity for recharge of groundwater from runoff in the form of the construction of two major natural drainage corridors – the Bee Canyon Channel and Agua Chinon Channel. Both of these channels currently traverse the project site underground and do not contribute to recharge in the area. Reclaimed water will be provided to the project area to serve a majority of the landscaping needs on-site.

Response to Comment R5

Analysis of project impacts to public services as well as public health and safety is included in the EIR. There is no evidence to provide a link between homelessness, infectious disease, and lawlessness.

Response to Comment R6

There is no provision in the Orange County Great Park plan that dictates where residents should live and work. The Transit Oriented Development (TOD) land use designation proposed within the project area is intended to encourage the use of alternative modes of transportation by locating housing units in proximity to major public transit systems (e.g., the Metrolink station), employment centers, and shopping. Under the TOD designation, more refined TOD principles will be employed in this area as specific developments are proposed, such as the provision of pedestrian connections, to encourage the use of alternative modes of transportation.

Response to Comment R7

The Orange County Great Park plan does not dictate where employees working within the project site shall live. It is anticipated that persons residing in other communities will commute to the project site. This issue has been factored into the trip generation assumptions of the traffic analysis of the EIR.

Response to Comment R8

It is anticipated that the Orange County Great Park will be visited and used by a variety of people, who both live and work in the area, as well as tourists from other areas. The Orange County Great Park is envisioned to provide a variety of uses that will attract a large cross-section of people.

Response to Comment R9

Public transportation will be available to the project site. No determination has been made as to whether or not there will be a charge for parking in any portion of the project site, and if so, what that amount would be.

Response to Comment R10

The City has not determined the number of picnic tables that will be provided at the Orange County Great Park. This will be determined as site-specific park and recreational improvements are implemented within the various portions of the project site.

Response to Comment R11

No determination has been made whether the Orange County Great Park will provide a petting zoo feature, although this type of use is considered compatible with the type of uses envisioned for the park.

Response to Comment R12

No determination has been made whether the Orange County Great Park will provide a carousel, although this type of use is considered compatible with the type of uses envisioned for the park.

Response to Comment R13

The potential air quality impacts of the proposed are analyzed in Section 5.3 *Air Quality*. Table 5.3-12 depicts the Mitigated Construction Emissions for the development of the project area. These emission estimates conservatively account for demolition and grading/excavation activities as major sources of construction emissions.

Response to Comment R14

Construction noise, including the demolition of runways, is evaluated in Section 5.4 *Noise*. Table 5.4-8 depicts Typical Noise Levels for Construction Equipment. As shown, the noise level associated with the operation of unquieted jack hammers ranges between 75 and 85 dBA measured at 50 feet.

Response to Comment R15

The runway debris is proposed to be recycled onsite for use in constructing roadways and other supporting infrastructure for the project. As described on page 3-28 of the EIR, the runways can be removed in a sequential manner with stockpiling of materials onsite as required to permit maximum economy of scale in the operation.

Response to Comment R16

The runways will not be available for emergency landings once removal activities have been initiated.

Response to Comment R17

The demolition activities and runway removal will be phased with development onsite. Most of the supporting infrastructure will be constructed in the early phases of the

development of the project site, which is expected in the first 3 to 5 years of project site development.

Response to Comment R18

Specific activities of any federal agency, including the Federal Aviation Administration (FAA) and Federal Bureau of Investigation (FBI) are subject to federal environmental regulations, including review under the National Environmental Policy Act (NEPA). Potential land use compatibility impacts would need to be evaluated based on the specific activity proposed by the federal agency. There is no information that indicates the FAA will use one-fourth of the former air station for aviation purposes, as such use is inconsistent with the Record of Decision adopted by the DON.

Response to Comment R19

Refer to Response to Comment R18.

Response to Comment S1

The comment states that the assumptions used in the analysis are theoretically within reason. The ITAM tool used to develop the future forecasts is consistent with the OCTAM travel demand forecasting tool, which is the regionally (County of Orange) adopted tool for developing future traffic forecasts on the regional roadway system, including the freeways and transportation corridors. Both ITAM and OCTAM have been validated against existing conditions including the freeways and transportation corridors.

Response to Comment S2

The planning level capacities used in the analysis (2,000 vehicles per hour per lane) are reduced to below their operational level capacities as observed in southern California (2,300 vehicles per hour per lane). It is reasonable to assume that including the additional capacity provided by an additional (truck climbing lane) offsets the loss of capacity that is already reflected in the planning level capacities used in this analysis. Regardless of capacity, the project contributes less than 0.03 to the volume capacity ration on the subject segments and accordingly does not exceed the CMP impact threshold for further analysis.

Response to Comment S3

Caltrans staff was contacted regarding ramp metering practices within the study area. No quantitative ramp metering plan was available for inclusion in the analysis and Caltrans could not provide a consistent schedule of ramp meter operations so it is impossible to determine where ramp metering will occur or when any given ramp meter will be operational. Therefore, it is appropriate to utilize the existing unmetered condition as the basis for projecting future traffic conditions and potential deficiencies. Storage of vehicles for a metered condition would of necessity utilize the arterial roadway system approaching the ramps to provide storage.

Response to Comment S4

The comment does not refer to any specific location(s) such that no site-specific response is possible. The Traffic Impact Analysis indicates that future traffic volumes are generally expected to increase over time. Isolated cases where improved future levels of service are projected to occur are most likely related to planned/funded improvements at the location in question.

Response to Comment S5

Proposed mitigation measures are based on environmental factors; the City of Irvine has no control over agreements entered into between Caltrans and other governmental agencies. The non-compete clause, for example, could result in one or more of the City of Irvine's mitigation measures not being implemented, but this is outside of the City of Irvine's control. To the extent that the non-compete clause interferes with implementation of mitigation measures proposed by the EIR, cumulative impacts would not be mitigated and thus remain significant and unavoidable. The following text has been added to Mitigation Measure Trans 7 on page 5.2-70 of the EIR:

"The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-compete clause or any similar agreement restricting a public agency's authority to construct improvement."

Response to Comment S6

The regional funding programs referenced in the EIR are not used as project mitigation. Rather, these programs are recognized as the regional approach to addressing cumulative impacts. The EIR mitigation measures address all project impacts that were identified in the Traffic Impact Analysis, subject to constraints such as those identified in Response to Comment S5 (TCA non-compete agreements).

Response to Comment S7

Comment noted.

Response to Comment T1

The EIR recognizes that the proposed Great Park project area currently and historically has had some wildlife movement; however, the project area does not currently serve as a significant wildlife movement corridor between the habitat preserve and the coastal habitat preserves. Additionally, by definition, a corridor is a linear habitat whose primary wildlife function is to connect significant habitat areas. Therefore, by definition, no wildlife corridor currently exists within the project area.

The Wildlife Corridor planning efforts are on-going, and the Orange County Great Park Plan land use concepts will accommodate this on-going planning effort to ensure that the proposed route of the new wildlife corridor is a viable one. Previously, as a part of the wildlife corridor feasibility study, preliminary "fatal-flaw" analysis was conducted on 15 August 1999, which has been examined on several subsequent occasions by wildlife biologists. The biologists examined the proposed route and its feasibility as a wildlife movement corridor. Additionally, a focused survey of the biological conditions along the proposed corridor was conducted on 7 September 1999. The biologists surveyed the extent of the route including the adjacent connective habitat at the start and end of the proposed corridor. Serrano Creek and Borrego Canyon Wash were also surveyed for use/potential use as wildlife corridors. Subsequent to these initial surveys, the proposed wildlife corridor has been informally surveyed by wildlife biologists and members of conservation groups.

As depicted in the Section 3.0 *Project Description* Figure 3-7 of this EIR, the riding and hiking trail is proposed to parallel Irvine Boulevard until it reaches the Habitat Preserve. At this point, the riding and hiking trail will extend north toward SR 241 and the Agua Chino Reservoir. The biking and hiking trail does not enter the Wildlife Corridor.

As described in Figure 5.9-2, the proposed development within Planning Area 18 includes a golf course with a clubhouse and some residential uses. To ensure the compatibility with the Wildlife Corridor, the clubhouse and residential units will be subject to development regulations that will be created as part of a wildlife corridor master plan.

The City of Irvine will continue to work with State and federal agencies to implement the revegetation/restoration plan necessary to create a viable wildlife corridor within the project area.

Response to Comment U1

Considerations for remedial actions objectives are provided in 40 CFR 300.430(e)(2)(i) that states, "remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response." The DON will be responsible for remediation of the former MCAS El Toro to these exposure levels regardless of the land use designation or the population that resides there. The DON has publicly stated that it will indemnify new land owners of former air station property in order to mitigate potential soil contamination that is attributable to historic DON operations.

Response to Comment U2

The objectives of the proposed project are defined in Section 3.0 *Project Description* of the EIR. As described, Measure W amended the County of Orange General Plan to remove the designation of the project site as a commercial airport. Therefore, implementation of a commercial airport would not be consistent with Measure W.

Response to Comment V1

Comment noted. Refer to Responses to Comments V2 through V20 for a detailed response to each of the comments raised by the commentor.

Response to Comment V2

Page 5.2-41 of the EIR, under the heading Master Plan of Arterial Highways Amendment, discusses the issues of consistency with the MPAH and the proposed amendments. The EIR also recognizes that typically, a cooperative study would occur prior to the City amending its General Plan. However, since OCTA cannot recognize the City of Irvine's jurisdiction on the former MCAS El Toro until the annexation is complete, the EIR states that the City of Irvine will enter into a cooperative agreement as soon as possible following the annexation of the property to the City of Irvine.

Mitigation Measure Tran 8 addresses this issue:

"Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of any building permits within the base property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdiction to amend the Orange County Master Plan of Arterial Highways. Marine Way, Trabuco Road from the SR-133 tollway to College Road, and Y Street should be included on the MPAH."

Response to Comment V3

The post year 2025 roadway network is depicted in Figure 5.2-23. The assumed roadway network does not include the extension of Culver Drive north of Portola Parkway.

Response to Comment V4

The discrepancy is a typographical error on Table 5.2-11 (Table 5-15 of the Traffic Impact Analysis). These tables have been amended to reflect the correct figure of 9,732 trips. The figure of 9,732 trips was correctly utilized in both the air quality analysis and the actual traffic impact analysis.

Response to Comment V5

Refer to Response to Comment S6. Although the City of Irvine intends that the project will contribute its fair share towards mitigation/improvements on impacted freeway segment, the City of Irvine does not control the implementation process. Therefore a statement of overriding considerations is necessary if certain mitigation measures are not implemented by the responsible agency (Caltrans). Caltrans comments on the EIR, for instance, specifically identified their non-compete agreement with the Transportation Corridor Agency(ies) (TCA) as a potential impediment. The regional funding programs referenced in the EIR are not used as project mitigation. Rather, these programs are recognized as the regional approach to address cumulative impacts. The impact of OCTA providing extra-peak and off-peak train service was not evaluated in the Traffic Impact Analysis, thereby making the analysis more conservative with regard to future traffic impacts.

Response to Comment V6

Refer to Responses to Comments H2 and V4. The City of Irvine has made every effort to accurately reflect anticipated project land uses and trip intensities in preparing the Great Park plan. However, in the event that the OCTA facility generates more traffic than was analyzed in the EIR, additional and separate environment analysis may be required for the OCTA facility. Any development proposed by OCTA, if it becomes a landowner in the

future, which is not consistent with the proposed plan and EIR will require additional environmental evaluation.

Response to Comment V7

The explanatory variable of employment is intended to capture both actual employee trips and ancillary traffic, such as buses entering and leaving the facility, maintenance vehicles etc. Regarding any traffic not anticipated in the Great Park project description, refer to the Response to Comment V6.

Response to Comment V8

The City of Irvine intends to coordinate closely with OCTA regarding the realignment of Marine Way and any impact to the existing OCTA Bus Operations and Maintenance facility. Meetings have already taken place with regard to the realignment issue.

Response to Comment V9

The City of Irvine standard street design manual specifies transit amenities such as concrete bus pads, bus turnouts, layover areas, benches, and other amenities. All streets in the Great Park will be designed in compliance with the City of Irvine standard street design manual. The specifics of the transit system will be determined prior to the implementation of the project. As stated in Mitigation Measure Tran 7:

"Prior to issuance of any building permits on the Great Park property, the City of Irvine shall coordinate with the Orange County Transportation Authority to restructure transit service plans to provide effective service to the project area."

Mitigation Measure Tran 2 states:

"Prior to the first building permit, the City shall prepare a transit system/infrastructure fee program to fund improvements identified as mitigation measures for the project area."

The implementation of these two Mitigation Measures will provide the necessary detailed transit service and the associated funding which would subsequently be used for detailed identification of transit amenities.

Response to Comment V10

Comment noted. If development of the project requires temporary use of OCTA's right-of-way, appropriate agreements will be entered into prior to entry.

Response to Comment V11

During implementation phases of the proposed project, the City of Irvine will evaluate the demand for additional park and ride facilities to serve the project area. Additional parking area at the Irvine Transportation Center is included in the Overlay Plan.

Response to Comment V12

The various public uses and educational facilities may create the need for an internal shuttle service. This will be addressed during the implementation phases of the project as more detail on the operational aspects of the various land uses are known and the ability to finance an internal shuttle service is evaluated.

Response to Comment V13

The comment appears to refer to the extension of Marine Way as an at-grade crossing. Marine Way is intended to be a grade-separated over-crossing of the SCRRRA rail lines.

Response to Comment V14

The traffic analysis of the EIR has addressed the Level of Service of the entire network serving the Great Park Plan, including all the streets mentioned in the comment.

Response to Comment V15

Refer to Responses to Comments C1 and V13.

Response to Comment V16

Use of the term “major event” in the comment is unclear. The operators of facilities located in the referenced location would be required to submit traffic and parking management plans as part of their master plans for the City of Irvine’s approval. This EIR addresses the impacts and identifies mitigation measures for the Great Park Plan and zoning designations for the proposed project. Operational issues will be part of the future permit processing of those facilities.

Response to Comment V17

Comment noted.

Response to Comment V18

The City of Irvine General Plan Circulation Element has established policies to connect the City’s trails to the regional trail network. The Great Park Plan will provide opportunities for the expansion of the trail system. As stated in the EIR, the City will continue to encourage such enhancement throughout the planning and implementation stages of the project. The Class II bike trail will remain along Irvine Boulevard and link to the Class I bike trails in the drainage corridors that traverse the Great Park.

Response to Comment V19

Refer to Responses to Comments C2 and H29. The City of Irvine is adding the County of Orange’s proposed bike trail to its Trail Network. Were funding to become available through the County, or were the City to initiate the specific design of the Class I bike trail mentioned in the comment, coordination with OCTA would be required.

Response to Comment V20

Comment noted.

Response to Comment W1

Measure W was drafted in response to evidence that the citizens of Orange County opposed a commercial airport at El Toro and preferred a non-aviation reuse of the base property with public benefit uses such as open space, recreational, educational and cultural amenities. In order to change the airport designation of the former MCAS El Toro in the County's General Plan, Measure W also had to specifically override Measure A which had established the airport designation for the former MCAS El Toro in the Orange County General Plan. Until the annexation of the former MCAS El Toro is completed, the base property remains within the County jurisdiction. A ballot measure amending the County's General Plan does not apply to the City of Irvine.

Response to Comment W2

The first two websites cited dealt with the estimated number of homes during plan preparation; the third website deals with the actual project in the EIR of which 3,625 is the correct number in the Overlay Plan.

Response to Comment W3

The maximum number of dwelling units allowed under the Overlay Plan is 3,625.

Response to Comment W4

The maximum number of dwelling units (3,625) is established by the proposed General Plan and zoning standards within the project area. Any increase in the total number of residential units would require a General Plan amendment, zone change, and associated environmental review.

Response to Comment W5

Refer to Responses to Comments M3 and M4. It should also be noted that the majority of development intensity is located in PA30, the portion of the project area already in the City of Irvine and not affected by Measure W.

Response to Comment W6

The Measure W land use plan did not show a lake. Some conceptual drawings published by the proponents of Measure W included a lake in the Great Park. This EIR covers the annexation, General Plan Amendment and Zoning of the El Toro property. The detail design of the Great Park and its amenities, including landscaping, water features, hardscape design and materials and other such details will be prepared in the subsequent phases of the implementation of the project, subject to all applicable development and environmental policies and standards.

Response to Comment W7

The advertisements and commercials discussed in this comment were disseminated by the proponents of Measure W and not by the City of Irvine. Those materials depicted a conceptual representation of a future countywide park with an array of natural and manmade amenities. Neither Measure W nor the Orange County Great Park Plan identify or specify any particular species of animals to be included in their project description.

Response to Comment W8

The comment does not address environmental issue relating to the EIR.

Response to Comment W9

The comment does not address environmental issue relating to the EIR.

Response to Comment W10

As required by CEQA, this EIR identifies, analyzes and discloses the potential environmental impacts of the proposed project and identifies feasible mitigation measures to minimize those impacts. CEQA does not require an economic analysis or a financing plan as a component of an EIR. Projections for economic and financial fluctuations are beyond the scope of this EIR.

Response to Comment W11

Refer to Response to Comment W10. The funding and financing strategy for the implementation of the proposed project are discussed in Section 3.0 *Project Description* and in the draft Development Agreement.

Response to Comment W12

The comment represents anecdotal information which is not relevant to the subject matter and scope of this EIR.

Response to Comment W13

The issues related to population, employment, and housing affordability are discussed extensively in Section 5.13 *Population and Housing*. As stated in Section 5.13.4, the jobs to housing imbalance will remain a significant impact and a statement of overriding consideration will have to be developed.

Response to Comment W14

Refer to Response to Comment W13.

Response to Comment W15

The future traffic impacts of the proposed project are based on the Irvine Transportation Analysis Model (ITAM 3.01). This model provides a quantitative and objective framework for projecting and analyzing future traffic conditions in the City of Irvine and roadways immediately adjacent to the City. The ITAM databases have been continually updated as new knowledge about development patterns and the circulation network has become available. The model is derived from the Orange County Transportation Analysis Model (OCTAM), which is a travel demand forecasting tool used by OCTA to evaluate circulation system needs throughout the County. The ITAM structure allows for the analysis of land use and roadway network alternatives using the data provided as input. For more information regarding land use assumptions and other parameters used in the traffic model, refer to ITAM 3.01 Technical Documentation and ITAM 3.01 Primary Study Area Database Expansion Technical Supplement.

Response to Comment W16

Refer to Responses to Comments H71, H77, and M18. The air quality impact analysis is contained in Section 5.3 of the EIR.

Response to Comment W17

Refer to Responses to Comments H71, H77, and M20.

Response to Comment W18

Per page 5.4-24 of the EIR:

“The main noise producing activities are anticipated to occur primarily during the early phases of construction. Portions of the infrastructure construction activities

and runway demolition may occur simultaneously. The sound levels associated with this worst case scenario were evaluated at the nearest off-project area residences. The combined sound level was estimated for: 20 pieces of large mobile equipment operating at a distance of 5,000 feet; five concrete breakers operating at a distance of 6,000 feet; and two crusher plants operating at a distance of 10,000 feet. These distances represent the closest possible location of the construction equipment to the nearest off-project area residences. Based on these equipment types and quantities, the combined effect of this equipment would result in a sound level of approximately 56dBA at the nearest off-project area residential locations during the heaviest construction period."

General construction noise impacts, including runway demolition, are discussed in Section 5.4.3 of the EIR based on the program level analysis. As specific projects are developed and specific construction activities are planned, more detailed analysis of potential construction noise impacts may be conducted.

Response to Comment W19

Refer to Response to Comment M91. Per Section 5.3.4 *Air Quality Mitigation Measures*, prior to the start of demolition and construction within the project area adjacent sensitive receptors shall be informed of the planned demolition and construction activities. The erection of fences around construction areas, staggered use of equipment near sensitive receptors, diversion of trucks away from sensitive receptors shall be employed. Additional mitigation measures will be used as determined appropriate and necessary when greater detail is known regarding the exact construction phasing methodology and logistics are determined.

Response to Comment W20

Erection of fences such as wind fences or partial temporary barriers and enclosures provide a wind-sheltered region in the vicinity of the disturbed area. The wind-shelter area reduces the mechanical turbulence generated by ambient winds, thus reducing the entrainment and wind erosion of small particulate matter.

Response to Comment W21

Construction would not be allowed to occur until contaminated soils are remediated to acceptable levels; therefore, it is not anticipated that the use of wash off stations for construction trucks will result in the generation of toxic water runoff.

Response to Comment W22

City inspectors, using professional judgment, will determine if the quantity of soil carried over to the streets constitutes substantial material. Street sweeping will be regularly practiced during construction activity to ensure soils are not washed into storm drains.

Response to Comment W23

Soil materials collected as a result of street sweeping will be recycled and disposed of on-site.

Response to Comment W24

Refer to Response to Comment H48. As described on page 5.15-20 of the EIR, demolition activities, including the removal of existing runways and buildings, at PA 51 will generate debris materials that will need to be disposed at local landfills. Additionally, green waste will be produced as a result of on-going park and landscaping maintenance. The City requires

construction and demolition debris recycling for new development projects. This will allow the reuse of building materials and reduce waste volume requiring disposal. Additionally, Mitigation Measure SW2 is proposed that requires 75 percent reduction of solid waste of those materials that cannot be recycled. Mitigation Measure SW2 states:

“For solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant must submit a written plan to the City and implement such plan to ensure that 75 percent of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.”

The construction waste is anticipated to consist primarily of green waste and recyclable concrete. There will be very little solid waste sent to landfills; furthermore it is anticipated that this material will be significantly less when the project has been fully implemented.

Response to Comment W25

A substantial portion of the runway materials are proposed to be recycled on-site to the maximum extent feasible. It is anticipated that the remainder will be recycled in development projects located within the region. As a result, the truck hauling from the former MCAS El Toro will displace other truck hauling that would occur with no anticipated net increase in materials hauling.

Response to Comment W26

Refer to Response to Comment W25. Local construction hauling is assumed in the Traffic Impact Analysis. The anticipated quantity of traffic resulting from material hauling, which would only occur for materials not used on-site, is expected to be less than the volume of traffic resulting from the project itself.

Response to Comment W27

Refer to Responses to Comments M17 and M87. The total emission estimates from construction of the proposed project are presented in Tables 5.3-19 and 5.3-20 (page 5.3-25) of the EIR. As compared to the total projected emissions for the SCAB, the mitigated emissions after Base Plan implementation constitutes 0.05 percent (for ROG) to 0.20 percent (for CO) of the total SCAB emissions. The mitigated emissions after implementation of the Overlay Plan would constitute from 0.09 percent (for NOx) to 0.39 percent (for CO) for the total SCAB emissions.

Response to Comment W28

AQMD Rule 1196(d) lists the requirements for new fleet vehicles. A link to the AQMD fleet vehicles rule is: [http://www.aqmd.gov/news1/fleet_rule_home.htm].

These rules do not impose any emission limits but rather require the use of alternative fuel vehicles, dual-fuel vehicles and use of low emission vehicles. AQMD Rule 1620 provides emission credits for clean off-road mobile equipment.

The AQMD is seeking to gradually shift to low emissions and alternative fuel vehicles in order reduce air pollution from motor vehicles pursuant to air quality management plans. Overall program direction for managing and reducing motor vehicle emissions is based on technology needs identified in AQMD's Air Quality Management Plan; state and federal rules and regulations; annual research and development coordination meetings with the

California Air Resources Board; periodic meetings with various technology, clean fuel, and industry working groups, and annual meetings with the Technology Advancement Advisory Group.

Response to Comment W29

Although there is ample opportunity for a substantial amount of recycled runway materials to be utilized on-site, there will be some recycled runway materials that will be sold for construction purposes outside of the project area. The effect on the concrete recycling market cannot be predicted as the quantity and timing of sales is not known. CEQA requires analysis of environmental not economic impacts.

Response to Comment W30

Refer to Response to Comment W29.

Response to Comment W31

Base Plan intersections were included in the EIR Traffic Impact Analysis and considered in the CO air quality impact analysis based on the following criteria (refer to Table 5.3-26 in the EIR). Since localized CO air quality impacts generally reach their peak in the vicinity of traffic congestion, only those intersections and roadways with the highest traffic congestion level of service (LOS) designations were considered in the air quality analysis. The high congestion intersections naturally represent the highest potential for localized air quality impact resulting from the project.

Roadway system performance with respect to traffic and congestion is generally described in terms of a LOS scale that ranges from designations of "A" to "F". Level of Service "A" represents the highest or best LOS, while LOS "F" represents the lowest or worst LOS. During peak hours, LOS A, B, C, and D are generally (at a minimum) considered acceptable, while LOS E and F represent degrees of deteriorating traffic system performance. Intersections with LOS designations of D, E, and F were included in the CO air quality impact analysis, while intersections and road way systems with LOS designations of A, B, and C were not.

Response to Comment W32

Refer to Response to Comment W31.

Response to Comment W33

Section 5.5 *Public Health and Safety* states:

"The Norwalk Pipeline was used as a jet fuel distribution system in support of the military mission at the former MCAS El Toro. The pipeline originates in Norwalk, California, enters the project site near the existing commissary located adjacent to Irvine Boulevard, and runs through the former air station housing to the former storage tank facilities. In May 1999, all the jet fuel was purged from the pipeline from Norwalk to the former air station using a pigging process and replaced with inert gas (nitrogen). The Defense Energy Support Center currently maintains the pipeline."

Response to Comment W34

Section 5.5 *Public Health and Safety* states:

“The County of Orange, in coordination with all other local jurisdictions and emergency response providers in the County, is responsible for the preparation, maintenance, and implementation of emergency response plans...for the County. The Orange County Emergency Plan is the official emergency plan for the County. The plan is a basic reference and training document for emergency preparedness, response, recovery, mitigation, and provides the authority and basis for the development of more detailed departmental and functional standard operating procedures”

Response to Comment W35

New air traffic routes in the vicinity of the former El Toro MCAS due to the lifting of air-space restrictions are not a function of the proposed Great Park Plan but rather the closing of the former air station. It is anticipated that these routes would remain whether or not the Great Park Plan was developed. Noise sampling of existing conditions recorded existing aircraft overflights as part of the existing ambient noise.

Response to Comment W36

The FAA may maintain some existing ancillary facilities within the 4,700-acre base property. The largest presence of the FAA will be in the +/-970-acre habitat area (which will remain in federal ownership) and where the FAA may continue to use some of its communication relay facilities. VORs are used as navigational devices within the National Airspace System (NAS). The VOR purpose is to provide azimuth (direction) and is transmitted in all directions and each signal can be considered a course or route, referred to as a radial. It works much like a road map when you're attempting to get from a departure point to a destination. For example, a hypothetical VOR at El Toro may be used by aircraft traveling from Los Angeles to San Diego, without the aircraft ever flying at such altitudes over the area where the VOR is located to generate additional aircraft noise impacts as a result of the existence of the device. In any event, the discussions about maintaining the existing VOR within the base property are still on-going between the FAA and the DON. However, since the operational closure of El Toro in 1999, that VOR has not been used and currently is not included in the navigational charts used by the FAA. Nor is El Toro's VOR on any approach/departures charts. In addition, historically, the VOR at El Toro was used for aircraft operations for the former MCAS El Toro only. As such, the subject VOR is not used as a navigation aid supporting the current flow of traffic in the Southern California area of operations.

Response to Comment W37

Based on Response to Comment W36, the existing VOR at the former MCAS El Toro is not used as a navigational device within the Southern California Airspace and discussions about its removal or relocation are underway. Radio wave transmissions from other FAA facilities may remain on the former air station. Detailed land use restrictions would accompany any sale that involved lands adjacent to and impacted by FAA radio waves.

Response to Comment W38

Refer to Response to Comment R18. It is likely that there will be use of live ammunition at the FBI training facility.

Response to Comment W39

Refer to Response to Comment R18.

Response to Comment W40

Refer to Response to Comment R18.

Response to Comment W41

The proposed acreage designated for agricultural activities under both the Base Plan and Overlay Plan represents a net decrease in acreage currently available for agricultural activities at the project site. Local water supplies would not be strained by these proposed reductions in agricultural activity; refer to the Irvine Ranch Water District Water Supply Assessment in Appendix C of the EIR.

Response to Comment W42

Refer to Response to Comment W41.

Response to Comment W43

The Irvine Ranch Water District will be the designated provider for domestic, recycled, and wastewater services for the proposed project.

Response to Comment W44

Agricultural producers that hire labors for agricultural activities are required to pay California Minimum Wages.

Response to Comment W45

Refer to Responses to Comments W13 and W14. Assessing the potential impacts to local traffic requires specific information regarding the future commuting options for day laborers; this information is not available and would prove speculative.

Response to Comment W46

The area proposed for agricultural use is currently being utilized for agricultural purposes. Any use of pesticides will need to be in compliance with US Department of Agriculture regulations. The City of Irvine envisions the proposed agricultural areas to become components of the City's Agricultural Legacy Program. To that extent, agricultural farming activities onsite may include organic farming activities, which would also reduce the amount of pesticides and fertilizers utilized in these agricultural areas.

Response to Comment W47

Refer to Response to Comment W46.

Response to Comment W48

Refer to Response to Comment W46.

Response to Comment W49

Refer to Response to Comment W46.

Response to Comment W50

Organic farming is a component of the City of Irvine's proposed agricultural heritage program which may be implemented, in part, in the portions of the project site designated for agricultural use.

Response to Comment W51

The City of Irvine is not aware of any claims by Native Americans as to any ancestral use of any portion of the project site.

Response to Comment W52

No specific development project is proposed; however, there will be opportunity for collaboration and involvement of Native Americans groups, should cultural facilities be constructed that involve Native American heritage.

Response to Comment W53

Comment noted.

Response to Comment W54

The Orange County Great Park will be served by the City of Irvine Police Department at the same level of service as other portions of the City.

Response to Comment X1

Following the passage of Measure W, and the subsequent issuance of a federal Record of Decision (ROD), on 23 April 2002, the Orange County Board of Supervisors acting as the Local Redevelopment Authority (LRA) with a majority vote decided to cease all further planning for El Toro by the County and to defer all further planning for El Toro to the City of Irvine and support the City's annexation of the property. In addition, on 25 February 2003, the Orange County Board of Supervisors adopted a resolution rescinding the Airport System Master Plan for El Toro in recognition of the fact that the future reuse of El Toro would be for non-aviation uses.

In addition to action taken by the County of Orange Board of Supervisors, the DON has been working with the City on the sale of property since April 2002.

Response to Comment X2

The intent of Measure W was to repeal Measure A and amend the Orange County General Plan by eliminating the airport land use designation for El Toro and to redesignate the property for a mix of non-aviation uses with a vast portion allocated to open space, recreational, educational and cultural uses.

Section Two B of Measure W states:

"Purpose. This Initiative will allow for the creation of one of America's greatest parks, with open space, sports and recreation facilities, museums, libraries, arts and cultural attractions, and a home for major universities and research centers. It will also not generate the traffic, congestion, noise, and air pollution associated with the development of a commercial airport."

Section Two J of Measure W states:

"Replaces the aviation use designation with non-aviation designations to ensure that the property will become a multi-use center for education, park, recreation, cultural and other public-oriented uses. These designations permit the development of El Toro over time, thus allowing future generations to determine specific uses consistent with this Initiative."

As such, the proposed project is consistent with the intent of Measure W by providing a non-aviation mixed use plan with a substantial portion allocated to open space and public uses.

Response to Comment X3

Measure W is an alternative that was analyzed in Alternative 6.1, the No Project/Measure W in PA 51 and Millennium Plan II in PA 30 alternative. This alternative is considered superior from an environmental analysis perspective.

When Measure W qualified for the ballot, it was assumed that the DON would transfer the property at no cost or very low cost to the public agency conducting the reuse of the property. Shortly after the Measure W election in March 2002, the DON announced its intention to sell virtually all of the former MCAS El Toro to the highest bidder. To the extent that the implementation of Measure W would require substantially greater governmental funding than if the land was provided at no cost, Measure W is less feasible today under the DON's chosen conveyance program.

Response to Comment X4

The Eastern Transportation Corridor is not identified as State Route (SR) 55 on EIR pages 1-5 and 5.1-8.

Response to Comment X5

In Figure 1-3 on page 1-7, Planning Area Zone 6 is proposed as Medium Density Residential development.

Response to Comment X6

Figures 1-2 and 1-3 depict the land use for each of the Planning Area Zone (PAZs). Furthermore, each PAZ has more detailed development data not shown in Figures 1-2 and 1-3. For example, the Project Description Table 3-3 of this EIR describes the development data for the Base Plan. Table 3-3 specifies that 60 Multiple-family residential units are proposed within the PAZ 10, and 165 multiple-family residential units are proposed within the PAZ 17a. Additionally, Table 3-4 describes the development data for the Overlay Plan. Table 3-4 proposes 850 single-family residential units for PAZ 2, 800 senior housing units for PAZ 6, 60 multiple-family residential units for PAZ 10, 165 multiple-residential units for PAZ 17a, 250 single-family residential units for PAZ 18, 635 multiple-family residential units for PAZ 24, 50 multiple-family residential units for PAZ 25, 170 multiple-family residential units for PAZ 27, 345 multiple-family residential units for PAZ 28, and 300 multiple-family residential units for PAZ 29.

Response to Comment X7

The County Counsel's impartial analysis of Measure W published in the voter pamphlets stated:

“This measure would amend the Orange County General Plan (“General Plan”) with respect to unincorporated land within the El Toro Marine Corps Air Station (“MCAS El Toro”), and repeal Measure A, which was adopted by the voters on 8 November 1994, designating much of MCAS El Toro for civil aviation and related uses.”

Therefore, Measure W was a voter approved General Plan Amendment of the County's General Plan via the initiative process. As such, Measure W applies only to the El Toro property while the property remains within the unincorporated county area and under the jurisdiction and land use authority of the County of Orange. There are no provisions in the Measure W language mandating adherence by any other jurisdiction to the provisions of the measure. The proposed project includes the Annexation, General Plan Amendment, Pre-Zoning and Zoning of the unincorporated portion of the Planning Area 51.

Response to Comment X8

As described on page 5.1-15, the land use, safety, and noise restricted areas as identified in the AELUP, AICUZ, and the PIL for the former MCAS EL Toro facility are no longer impacted by aircraft noise from military operations now that the air station has closed for military use. The military mission at the former air station has been terminated and there are no actual noise or safety hazards generated by aircraft flight which would threaten the proposed development; implementation of the proposed project would not result in a significant land use compatibility impact, even though it would conflict with the adopted AELUP. Implementation of the Base Plan or Overlay Plan would result in a non-aviation reuse of the former MCAS El Toro property. On 17 April 2003 the ALUC formally acknowledged that the ALUC has no statutory jurisdiction over the proposed project.

Response to Comment X9

The Great Park Traffic Impact Analysis demonstrates that no measurable impacts to streets or intersections within the City of Tustin will occur as a result of the proposed Great Park project. The methodology applied to determine the extent of the study area is to examine the increase in intersection capacity utilization (ICU) value and determine whether or not the increase exceeds the impact significance threshold (0.02). This method of determining traffic impacts and hence the study area boundary is employed by jurisdictions throughout California, including many jurisdictions in Orange County. The analysis included in the EIR demonstrates that the increase in ICU value attributable to the project is less than 0.02 west of Culver Drive. Therefore it was not necessary for the EIR to analyze the roadway segments and intersections listed in the comment. The roadway segments and intersections listed in the Response to the NOP were analyzed. The analysis completed in the EIR showed steadily decreasing traffic impacts at an increasingly greater distance from the project. The increase in traffic caused an ICU increase of less than 0.02 prior to reaching the City of Tustin. It should be noted that the Great Park project is several miles from any part of the City of Tustin and no project impacts were identified beyond Culver Drive in the City of Irvine.

Concurrently with the proposed project, the City of Irvine is considering adoption of the North Irvine Transportation Improvement (NITM) program. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events. NITM aggregates the traffic mitigation requirements for Northern Sphere, Great Park, and PAs 1, 2, and 40 and allocates funding proportionately among the projects. The NITM program provides fair share funding for four intersections within or at the border with the City of Tustin; Irvine Boulevard/Tustin Ranch Boulevard, Jamboree Road/Irvine Boulevard, Jamboree Road/El Camino Real, and Red Hill Boulevard/Irvine Boulevard.

Response to Comment X10

All of the projects identified in the comment were incorporated in the Traffic Impact Analysis. PAs 1 and 2 are included in the City's General Plan. As a result, traffic generation from these already approved projects or land uses were analyzed as the future conditions for purposes of analyzing Great Park traffic impacts.

Response to Comment X11

As stated in the comment, the direct contribution of the project to increased traffic on the I-5 Freeway is already minimized by the existing congestion on that roadway, and the resulting impacts to the arterial roadway system have been identified and analyzed.

Response to Comment X12

Refer to Responses to Comments M64 and X9. Application of traditional study area boundary determination methodologies concludes that project traffic is not contributing significantly to future traffic volume increases in the City of Tustin. Increased traffic volumes result from regional growth including, but not limited to, City of Tustin's plan for the reuse and urbanization of MCAS Tustin.

Response to Comment X13

Refer to Responses to Comment X9 and X12.

Response to Comment X14

Substantial improvements to parallel routes (Irvine Boulevard and Trabuco Road), funded by north Irvine developers and the Great Park, are expected to reduce the future traffic volumes on Bryan Avenue.

Response to Comment X15

Refer to Response to Comment X9. The project contributes fair share funding to four intersections that have been identified by the NITM program. No project impacts are anticipated in the City of Tustin. However, the NITM program does identify very small traffic shares (approximately 1.5 percent) towards which the project will be contributing at locations significantly impacted by other projects (e.g., Northern Sphere) located in closer proximity to the City of Tustin.

Response to Comment X16

The ITAM traffic forecasting tool has been developed explicitly in response to modeling consistency requirements and is the most appropriate tool for use in the Great Park traffic study. The OCTAM 2.8 tool referred to in the comment was “retired” by the Orange County Transportation Authority (OCTA) several years ago and is no longer appropriate for any type of regional or subregional analysis.

Response to Comment X17

Mitigation measures aimed at reducing significant impact to sensitive receptors from air quality impacts are described in Section 5.3.5 *Air Quality Mitigation Measures*. Mitigation Measure AQ1 states:

“Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of trucks away from receptors; etc., shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.”

Response to Comment X18

Comment noted. Mitigation Measure AQ4 and AQ5 will be located underneath a subheader that reads: “Operational Emissions Mitigation.” Mitigation Measure AQ5 has been amended to read:

“Future employment generating non-residential development shall include measures to reduce vehicle trips, including: the promotion of carpool incentives and alternative work schedules; easy access to public transit systems; trail linkages between uses; low-emissions vehicle fleets; the provision of on-site facilities, such as banking machines, food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.”

Response to Comment X19

Refer to Response to Comment M17. Section 5.3.3 *Air Quality Environmental Impacts* states:

“The URBEMIS 2001 model is used for estimating construction emissions for all stages of development. Estimates of land use and acreage absorbed are obtained for the plan proposal and modification for the development. Due to the limited availability of specific data regarding construction activities and equipment requirements, the URBEMIS 2001 model default options were used.”

Response to Comment X20

Disposition of the fuel line outside of PA 51 is not part of the proposed project and beyond the City’s legal authority and jurisdiction. The portion of the pipeline referenced in the comment is under the authority of the federal government. The EIR discusses information from the DON on that portion of the pipeline. Refer to Section 5.5.1 *Public Health and Safety Environmental Setting* (page 5.5-19) for a detailed discussion of the status of the jet fuel distribution system.

Response to Comment X21

Comment noted.

Response to Comment Y1

The project impacts to Jeffrey Road have been thoroughly and completely evaluated in the Great Park Traffic Impact Analysis and EIR and all project impacts have been mitigated to a level of insignificance.

Response to Comment Y2

The analysis of the traffic impacts of the Great Park project have been analyzed in the EIR and supporting Traffic Impact Analysis and there has been no reliance on other environmental documents. The North Irvine Transportation improvement Program (NITM) is a mechanism for implementing the required mitigation for the Great Park and other significant development projects located in close proximity to the Great Park.

Response to Comment Y3

Refer to Response to Comment F50.

Response to Comment Y4

Refer to Response to Comment F50.

Response to Comment Y5

Refer to Response to Comment F50.

Response to Comment Y6

Refer to Response to Comment F50.

Response to Comment Z1

The intersection referenced in the comment is not an intersection of two arterial roadways. Towne Center Drive is not shown on the Orange County Master Plan of Arterial Highways. The analysis of required lanes at adjacent intersections included in the Great Park Traffic Impact Analysis does not indicate the need for additional through lanes on Alton Parkway at Town Centre Drive.

Response to Comment Z2

The cumulative impacts and resulting roadway infrastructure needs of the Great Park project and surrounding development are analyzed under typical weekday conditions. Substantially lower overall traffic conditions can be expected on a weekend (Saturday). Therefore, no additional weekend analysis is required to evaluate areawide traffic impacts. The Sportspark would be required to prepare and submit traffic and parking management plans as part of their master plans for the City of Irvine's approval. This EIR addresses the impacts and identifies mitigation measures for the Great Park Plan and zoning designations for the proposed project. Operational issues will be part of the future permit processing of those facilities.

Response to Comment Z3

Concurrently with the proposed project, the City of Irvine is considering adoption of the NITM program. This program includes concrete, feasible mitigation measures that, if fully funded, will bring intersections back to the appropriate level of service. The EIR Traffic Impact Analysis includes an entire chapter (Chapter 9 of the Traffic Impact Analysis) devoted to CMP compliance. As part of this analysis, the EIR Traffic Impact Analysis and NITM identified all intersections in the City of Lake Forest to which project traffic contributed to an unacceptable level of service. The NITM program imposes fair share fee obligations on the project and other properties in the City of Irvine and its sphere of influence to fund their proportionate share of the mitigation to bring that intersection to an acceptable or pre-project level of service, based upon the extent of the properties' contribution of traffic. The City of Irvine recognizes that as the agency with jurisdiction over the intersections and as the lead agency for the construction of intersection improvements, the City of Lake Forest must concur with the proposed mitigation measures if those mitigation measures are to be implemented.

Response to Comment Z4

The extensions of Portola Parkway and Alton Parkway have been analyzed in the post-2025 Great Park Traffic Impact Analysis. The extensions were not included in the scenarios analyzing conditions prior to 2025.

Response to Comment Z5

Comment noted.

Response to Comment AA1

Comment noted.

Response to Comment AA2

Per this comment, the following has been added to Section 5.14 *Public Services and Facilities* page 5.14-25:

“Based on Table 5.14-6, the IUSD estimated the cost for typical District elementary, middle, and high schools. According to the District, the estimated acreage needed for an elementary school is 10-acres with a total building area of 45,000 square feet and the estimated acreage for a middle school is 15-acres with a total building area of 65,000 square feet. The District also estimated that an acre of land would cost \$1-1.5million, resulting in a total building cost of \$218 per square foot for elementary and middle schools (not including land for Oak Creek Elementary School in 2000). According to the District, the total building area needed for a high school expansion would be 20,000 to 30,000 square feet, resulting in an estimated total cost of \$3.2million.”

Response to Comment AA3

The EIR states that at this General Plan analysis it is unknown where exactly the housing units will be placed within each individual planning area (i.e., whether the new units will be in IUSD or SVUSD). For analysis purposes, the highest number of potential units was used to estimate the “worse-case” scenario for both districts. As a result, the analysis overestimated the amount of new or expanded school facilities that would be needed to serve the project. Therefore, the number of new students generated by the project is most likely overestimated and the number of new students will most likely be well under the estimated number of 1,525.

In regard to this comment requesting the shifts in the school attendance boundaries, the EIR states the following on page 5.14-26:

“In the event that a new school is not built, IUSD may consider shifts in the school attendance boundaries for existing elementary, middle, and high schools. This could result in existing communities within IUSD to change from their current school assignment to another District school in order to better accommodate new growth within PAs 51 and 30.”

Response to Comment AA4

The following sentence has been added to Section 5.14 *Public Services and Facilities* page 5.14-25:

“The District’s consultants are currently analyzing the land bordering the existing El Toro Elementary site for purposes of realigning the property lines and/or expanding the site from approximately 10-acres to 13-acres in order to better accommodate a K-8 school.”

Response to Comment AA5

The EIR states on page 5.14-25:

“To accommodate the expected student growth from the project during buildout of the proposed project and prior to final construction of the new elementary school,

IUSD may re-open the El Toro Marine Elementary School and/or assign students residing in the project area to various schools with available capacity."

Response to Comment AA6

In order to obtain development rights under the Overlay Plan the landowner must enter into a Development Agreement that requires, among other things, the dedication of a 13-acre school site at no cost to IUSD. State law (Government Code Section 65995 and following) establishes the exclusive means of obtaining developer impact mitigation for public school construction.

Response to Comment AA7

Comment noted.

Response to Comment AA8

Comment noted.

Response to Comment BB1

This comment generally recites the major components of the proposed project and the responsibilities of the US Fish and Wildlife Service.

Response to Comment BB2

This comment summarizes the responsibilities of the California Department of Fish and Game.

Response to Comment BB3

Comment noted. The portion of the project site designated for habitat preserve is consistent with the NCCP/HCP. This property will remain under the ownership of the Federal Aviation Administration (FAA).

Response to Comment BB4

The City of Irvine is a participant in the Special Area Management Plan/Master Streambed Alteration Agreement (SAMP/MSAA) process. The City anticipates continued participation and coordination with the wildlife agencies in constructing the proposed natural drainages on-site.

Response to Comment BB5

Refer to Responses to Comments BB6 through BB18 for a response to each of these issues.

Response to Comment BB6

A portion of PAZ 4 is sage scrub habitat that will be designated as agriculture under the OCGP. Habitat preservation is a permitted use in the agricultural land use designation. The EIR did quantify an impact to this area. The City of Irvine is a participant in the NCCP/HCP program and will ensure that adequate protections are implemented in accordance with those programs.

Response to Comment BB7

Comment noted. Original biological surveys have not indicated the presence of the sensitive species identified by the commentor. No development is proposed within the Habitat Preserve portion of the Great Park plan; therefore, sensitive resources that may be located in this area would not be impacted by proposed development activities.

Any future development activity within the project area will be reviewed to ensure potential impacts have been adequately addressed. In order to ensure that potential biological impacts of proposed development are addressed, Mitigation Measure Bio.1 has been modified as follows:

“Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl, shall be conducted. Prior to approval of a subdivision map for development within, or in proximity to Serrano Creek a focused survey shall be conducted for the least Bell’s vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell’s vireo, or southwestern willow flycatcher, of this species in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).”

Response to Comment BB8

Comment noted. As described in the EIR, a significant amount of open space and foraging areas will remain under the project's proposed land use plan.

Response to Comment BB9

Refer to Response to Comment BB7.

Response to Comment BB10

Refer to Response to Comment BB7.

Response to Comment BB11

Refer to Response to Comment BB7.

Response to Comment BB12

Mitigation Measure Bio 1 is proposed to address potential impacts to sensitive species potentially occurring onsite, and not covered by the NCCP. Any subsequent development project within the project area will be reviewed as to its potential environmental impacts, including biological resources. The City of Irvine will require additional biological surveys as appropriate to address any potential impacts to biological resources as a result of subsequent development activity.

Response to Comment BB13

Comment noted.

Response to Comment BB14

The comment pertains to a separate report entitled *Draft Wildlife Corridor Plan*. The City of Irvine appreciates the input from the US Fish and Wildlife Service and the California Department of Fish and Game and will evaluate and address these comments as it proceeds to process the *Draft Wildlife Corridor Plan* separately from this EIR.

Response to Comment BB15

Refer to Response to Comment B14.

Response to Comment BB16

Comment noted. Refer to Response to Comment B14.

Response to Comment BB17

Refer to Response to Comment B14. It is anticipated that these details related to the proposed wildlife corridor will be resolved after the general wildlife corridor concept has been adopted, and more detailed aspects of implementation are initiated.

Response to Comment BB18

Comment noted. Refer to Response to Comment B14.

Response to Comment BB19

Comment noted. Refer to Response to Comment B14.

Response to Comment BB20

Comment noted. Refer to Response to Comment B14.

Response to Comment BB21

Comment noted.

Response to Comment CC1

Under the Overlay Plan, the Agriculture designation is proposed within PAZ 1 and PAZ 4. As stated on page 5.8-10 of the EIR, the proposed project will help to implement the City's proposed Agricultural Legacy Program by proposing agricultural land uses in the portion of PA 51 that is identified by the Irvine Agricultural Legacy Program Preliminary Sites Assessment (City of Irvine 26 November 2002). The City of Irvine recently amended its General Plan Objective L-10 with the purpose of addressing the cumulative loss of agricultural resources in Irvine and Orange County as a whole. The amendment shifts the emphasis from retention of agriculture for open space relief, to retention of smaller scale agricultural operations for heritage value. To that extent, the City of Irvine has committed to preservation of agriculture in these areas of the project site both by designating these areas for agriculture use and through the recently amended General Plan policy, which commits the City of Irvine to implementation of the Agricultural Legacy Program.

Response to Comment CC2

An Agricultural Preservation Program, as described in this comment, has been determined to be infeasible. No agricultural preserves or Williamson Act contracts exist within the City of Irvine or the project site. As stated in the EIR, (page 5.8-15), the County of Orange has not yet initiated the evaluation of such a program, and has no plans to implement such a program.

Response to Comment CC3

Comment noted.

Response to Comment DD1

Section 3.0 *Project Description Actions and Approvals of Other Agencies* has been amended to reflect the requirement that DTSC approve the acquisition and/or development of property for public schools. The added additional language reads as follows:

“California Department of Toxic Substances Control (DTSC) – Approval of acquisition and/or development of property for public schools based on hazardous materials evaluation.”

Response to Comment DD2

Section 5.5 *Public Health and Safety Environmental Setting* has been amended with the following wording:

“Certain LBP abatement and hazard disclosure requirements must be complied with prior to the transfer of the former MCAS El Toro site from federal responsibility. Housing units constructed prior to 1960 must be abated of LBP and LBP hazards. The presence of LBP and LBP hazards must be disclosed for housing units constructed between 1960 and 1978. Occupation of housing units scheduled for demolition due to the presence of LBP or LBP hazards is prohibited. Post-demolition sampling and response actions for any hazards due to lead in soil shall be conducted, consistent with regulatory requirements, prior to the occupancy of any newly constructed housing units to ensure public health and safety.”

This language has also been added to Section 5.5.3.

Response to Comment DD3

Per the regulations outlined in 40 CFR 300.430(e)(2)(i), “remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response.” The DON will be responsible for remediation of the former MCAS El Toro to these exposure levels. The DON has publicly stated that it will indemnify new land owners of former air station property in order to mitigate potential soil contamination that is attributable to historic DON operations.

Response to Comment DD4

Comment noted. Revisions will be made as referenced.

Response to Comment DD5

Section 5.5 *Public Health and Safety Environmental Regulations Affecting MCAS El Toro* has been amended to reflect the comment. Added wording is as follows:

“The Resource Conservation and Recovery Act (RCRA), adopted in 1976, provides the basic framework for federal regulation of hazardous waste. The State of California Department of Toxic Substances Control (DTSC) is authorized to implement the state hazardous waste program in lieu of federal RCRA regulations.”

Response to Comment DD6

Section 5.5 *Public Health and Safety Compliance Program Sites and Other Locations of Concern* has been amended with the following language:

"The DTSC states that the former MCAS El Toro contains two hazardous waste management units (HWMU). The HWMUs include a hazardous waste container storage area and an open burn/open detonation (OB/OD) hazardous waste treatment unit. A hazardous waste facility permit (a RCRA-equivalent permit) to operate the hazardous waste container storage area designated as Building 673-T3 was issued in August 1993 by the DTSC. The permit allowed the storage of hazardous wastes for longer than 90-days at Building 673-T3. In March 1996, the closure certification report was accepted by the DTSC and the container storage area was considered closed."

Response to Comment DD7

Refer to Response to Comment DD6.

Response to Comment DD8

Comment noted. The City of Irvine has coordinated with the DON and concurs with the DON's determination that corrective action at the former MCAS El Toro can overlap with other remediation or response actions. EIR text will be amended to read:

"The State of California considered any site from which hazardous constituents may migrate to be a SWMU, but corrective action can be addressed through the Federal Facilities Agreement for MCAS EL Toro or responses to petroleum releases with oversight provided by the Regional Water Quality Control Board."

Response to Comment DD9

The EIR clearly states that Site 24 contains VOC contaminated soil; Site 18 is a groundwater plume, contaminated by VOCs leaching from Site 24, that is located both on- and off-site. Language has been added to the referenced section to read:

"In addition to an interim Record of Decision (ROD) for the contaminated soil of Site 24, a final ROD for groundwater contamination at Sites 18 and 24 was signed in June 2002. Please refer to the Final Record of Decision, Operable Unit 1, Site 18 - Regional Volatile Organic Compound Groundwater Plume, Operable Unit 2A, Site 24 - VOC Source Area, Former MCAS El Toro, California (Bechtel National, Inc. 2002) for additional information."

Response to Comment DD10

The referenced section has been amended with the following added language:

"An interim ROD was signed in July 2000 for Site 2 and 17 to allow for the design of the landfill caps to proceed. However, construction of the landfill caps will not proceed until radiological survey/sampling is complete and the data have been evaluated to determine potential impact on the remedial design. Please refer to the Final Interim ROD, Operable Unit 2B, Landfill Sites 2 and 17, MCAS El Toro, California (Bechtel National, Inc. 2000) for additional information."

Response to Comment DD11

The referenced section has been amended with the following added language:

"The draft version of the ROD for Sites 3 and 5 was issued in March 1999. The draft final ROD will be issued following evaluation of the results from radiological survey/sampling. Please refer to the Draft ROD, Operable Unit 2C, Landfill Sites 3 and 5, MCAS El Toro, California (Bechtel National, Inc. 1999) for additional information."

Response to Comment DD12

The referenced section has been amended with the following added language:

"Site 7, Drop Tank Drainage Are No.2, and Site 14, Battery Acid Disposal Area, received concurrence for no further action in the final ROD signed June 2001. Please refer to the Final ROD, Operable Unit 3B, No Action Sites 7 and 14, MCAS El Toro, California (Bechtel National, Inc. 2001) for additional information."

Response to Comment DD13

The referenced section has been amended with the following added language:

"Monitored natural attenuation is the selected remediation procedure for Site 16. A ROD is being prepared to document the selected remediation process. Please refer to the Proposed Plan for Site 16, Crash Crew Training Pit No.2 at MCAS El Toro (Bechtel National, Inc. 2002a) for additional information."

Response to Comment DD14

The referenced section has been amended with the following added language:

"The DON is in the process of completing a remedial investigation to determine the nature and extent of contamination at Site 1. Please refer to the Final Work Plan, Phase II Remedial Investigation, IRP Site 1, Explosive Ordinance Disposal Range, MCAS El Toro, California (Earth Tech, Inc. 2001) for additional information."

Response to Comment EE1

The Traffic Impact Analysis has been reviewed and revised in accordance with the new significance thresholds provided by the City of Laguna Hills. The additional analysis is provided as it confirms that the initial analysis adequately assesses the project's traffic impacts. A total of 16 intersections are located within the jurisdiction of the City of Laguna Hills or are shared with other local jurisdictions, including the City of Irvine.

Table EE-1 summarizes the 2007 intersection capacity utilization (ICU) analysis for the City of Laguna Hills intersections. As shown on Table EE-1, two intersections are impacted. Table EE-2 summarizes the 2025 intersection capacity utilization (ICU) analysis for the City of Laguna Hills intersections. As shown on Table EE-2, six intersections are impacted by either the Base Plan or the Overlay Plan. Table EE-3 summarizes the post-2025 intersection capacity utilization (ICU) analysis for the City of Laguna Hills intersections. As shown on Table EE-3, eight intersections are impacted for post-2025 conditions. Table EE-4 summarizes the proposed improvements at the intersections that are impacted by the Base Plan project alternative. Table EE-5 summarizes the proposed improvements at the intersections that are impacted by the Overlay Plan project alternative. The only intersection where additional impacts have been identified based on the revised impact criteria is Laguna Hills Drive at Paseo De Valencia, where very minimal mitigation improvements (modifying the traffic signal to provide an eastbound right turn overlap concurrent with the northbound left turns) would be required. (Note: All of the following referenced tables are included in the Appendix to this Response to Comments document.)

Response to Comment EE2

(Note: All of the following referenced tables are included in the Appendix to this document.) Cost estimates and the plan for funding the project fair share of improvements are included in the implementing mechanism (the NITM program) currently being developed by the City of Irvine as the next logical step in the development process. Funding for right of way acquisition, engineering, and construction is included in the NITM program. The City of Irvine recognizes that as the agency with jurisdiction over the intersections and as the lead agency for the construction of intersection improvements, the City of Laguna Hills must concur with the proposed mitigation measures if those mitigation measures are to be implemented. Table EE-6 summarizes the fair share traffic contributions and resulting cost share related to mitigation at the one intersection not specifically addressed in the NITM Program (Laguna Hills Drive at Paseo De Valencia). Table EE-7 then summarizes the project fair share traffic contribution at all of the locations impacted by the Base Plan alternative, along with the estimated cost contribution attributable to all NITM projects. Table EE-8 provides a similar summary for the Overlay Plan alternative.

Response to Comment FF1

Comment noted.

Response to Comment GG1

The comment regarding Irvine's urban water management plan is assumed to be in reference to the Irvine Ranch Water District's water supply assessment. The water supply assessment (WSA) contained in Appendix C complies with the most recent statutory requirements and concludes that adequate supplies are available to serve the proposed project. As noted in Response to Comment G2, the EIR is amended to reflect the statutory compliance of the water supply assessment prepared by the Irvine Ranch Water District.

Response to Comment GG2

The mitigation for loss of agricultural lands within the City of Irvine and surrounding areas was analyzed on a cumulative basis by the City when the General Plan agricultural policies contained in Objective L-10 were amended on 4 June 2002. The Great Park plan is full consistent with Objective L-10.

The EIR provides a comprehensive analysis of the feasibility of Mitigation Measures designed to reduce the project's impact to agricultural resources (see EIR pages 5.8-7 through 5.8-15). The EIR also identifies three feasible Mitigation Measures that will be implemented as part of the project (see Mitigation Measures AG 1 through AG 3 on pages 5.8-15 and 5.8-16). In this discussion, a variety of Mitigation Measures have been thoroughly analyzed including retention of agricultural uses. EIR pages Page 5.8-7 and 5.8-8 provide economic data to support the basis of conclusion of infeasibility of Mitigation Measures. Additionally, the City of Irvine's Legacy Program (as described in EIR page 5.8-14) promotes the preservation of agricultural resources city-wide, acreage from the Great Park of which are included in this program. On-site preservation of all existing agricultural lands on the Great Park property, to the exclusion of other City goals such as the provision of new open space through the park, job opportunities, and new housing would be inconsistent with the Objective L-10 as amended by the City of Irvine.

Response to Comment GG3

On page 5.13-9 of the EIR, the sections on long-term impacts for both the Base Plan and Overlay Plan indicate that the imbalance between jobs and housing will worsen and the impact is considered significant and unavoidable. This conclusion is repeated on pages 5.13-12 and 5.13-17. Also refer to Response to Comment KK1.

Response to Comment GG4

The base projections for the RHNA were completed in 1998 and assumed federal/military ownership of the site and it is likely that no RHNA allocation specific to the El Toro property was assigned. However, it is assumed that the upcoming 2004 RHNA, required under Government Code Section 65584 to allow the City of Irvine (and other jurisdictions) to undertake its required Housing Element updates, will reflect an appropriate allocation of future and existing regional housing need to the project site.

Response to Comment GG5

The City of Irvine has striven to integrate the Great Park with other planned development in the region, including the extension of public services. Preparation and planning with environmental documents such as this EIR is an important step in ensuring that this integration is seamless and coordinated. Section 5.14, *Public Services and Utilities*, considers potential impacts related to the extension of public services to the proposed project. Specific examples of planned development integration are considered in Section 7.1 *Cumulative Impacts*. The City of Irvine's Urban Services Plan will be made available to LAFCO as part of the annexation process undertaken with the Great Park. All impacts

discussions in the EIR assume growth and development in the Northern Sphere as allocated in the Orange County Projection 2000 prepared by the Center for Demographic Research. (Note: The Urban Services Plan is included in the Appendix to this Response to Comments document).

Response to Comment HH1

Section 5.15.3 *Population and Housing Environmental Impacts* (5.13-12) states:

“Since the Orange County Subregion is anticipated to become increasingly jobs-rich over the next 20 years, the project-related employment would exacerbate the subregional jobs/housing imbalance. As a result, the proposed project will not improve and would only exacerbate the Orange County’s overall jobs/housing imbalance and the impact is considered significant and unavoidable.”

No mitigation is available to rectify conflicts with the numerical objectives of regional planning documents including the jobs/housing ratio. The imbalance between jobs and housing in Orange County may result in increased vehicle miles traveled since part of the work force consists of commuters who are drawn to the County for employment purposes. The EIR supports the SCAG objectives to reduce VMT and related congestion and air pollution. A CARB-commissioned report, entitled *Transportation-Related Land Use Strategies to Minimize Motor Vehicle Emissions: An Indirect Source Research Study*, analyzes the efficiency of numerous land use planning factors that have the greatest potential for reducing VMT and mobile source emissions. The study is outlined in the EIR, contains a list of recommended strategies, many of which have been incorporated into the Base Plan and Overlay Plan.

A portion of the project’s housing growth will be absorbed in residential projects currently being developed or planned in the surrounding area. Substantial new areas of residential development will be opened for development with the completion of several planned transportation improvement in the County. Housing projects developed under the Base Plan or Overlay Plan will be consistent with the City of Irvine’s Housing Element Affordable Housing Goal.

The Base Plan and the Overlay Plan were developed to reflect the intent of the voters of Orange County through the passage of Measure W. A higher development intensity alternative was analyzed (Alternative 6.5) in the EIR which evaluated 4,635 housing units. Alternative 6.5 concludes that a greater impact would occur on the following environmental elements: traffic/circulation; air quality; noise; geology and seismicity; hydrology and water quality; aesthetics; public services and facilities and utilities. Refer to the Alternatives (Section 6.0) in the EIR for further discussion. Moreover, the selection of an alternative that would include more housing and less commercial development would be infeasible since it would be in conflict with the City’s fiscal balance requirement for new planning areas and prevent the City from having the financial resources to implement the Great Park plan.

Response to Comment HH2

Under the proposed Base Plan 225 multi-family housing units would be developed; implementation of the Overlay Plan would result in the construction of 3,625 housing units. Implementation of either plan would be consistent with the affordable housing goals stated in the City of Irvine’s General Plan Housing Element.

Response to Comment HH3

The EIR provides for a mix of housing densities in the residentially zoned areas. Implementation of the Base Plan would result in the construction of 225 multi-family housing units. It is beyond the scope of this EIR to “set-aside (future) City-owned sites for affordable housing sooner rather than later,” increase densities in the transit areas from 40- to 60-units per acre, all farm-worker housing on or near agricultural areas, and include

housing as an allowable use in all commercial, institutional, and industrial areas. These are policy matters that must be considered by the City of Irvine. Also refer to Response to Comment KK2.

Response to Comment II1

The Highway Capacity Manual (HCM) methodologies are most appropriate for near-term engineering and operational analysis. The many input data and factors required by HCM methodologies are not available for the long-range planning horizon addressed in this Traffic Impact Analysis. The planning level analysis in the Great Park Traffic Impact Analysis is an appropriate approach that has been utilized in various other traffic studies that have also been submitted to Caltrans.

The ITAM tool used to develop the future forecasts is consistent with the OCTAM travel demand forecasting tool, which is the regionally (County of Orange) adopted tool for developing future traffic forecasts on the regional roadway system, including the freeways and transportation corridors. The OCTAM model has been validated at both the peak hour and daily traffic volume levels of detail for freeway and transportation corridor mainline conditions. Use of a consistent modeling tool is a mandatory requirement, based on state and federal legislation.

Response to Comment II2

The lane assumptions for the I-5 Freeway corridor are correct and are based on existing field inventory and anticipated long-range improvements. The analysis may be inconsistent with OCTAM 3.1 because of the more accurate lane assumptions compared to the generalized OCTAM 3.1 inputs. The lane assumptions utilized in the Traffic Impact Analysis for the transportation corridors are based on the long-range capital improvement program (CIP) developed by the Transportation Corridor Authority(ies) (TCA).

Response to Comment II3

The analysis contained in the EIR and supporting Traffic Impact Analysis is unaffected by the status of the projects referenced in the comment. The ITAM model used in the Traffic Impact Analysis is based on a year 2000 validation scenario; therefore, all of the future forecasts included in the Traffic Impact Analysis accurately reflect the validation year conditions.

Response to Comment II4

The HOV lanes are identified in the TCA CIP. Ms. Macie Cleary-Milan of the Transportation Corridor Agency provided the following information on 7 May 2003 regarding the funding for HOV lanes on the transportation corridors:

The TCA has a list of all the projects that have been identified as part of the long-range concept plans for the various transportation corridors. Improvements are funded as the money is available, and as the need for the improvements is identified to provide acceptable traffic operations for the system. Priorities are set based on congestion or operational issues. If future traffic volumes result in a deterioration of levels of service, the TCA is dedicated to providing the improvements needed to provide the levels of service their patrons expect.

Therefore, it is reasonable to assume that the TCA would fund HOV improvements necessary to provide acceptable levels of service.

Response to Comment II5

Refer to Response to Comment S5.

Response to Comment II6

As demonstrated in the EIR and supporting Traffic Impact Analysis, adequate access to the Great Park is being provided. Major roadway improvements within and outside of the proposed park area include the widening of Trabuco Road, Bryan Avenue, Irvine Boulevard, and Sand Canyon Avenue. In addition, the Great Park project roadway system proposes a number of new arterial roadways, including Marine Way, College Road, and Y Street. The project also proposes substantial new or modified freeway/transportation corridor interchange improvements, including the I-5 Freeway/Bake Parkway interchange, the I-5 Freeway/Sand Canyon Avenue interchange, and the SR133 tollway/Trabuco Road interchange.

Concurrently with the proposed project, the City of Irvine is considering adoption of the North Irvine Transportation Improvement (NITM) program. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events. The NITM program also includes numerous other ramp improvements commensurate with other cumulative project impacts. In summary, the project has adequate access.

The EIR and supporting Traffic Impact Analysis have addressed both the changes in land use and the circulation system as a result of the proposed project. The issue raised in this comment is addressed either by the EIR analysis itself, or through the proposed mitigation measures. The key mitigation measure with respect to this comment is the requirement to enter into a cooperative Master Plan of Arterial Highways amendment study per the Orange County Transportation Authority (OCTA).

The portion of the comment related to the extension of Marine Way to Bake Parkway at the I-5 Freeway northbound ramps is noted. The City of Irvine is working closely with Caltrans to resolve the design issues related to the I-5 Freeway/Bake Parkway interchange.

Response to Comment II7

Refer to Response to Comment S6. The programs referenced in the comment will address ongoing regional traffic growth and are not related to the anticipated project impacts. The EIR mitigation measures address all project impacts that were identified in the Traffic Impact Analysis, subject to constraints such as those identified in Response to Comment S5 (TCA non-compete agreements).

The second part of the comment relates to the detailed implementation mechanism for mitigating project impacts. The City of Irvine is actively developing an implementation mechanism (NITM) for proposed Great Park (and other nearby) project mitigation measures/improvements. The NITM program includes conceptual engineering, cost estimates, and fair share contribution calculations as requested in this comment.

Response to Comment II8

Refer to Response to Comment II7. The City has created a pro rata fair share program (NITM program) that includes projects that mitigate impacts to the State facilities, including freeway mainline and ramp improvements.

Response to Comment II9

Refer to Responses to Comments II7 and II8.

Response to Comment II10

The comment pertains to a separate report entitled *Draft Wildlife Corridor Plan*. The City appreciates Caltrans input and will evaluate and address these comments as it proceeds to process the *Draft Wildlife Corridor Plan* separately from this EIR.

Response to Comment II11

Refer to Response to Comment II10.

Response to Comment II12

Refer to Response to Comment II10.

Response to Comment II13

Refer to Response to Comment II10.

Response to Comment II14

Refer to Response to Comment II10.

Response to Comment II15

Refer to Response to Comment II10.

Response to Comment II16

Refer to Response to Comment II10.

Response to Comment II17

Refer to Response to Comment II10.

Response to Comment II18

Refer to Response to Comment II10.

Response to Comment II19

Refer to Response to Comment II10.

Response to Comment II20

Refer to Response to Comment II10.

Response to Comment II21

Refer to Response to Comment II10.

Response to Comment II22

Comment noted.

Response to Comment JJ1

Comment noted.

Response to Comment JJ2

Comment noted.

Response to Comment KK1

Section 5.15.3 *Population and Housing Environmental Impacts* (5.13-12) states:

“Since the Orange County Subregion is anticipated to become increasingly jobs-rich over the next 20 years, the project-related employment would exacerbate the subregional jobs/housing imbalance. As a result, the proposed project will not improve and would only exacerbate the Orange County’s overall jobs/housing imbalance and the impact is considered significant and unavoidable.”

No mitigation is available to rectify conflicts with the numerical objectives of regional planning documents including the jobs/housing ratio. A portion of the project’s housing growth will be absorbed in residential projects currently being developed or planned in the surrounding area. Substantial new areas of residential development will be opened for development with the completion of several planned transportation improvement in the County. Housing projects developed under the Base Plan or Overlay Plan will be consistent with the City of Irvine’s Housing Element Affordable Housing Goal.

The Base Plan and the Overlay Plan were developed to reflect the will of the voters per Measure W. A higher development intensity alternative was analyzed (Alternative 6.5) in the EIR which evaluated 4,635 housing units. Alternative 6.5 concludes that a greater impact would occur on the following environmental elements: traffic/circulation; air quality; noise; geology and seismicity; hydrology and water quality; aesthetics; public services and facilities and utilities. Refer to the Alternatives (Section 6.0) in the EIR for further discussion.

Response to Comment KK2

While the number of multi-use residential units has been reduced from 2,313 to 1,500, the overall level of multi-use residential development has been increased from 3,261 to 3,625. The EIR examines two formulated plans: the Base Plan and the Overlay Plan. The EIR analyzes the environmental impacts from these plans and proposes mitigation measures to reduce impacts to levels less than significant. The current General Plan allows a maximum 3,261 dwelling units in Planning Areas 30 and 51 combined. Under the proposed Base Plan 225 multi-family housing units would be developed; implementation of the Overlay Plan would result in the construction of 3,625 housing units. Implementation of either plan would be consistent with the affordable housing goals stated in the City of Irvine’s General Plan Housing Element. As a result, the project provides for a mix of housing densities in the residentially zoned areas.

Section 5.13.3 *Population and Housing Environmental Impact* states:

“...housing project developed on the site under either the Base Plan or Overlay Plan will be required to be consistent with the City’s Housing Element Affordable Housing Goal, which states that:

- Five percent of units should be affordable to households earning less than 50 percent of the County Median Family Income through rental housing.
- Five percent of the actual number of units built should be affordable as either rental or ownership housing for households earning between 51 and 80 percent of the County Median Family Income.

- Five percent of the units should be affordable to household earning between 81 and 121 percent of the County Median Family Income, satisfied through the development of ownership housing.”

Response to Comment KK3

Refer to Response to Comment KK2.

Response to Comment A1

This letter acknowledges that the City has complied with the State Clearinghouse review requirements for the EIR pursuant to the California Environmental Quality Act. No further response is required.

Response to Comment B1

The EIR is the environmental document pursuant to CEQA that identifies, analyzes and discloses potential environmental impacts and mitigation measures for the Orange County Great Park Plan. The Orange County Great Park Plan is consistent with the intent of Measure W since it allocates approximately 84 percent of the total land area of the former MCAS El Toro to open space, recreational, institutional, educational, cultural, and other public uses. Measure B was an advisory measure passed by the voters in November of 2002. The EIR does not analyze the impacts of the provisions of Measure B. Furthermore, because Measure B was passed as a County initiative, it does not have any legal effect with respect to actions taken by the City of Irvine with respect to lands within, or annexed to, the City. Section 5.5 of the EIR *Public Health and Safety* discusses the issues related to contamination on the base property and the various determinations and actions taken and planned to be taken by the responsible parties and regulatory agencies. Further, arguments for or against ballot measures published in voter pamphlets are not part of the language of the ballot measures subject to voters' action and therefore, are not in any way binding if the ballot measure passes. As such, the proponent's arguments for Measure B are not a binding mandate.

Response to Comment B2

The meteorological station used in the EIR is administered by the AQMD with wind velocity data generated, verified, and published by that public agency. The station referenced in Section 5.3 *Air Quality* is located on the project site, and is consequently represents the best source of on-site wind velocity data for air quality purposes. According to the website maintained by the AQMD (and referenced in the EIR on page 5.3-1), this data is neither erroneous nor obsolete.

Response to Comment B3

The proposed zoning regulations will allow for development on a similar scale as existing residential, industrial, office, and commercial buildings in the City of Irvine.

The objectives of the proposed project are defined on page 3-29 of the EIR. The project objectives are not to develop an aviation use at the former MCAS El Toro. As described in the EIR, the voter-approved Measure W initiative amended the County General Plan for the area of the base north of the Southern California Regional Rail Authority (SCRRA) Metrolink rail line (PA 51) to designate the unincorporated land for park, open space and other uses, removing the designation of the site as a commercial airport from the County General Plan (EIR, p. 1-2). Therefore, a detailed analysis of an aviation reuse alternative is not permitted under the Orange County General Plan and is not required under CEQA because an aviation reuse of the site does not meet the basic objectives of the project. Furthermore, on 25 February 2003, the Orange County Board of Supervisors, acting as the El Toro Local Redevelopment Authority, rescinded the

Airport System Master Plan, thus removing an airport at the former MCAS El Toro from all County plans.

Response to Comment B4

As stated in Response to Comment B3, Measure W amended the County General Plan to remove the designation of the site as a commercial airport. Therefore, implementation of a commercial airport at this location is not consistent with the County General Plan nor is it consistent with most of the basic objectives of the project.

Section 6.0 Alternatives of the EIR addresses a reasonable range of alternatives to the proposed project as required by the CEQA Guidelines.

Response to Comment B5

This comment does not address the adequacy of the EIR nor does it raise an environmental issue with respect to the proposed project. While the City recognizes there are heightened security concerns regarding airports in general, there is no evidence to indicate that construction of a new airport, at any location, would alleviate security concerns at the existing John Wayne Airport.

Response to Comment B6

It is beyond the scope of the EIR to consider potential impacts of a non-aviation plan on existing residential communities contiguous to the Los Angeles International Airport, Ontario International Airport, Long Beach International Airport and Santa Ana (John Wayne) International Airport. As stated in Response to Comment B3, the proposed project objectives meet the spirit and intent of Measure W, which changed the County General Plan designation for the former MCAS El Toro from airport to non-aviation uses. This EIR analyzes the potential impacts of Annexation, General Plan Amendment and Zoning of the former base property and not those of Measure W. Furthermore, on 25 February 2003, the Orange County Board of Supervisors, acting as the El Toro Local Redevelopment Authority, rescinded the Airport System Master Plan, thus removing an airport at the former MCAS El Toro Airport from all County plans.

Refer to Final Environmental Impact Report No. 573 *For the Civilian Reuse of MCAS El Toro and the Airport System Master Plan for John Wayne Airport and Proposed Orange County International Airport* for information pertaining to reports and supporting data from studies conducted for that EIR.

Response to Comment B7

The Orange County Great Park plan proposes several features that will address on-site water quality control and flood protection. These project features provide a unique opportunity for water quality and flood protection to be addressed on a regional level and in a comprehensive manner. The proposed water quality and flood control concept plan is shown on Figure 5.7-2 of the EIR. A description of the concept plan is provided on pages 5.7-16 through 5.7-22 of the EIR. The EIR

identifies future potential permit requirements for project implementation, including Section 404 Permit(s) from the U.S. Army Corps of Engineers (EIR, p. 3-30). A Section 404 permit(s) will be obtained as necessary, as future projects are proposed within the project area. In the context of the size of the entire site, there is a relatively small amount of existing wetland habitat which is generally limited to the Borrego channel and San Diego Creek. The mitigation of potential impacts to wetland habitat as a result of project implementation will be addressed through the Section 404 permit process. The construction of the proposed 179-acre wildlife corridor will provide significant opportunity for the creation and enhancement of viable wetland habitats within the project area. Drainage improvements and flood control facilities will also be created on-site through the daylighting of the Bee Canyon and Agua Chinon channels.

Response to Comment C1

Page 3-31 of the EIR has been revised to include the California Public Utilities Commission under "Actions and Approvals of Other Agencies." The modified text reads:

- California Department of Fish and Game-Approvals related to wildlife corridor and habitat areas
- Federal Department of the Interior (DOI) Fish and Wildlife Agency
- Southern California Regional Rail Authority (SCRRA)
- Orange County Transportation Authority (OCTA) – Revisions to the County Master Plan of Arterial Highways (MPAH)
- Irvine Unified School District
- Saddleback Unified School District
- *California Public Utilities Commission – Highway Rail Crossings*

Response to Comment C2

Comment noted. The City will notify and coordinate with the CPUC as appropriate, with respect to any future trails planning on or adjacent to the railroad right-of-way.

Response to Comment D1

The traffic analysis is based on the most current regional growth projections that have been adopted by the County of Orange which incorporates the most current projections for all the cities in the County. The concept of trip banking in Laguna Woods, related to available trips on Moulton Parkway, was not considered, as the traffic model addresses regional traffic impacts.

Response to Comment D2

The difference in daily traffic volumes cited in this comment is most likely due to the collection of traffic count data at different times. The 20 percent variation is quite possibly due to day to day variation in traffic conditions or changes in traffic patterns that occur as various roadway improvements are implemented. It does not affect the findings and conclusions of the Traffic Impact Analysis because project impacts and resulting mitigation are all based on more detailed analysis of peak hour conditions.

Response to Comment D3

The traffic analysis is based on the most current regional growth projections that have been adopted by the County of Orange which incorporates the most current projections for all the cities in the County. No roadway or intersection improvements attributable to the Laguna Hills Mall were included in the Great Park traffic study. Therefore, the analysis is inherently conservative, as any additional improvements may result in a decrease in the Great Park project traffic impacts that were identified. Mitigation Measure Trans. 6 is consistent with the El Toro Roadway and Landscape Improvement project.

Response to Comment D4

Concurrently with the proposed project, the City of Irvine is considering adoption of the North Irvine Transportation Improvement (NITM) program. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events. Traffic mitigation improvements within the City of Laguna Woods and other areas outside of Irvine will receive fair-share funding from the NITM program.

The City of Irvine recognizes that as the agency with jurisdiction over the intersections and as the lead agency for the construction of intersection improvements must concur with the proposed mitigation measures if those mitigation measures are to be implemented.

Response to Comment D5

The DON intends to incorporate temporary institutional controls in remediating IRP Sites 16 and 24 on the base. The Record of Decision for Site 24 states that “the Environmental Restriction Covenant and Agreement(s) will include information summarizing the remedial actions at Site 24 and provisions for

terminating or modifying the Environmental Restriction Covenant and Agreement(s) when cleanup levels established in this ROD have been achieved and the remedial equipment has been removed.” Refer to the *Final Record of Decision, Operable Unit 1, Site 18 – Regional Volatile Organic Compound Groundwater Plume, Operable Unit 2A, Site 24 – VOC Source Area, Former MCAS El Toro, California* (Bechtel National, Inc. 2002) for additional information. The Record of Decision for Site 16 is expected to contain a similar process for removal of temporary restrictions. Responsibility for development and enforcement of the temporary restrictions rests exclusively with the DON and the applicable state agencies depending on the nature of the controls. The City has no authority over the federal process to implement Institutional Controls at the former MCAS El Toro regardless of mitigation measures proposed in the EIR. See also the attached letter from the DON dated 25 April 2003, describing the public sale plan, including Findings of Suitability to Transfer and Lease in Furtherance of Conveyance processes as well as the methodology of imposing, monitoring, and removing environmental remediation restrictions.

Response to Comment D6

The City will adopt rules, policies, and regulations as needed that will supplement the implementation of the temporary institutional controls by the DON and other agencies. The City’s approach will be similar to and consistent with rules, policies, and regulations in use to control development and construction activities and enforced in a similar manner. Until the institutional controls are adopted by the DON via an Environmental Restriction Covenant and Agreement(s), the City cannot identify with certainty the specific rules, policies, and regulations that will be needed. Refer to Response to Comment D5 for an example of regulations that control development and construction activities.

Response to Comment D7

The City is cognizant of the potential for stormwater impacts from contaminated sites. However, at both Sites 16 and 24, the remediation activities are focused on treating contaminated groundwater. Because hazardous materials are not present at the surface of the site, there is minimal potential for stormwater to create a hazardous materials runoff. At Site 16, remediation of subsurface soil may be required, but it is expected to be completed prior to a fee conveyance to another party. Also refer to Response to Comment D8.

Response to Comment D8

Individual projects within the project area will be responsible for the development and implementation of specific Storm Water Pollution Prevention Plans (SWPPPs) and Water Quality Management Plans (WQMPs) to address the potential pollutants of concern based on the location, size, and type of development and proposed operations. Site specific BMPs and structural controls will be identified for each individual project based on the need to target specific potential sources of pollution. Implementation of Mitigation Measures

H/WQ 1 and H/WQ 2 (EIR, pages 5.7-24, 25) will ensure that these uses are implemented in accordance with local and state regulatory requirements.

Response to Comment D9

The City of Irvine agrees that implementation of a regional approach to stormwater management is preferred. To further this goal, the City's proposed Orange County Great Park drainage plan concept provides for the creation of large, natural drainage features that are designed to address regional water quality and flood control in a comprehensive manner. The proposed natural drainage corridors will function in a manner so as to control surface water flows and maintain and/or improve surface water quality, for stormwaters that emanate from both on-site development and development that occurs in surrounding areas. As described in the EIR, the drainage corridor concept is consistent with and facilitates the regional flood control master plan adopted by the Orange County Public Facilities and Resources Department, The Irvine Company, and the cities of Tustin and Irvine. In addition, regional water quality issues are proposed to be addressed by the project through the construction of "natural treatment system" (NTS) basins within the proposed natural drainage corridors. The IRWD has issued a draft Master Plan and draft EIR on this program. Figure 5.7-2 of the EIR identifies the location of the proposed drainage corridors and potential NTS water quality basins.

Response to Comment E1
Comment noted.

Response to Comment F1

This comment does not note any specific sections or tables requiring revision. The references to appendices and volumes identified in the EIR Section 5.2 *Traffic/Circulation* have been reviewed and revised appropriately. Additionally, the other EIR sections have been updated to correspond the correct lettering of appendices, as appropriate.

Response to Comment F2

The Jeffrey Road extension is not part of this project. Both the Jeffrey Road extension and the SR 133/Trabuco Road interchange are included in the North Irvine Transportation Model (NITM) program and are prioritized for construction in the NITM program based on the comprehensive NITM program traffic study. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events.

Response to Comment F3

The normal practice in the City of Irvine has been a threshold criterion of 0.02 for major arterials, not 0.01 as stated in the comment. The 0.03 threshold is used for Congestion Management Plan (CMP) roadways to ensure consistency with the Orange County Congestion Management Plan.

Response to Comment F4

The freeway mainline and ramp peak hour analysis is included in the EIR pages 5.2-35, 5.2-36 and Appendix G. Furthermore, freeway congestion does in fact influence the traffic volume forecasts in the Traffic Impact Analysis. The Irvine Transportation Analysis Model (ITAM) takes congestion effects into account and distributes traffic to the most desirable/least congested route. Also refer to Response to Comment F24.

Response to Comment F5

Improvements associated with Trabuco Road and Irvine Boulevard have been included in the Great Park Traffic Impact Analysis and the NITM program, along with the Northern Sphere development itself. The mitigation measures for the Northern Sphere have been adopted by the City of Irvine as required mitigation measures. These improvements will also be conditions of approval for subdivisions processed within the Northern Sphere.

The financial difficulties of the State do not affect the funding source for the I-5 Freeway/Culver Drive interchange improvements. The funding source is Measure "M" funds derived from County tax revenue resulting from a sales tax increase approved by Orange County voters; as a result, the Measure M funds are not controlled by the State.

Response to Comment F6

The phasing listed is correct. The Portola Parkway to SR-241 segment should not be included. Refer to Response to Comment F2. Since the Trabuco Road/SR-133 interchange is funded but may not be completed until after 2025, it is appropriate to show the improvement operational in the post-2025 timeframe.

Response to Comment F7

The EIR correctly states that unfunded buildout roadway segment improvements are summarized in Table 4-3 of Appendix G. Regardless of the title of the table, the table accurately identifies unfunded future roadway improvements.

Response to Comment F8

The traffic associated with the unfunded, full expansion of the Musick Jail site is not included in the City of Irvine's current ITAM. However, based on the Musick Jail final EIR traffic analysis, the proposed expansion is expected to generate 4,253 additional trips on a daily basis. The additional 4,253 trips represent an increase of less than one percent compared to the other known development projects (e.g., Northern Sphere and Planning Area 40/Spectrum 8) that were explicitly included in the traffic analysis. The percentage is even smaller when all development anticipated within the study area (both within the City of Irvine and adjacent jurisdictions) is considered. Therefore, these additional trips are not considered significant. In addition, the Musick Jail expansion project is also required to mitigate any significant traffic impacts it may cause or contribute to.

Response to Comment F9

The segment of the I-5 Freeway referenced in the comment carries seven percent of the project traffic, not 10 percent as stated in the comment. The results contained in the Figure 5.2-17 take into account traffic redistribution effects. For instance, trips that leave the project site may be balanced by the South County work trips that now go to project provided employment opportunities rather than further north to the Irvine Business Complex.

Response to Comment F10

Within the EIR Section 5.2 *Traffic/Circulation*, references to Volume III Appendix K have been updated to references to Volume II Appendix G, where appropriate.

Response to Comment F11

The assumption that other mitigation measures are possible and not undesirable is based upon information from Caltrans, OCTA, and SCAG as embodied in the Regional Transportation Plan, wherein alternative improvements such as enhanced traffic service, TGM programs, etc. will serve to reduce freeway congestion. An example of an alternative improvement would be to provide additional mainline capacity.

Response to Comment F12

As shown in the EIR and supporting Traffic Impact Analysis (Appendix G, Tables 7-12 through 7-25), the project related traffic drops below the significance threshold at the Jeffrey Road interchange.

Response to Comment F13

The NITM Program includes engineering concept plans for freeway and corridor improvements. The engineering and right of way analysis completed as part of the NITM program has determined that the proposed mitigation measures are feasible.

Response to Comment F14

The comment suggests that Irvine Boulevard or Bryan Road might be impacted further west than the western limit of the study area. The traffic study analysis shows that neither the Culver Drive at Irvine Boulevard nor the Culver Drive at Bryan Avenue intersections are impacted by the project as shown on Tables 7-34, 7-37, and 7-40 of Appendix G of the EIR.

Response to Comment F15

The Traffic Impact Analysis includes all of the locations identified in the comment. The I-5 Freeway Northbound on- and off-ramps at Trabuco Road are analyzed as a single intersection in the traffic study rather than two separate locations as implied in the comment. The second intersection is located at Trabuco Road/Culver Drive.

Response to Comment F16

Irvine Center Drive and Irvine Boulevard within the study area are examples of CMP roadways. Exhibit 9-A in Appendix G of the EIR specifically identifies CMP facilities within the study area.

Response to Comment F17

Irvine Boulevard within the study area is a CMP roadway and was analyzed using a significance threshold of three percent in the traffic study.

Response to Comment F18

The performance threshold for Irvine Boulevard is LOS "E" rather than LOS "D". Using the 2000 Highway Capacity Manual, the additional roadway performance increase in delay allowed is up to 25-seconds in the peak hour.

Response to Comment F19

The City of Irvine's approved analysis methodology is the intersection capacity utilization (ICU) methodology. Although the ICU methodology does not specifically include any provision for the effects of pedestrian activities, the assumed capacity of 1,700 vehicles per lane per hour (vphpl) is less than the ideal capacity of 1,900 vphpl that are used in more detailed analysis

methodologies. One factor that could account for the more conservative capacity per lane is the effect of pedestrian activities.

Response to Comment F20

There is no Table 2-23 in the Traffic Impact Analysis (Appendix G of this EIR). It is assumed that the comment refers to Table 2-1 (Daily Roadway Capacity Assumptions). The capacities for freeways greater than 10 lanes were not explicitly listed on Table 2-1. However, the following capacities were identified in the analysis contained in Section 7:

<u>Lanes</u>	<u>Capacity (vehicles per day)</u>
12	250,000
14	290,000
16	330,000
18	370,000

Response to Comment F21

The traffic count data throughout the City of Irvine was collected in 2002. Only a small amount of traffic count data in the already developed areas of the adjacent cities to the east of the City of Irvine utilized existing conditions data from 2000 or 2001. Furthermore, such daily data has no effect on the future conditions traffic volume forecasts or analysis. Finally, the project impacts are identified and mitigation has been developed on the basis of the more detailed peak hour traffic data and analysis.

Response to Comment F22

The volume refers to the segment from the I-5 Freeway northbound on- and off-ramps to Yale Avenue.

Response to Comment F23

The capacity listed is a general planning capacity and reflects three northbound lanes and four southbound lanes (for a total of seven lanes). It is appropriate to use this capacity in the analysis, as the fourth southbound through-lane has most likely been constructed in response to actual traffic patterns and presumably serves the requirements of the greatest traffic volume. The Traffic Impact Analysis peak hour assessment of conditions at the actual intersection of Culver Drive at Trabuco Road takes into account merging into three southbound lanes.

Response to Comment F24

The traffic forecasts have been developed using the Irvine Transportation Analysis Model (ITAM), Version 3.01. The ITAM takes congestion effects into account, and congestion influences the assignment of traffic to the freeway and surrounding roadway system. It should be noted the generalized planning level freeway mainline capacities in the ITAM model are far lower than the volumes (exceeding 2,300 vehicles per hour) that have been observed on busy freeways in southern California.

Response to Comment F25

This data was inadvertently omitted from the existing conditions summary table only. The analysis results are included in Appendix F of the Traffic Impact Analysis (Page F-5) which is included as Appendix G of this EIR and indicate that the existing ICU values at this location are 0.58 in the AM peak hour and 0.82 (LOS "D") in the PM peak hour.

Response to Comment F26

The footnote means that the SR-133/Trabuco Road interchange was not treated as a funded 2007-2025 improvement in the EIR and was not included in the primary Traffic Impact Analysis. A special issues analysis examining the benefits/impacts of including this interchange for 2025 conditions was also included in the Traffic Impact Analysis.

Response to Comment F27

There is no change in the number of lanes shown on the I-5 Freeway north of Sand Canyon on the exhibits in the EIR or the supporting Traffic Impact Analysis. The segment of the I-5 Freeway north of Sand Canyon is shown as a 14-lane freeway ("14F") for existing conditions (Exhibit 3-A in the Traffic Impact Analysis and Figure 5.2-4 in the EIR); 2007 Conditions (Exhibit 4-A in the Traffic Impact Analysis and Figure 5.2-10 in the EIR); 2025 Conditions (Exhibit 4-C in the Traffic Impact Analysis and Figure 5.2-12 in the EIR); and Post-2025 Conditions (Exhibit 4-E in the Traffic Impact Analysis and Figure 5.2-15 in the EIR).

Response to Comment F28

It is incorrect to assume that the use of socioeconomic data (SED) rates results in generally lower traffic volumes. Traffic models validated using land use data or SED have both been shown to match (validate to) existing traffic volumes quite well. The adopted ITAM, version 3.01, uses socioeconomic data as a basis for analysis.

Response to Comment F29

The students included in the Great Park Traffic Impact Analysis were all treated as commuter students, thus generating the highest possible number of trips to and from the project. The model can handle both commuter students and resident (non-institutionalized group quarters) students. The analysis assumed 4,000 students in the 2007 analysis for both the Base Plan and the Overlay Plan. The analysis assumed 7,637 students in 2025 for the Base Plan and 7,800 students in 2025 for the Overlay Plan. This represents a change of 3,637 (Base Plan) to 3,800 (Overlay Plan) students from 2007 to 2025. The source of this data is the Great Park project description.

Response to Comment F30

The types of activities described in the comment are accounted for in the trip rates for residential land uses (see Table 5-10). These types of activities are

potentially included as non-home based productions (Other-to-Other or O-O) or as attractions (Home-to-Work/H-W or Other-to-Other/O-O).

Response to Comment F31

The numbers of students are based on the Great Park project description. The hours of travel have been derived from the regional travel demand model and correspond closely to home-work trips, which exhibit a heavy concentration in the peak hours of traffic. Staff and maintenance workers were derived directly from the number of students (see Table 5-9 of Appendix G to the EIR, land use to socioeconomic data conversion factors). There is no distinction between residents and commuter students made in the ITE Trip Generation Manual. ITAM does differentiate between commuter and resident students, and the Traffic Impact Analysis assumed the worse case scenario of all commuter students.

The trip generation rate for students is reasonable. The project was assumed to include only commuter students. Not every student travels to a college campus everyday. Nor does every student drive a single occupant vehicle to school. Finally, the data being referenced is land use based student trip generation, which was provided for informational purposes only and does not relate to the primary traffic impact analysis.

Response to Comment F32

The comment refers to the trip distribution exhibits. These exhibits present the percentage of project traffic, not actual traffic volumes. The percentage of trips oriented to the west is likely to drop over time, as the largest undeveloped areas of Orange County are located east of the project and will be more likely to interact with the Great Park project further out in time (e.g., 2025 versus 2007). The second part of the comment also mistakes the project trip distribution percentages for actual project volumes.

Response to Comment F33

The extents of the study area are appropriate. The study clearly identifies areawide congestion on the freeway system. The Traffic Impact Analysis has verified that the project's potentially significant impacts extend no further west than Jeffrey Road. The Traffic Impact Analysis (Appendix G of the EIR) informs the reader of the project impacts. The ITAM model, version 3.01, takes into account on-going development.

Response to Comment F34

Although the Great Park traffic study included all Northern Sphere roadway improvements identified as mitigation measures, improvements that were "project features" (including the referenced improvement) were inadvertently omitted. This does not affect the findings and conclusions of the Great Park traffic study, other than to potentially reduce the required mitigation. The NITM Program does take the referenced improvement into account.

Response to Comment F35

In accordance with the adopted City Traffic Study Guidelines, the subject roadway segment is not long enough to warrant separate analysis as a roadway segment. The more detailed peak hour analysis completed for the intersections of Culver Drive at Trabuco Road and Culver Drive at the I-5 Freeway southbound ramps more accurately depicts the actual lane requirements for the segment of Culver Drive between these two intersections. The reason no peak hour segment analysis was performed for Culver Drive from Trabuco Drive to Walnut is that the daily roadway segment analysis for the subject segments was below the 0.02 impact significance criteria.

Response to Comment F36

The mainline freeways are already deficient under existing conditions. It is the responsibility of the regional agencies to address these deficiencies. Pursuant to City policy, the City of Irvine is working in close coordination with Caltrans regarding the improvements needed to mitigate identified project impacts. The City of Irvine does not control freeway improvements and cannot guarantee the implementation of the identified mitigation measures. For that reason, the EIR conservatively concludes that the impacts remain significant and unmitigated. Refer to Response to Comment F24 regarding the impact of freeway congestion on trip distribution.

Response to Comment F37

In accordance with the Caltrans standards, the Type 7 ramp most accurately defines the subject ramp. The Traffic Impact Analysis has identified a deficiency and mitigation to reduce the project impact to insignificant levels has also been identified, regardless of the initial ramp configuration.

Response to Comment F38

The geometric configuration referred to in the comment is actually shown in the ITAM model as Walnut Avenue. The ramp itself conforms to Caltrans standards and the analysis has been completed at an appropriate level of detail and accuracy. The movement of trucks is explicitly considered in Caltrans design standards.

Response to Comment F39

Refer to Response to Comment F24. The NITM Program is the implementing mechanism for the freeway ramp mitigation at the proposed SR-133/Trabuco Road interchange. This improvement will reduce traffic congestion at the I-5 Freeway/Sand Canyon Avenue interchange by providing an alternative means of freeway access. Therefore, no additional traffic diversions as theorized in the comment are anticipated.

Response to Comment F40

Refer to Response to Comment F36. The City of Irvine is working with Caltrans to implement mitigation related to the Great Park project where project impacts

have been identified. The commentor is addressing areawide congestion issues. Because the City of Irvine does not control freeway improvements and cannot guarantee the implementation of the identified mitigation measures, the impacts remain significant and unmitigated, as described in the Traffic Impact Analysis.

Response to Comment F41

Comment noted. In accordance with the City's adopted traffic study guidelines, the threshold for significance of traffic impacts is a 0.02 increase in the volume-to-capacity ratio caused by the project. The identified roadway segment was measured to have a volume-to-capacity increase of less than 0.02 and thus no further analysis was required.

Response to Comment F42

No mitigation is required because the project does not worsen the ICU value by 0.02 or more. In fact, the Great Park project actually results in a decrease in ICU in some instances.

Response to Comment F43

Comment noted. The discussion in the Great Park traffic study is intended to address pedestrian and bicycle circulation issues directly related to the project site. Future bicycle connections through PA9A or within the SCRRA right-of-way are not a part of this project. Refer to Response to Comment F59.

Response to Comment F44

Although the westbound approach (Bryan Avenue) currently has two lanes in each direction, the table referenced in the comment (Table 3 in Appendix G of the EIR) incorrectly indicates three westbound through lanes and will be corrected in the final EIR. The City's Traffic Impact Analysis for existing and buildout conditions assumed the existing two lanes in each direction. The attached table (F44-1) shows that the corrected 2007 and 2025 traffic conditions and indicates that no significant traffic impacts occur.

Response to Comment F45

The comment is correct, the ">" symbol indicates a right turn "overlap" or green arrow that allows simultaneous movement with the associated left turn movement (e.g., northbound right turns and westbound left turns, etc.).

Response to Comment F46

Based on the NITM Program engineering concept drawings, the east-side of Yale Avenue would be widened by 6 feet or less to accommodate the proposed improvement. No widening on the west-side of Yale Avenue, where the landscape is located, is anticipated.

Response to Comment F47

The NITM analysis has further investigated this location and the improvement noted in the EIR has been modified. The improvement required will be funded by

NITM. The current engineered proposal to provide acceptable levels of service at this location would not include a free westbound right turn lane at this location. A dual westbound right turn lane configuration would be accomplished by widening the north side of Trabuco Road approximately 12 feet. Slight widenings of Culver Drive will also be required to accommodate the 3rd northbound through lane. The improvement required will be funded by NITM.

Response to Comment F48

The third EB-through lane identified for Irvine Boulevard at Jeffrey Road could be accomplished by widening the north side of Irvine Boulevard.

Response to Comment F49

Comment noted. The timing of these improvements may in fact occur in conjunction with the PA-8A development, but is not related to the Great Park impacts or mitigation requirements.

Response to Comment F50

Based on the Orange County Public Library (OCPL) capacity standards and an anticipated population of 7,681, under the Great Park overlay an additional 1,536 square feet of floor space and 11,522 volumes will be required to serve the project. Since the average size of a library facility is 10,000, construction of a new facility would not be warranted. To meet the demand the Heritage Park facility could possibly be expanded in conjunction with demand created by other projects. The project area will continue to be served by the El Toro Branch facility and the new Foothill Ranch facility. Since a portion of property taxes are specifically allocated for capital improvement and operating costs for the County public library system, additional residents will make a financial contribution to expand and/or construct new library facilities.

Response to Comment F51

The Foothill and Eastern Transportation corridors are currently used by a substantial number of commuters. It is expected that tolls will be removed from the Foothill and Eastern Transportation Corridors in the future (i.e., post 2025). Also, buildout of the region would not occur for another 20-25 years. Regardless of whether or not tolls are collected, the completion of the Foothill and Eastern Transportation corridors will improve accessibility to new distant residential developments. Traffic impacts are addressed in the Traffic Impact Analysis in Appendix G of this EIR.

Response to Comment F52

New development within the surrounding area, including but not limited to, the Spectrum 8 and Northern Sphere projects, will include the development of additional residential dwelling units and provide housing opportunities. Therefore, a portion of future housing demand will be absorbed by these developments. The EIR does not premise the conclusions regarding population and housing impacts on the ability of other developments to provide housing.

The EIR has concluded that the proposed project will result in a significant unavoidable impact associated with jobs/housing balance. Also refer to Response to Comment HH1.

The City agrees that, in general, residential uses create a greater demand on city services while generating less revenue, whereas non-residential uses (commercial and employment based uses) create less of a demand on services and generate more revenue for the City. These basic fiscal principles are evaluated for each General Plan amendment proposed within the City, including the Orange County Great Park plan and the information is provided to the City Council.

A white paper was developed to further evaluate key issues raised by the Spectrum 8 draft EIR population and housing analysis. The *Population/Housing Issues in Planning Area 40* (Carla Walecka, March 2003) concludes that, in a broader context, southern Orange County is a housing-rich community and the jobs/housing imbalance is not the only methodology that applies to regional growth forecasts. Growth impacts resulting from the proposed project have been substantially anticipated by adopted city, county, and regional growth forecasts. The referenced document states that:

“Professional literature and research customarily examine jobs/housing relationships at a subregional or county scale, not at the project or city scale...the [Spectrum 8] project is very beneficial because it balances the housing-rich nature of southern Orange County. Without jobs [in central Orange County], south Orange County residents would have to travel farther north or east for job opportunities. This would result in greater imbalance between jobs and housing opportunities, and exacerbate congestion and associated air pollution.”

The City of Irvine concurs with the conclusions stated in the Spectrum 8 EIR and further evaluated in the *Population/Housing in Planning Area 40* document (Carla Walecka, March 2003).

Response to Comment F53

As stated on page 5.14-2 of this EIR, the standard response times promoted by the City of Irvine Police Department are considered appropriate for the community. As stated in the EIR on page 5.14-2, the City of Irvine's Police Department response guidelines state:

- Responding to “emergency” events within six minutes, 85 percent of the time.
- Responding to “crimes in progress” events within 10 minutes, 85 percent of the time.
- Responding to “less serious crimes occurring now” events within 20 minutes, 90 percent of the time.

- Responding to “routine calls for service” events within 60 minutes, 85 percent of the time.

These response times are established by the City’s Strategic Business Plan to ensure that appropriate resource levels are required for the Public Safety Department.

Response to Comment F54

Estimates of police personnel required for the Great Park are based upon current demand levels coupled with anticipated call for service based on the specific land uses in the plan rather than an officer-per-resident standard. Based on the City of Irvine’s Police Department current staffing formula, the proposed project would require between 17 and 22 sworn police officers, three to five sworn police supervisors, and eight to 11 non-sworn support staff. Funding required for these new police personnel would be provided through a special assessment levied against the property owners within the project area.

Response to Comment F55

Following annexation, the entire project area will be within the City’s corporate boundary and within the jurisdiction of the City of Irvine Police Department. Sharing the cost of policing the Great Park with the County of Orange is a policy issue. The fiscal plan for the OCGP Plan proposes fees and assessments to fund police services for the public park portions (i.e., Sportspark, Meadows Park, Exposition Area South, and the drainage and wildlife corridors). Special assessments will be applied to new development within the project area remaining on the tax rolls after the dedication of public use areas identified in the Great Park Plan.

Response to Comment F56

Refer to Response to Comment F53. Proposed additional police personnel numbers are based on the City of Irvine Police Department’s staffing formula; anticipated calls for service to the project area are determined by the Police Department based on historical data regarding the proposed land uses.

Response to Comment F57

The comment regarding “mitigation measures” refers to the construction and/or operation of public facilities within the project area. Construction impacts related to the development of public facilities within the project area are likely to be short-term events; operation impacts are considered long-term events. Construction and operation impacts associated with public facilities are considered under in Sections 5.1 *Land Use*; 5.2 *Traffic and Circulation*; 5.3 *Air Quality*; and 5.4 *Noise*.

Response to Comment F58

Comment noted. Section 5.14.2.1 *Public Services and Facilities Environmental Setting* has been amended to read:

“OCFA is planning two additional fire stations. Station No. 55 will be located in Northwood on the north side of Portola Parkway between Yale and Jeffrey, and Station No. 47 will be located near Sand Canyon and Interstate 405.”

Response to Comment F59

The final alignment of the Venta Spur connection through PA9, specifically in the area east of Sand Canyon, has not been determined. Figure 3-7 has been corrected to show a Class I trail along the north side of Trabuco Road, from the Eastern Transportation Corridor to the Meadows Loop Road.

Response to Comment F60

Comment noted. The actual parkland dedication requirement will be calculated during the review of subdivision maps for future residential developments, using the most current City of Irvine standard. It should be noted that community parkland dedication requirements will be deemed satisfied with the commitment to participate in the Development Agreement. The total amount of parkland in the project far exceeds the minimum required by the existing or proposed standard.

Response to Comment F61

Refer to Response to Comment F50. The square footage assigned to PAZ13 for museum/library facilities is necessary to determine traffic and other environmental impacts of the proposed project. The determination of how that square footage will ultimately be developed is dependent upon future opportunities and funding sources for these types of public facilities.

Response to Comment F62

The EIR bases its water demand analysis on the greatest demand, which is the Overlay Plan, as it proposes the greatest level of development under the proposed project. Refer to the attached IRWD comment letter (specifically comment G4) which confirms that the water district would utilize the Overlay Plan as representing the “worst case scenario” for water demand. Refer also to the IRWD Water Supply Assessment (Appendix C of the EIR) for further information about water supply.

Response to Comment F63

The Orange County IWMD’s CIWMP was approved in 1996 and shows that sufficient solid waste disposal capacity is available in the County for approximately 25 years, based on population projections for the area. Considering the potential for expansion by the County does not imply that current and near-future capacity is lacking.

The Regional Landfill Options for Orange County (RELOOC) is a long-term 40-year plan that is part of the County’s effort to assure that the countywide landfill system remains adequate, solvent, and efficient in the long term. Sufficient local

capacity for Irvine at Bowerman Landfill and the other County disposal sites is not in doubt in the short to mid-term even without implementation of RELOOC. In the longer term, RELOOC provides sufficient contingencies should they become necessary to manage additional solid waste from future anticipated countywide development. Refer to Response to Comment H49.

Response to Comment F64

Refer to Responses to Comments F63 and H48. Although the IWMD system has capacity for approximately 25 years, the District anticipates that the Bowerman Landfill will reach capacity by 2022. The ability to accommodate waste at other facilities is being planned by the IWMD.

Response to Comment F65

Comment noted. A primary goal of City policy will continue to be maintaining compliance with the California Integrated Waste Management Act (AB939), requiring good faith effort to divert 50 percent of total solid waste from landfills. Contrary to the assertion that recycling goals for the project are “unambitious and meaningless,” the specific goal of this project to recycle 75 percent of construction and demolition debris commits the City to a much more ambitious effort than the minimum required by state law.

Regarding recycling (diversion) rate calculations, the City cannot exclude any materials generated by the project that, if landfilled, would be counted as disposal and therefore detrimental to the City’s overall diversion rate and its compliance with AB939. Any material that would be counted as disposal at the landfill should be calculated and credited to the City as diversion if it is recycled.

Response to Comment F66

Comment noted. Mitigation Measure SW 5 (page 5.15-24 of the EIR) has been amended to read:

“For green waste, the project applicant must submit a written plan to the City and implement such a plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City-authorized waste hauler or recycling agent, *that the maximum feasible amount of that collected green waste is recycled*, and that a minimum of 50 percent of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.”

Response to Comment F67

As with the development of any new project, modifications to existing electric systems would be necessary. Such is the case with the proposed project. As stated in Section 5.15.5.3 *Utilities Environmental Impact*:

“...the proposed project would consume 59.1 million kilowatt hours per year....The proposed project would have a peak load of 14,771 kilowatts. Sufficient available capacity exists at the Irvine and Limestone Substations to serve the proposed project’s load estimates. However, the existing overhead 4 kilovolt distribution system currently serving the former MCAS El Toro would be replaced with an underground 12 kilovolt distribution system....The additional electrical load imposed by the proposed project is within the capacity of SCE.”

The EIR states on page 5.15-27 that the Base and Overlay Plans propose to replace the existing electrical system in its entirety, complying with modern design methods, performance standards, and specifications. The new system will be installed to generally coincide with the routing of new and existing roadways. Electrical lines will be required to be underground pursuant to City standards. The specifics of the new electric distribution system and the necessary environmental evaluation will be determined as site specific plans for the installation are prepared.

Response to Comment F68

The proposed project will be served from the 12kV distribution lines that interconnect with the existing SCE 66/12kV Irvine Substation, directly outside the gate of the former MCAS El Toro. This substation has sufficient capacity to serve the proposed project. Sub-transmission lines interconnect this substation to the existing SCE 230/66kV Santiago substation and the 66/12 kV Bryan Substation. SCE has indicated that no additional sub-transmission lines are planned to increase the capacity at the Irvine substation.

Refer to Response to Comment F67 for information pertaining to the modification of existing electrical systems resulting from implementation of the proposed project. Modifications deemed necessary to the electrical system will be considered as specific development proposals are initiated. Section 5.15.5.3 *Utilities Environmental Impact* states:

“...new [electrical] system will be installed to generally coincide with the routing of new and existing roadways circulating throughout the project. Electrical lines will be required to be underground pursuant to City standards.”

The EIR states on page 5.15-29 that sufficient available capacity exists at the substations serving the proposed project and “that the existing overhead 4kV distribution system currently serving the MCAS El Toro would be replaced with an underground 12 kV distribution system.” No analysis has indicated that a new transmission line greater than 12 kV will be required to serve the proposed project. The specifics of the new electric distribution system and the necessary environmental evaluation will be determined as site specific plans for the installation are prepared.

Response to Comment F69

SCE generally uses a peak load standard of 50,000 kW for "significant impact". The proposed project's maximum estimated electrical demand is 35,000 kW.

The CEQA Environmental Checklist, Appendix G, outlines the Thresholds for Determining Significance for energy. As stated in Section 5.15.5.2 Utilities Threshold for Determining Significance:

"Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered energy and communication transmission facilities, need for new or physically altered energy and communication transmission facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable levels of service?"

The City defines a significant impact to the current level of electric service for the project to be requiring more electrical energy than SCE has the stated ability to provide. The Threshold for Determining Significance is answered in full in Section 5.15.5.3 *Utilities Environmental Impact*.

Section 5.15.5.3 *Utilities Electrical Facilities and Service* discusses the expansion of the electrical system to serve the project. The EIR states on page 5.15-30 that the proposed project's consumption of electricity is 0.05 percent and peak demand is 0.06 percent of the California Energy Commission's forecast for Southern California Edison (SCE) in 2012. Furthermore, SCE has indicated its ability to serve the projected project in accordance with all applicable tariff schedules.

Response to Comment F70

Section 5.15.5.3 *Utilities Electrical Facilities and Service* discusses the expansion of the electrical system to serve the project. The comment discusses the adequacy of generation and transmission systems and incentives and disincentives to investment in electrical system infrastructure on a statewide basis. These comments are considered beyond the scope of the proposed project. SCE indicates that there is no transmission congestion within the project area.

Response to Comment F71

SCE has sufficient transmission capacity to provide power to the project. Refer to Responses to Comments F67 through F69 for information pertaining to the modification of existing electrical systems resulting from implementation of the proposed project. Analysis indicates that a new transmission line greater than 12 kV will not be required to serve the proposed project. Any other SCE system enhancements would be required to obtain the necessary licensing/regulatory approvals and would not impact the proposed project.

Response to Comment G1

Comment noted.

Response to Comment G2

The first paragraph on EIR page 5.15-5 is amended to read:

“The proposed project’s impact on water supply and the ability of the water provider to provide a water source to the project site has been assessed by the IRWD in accordance with the requirement of ~~SB904~~ SB610 and SB221, both effective 2 January 2002, and the water supply assessment (WSA) contained in Appendix C complies with the most recent statutory requirements and concludes that adequate supplies are available to serve the proposed project.”

Response to Comment G3

Comment noted. The record is hereby incorporated by reference.

Response to Comment G4

Comments noted.

Response to Comment G5

Comment noted.

Response to Comment G6

Comment noted.

Response to Comment G7

Comment noted.

Response to Comment G8

The assumption should be clarified that only existing infrastructure that meets IRWD standards will be preserved for future use.

Response to Comment G9

The EIR is amended to correctly indicate that potable water is and will be used to irrigate the IRWD parcel.

Response to Comment G10

Comments noted.

Response to Comment G11

Comment noted.

Response to Comment H1

The proposed zoning for the property consisting of the Base Plan and the Overlay Plan is fully described in the “Introduction”, “Project Description” and “Land Use” sections of the EIR. As described in those sections, the proposed zoning consists of a Base Plan which provides a lower intensity and density of development and a higher proportion of land dedicated to open space and public uses. The Overlay Plan provides a higher intensity and density of development if the property owners enter into a Development Agreement with the City of Irvine (Appendix D of the EIR) requiring, among other provisions, dedication of land for open space and public uses and payment of fees for the provision and maintenance of the public infrastructure.

The parcels to be dedicated to the County of Orange through the Development Agreement are labeled as PAZ23 with General Plan and zoning designation of Institutional (Inst/Inst – 6.1/6.1) and PAZ4 with General Plan and zoning designation of Agriculture in both Base and Overlay plans. The development intensity for these sub-areas is also identical under both Base and Overlay plans. This information is provided in Tables 3-3 and 3-4 of the EIR.

The EIR provides a clear description of the “project” stating that the commonly used overlay zoning tool has been utilized for the project site. The EIR also clearly states that the Overlay Plan represents the maximum density and intensity of development proposed. All sections of the EIR analyze the potential impacts of both the Base Plan and the Overlay Plan and identify mitigation measures for each plan.

Response to Comment H2

The Great Park EIR assesses potential impacts of proposed uses for the entire former MCAS El Toro owned by the federal government and administered by the DON. The DON has been supplied with the proposed land plan and the EIR. The DON agreed that the land plan is consistent with their Record of Decision and their intent to sell the property at public auction. The DON has also agreed with the provision of the Great Park Development Agreement that requires, among other things, the dedication of 100-acres of property from the property owner to the County upon the election of receiving the development rights of the Overlay Plan. The EIR assumes certain development intensities that are consistent with the intentions of the landowner (DON) and the expectations of the City of Irvine. The EIR also assumes development intensities for the 100-acres that may be dedicated to the County, consistent with the list of uses provided in the Property Tax Transfer and Pre-Annexation Agreement in Section 2.2.4. Although the County refers to previously proposed land plans and the County’s 1996 EIR, these documents are not consistent with the current intentions of the landowner (DON) or the City of Irvine and are not relevant to this EIR. If the County becomes the owner of the 100-acres, it can then assess development intensities provided in the program EIR and evaluate its specific development plans for the site. No specific development plans for the site by the County have

been provided to the City, nor is the County a landowner of the property. Any development proposed by the County, if it becomes a landowner in the future, which is not consistent with the proposed plan and EIR, will require additional environmental evaluation.

The City recognizes that the County's development of governmental uses on the 100-acres is not subject to City zoning or building controls. The City also recognizes that its land use assumptions for the 100-acres are an estimate based upon no current County plan, and that any trip limits used in the Traffic Impact Analysis for the Great Park project do not restrict the County's use of the 100-acres for governmental purposes. Finally, the City recognizes that, as the County defines its project and proposed uses for the 100-acres, the County will analyze traffic and other impacts from this project as required by law.

Response to Comment H3

Comment noted. While the EIR evaluated the Musick Jail Facility for its contribution of impacts to the project, the Final EIR will reflect that the Musick Jail Facility will not be included in the City of Irvine's annexation proposal.

Response to Comment H4

Comment noted. Mitigation Measure H/WQ 3 (EIR page 5.7-26) has been amended to read:

"Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrology and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department."

Response to Comment H5

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in "accordance with OCFCD Methodologies...as well as any additional guidelines in effect at the time of the project design" which includes utilizing the appropriate Manning's "n" value for the conveyance type. Approval from the OCFCD will be obtained prior to any construction activity on the proposed drainage corridors.

Response to Comment H6

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in "accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design" would include analyzing as applicable the effects of sediment deposition, meandering, scour,

erosion and bank stability with appropriate recommendations for slope protection. Approval from the OCFCD will be obtained prior to any construction activity on the proposed drainage corridors.

Response to Comment H7

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in “accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design” includes addressing drainage/flooding issues related to proposed development. Approval from the OCFCD will be obtained prior to any construction activity on the proposed Bee Canyon and Agua Chinon drainage corridors.

Response to Comment H8

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in “accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design” would include studying diversions with appropriate justification and mitigation. Approval from the OCFCD will be obtained prior to any construction activity on the proposed Agua Chinon drainage corridor and the proposed Borrego wildlife corridor.

Response to Comment H9

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in “accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design” would include addressing the concerns raised in this comment. Approval from the OCFCD will be obtained prior to any construction activity on the proposed Borrego Channel and Serrano Creek corridors.

Response to Comment H10

Comment noted. Prior to concept design or preliminary engineering it will be necessary to receive approval from the Manager, Flood Control Division. Initial meetings have occurred regarding the drainage plan.

Response to Comment H11

Maintenance responsibility for the proposed flood control facilities has not been determined. The question of maintenance responsibility will need to be addressed during the preliminary design process. Maintenance will be, in part, the County of Orange’s responsibility for some facilities, and the City of Irvine’s responsibility for other facilities, depending on the ultimate design solution implemented.

Response to Comment H12

Mitigation Measure H/WQ 3 addresses preparing detailed studies in accordance with...“the Flood Control Master Plan for San Diego Creek (FCMPSD).” Refer to Response to Comment H4.

Response to Comment H13

Refer to Response to Comment H11.

Response to Comment H14

Refer to Response to Comment H11.

Response to Comment H15

Mitigation Measure H/WQ 4 addresses the potential impact of project construction and flood control improvements occurring in tandem. Approval from the OCFCD will be obtained prior to any construction activity.

Response to Comment H16

The Natural Treatment System (NTS) basin proposed to be placed in Marshburn Basin is a part of the Irvine Ranch Water District NTS system and not of this proposed project. Because the basin will be upstream of the development area, the basin is not a part of the project design.

Response to Comment H17

The hydrologic and hydraulic analysis referenced in mitigation measure H/WQ 03/B3 are to be performed in “accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design” includes reconciling Master Plan facilities (e.g., raceway stormdrain) in relationship to the project requirements.

Response to Comment H18

Adequacy of existing facilities should be analyzed based on ultimate discharges as provided by the OCFCD. Mitigation Measure H/WQ 3 would include this type of analysis. Refer to Response to Comment H4.

Response to Comment H19

Mitigation Measure H/WQ 4 addresses the LOMR process.

Response to Comment H20

Any work within OCFCD or County of Orange right of way will require encroachment permits. The submittal process for an encroachment permit would occur at the time construction drawings are available for submittal.

Response to Comment H21

A significant amount of open space and recreational opportunities comparable to the type of activities associated with County regional parks will be provided within PA 51 of the project site. As described in Section 3.0 and illustrated on Figure 3-1 of the EIR, PA 51 is proposed to be annexed into the City. Upon annexation, this portion of the project area will be subject to City of Irvine General Plan land use and zoning designations. There is no equivalent “regional park” land use designation or zoning district in the City. Therefore, no portion of the project site has been designated as “regional park” although the functionality of proposed

park areas will be very similar to various existing parks in the County's regional parks system. Tables 3-3 and 3-4 of the EIR provide a statistical summary of open space and recreational acreage proposed within the project area.

Response to Comment H22

Refer to Response to Comment T1. As described in Section 5.9 *Biological Resources*, a wildlife corridor is proposed where one currently does not exist. Figures 1-2, 1-3 and 5.9-2 of the EIR depict the proposed wildlife corridor alignment. As shown, a majority of the wildlife corridor traverses passive uses, such as the golf course and park uses which are not anticipated to generate significant noise levels. In fact, the alignment of the wildlife corridor was shifted west, away from existing industrial uses located immediately east of the base, in part with consideration of potential indirect effects from these existing off-site uses. Within PA 30, the alignment of the corridor is fixed between the underpass of the SCRRA railroad tracks and the I-5 Freeway/I-405 Freeway undercrossing. In this area, indirect effects are likely to be of more concern to the functionality of the wildlife corridor.

The EIR describes guidelines that will be incorporated into the implementation of the corridor. Specifically, as described in Section 5.9 *Biological Resources*:

“The revegetation/restoration plan would need to address various issues to increase the viability of the proposed corridor and will need to be prepared based on the following criteria:

- **Reduce the amount of noise pollution and urban influence.** Sight and sound barriers need to be constructed at the edges of the corridor to help create a secluded, natural setting. Barriers may range from artificial sound walls to natural diversions such as hedges and tree lines.” (EIR, p. 5.9-22)

With respect to Planning Area Zone 2, under the proposed Overlay Plan PAZ 2 is proposed for residential development; however, this portion of the project site is currently developed with residential uses associated with the former base (refer to Figure 1-4 of the EIR). Any reuse or redevelopment of PAZ 2 with residential uses would not likely increase the level of noise impacts on the adjacent habitat preserve.

Response to Comment H23

Implementation of the proposed project will not create an impact to any existing wildlife corridors. Therefore, the provision of a linear corridor through Planning Area Zone 2 (PAZ 2) is not a mitigation measure required to mitigate any significant impact associated with the proposed project.

The City agrees that maintaining connectivity to regional habitat preserve areas is desirable. As such, the City has proposed the wildlife corridor as a major

feature of the proposed project. The primary goal of the wildlife corridor is to provide a viable connection between the Habitat Preserve Area (which, in turn, is connected to the NCCP Preserve Area) with the Laguna Coast Wilderness Park to the south. The alignment of the corridor has been carefully planned with significant input from various wildlife entities and stakeholders.

Response to Comment H24

With respect to Planning Area Zone 2, under the proposed Overlay Plan PAZ 2 is proposed for residential development; however, this portion of the project site is currently developed with residential uses associated with the former base (refer to Figure 1-4 of the EIR). Any reuse or redevelopment of PAZ 2 with residential uses would not likely increase the level of lighting impacts on the adjacent habitat preserve.

Response to Comment H25

The proposed Conservation Zone widths have been planned to achieve the maximum widths feasible. However, the proposed wildlife corridor is constrained in several areas as a result of many factors including existing development, roadways, and topographical conditions. The functionality of the wildlife corridor is not solely dependent upon width, and in areas where the width becomes more restrictive more care would need to be taken to implement measures to reduce the potential for edge effects and ensure that the corridor is attractive for wildlife.

Response to Comment H26

Tables 3-3 and 3-4 of the EIR depict a statistical summary of potential project development, including park acreages. Page 5.9-16 of the EIR has been corrected as follows:

“In addition, under the Base Plan, low to moderate quality foraging habitat (comparable to the existing agricultural fields) in the form of the approximately 576 acres of proposed golf course, ~~988~~ 716 acres of parkland, 438 acres of agriculture, 179 acres of wildlife corridor, and 229 acres of drainage/riparian corridor (~~2,410~~ 2,138 acres total) will be available after the completion of the project.”

Response to Comment H27

Tables 3-3 and 3-4 of the EIR depict a statistical summary of potential project development, including park acreages. Page 5.9-16 of the EIR has been corrected as follows:

“Under the Overlay Plan, low to moderate quality foraging habitat (comparable to existing agricultural fields) in the form of approximately 526 acres of proposed golf course, ~~547~~ 382 acres of parkland, 303 acres of agriculture, 179 acres of wildlife corridor, and 229 acres of drainage/riparian corridor (~~1,784~~ 1,619 acres total) will be available after the completion of the project.”

Response to Comment H28

Page 5.9-18 of the EIR has been corrected as follows:

“The wildlife corridor provides connection to the ~~995~~ 975-acre habitat preserve, as well as the Limestone-Whiting Wilderness Park.”

Response to Comment H29

The City has a policy of encouraging alternative modes of transportation, including bicycling. The City of Irvine General Plan Circulation Element Policies establish various goals and implementation measures for this purpose. As such, the City of Irvine has one of the most advanced bike trails systems in Orange County. The proposed plan links the entire Planning Area 51 through Class I and II bicycle trails as well as a hiking and riding trail system. The Class I trails have been designed to link the recreational, educational and culture uses within the Great Park. In addition, the City's Bicycle Transportation Plan is scheduled to be updated in 2005. Bike trail alignments, amenities, and grade separations will be discussed in that update.

Response to Comment H30

The County Master Plan of Regional Riding and Hiking Trails does not show the connection between the Serrano Creek and Hicks Canyon Trails alluded to in the comment. The Riding and Hiking Trail link that is being deleted is shown on the City of Irvine Trails Network Plan only. The link being deleted has been determined to be infeasible due to existing industrial development along the proposed route through PA 35, the inability to use the existing flood control improvement at Bake Parkway for the trail undercrossing, and other route specific impediments.

Response to Comment H31

The County of Orange's proposed Borrego Canyon bikeway traverses the NCCP/HCP that remains in federal control and is considered to be habitat for sensitive and endangered species. As such, the City has chosen not to show the proposed connection. The project does not propose to add this trail connection. A Class I off-street bikeway will be located in the proposed drainage swale that carries Agua Chino drainage between Irvine Boulevard and the Irvine Transportation Center. The County should consider realigning its proposed Borrego Canyon bikeway to join this trail or using the proposed Class II bikeway along the future Alton Parkway extension as an alternate route for bicyclists.

Response to Comment H32

Page 5.14-18 of the EIR has been revised as follows:

Both on-road (~~Class I~~ Class II) and off-road (Class I ~~Class II~~) bikeways are planned for the site, linking the site with the regional bikeway system.

Refer to Responses to Comments H35 through H38 with respect to regional trail connections.

Response to Comment H33

The EIR does address policies and programs supporting alternative modes of transportation. This EIR has followed CEQA Guidelines (Appendix G) as the guide to select Significance Thresholds. While the proposed trail system may differ in some areas with other plans, it does propose an extensive bike trail system that links the project internally and to the regional system. On page 5.2-63, the EIR presents the opportunities offered by the proposed project's recreational, educational, and transit-oriented uses for an enhanced bike trail network. The EIR also states that connections should be considered to Portola Parkway as well as encouraging additional trails for a more extensively linked network. As the project reaches its implementation stages, there will be opportunities for these considerations. Refer to Responses to Comments H29 through H31.

Response to Comment H34

The subheading "Trails and Bikeways" has been added between the fourth and fifth paragraphs on page 5.2-62 of the EIR.

Response to Comment H35

Cyclists of all levels will be able to use the proposed trail system for recreational and transportation purposes within the opportunities that the network will provide. As a community with an extensively designed and used bike trail system, the City of Irvine continually plans and develops additional trails, as well as linkages and amenities to enhance these opportunities. As stated in the EIR, the City of Irvine will continue to encourage such enhancements through the planning and implementation stages of the project. Refer to Response to Comment H29.

Response to Comment H36

Comment noted. The design of the Irvine Transportation Center includes the opportunity to link to Barranca and ultimately Alton Parkway via bicycle.

Response to Comment H37

The City of Irvine General Plan Circulation Element has established policies to connect the City's trails to the regional trail network. The Great Park plan will provide opportunities for the expansion of the trail system. As stated in the EIR, the City will continue to encourage such enhancements throughout the planning and implementation stages of the project.

Response to Comment H38

Figure 3-7 (EIR page 3-23) represents the trail system envisioned in the proposed project. The Great Park Plan includes vast areas of open space, recreational uses, as well as institutional and educational uses which will require detailed planning and design during the subsequent phases of the project. The

enhancement of the trail system will be part of the detailed planning process for those land uses, and can be integrated with the opportunities offered by those plans.

Response to Comment H39

Comment noted. Refer to Responses to Comments H29 and H38.

Response to Comment H40

The suggestion for inclusion of the Class I bikeway network into the Transportation Management Plan (TMP) will be considered. The TMP is not, however, intended to construct or maintain bikeways. The City of Irvine will coordinate with the County of Orange's Harbors, Beaches, and Parks during the implementation phase of the project for information about the bike trails that could be included in the TMP.

Response to Comment H41

Comment noted. The potential for grade-separated crossings will be identified during the later phases of more specific planning and implementation of the project.

Response to Comment H42

Figure 3-7 (EIR page 3-23) depicts the Great Park Plan Trail Network. Staging areas and details will be identified during the later phases of more specific planning and implementation of the project.

Response to Comment H43

The EIR addresses the proposed General Plan and zoning for the project site. At this time, the Equestrian Center is a permitted land use within the proposed General Plan and zoning designation for the existing site. The property will transfer to private ownership through the DON sale. The future property owner will determine the viability of an equestrian use at that time.

Response to Comment H44

The City of Irvine appreciates the offer to make a presentation on bikeways and trails planning to the County of Oranges, Harbors, Beaches, and Parks and the Orange County Regional Recreational Trails Advisory Committee.

Response to Comment H45

Mitigation Measures C1 through C4 address cultural resources; Mitigation Measure P1 (see Section 5.10 Paleontological Resources) addresses the potential for paleontological resource finds.

Any cultural resources discovered as a result of implementation of Mitigation Measures C1 through C3 would be curated at an acceptable archaeological repository within the County. Fees for storage and curation would be the responsibility of the developer/applicant for individual projects.

Response to Comment H46

Because 95 percent of PA 30 has not been surveyed, Mitigation Measure C1 requires an initial survey report which would include a records search, literature review, and walkover survey. A testing report will be required if the results of the initial survey report indicate the potential for cultural resources to be present on that portion of the project site subject to the cultural survey.

Response to Comment H47

Refer to Response to Comment H45.

Response to Comment H48

As described in the EIR, the County of Orange IWMD owns and operates three landfills to serve the solid waste disposal needs of the County. The City disposes the majority of its solid wastes at the Bowerman landfill. When the daily tonnage limit of one of the three IWMD landfills is exceeded, waste imported to that facility is reduced accordingly, and the excess tonnage is disposed of at one of the other facilities. The IWMD accepts wastes from outside of Orange County. Project refuse can be disposed of within any one of the three landfills in the County landfill system. The currently permitted maximum daily tonnage at the Bowerman landfill is 7,263, which is adjusted to increase by 1.75 percent per year with a maximum of 8,500 tons per day. Currently, the landfill accepts approximately 6,700 tons per day. Under the proposed Overlay Plan, the project would generate approximately 35 tons per day of solid waste. Thus the project would increase the tonnage received by the Bowerman landfill to approximately 6,735 tons per day, which is well below the existing 7,263 tons per day and the future 8,500 tons per day limit of the landfill.

Response to Comment H49

The Bowerman currently accepts additional landfill waste from outside Orange County. Should the cumulative effect of development within the Central Region watershed cause the daily tonnage ceiling to be exceeded, the waste being imported will be reduced by an amount sufficient to stay within tonnage limits.

Additionally, the California Integrated Waste Management Board requires that all counties have an approved Countywide Integrated Waste Management Plan (CIWMP). To be approved, the CIWMP must demonstrate sufficient solid waste disposal capacity for at least 15 years, or identify additional available capacity outside the County's jurisdiction. Orange County's CIWMP, approved in 1995, estimates future solid waste disposal demand based on countywide population projections adopted by the Board of Supervisors. IWMD's database estimates that the Orange County landfill system has capacity for approximately 25-years; therefore no significant cumulative solid waste impacts are anticipated. Continuation of local government efforts required under AB 939 to divert wastes from the County's landfills will also reduce the magnitude of cumulative impacts.

RELOOC is an acronym for “Regional Landfill Options for Orange County.” The RELOOC program is a 40-year strategic plan under preparation by the County IWMD, and is proposed to ensure that waste generated by the County is safely disposed of and that the County’s future disposal needs are met. The County IWMD is currently in the process of conducting the environmental review for the RELOOC program, with the EIR anticipated to be released in spring 2003.

The County’s waste disposal system includes three landfills, 20 former refuse disposal stations, and four household regional hazardous waste collection centers. The RELOOC implementation strategy is based on a “Phased Option” approach to managing solid waste disposal in the County, consisting of Phase 1 Short Term Strategies and Phase 2 Long-Term Strategies. Phase 1 strategies include, among others, fully utilizing the capacity of existing landfills files before seeking new site or alternative waste disposal methods. This would be achieved by maximizing operational efficiency at existing landfills (e.g., compacting refuse), increasing landfill capacity of the Frank R. Bowerman and Olinda Alpha landfills, and proactively encouraging recycling. Phase 2 strategies include determining if there is a need to increase the daily amount of solid waste permitted at the Prima Deschecha landfill, identification of strategies, including new technology, to maximize solid waste disposal capacity, and completion of a feasibility study of expanding the Bowerman landfill into the adjacent Round Canyon after the Bowerman landfill reaches capacity.

Response to Comment H50

Refer to Response to Comment H49.

Response to Comment H51

Refer to Responses to Comments F65, F66, and H49.

Response to Comment H52

Refer to Response to Comment H49.

Response to Comment H53

For both the Base Plan and Overlay Plan, only future roadway improvements with an identified funding source have been included for 2007 and 2025 conditions. Only the post-2025 (General Plan buildout) scenario includes unfunded improvements. This reflects circulation needs and development levels consistent with and required for General Plan buildout conditions only and is appropriate in this context.

Response to Comment H54

All of the intersections identified in the comment were in fact included in the Great Park Traffic Impact Analysis.

Response to Comment H55

Refer to Response to Comment H2. The “trip cap” approach is an appropriate mechanism for ensuring that future development conforms to the Great Park project description. As part of the North Irvine Transportation Improvement Program (NITM), each development proposal must submit a traffic analysis demonstrating consistency with the planned trip cap. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events.

Response to Comment H56

This is unnecessary since the minor differences in the ICU assumptions between the City of Irvine and other jurisdictions, if any, would not affect the findings and conclusions of the Great Park Traffic Impact Analysis.

Response to Comment H57

Refer to Response to Comment H55.

Response to Comment H58

The Traffic Impact Analysis evaluates peak hour mainline freeway conditions for all land use scenarios. The peak hour mainline freeway conditions are presented in the EIR on pages 5.2-35 and 5.2-36 (Base Plan) and pages 5.2-53 and 5.2-54 (Overlay Plan) (see specific references to Appendix G).

Response to Comment H59

Ongoing studies and analysis (monitoring) in accordance with the NITM program will continue to ensure that mitigation measures are implemented in a timely and appropriate manner.

Response to Comment H60

Comment noted. The MPAH amendment process has been specifically identified as a required project mitigation measure. The City of Irvine has initiated a request to OCTA for the review of the proposed MPAH amendments.

Response to Comment H61

Although an industrial reuse was contemplated during the initial efforts to clean up the base, the remediation strategies put in place allow for other reuses. The DON, with the concurrence of the other members of the Base Cleanup Team, considers all “no further action” sites and all remediated sites at the base to be available for unrestricted uses. Therefore, the use of such sites is consistent with the land uses proposed in the Great Park Plan. At locations that are to be used for schools (K-12), additional evaluation of the sites by DTSC is required by law.

Considerations for remedial actions objectives are provided in 40 CFR 300.430(e)(2)(i) that states, “remediation goals shall establish acceptable

exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response.” The Department of the Navy (DON) will be responsible for remediation of the former MCAS El Toro to these exposure levels. The DON has stated that some land-use controls (i.e., easements, covenants, institutional controls, ordinances, etc.) will be required in order to restrict public access on approximately seven Installation Restoration Plan (IRP) sites. The DON will employ limited land use controls at IRP sites 2, 3, 5, 16, 17, 18, 24; the use of such controls has yet to be determined for IRP sites 1, 8, 11, and 12. This action has been deemed necessary until the IRP sites in question can be remediated to the above mentioned acceptable exposure levels.

Section 3.0 *Project Description Actions and Approvals of Other Agencies* has been amended to reflect the requirement that DTSC approve the acquisition and/or development of property for public schools. The added additional language reads as follows:

“California Department of Toxic Substances Control (DTSC) – Approval of acquisition and/or development of property for public schools based on hazardous materials evaluation.”

Response to Comment H62

In the April 2003 Draft Final EBS, the DON identifies approximately 84 percent of the base as suitable for transfer through a fee conveyance. The DON considers areas that are suitable for transfer to be available for unrestricted uses. The percentage of transferable property has increased since 1995 due to additional investigation and sampling performed in 2002 and 2003 as part of the EBS update. Additionally, numerous areas have received “no further action” concurrence from the site regulators since 1995, thus increasing the acreage suitable for transfer from the original estimate of 67 percent. Refer to the *Final Environmental Baseline Survey, Former MCAS El Toro, California* (Earth Tech, Inc. April 2003) for additional information.

Approximately 84 percent of the former air station property is suitable for transfer by deed without remediation or land-use controls. Most of the remaining 16 percent of the former air station consists of areas with subsurface groundwater contamination and may be transferred to private control through a lease in furtherance of conveyance until the remediation is complete and fee title can be conveyed. Land-use controls, as defined in Response to Comment H61, for such groundwater contamination will be limited to prohibitions on the extraction and use of groundwater and limited surface controls to protect monitoring and remediation equipment.

Response to Comment H63

Additional remediation plans are not required, as specific land use designations (i.e., residential, industrial, park, or recreation) are irrelevant. Per 40 CFR 300.430(e)(2)(i), "remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response." The DON is required to remediate the site to these exposure levels. Analysis of supplemental remediation costs, if any, are not required by CEQA. The cost and responsibility of remediation rests with the DON. Refer to Response to Comment H61.

Response to Comment H64

Refer to Responses to Comments H61 and H63.

Response to Comment H65

The City of Irvine's Solvent Study identified a potential conduit of contamination, the base sanitary sewer system, and analyzed the maximum potential releases that could have occurred based on a review of historical records and engineering practices. The City submitted the report to the DON for consideration of alternate sources for contamination on the base. In response, the DON gave careful consideration to the rationale and logic of the report, conducted extensive testing of a likely source (Building 307, the base laundry and dry cleaning facility located within IRP Site 24), and concluded that the potential releases were most likely very limited. While the City of Irvine concurs with the DON's conclusions, based on its evaluation of Building 307, the City recognizes that there is a potential, albeit small, for hidden releases of solvents and other hazardous substances. Mitigation Measure HH 5 puts in place a process for responding to potential unidentified contamination when it is encountered during any construction activities on the base. The April 2003 Draft Final EBS released by the DON addresses concerns brought up in the City of Irvine's Solvent Study. Refer to the City of Irvine's letter of response dated 21 March 2003 attached in the Appendix.

Response to Comment H66

It is the responsibility of the DON along with the rest of the members of the Base Cleanup Team (including USEPA, DTSC, and RWQCB) to review evidence of contamination presented by any and all parties, including those identified by the commentor. In the April 2003 Draft Final EBS, the DON reviews all of the evidence presented by other parties for potential additional locations of concern, including the City of Irvine's Solvent Study. The DON performed studies to address issues raised in the Solvent Study and the conclusions are presented in the April 2003 Draft Final EBS. While many potential locations of concern do not warrant further investigation, the DON considers 76 locations to require evaluation for potential releases. Those sites that pose a significant risk to health

and safety will be subject to remediation sufficient to allow a fee conveyance of the site for unrestricted uses.

Response to Comment H67

Refer to Response to Comment H65. The EIR will be revised to note that the DON evaluated potential soil contamination adjacent to runways and under certain runway extensions in the April 2003 Draft Final EBS. There date is no evidence that there are significant levels of unknown contaminants in these areas. The City of Irvine believes that the DON's April 2003 Draft Final EBS addresses all concerns brought up in the GeoSyntech report and the City of Irvine's Solvents Study. Refer to the City of Irvine's letter of response dated 21 March 2003 attached in the Appendix.

Response to Comment H68

The April 2003 Draft Final EBS released by the DON addresses and responds to concerns brought up in the County's environmental site assessment (the GeoSyntech report). Per the Base Realignment and Closure Business Plan for MCAS El Toro (March 2000) and the April 2003 Draft Final EBS, the DON states that approximately 84 percent of the former air station is environmentally suitable for transfer by deed without remediation or land use restriction. Most of the remaining 16 percent consists of areas with subsurface groundwater contamination and may be transferred through a lease in furtherance of conveyance. Some portions of the land area remaining to be remediated will have restricted public access via land use controls until remediation is complete. The DON does not propose to remediate the site to a specific land use designation (i.e., industrial, residential, park, or recreation) as the federal regulations codified under 40 CFR 300.430(e)(2)(i) designate acceptable exposure levels regardless of proposed land use. Refer to Response to Comment H66.

Response to Comment H69

At the time of the review of the County's EIR 563 and 573 processes, the clean-up of the former MCAS El Toro was not far along, therefore the City identified a number of issues that it believed should be addressed prior to going forward with reuse. Subsequently, the DON completed a substantial portion of its investigations and decisions about remediation such that there are relatively few unknowns regarding contamination at this time. Consequently, it is not necessary to revisit issues that the DON has addressed.

Response to Comment H70

The DON recently released an updated baseline environmental analysis of the former air station (Draft Final EBS April 2003). There is no evidence to date indicating the presence of pools of solvents in the bedding of the existing sewer alignments. Refer to Response to Comment H65.

Response to Comment H71

Refer to Responses to Comments H65 and H70. Air quality and traffic impacts attributable to construction activities for both the Base Plan and Overlay Plan, including grading activities, were modeled using the URBEMIS 2001 and the Irvine Transportation Analysis Model (presented in Section 5.3 *Air Quality* and Section 5.4 *Traffic/Circulation*), respectively.

Response to Comment H72

Comment noted. Mitigation Measure HH5 requires that applicants for grading permits within the boundaries of Site 24 prepare a worker health and safety plan that acknowledges the presence of residual VOCs in soil and groundwater at Site 24 and provides adequate measures to protect worker health and safety. Land use controls, as outlined in Response to Comment H61, will be employed at IRP Site 24 in order to prevent extraction or use of contaminated groundwater without prior approval, to protect the integrity of the remedial actions (e.g., protect extraction and treatment equipment and monitoring wells), and to allow access to the site for equipment operation, maintenance, and monitoring. Also refer to Responses to Comments H65 and H77.

Response to Comment H73

The DON evaluated the potential for contamination associated with the piping that ran between an on-base plating shop and an industrial wastewater treatment facility and determined that contamination did not exist. Refer to Responses to Comments H65 and H66.

Response to Comment H74

The vast majority of tanks have been removed under the supervision of the appropriate regulatory agencies. The few tanks that have been or will be abandoned in place will be rendered inert under the supervision of the appropriate regulatory agencies. The information on the status of the storage tanks located on the project site has been updated to reflect the April 2003 Draft Final EBS. Section 5.5.1 *Public Health and Safety Environmental Setting* (5.5-9) has been amended to read:

“Based on the April 2003 Draft Final EBS, a total of 404 USTs were in use at the former air station. Of these USTs, 357 have been remediated and received findings of “no further action.” Of a total of 39 ASTs used in support of the military mission at the former MCAS El Toro, 36 have been remediated and received findings of “no further action.”

Response to Comment H75

Comment noted. Access to monitoring wells will be protected by restrictions placed on the property prior to sale by the DON. Mitigation Measure HH 6 will be added to Section 5.5.5 *Public Health and Safety Mitigation Measures* to read as follows:

“The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells located on the former MCAS El Toro in a geographic information systems database (GIS). The City will review all permit applications on the former air station for well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to wells will be limited to authorized personnel.”

Response to Comment H76

The use of significant quantities of CFC/HCFC refrigerants is not required for implementation of the proposed project. Compliance with SCAQMD rule 1415 requires the capture and recovery of refrigerants resulting in insignificant impacts to the environment.

Response to Comment H77

Although grading operations are not expected to result in the release or disturbance of asbestos or lead, demolition of existing structures may result in such releases. Section 5.5.5 *Public Health and Safety Mitigation Measures* (5.5-27) states:

“Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities.”

Response to Comment H78

The DON is required to complete all necessary remedial actions before fee title to the former MCAS El Toro is transferred from federal ownership. The DON may transfer control of those portions of the property not found suitable for transfer of fee title through a lease in furtherance of conveyance. Even after the fee title is transferred, the federal government is required to conduct further remediation if additional contamination caused by DON actions is discovered or if a remedy fails to perform adequately. Federal law also provides that the DON may be required to indemnify the new owners or certain other parties for liabilities arising from claims for personal injury or property damage resulting from the release or threatened release of any hazardous substances, pollutants or contaminants, or petroleum or petroleum derivatives attributable to DON activities on military installations. Refer to the following letters that are attached in the Appendix to this Response to Comments document: H.T. Johnson, Assistant Secretary of the Navy, Installations and Environment, Letter to the Editor, Los Angeles Times, 5 August 2002; and the letter to the City of Irvine from the DON dated 25 April 2003. Also see the “DOD Policy on Responsibility for Additional Environmental Cleanup after Transfer of Real Property” electronically at:

[http://www.dtic.mil/envirodod/Policies/BRAC/brac_flu.htm].

Response to Comment H79

All hazardous wastes generated in the course of the proposed project will be managed in compliance with regulatory requirements and sent to a licensed hazardous waste facility, thereby minimizing risks and rendering impacts to public health and safety less than significant.

Response to Comment H80

Section 5.3 *Air Quality* and Section 5.4 *Traffic/Circulation* of the EIR address the issue of human health impacts resulting from diesel exhaust particulates.

Response to Comment H81

Existing users of pesticides and fertilizers at the base, agricultural leaseholders and landscape maintenance staff, must meet regulatory requirements for the storage, application, and disposal of registered pesticides. Proposed uses will be similar. Compliance with regulatory requirements will minimize both exposures to pesticides and the potential risk of accidental releases resulting in less than significant impacts to public health and safety.

Response to Comment H82

Only SCAQMD-compliant paints and coatings are legally available for use in the proposed project. Compliant coatings minimize the use and release of VOCs resulting in less than significant impacts to public health and safety.

Response to Comment H83

Non-point source pollution and related TMDLs are addressed in Section 5.7 *Hydrology/Water Quality*. Mitigation Measures H/WQ 1 states:

“A Storm Water Pollution Prevention Plan and Water Quality Management Plan are to be prepared [prior to project implementation]. A Notice of Intent for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project areas. This requirement will be met to the satisfaction of the City Engineer for: a) any disturbance of one-acre or more of soil...b) General Dewatering NPDES Permit of the Santa Ana RWQCB, and c) provisions of the Countywide Permit....As future projects are planned, designed, and constructed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed.”

Monitoring protocols implemented as part of the BMPs and other Permits identified in this Mitigation Measure would require quantification of non-point source pollution loading as part of the TMDLs identified for the Newport Bay watershed.

Response to Comment H84

Refer to Response to Comment H83.

Response to Comment H85

Air quality emissions are presented and analyzed in Section 5.3 *Air Quality*. Growth inducement due to the proposed project is addressed in Section 7.2 *Growth Inducing Impacts*.

Response to Comment H86

Information pertaining to the consistency between the proposed project and the SCAQMD's AQMP and SIP is presented in Section 5.3 *Air Quality*.

Response to Comment I1

This comment recites the primary components of the proposed project.

Response to Comment I2

Refer to Responses to Comments I3 through I13.

Response to Comment I3

Page 3-30 of the EIR has been corrected as follows:

Orange County Airport Land Use Commission (ALUC) for Orange County – Amendment Revision of the Airport Environs Land Use Plan (AELUP), dated 1995.

This correction has also been made in other applicable sections of the document.

Response to Comment I4

Page 5.1-5 of the EIR has been modified to include the text of Policy J-1.d as follows:

Policy J-1.d address hazards associated with aircraft operations. Policy J-1.d states, “Use the most current available Airport Environs Land Use Plan (AELUP) as a planning resource for evaluating aircraft operations, land use compatibility and land use intensity.”

Response to Comment I5

Page 5.1-6 of the EIR has been modified as follows:

The Airport Land Use Commission for Orange County Airport Land Use Commission (ALUC) prepares a comprehensive land use plan and regulates land uses for each public and military airport. The ALUC adopted the has Airport Environs Land Use Plans for (AELUP) covering the former MCAS El Toro, the former MCAS Tustin, John Wayne Airport (JWA) (adopted 2002), Armed Forces Reserve Center Los Alamitos, and Fullerton Municipal Airport (2002), Joint Forces Training Base Los Alamitos (2002), Heliports projects (2002) and for MCAS El Toro (adopted 1995) ... Figures found in Appendix D of the 1995 AELUP depict the noise and safety zones for MCAS El Toro. Figure 5.1-1 depicts the APZs for the former MCAS El Toro as shown in the 1995 AELUP.

The MCAS El Toro property is still owned by the Federal government. The 1995 AELUP applicable to that property remains in effect and has not been amended. California Public Utilities Code Section 21670, et. seq. requires that local General Plans and Zoning be consistent with the land use compatibility plan (AELUP). The Public Utilities Code provides a method whereby a local jurisdiction may override an Airport Land Use Commission finding of inconsistency with the AELUP.

Response to Comment I6

Page 5.1-15 of the EIR has been revised as follows:

The land use, safety, and noise restricted areas as identified in the AELUP, AICUZ, and the PIL for the former MCAS El Toro facility are no longer impacted by aircraft noise from military air operations now that the base has closed for military use. The MCAS El Toro property is still owned by the Federal government. The 1995 AELUP applicable to that property remains in effect and has not been amended. California Public Utilities Code Section 21670, et. seq. requires that local General Plans and Zoning be consistent with the land use compatibility plan (AELUP). The Public Utilities Code provides a method whereby a local jurisdiction may override an Airport Land Use Commission (ALUC) finding of inconsistency with the AELUP.

Response to Comment I7

Refer to Responses to Comments I9 and I10.

Response to Comment I8

Reference 6 on page 5.1-27 of the EIR has been revised as follows:

Orange County Airport Land Use Commission for Orange County. Airport Environs Land Use Plan, adopted November 1995. 1975-90.

Response to Comment I9

Page 5.1-15 of the EIR states that the proposed project, “would not result in a significant land use compatibility impact, even though it would conflict with the adopted AELUP.” This language is consistent with the language contained in Section 6.0 Alternatives.

Response to Comment I10

On 17 April 2003, the ALUC formally acknowledged that the ALUC has no statutory jurisdiction over the proposed project. Further, according to the ALUC’s 17 April 2003 staff report, ALUC staff has reviewed the project and finds no AELUP issues.

In the 17 April 2003 staff report the ALUC has also stated that the ALUC does have jurisdiction within the AELUP surrounding the former military airfield. The Orange County Great Park EIR recognizes the potential for growth-inducing impacts as a result of the removal of development restrictions within the AELUP areas surrounding the former base (e.g., EIR, page 7-13). However, Measure W changed the County of Orange’s General Plan to delete any airport development opportunity at the former MCAS El Toro and the DON, in its Record of Decision, chose a non-aviation reuse plan. Consequently, changes in land use restrictions are based on that voter-approved initiative and subsequent DON decisions, not on this project, which modifies the Irvine General Plan designations from a more

intensive non-aviation use (known as “Millennium Plan II, adopted in February 2000) to the less intensive, park-oriented non-aviation use proposed by the Great Park project. Many of the areas referenced by the commentor are located within other jurisdictions (primarily the City of Lake Forest and newly incorporated Aliso Viejo). The City of Lake Forest is currently in the preliminary stages of preparing a land use study of the subject area. The City of Aliso Viejo has just recently initiated preparation of a General Plan. It is anticipated that any future proposal by any jurisdiction with lands currently located within the AELUP would be required to evaluate, with specificity, the potential environmental impacts associated with adoption of any proposed land use changes. This information would then be available to the ALUC when amending the AELUP as it relates to that jurisdiction.

Response to Comment I11

Refer to Response to Comment I10. There is no need to include growth-inducing impacts as a significant unavoidable impact of the proposed project.

Response to Comment I12

Page 8-5 of the EIR has been corrected as follows:

~~Orange County~~ Airport Land Use Commission for Orange County, Airport Environs Land Use Plan, 1995. ~~1975-1990~~.

Response to Comment I13

The documentation referenced by the commentor will be provided to the Airport Land Use Commission as requested.

Response to Comment J1

Comment noted.

Response to Comment J2

Coordination between project developers and the Fire Authority, as with other service providers, is a requirement of development of this type and magnitude. Any necessary agreements regarding fire protection services will occur in accord with established procedures.

Response to Comment J3

Refer to Response to Comment J2.

Response to Comment J4

Comment noted.

Response to Comment J5

Comment noted. See Section 5.5 *Public Health and Safety* for information pertaining to hazardous materials related to agricultural and military activities.

Response to Comment J6

Comments noted. See Section 5.5 *Public Health and Safety* for information pertaining to wildland fires.

Response to Comment J7

Development standards of the type noted are either legal requirements or will be negotiated and established during the review and approval process for the master development plans or other approvals given by the City.

Response to Comment J8

Any further reduction of the surplus area will be determined by the General Services Administration. The effect of future government ownership and operations in areas proposed to remain in government control will need to be assessed once the specific areas are established.

Response to Comment J9

Refer to Response to Comment H65. The commitment by the DON is to convey land based on the federal regulations codified under 40 CFR 300.430(e)(2)(i); the regulations designate acceptable exposure levels suitable for the proposed reuse of the former air station. If an unknown hazard appears during construction, appropriate responses will be taken by the City in coordination with the DON and the Fire Authority and other responsible agencies. Refer to the April 2003 Draft Final EBS for additional information on the status of underground storage tanks, pipelines, and other specified information. See Section 5.5 *Public Health and Safety* for information pertaining to hazardous materials and wastes. Mitigation Measure HH 5 states:

“Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director Community Development of the City of Irvine in a timely manner.”

Response to Comment J10

Comment noted.

Response to Comment J11

Comment noted.

Response to Comment J12

Comment noted.

Response to Comment J13

Comment noted.

Response to Comment J14

Comments noted.

Response to Comment J15

The location of IRP sites are identified on Figure 5.5-1 (EIR page 5.5-8).

Response to Comment J16

The project is a General Plan amendment, zone change, development agreement, and annexation. The detailed information discussed in the comment will be available in the design phase.

Response to Comment J17

Coordination with OCFA will occur during the design phase and during the project approval process, consistent with City standard procedures.

Response to Comment J18

Refer to Response to Comment J17.

Response to Comment J19

Comment unclear due to partial sentence provided as comment.

Response to Comment J20

Regulation of agricultural chemicals application and storage will continue for land proposed to be retained for agricultural use.

Response to Comment J21

Comment noted.

Response to Comment J22

Fire protection agreements are a requirement prior to development. This issue is also referenced in the Urban Services Plan (provided as an attachment to this document).

Response to Comment J23

Comment noted. Fire service was considered in establishing maximum water demand and subsequent backbone infrastructure sizing.

Response to Comment J24

OCFA will be listed as an Action Agency in the EIR on pages 3-30/3-31.

Response to Comment J25

Corrections will be made in the final EIR as noted.

Response to Comment J26

Refer to Responses to Comments J1 through J25.

Response to Comment K1

The elements and development characteristics of the proposed project are specifically defined in Section 3.0 *Project Description*. The analysis of potential environmental impacts is based on the development and operation of the project as defined in Section 3.0.

The City has proposed a concept plan that will meet the spirit and intent of Measure W while maintaining a fiscally-balanced plan. Annexation of PA 51 is proposed in order to ensure the City can control the logical development of the property, and to maintain high service levels for public service and utility providers. Although the project site will be incorporated into the City of Irvine, the proposed uses are regional in nature and are intended to benefit and serve all residents of the County.

Response to Comment K2

This comment references the adequacy of the DON's Environmental Impact Statement (EIS) and the Record of Decision for the Disposal of the former MCAS El Toro issued by the DON and co-signers of the Federal Facilities Agreement. This comment does not address the adequacy of the Orange County Great Park EIR.

Response to Comment K3

The DON has analyzed a non-aviation alternative in its EIS for the Disposal and Reuse of the former MCAS El Toro. The Orange County Great Park project, however, is proposed by the City of Irvine. The City is designated as the "lead agency" under CEQA, and in this capacity, is responsible for preparation and certification of an EIR that addresses the potential environmental impacts associated with implementation of the proposed project as defined in Section 3.0 of the EIR. The DON is not required to prepare an EIR for the proposed project as a range of alternatives were previously addressed in the DON's EIS for the federal action. The Orange County Great Park project is proposed by the City of Irvine and does not involve a federal action beyond the disposal of the property which is addressed in the federal EIS.

Response to Comment K4

Section 7.1 *Cumulative Impacts* of the EIR analyzes the potential environmental impacts associated with the development of the proposed project in conjunction with the projected growth in the region, including the Northern Sphere. This cumulative impact analysis includes analyses of impacts to traffic, air quality and energy.

With respect to aviation, implementation of the proposed project does not involve a use that would impact existing airports and aviation activity. The proposed project is the reuse of a former military air base which is currently not utilized for any type of aviation use. The Measure W initiative changed the County of Orange's General Plan and deleted the airport designation for the former MCAS

El Toro. Furthermore, on 25 February 2003 the Orange County Board of Supervisors, acting as the El Toro Local Redevelopment Authority, rescinded the El Toro Airport System Master Plan, thus removing an airport at MCAS El Toro from all County plans.

Response to Comment K5

This comment addresses the adequacy of the Final Environmental Impact Statement and Record of Decision issued by the DON for the closure of the former MCAS El Toro. This comment does not address the adequacy of the Orange County Great Park EIR and no further response is necessary.

Response to Comment K6

As described in Section 5.5 *Public Health and Safety* of the EIR, the DON will be responsible for clean-up and remediation activities on the base. Page 5.5-11 of the EIR states, "Under CERCLA, contaminated federal property cannot be transferred until all necessary remedial actions have been taken or a remediation system is operating properly and successfully. Cleanup responsibility remains with the DOD until the property is fully remediated. Therefore, some of the former air station property cannot be transferred immediately." Additionally, "As established by BRAC III, the DON will continue its environmental restoration activities after installation disposal. Sites that require continuing monitoring and remediation will receive continuing investigation/remediation beyond installation closure, which occurred in July 1999." (EIR, page 5.5-15) Additionally, Mitigation Measures HH1 through HH5 are proposed to ensure that no significant impact associated with the presence of hazardous materials or contamination occurs with implementation of the proposed project. Refer to Responses to Comments H61 and M26 for information pertaining to the DON's remediation requirements.

Response to Comment K7

Refer to Response to Comment K1.

Response to Comment L1

Refer to Responses to Comments DD1 through DD14, which respond to the Department of Toxic Substances Control comment letter on the EIR.

Response to Comment M1

Refer to Responses to Comments M2 through M95 which respond to each comment raised by the commentor.

Response to Comment M2

This comment correctly summarizes the primary components of the proposed project, as described in the EIR. However, the City does not agree with the commentor's statement that the Great Park is not a feasible reuse of the project site and that the magnitude of the proposed land uses are understated. The proposed uses are considered feasible in terms of constructability as well as a fiscal standpoint. Proposed uses have been carefully considered so as to achieve a fiscally balanced plan while maintaining the spirit and intent of Measure W.

The proposed project characteristics are described in detail in Section 3.0 *Project Description*. The EIR focuses on the Overlay Plan as it presents the highest level of potential impact in order to ensure mitigation at the highest level. Tables 3-3 and 3-4 provide a detailed summary of the potential maximum development potential of the project according to both the Base Plan and Overlay Plan.

Response to Comment M3

The proposed Orange County Great Park land uses are proposed within City of Irvine Planning Areas (PAs) 30 and 51. Lands within PA 51 are not subject to Measure W while they remain under the jurisdiction of the County of Orange. To the extent that these lands are not annexed under the Great Park Plan, there will be no impact to the County's General Plan and zoning. However, PA 30 is located within the jurisdictional boundary of the City, and is not subject to Measure W. Generally, the more intensive land uses are proposed within PA 30. Comparatively, the Overlay Plan is more intense than the Base Plan, which are clearly depicted in Tables 3-3 and 3-4 of the EIR. However, the Overlay Plan allows for a similar amount of the open space, park, recreational and public uses within PA 51 as could occur under the Base Plan.

The City does not concur that the Overlay Plan constitutes "massive development" as inferred by the commentor. Regardless of whether land uses are developed according to the Base Plan or the Overlay Plan, the spirit and intent of Measure W will be met with implementation of the proposed project, for that portion of the project site currently subject to Measure W. In either case, the development potential of the Base Plan and the Overlay Plan are clearly illustrated in Tables 3-3 and 3-4 of the EIR.

Response to Comment M4

As stated in the EIR, "the purpose of the project is to assure that reuse of El Toro is consistent with the intent of Measure W approved by the voters in March, 2002 while responding to the decision of the federal government to sell the land". The proposed zoning with the Base Plan and Overlay Plan assures the fulfillment of

this purpose, regardless of the option chosen by the buyers of the property. While the option of the Overlay Plan provides a potential higher return to the developers in exchange for providing the land and infrastructure for the public uses, the Base Plan, through the regulation of the permitted land uses, also assures that the land will be developed for open space, recreation, educational, and cultural facilities, agriculture, and other park-like uses. Project applicants may opt to develop under the Base Plan and forego the increased intensity and development rights that are available through the Development Agreement and Overlay Plan.

Response to Comment M5

The former air station will be divided into four parcels for sale by the DON. The requirement through the Development Agreement for land dedication and maintenance fee participation under the Overlay Plan option assures that the public uses are implemented. Conversely, under the Base Plan the land use regulations will be the mechanism for the implementation of the park and open space uses. Under the Base Plan, public funding is not required because park and open space lands are not required to be dedicated.

Response to Comment M6

The zoning allows the development of the Great Park under both options. With the Overlay Plan the Great Park will be implemented through land dedication and fee contributions, and the City (or its designee), in turn, will be the developer of those public uses. Under the Base Plan, the owner of the property will develop the land based on the designated land uses, including the open space, recreational, educational and cultural facilities, agriculture, and other park-like uses, since those are the permitted land uses provided by the Base Plan option.

Response to Comment M7

The EIR analyzed the potential impacts of the Overlay Plan as the maximum buildout of the Plan, including the Development Agreement as an integral part of the Overlay Plan option. If a buyer declines to enter into the Development Agreement, the property would have the General Plan and zoning designation provided in the Base Plan. Any subsequent increase in the density and intensity would require the preparation of a General Plan Amendment, zone change, and the required environmental documentation addressing both project-specific and cumulative impacts.

Response to Comment M8

The City of Irvine is not involved with the sale of land parcels; the DON has publicly stated that it will sell all parcels of the former MCAS El Toro concurrently. As the owner of the property, the DON has indicated that it will divide the land into the four parcels as indicated on the attached figures. The EIR provides an analysis of the project's potential impacts based upon the maximum amount of development allowed under the Base Plan and Overlay Plan regardless of the

manner in which the DON sells the property. (Note: The four referenced parcel figures are included in the Appendix to this Response to Comments document).

Response to Comment M9

The proposed maximum development intensity of the project is defined in Section 3.0 *Project Description*. The City does not propose to exceed the level of development beyond that defined in Section 3.0 and analyzed in the EIR. The development potential is based on densities and intensities achievable under the proposed General Plan land uses and zoning designations, subject to the specific density and intensity caps that are explicit in the proposed project. Any proposed increase in the level of development beyond that described and analyzed in the EIR would require the preparation of subsequent or supplemental environmental documentation to address the potential environmental impacts of such a proposal. The land use densities of the proposed project, as with land use densities for all similar proposed projects in Irvine, are based on and controlled by the maximum allowable development intensity. As such, the density range establishes the framework for analysis within the limits of the maximum development intensity.

Response to Comment M10

The proposed project sets specific maximum levels of density and intensity and the City of Irvine has no intention of changing these levels. Refer to Response to Comment M9.

Response to Comment M11

Comment noted.

Response to Comment M12

The EIR discusses all potential environmental effects of the Overlay Plan which is the maximum buildout scenario as defined in the project description. The City of Irvine has no intention of adding development intensity beyond that which is presented in the EIR. Refer to Responses to Comments M9 and M10.

Response to Comment M13

Refer to Responses to Comments M9 and M10

Response to Comment M14

Per the Overlay Plan, the maximum number of dwelling units in PAZ2 is set at 850, notwithstanding the number of units that could be calculated using the maximum range of the zoning designation. The maximum intensity of development for both the Base and Overlay Plans is specifically depicted in Tables 3-3 and 3-4 of the EIR. Refer to Response to Comment M9.

Response to Comment M15

Refer to Response to Comment M9.

Response to Comment M16

Comment noted.

Response to Comment M17

The air quality impact analysis contained in Section 5.3.3 *Air Quality Environmental Impacts* is adequately assesses the air quality impacts of runway removal as part of the overall project construction. In order to confirm the validity of the initial URBEMIS 2001 model, additional analysis of the airport runway model was completed. As part of this additional analysis, it was determined that the URBEMIS 2001 site grading PM₁₀ fugitive emissions calculations are based on the emission factor prepared by the CARB for construction activities, that include: limited-to-heavy trenching activities; limited-to-heavy earth moving activities by scrapers; road pre-paving activities; paving activities; road grading; scraper excavations; general construction of pads, framing, landscaping, etc.; and drilling, blasting, compaction, and trucking of excavated and fill material. The secondary set of URBEMIS 2001 model runs were performed with the demolition tab enabled. The results of the initial URBEMIS 2001 model run and the secondary URBEMIS 2001 calculations are presented as Table M-1 in the Appendix of this Response to Comments document. The results of the secondary URBEMIS 2001 calculations show that unmitigated PM₁₀ emissions increased to approximately 458-tons per year as compared to 451-tons per year using the initial URBEMIS 2001 data. This represents an increase of less than seven tons, or 1.4 percent of the total unmitigated PM₁₀ emissions. The difference is statistically insignificant and the additional analysis is provided to confirm that the initial analysis adequately assesses the air quality impacts of runway removal as part of the overall project construction. Section 5.3.3 will be amended with the addition of the secondary URBEMIS 2001 calculations and qualitative description.

The Mitigation Measures proposed will apply to all construction activities, including demolition and removal of the runways as well as grading and excavation. Mitigation Measure AQ2 has been amended to read:

“Prior to the commencement of construction activities required to demolish and/or remove existing DON infrastructure, including runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plans ~~plan~~ shall identify implementation procedures for each of the following emission reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.”

Response to Comment M18

Refer to Response to Comment M17. Section 5.3.3 *Air Quality Environmental Impacts* states:

“Both the Base Plan and Overlay Plan propose the development of the entire 4,693-acre base within a 19-year (2007-2025) time frame. For estimation of air emissions, it was assumed that either plan is subdivided into two phases based on utility and extent of the development...For the estimation of air quality emissions from construction of the various facilities, construction activity is assumed to last for a period of three years during each phase. This assumption conservatively accounts for both demolition and grading/excavation activities as major sources of construction-related emissions. The URBEMIS 2001 model is used for estimating construction emissions for all stages of development...Due to the limited availability of specific data regarding construction activities and equipment requirements, the URBEMIS 2001 model default options were used.”

Response to Comment M19

The DON will not transfer fee title to the property of the former MCAS El Toro until the parcels have been remediated to acceptable exposure levels; property not meeting acceptable exposure levels will not transfer or may be transferred to private control through a lease in furtherance of conveyance until the remediation is complete. The EIR will be revised to note that the DON, in the April 2003 Draft Final EBS, evaluated potential soil contamination adjacent to runways and underneath certain runway extensions. In addition, Mitigation Measure HH 5 puts in place a process for responding to potential unidentified contamination were it to be encountered during any construction activity on the former MCAS El Toro. Also refer to Response to Comment M24.

Response to Comment M20

Refer to Responses to Comments M17 and M19 for potential contamination issues associated with runways. Potential impacts to air quality related to the removal of runways, tarmac, and related infrastructure were modeled using URBEMIS 2001 and is presented in Section 5.3 *Air Quality*.

Response to Comment M21

Refer to Responses to Comments M16 through M20. Referenced analysis has been conducted and findings presented in the EIR.

Response to Comment M22

This comment incorrectly assumes that the proposed project provides the authority to develop an additional 14,000 acres of land. Even if the proposed project is not approved and implemented, based on Measure W, the Orange County General Plan precludes development of an airport on the former MCAS El Toro and thereby removes previous land use restrictions due to aircraft

operations. Even in the absence of the proposed project development would have to adhere to the non-aviation designation of the site based on the provisions of Measure W. The project proposes to change the City of Irvine General Plan and zoning designations for the project site from one non-aviation land use plan (e.g., the Millennium Plan, adopted in February 2000) to another non-aviation land use plan, designated the Great Park Plan.

The cumulative analysis provided in Section 7.1 of the EIR is consistent with the provisions of CEQA and the CEQA Guidelines. As stated in the EIR, the CEQA Guidelines allow for the analysis of cumulative impacts to utilize the Regional Growth Projections Method. According to CEQA Guidelines Section 15130, the Regional Growth Projections Method can be a summary of projections contained in an adopted general plan or related planning document which is designed to evaluate regional or area wide conditions. As described in the EIR (EIR, page 7-1), the Regional Growth Projections Method has been utilized for analysis of cumulative impacts. The cumulative analysis is based on buildout assumptions identified in the Center for Demographic Research's *Orange County Projections 2000*. This cumulative analysis takes into consideration buildout of local and regional general plans as well as population forecasts for the County of Orange and the region as a whole (as shown in Figure 7-1 and Table 7-1) (EIR, page 7-1). The EIR is consistent with the CEQA Guidelines provisions for the use of the Regional Growth Projections Method in the evaluation of cumulative impacts, as the OCP-2000 projections are adopted based on regional growth estimates utilized by various jurisdictions throughout the County.

Furthermore, the commentor appears to confuse the intent of CEQA Guideline Section 15130(b)(1)(B)(2) with respect to "probable future projects." CEQA Guideline Section 15130(b)(1)(B)2 addresses the list approach for analysis of cumulative impacts. As previously stated, the Orange County Great Park EIR does not rely on the list approach for the analysis of cumulative impacts. Also, CEQA Guideline Section 15130(b)(1)(B)2 does not apply to the 14,000 acres of land referenced by the commentor as it does not meet the criteria of the Guideline. Specifically: 1) the 14,000 acres is not the subject of an application requiring an agency approval which has been received at the time the notice of preparation was released; 2) the 14,000 acres is not a project identified in an adopted capital improvements program, general plan, regional transportation plan, or other similar plan; 3) the 14,000 acres is not a project anticipated at a later phase of a previously approved project; and 4) the 14,000 acres is not a public agency project for which money has been budgeted." Also refer to Response to Comment I10.

With respect to the City of Lake Forest, the City's adopted General Plan was both reviewed and has been included in the preparation of the Orange County Great Park EIR. Land use assumptions for cumulative growth include the adopted land uses of the City of Lake Forest General Plan. The City of Lake Forest has recently amended its General Plan to remove references to the aviation-use of

the airport, and to delete references to the noise contours and AICUZ boundaries formerly associated with the base operations. However, no land use changes were adopted as part of this recently approved General Plan amendment. Also, no land use changes have been identified or are proposed by the City at this time. The City has just recently solicited proposals to initiate a land use study that would examine potential land use changes within the areas previously restricted by aviation use of the former base. No formal land use change recommendations are expected until sometime in 2004. Because the nature, extent, and timing of potential land use changes that could occur in this area have not been determined, any additional analysis, beyond that provided in the EIR, would be speculative.

With respect to the City of Aliso Viejo, the City is a newly incorporated City and does not have an adopted General Plan. The City is currently in the preliminary stages of preparing a General Plan, which is expected to be adopted in late 2003 or 2004, well beyond the timeframe associated with the Orange County Great Park EIR. Rather than engage in speculation as to the nature, extent, and timing of potential land use changes that could occur in this newly incorporated jurisdiction, the Orange County Great Park EIR relies upon adopted growth projections as allowed by the CEQA Guidelines for the Regional Growth Projections Method.

The analysis of the 14,000-acres is addressed in the EIR, to the degree that the project would cause growth-inducing impacts in the City of Irvine and surrounding jurisdictions (EIR, page 7-13). The EIR concludes that the growth-inducing impacts are significant.

Response to Comment M23

The EIR describes the project's potential contribution to regional air emissions and provides a comparison of these emissions to the projected air emissions within the basin as a whole. The EIR does not rely upon this comparison as the basis for determining the significance of the project's air quality impacts. Rather, this comparison is made to assess the magnitude of the proposed project's impact on the region as a whole. While the EIR states that the project will have a negligible impact on the overall air quality within the SCAB, the EIR concludes that, "due to the size of the project, certain impacts that result from development will be "unavoidable" as these impacts cannot be completely mitigated and most of these changes are irreversible. This is considered a significant unavoidable impact, although the overall effect on air quality within the Basin for the life of the proposed project is estimated at less than one half of one percent." (EIR, page 5.3-55).

With respect to the EIR's conclusion of cumulative air quality impacts, the EIR's conclusion of significance is based on the cumulative impact associated with the regional growth projected pursuant to OCP-2000. The EIR concludes that area-wide emissions as a result of cumulative development pursuant to OCP-2000

projections are considered significant. As stated in the EIR, “operation emissions in conjunction with related projects and other emissions in the Basin will also coincide. Since air quality in the SCAB does not comply with federal or state standards, these emissions will contribute to a cumulatively significant impact on air quality,” (EIR, page 7-6). The tables provided in the discussion of cumulative air quality impacts provide a quantification of pollutant emissions estimates for the year 2025 based on the adopted 1997 Air Quality Management Plan. Also, regional emissions projections are graphically depicted in Figure 5.3-2 of the EIR.

The potential cumulative impacts with respect to CO hotspots are also quantified and evaluated in Section 5.3 *Air Quality*. Table 5.3-29 depicts the CALINE 4.0 8-hour Carbon Monoxide Modeling Results for Post-2025, and demonstrates that no project-specific or cumulative Carbon Monoxide Hot Spot will result.

Response to Comment M24

The EIR includes data and analysis from the DON and other sources of information and uses these sources to draw conclusions for potential impacts to public health and safety. The federal government is required to remediate the site to acceptable exposure levels. As part of its obligation to remediate, the DON continues to monitor the site and publish results of its monitoring and remediation efforts. The April 2003 Draft Final EBS is the most relevant evaluation of continuing remediation efforts; it identifies an additional 76 new potential release locations, all of which require further evaluation for potential releases to the environment and subsequent remediation, if required. The April 2003 Draft Final EBS catalogs the types of sites and distinguishes between those that require no further action, those that require further evaluation, those that require implementation of response actions, and those that require completion of ongoing response actions. The DON will not transfer fee title to the property of the former MCAS El Toro until the parcels have been remediated to acceptable exposure levels; property not meeting acceptable exposure levels will not transfer or may be transferred to private control through a lease in furtherance of conveyance until the remediation is complete. Property not transferred in fee title by the DON can only be developed with institutional controls established by the DON until remediation is complete and the fee title is complete. The April 2003 Draft Final EBS concludes that of the 3,738-acres of base property that are expected to become available for transfer, approximately 84 percent are environmentally suitable for transfer of fee title at the present time. The EIR will be revised to incorporate the latest information available in the April 2003 Draft Final EBS.

Response to Comment M25

Refer to Response to Comment M24.

Response to Comment M26

There is no indication that recordkeeping by the DON differed significantly from recordkeeping in private industry during the period the base was in operation.

Uses of hazardous materials are well-documented, as are facility plans and operating procedures. While quantities of wastes may not have been well-documented in the period prior to the advent and enforcement of RCRA at the base, that is also the case in the private sector. The extensive process of records reviews, visual inspections, and interviews has created as thorough a record of hazardous materials use and disposal practices as exists. The DON and the regulatory agencies participating in the Federal Facilities Agreement concur that the protocol for investigating the base is sound, that the vast majority of potential contamination locations at the base have been identified, and that significant areas of unidentified contamination are not likely to be found. The City is concerned that there may be small areas of unidentified contamination and that these may be encountered during grading and construction activities. Mitigation Measure HH 5 addresses this potential by requiring applicants for grading permits to prepare a protocol plan that will guide responses to the discovery of unknown contamination. Furthermore, the DON is required to complete all necessary remedial actions before title to the former MCAS El Toro is transferred from federal ownership. Even after the title is transferred, the federal government is required to conduct further remediation if additional contamination caused by DON actions is discovered or if a remedy fails to perform adequately. Federal law also provides that DON may be required to indemnify the new owners or certain other parties for liabilities arising from claims for personal injury or property damage resulting from the release or threatened release of any hazardous substances, pollutants or contaminants, or petroleum or petroleum derivatives attributable to DON activities on military installations. Refer to the following letters that are attached in the Appendix to this Response to Comments document: H.T. Johnson, Assistant Secretary of the Navy, Installations and Environment, Letter to the Editor, Los Angeles Times, 5 August 2002; and the letter to the City of Irvine from the DON dated 25 April 2003. Also see the "DOD Policy on Responsibility for Additional Environmental Cleanup after Transfer of Real Property" electronically at: [http://www.dtic.mil/envirodod/Policies/BRAC/brac_flu.htm].

GeoSyntec based its evaluation on the use of PRGs (preliminary remediation goals) for identified contaminants. As the U.S. Environmental Protection Agency notes:

"Preliminary Remediation Goals (PRGs) are tools for evaluating and cleaning up contaminated sites. They are risk-based concentrations that are intended to assist risk assessors and others in initial screening-level evaluations of environmental measurements. The PRGs contained in the Region 9 PRG Table are generic; they are calculated without site specific information. However, they may be re-calculated using site specific data.

PRGs should be viewed as Agency guidelines, not legally enforceable standards. They are used for site "screening" and as initial cleanup goals if applicable. PRGs are not de facto cleanup standards and should not be

applied as such. However, they are helpful in providing long-term targets to use during the analysis of different remedial alternatives. By developing PRGs early in the decision-making process, design staff may be able to streamline the consideration of remedial alternatives. “ EPA, Region 9, Superfund Program:
[<http://www.epa.gov/region09/waste/sfund/prg/index.htm>]

The City supports the use of PRGs in the screening process, but recognizes that site specific characteristics may result in the adoption and implementation of cleanup goals that protect public health and safety without achieving the PRGs. The City will review the specific sites mentioned in the comment and address them in the final EIR.

Considerations for remedial actions objectives are provided in 40 CFR 300.430(e)(2)(i) that states, “remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response.” This means that the DON will be responsible for remediation of the former MCAS El Toro to these exposure levels prior to the transfer of the fee title to the property. The DON has stated that some land-use controls (i.e., easements, covenants, institutional controls, ordinances, etc.) will be required in order to restrict public access on approximately seven Installation Restoration Plan (IRP) sites if those properties are transferred through a lease in furtherance of conveyance. The DON will employ limited land use controls at IRP sites 2, 3, 5, 16, 17, 18, 24; the use of such controls has yet to be determined for IRP sites 1, 8, 11, and 12. This action has been deemed necessary until the IRP sites in question can be remediated to the above mentioned acceptable exposure levels.

Response to Comment M27

Refer to Response to Comment H65. The DON has conducted a revised EBS of the remaining acreage at the former air station (April 2003 Draft Final EBS). The DON has sufficiently analyzed the existing locations of concern and has addressed recommendations for additional potential locations of concern set forth in the City of Irvine’s Solvents Study (January 2000) and the GeoSyntech report commissioned by the County of Orange (November 2001). The Solvents Study and GeoSyntech report predate the March 2003 letter from the City of Irvine; the April 2003 Draft Final EBS conducted by the DON sufficiently addresses environmental concerns at former MCAS El Toro. The City of Irvine has concluded that the assessment of the potential release locations is fair and appropriate.

Response to Comment M28

While the DON did not identify any specific spills or releases prior to 1983 (documentation of waste management practices improved dramatically following the implementation of RCRA beginning in the early 1980s), it acknowledged practices that resulted in releases that most likely caused the contamination problems at the base. These practices included disposal of hazardous materials and wastes to sewers, primarily storm sewer drains, disposal of hazardous wastes in base landfills, use of hazardous materials and wastes in controlling dust on roads and impermeable surfaces, uncontrolled runoff of hazardous wastes, lack of monitoring of underground storage tanks and storage facilities, and the use of hazardous materials and wastes for training of emergency response personnel. The DON's analysis of these practices led to its list of potential locations of concern (LOCs), evaluation of the LOCs, and responses where required. Where other parties, including the City of Irvine, the Restoration Advisory Board, the County of Orange, and the regulatory agencies involved in the base cleanup, have identified other potential locations of concerns, the Navy has responded with additional investigation. In some cases, the Navy, with the concurrence of the regulatory agencies, has concluded that releases did not occur or were not of sufficient magnitude to warrant further evaluation or remediation. For example, in response to the City's Solvent Study, the DON investigated Building 307, the Laundry and Dry Cleaning facility for the base. In its Final Technical Memorandum, the DON concluded that significant releases did not occur at that location and further investigation was not needed. In other cases, the DON has pursued additional evaluation as in the case of the discovery of radium dials at IRP Site 2, which prompted a thorough historical radiological analysis and a radiological survey of much of the base. This evaluation is ongoing. In sum, the City of Irvine considers the DON's process to be responsive to input from interested parties and to be sufficiently comprehensive.

Response to Comment M29

The DON responded to the GeoSyntec report in the April 2003 Draft Final EBS and concurred with seven of the 339 sites recommended for further action or assessment. The remaining 332 sites were either previously assessed, are currently being assessed, or will be assessed in the near future, have closure NFA letters signed by a regulatory agency or are recommended for NFA and are pending regulatory concurrence, or are considered to not require further action or assessment. Regulatory agencies concur with the DON's assessment of the GeoSyntec Report. The DON's April 2003 Draft Final EBS identifies new potential release locations that require further investigation, but does not identify conclusively any significant new risks to public health and safety, nor does it substantially alter conclusions drawn in the EIR.

Response to Comment M30

Refer to Responses to Comments M27 and M29 for information regarding the DON's April 2003 Draft Final EBS and information pertinent to the GeoSyntec report.

Response to Comment M31

Refer to Response to Comment M26. The City of Irvine will continue to review and monitor the base cleanup as it progresses. The City expects the DON to evaluate the seven GeoSyntec recommended new sites with which it concurs regarding the need for further evaluation, along with the other 69 new locations of concern, in a manner that follows regulatory requirements and guidelines and meets the highest of professional standards. At any sites that require remediation to protect public health and safety, the City expects that the DON will meet agreed upon remediation goals that will ultimately result in the transfer of fee title to the property in a condition suitable for unrestricted use.

Response to Comment M32

The DON has publicly stated that it will indemnify new land owners of former air station property in order to mitigate potential soil contamination that is attributable to historic DON operations. Refer to Response to Comment H67. Also refer to Responses to Comments M27 and M29 for information regarding the DON's April 2003 Draft Final EBS and information pertinent to the GeoSyntec report.

Response to Comment M33

Refer to Response to Comment M26. Also refer to Responses to Comments M27 and M29 for information regarding the DON's April 2003 Draft Final EBS and information pertinent to the GeoSyntec report.

Response to Comment M34

Refer to Response to Comment M26. There is no evidence that the Overlay Plan, due to its greater development, will result in greater human contact with contaminated or potentially contaminated soil. For both the Base Plan and the Overlay Plan, the greatest potential impact to public health and safety is the risk of exposure to unidentified contamination, rather than the risk of contact with known contaminated soil or groundwater. Whether currently identified or not, the DON is obligated to remediate the former MCAS El Toro to acceptable exposure levels. Mitigation Measure HH 5 addresses the potential for exposure and reduces the risk to below a threshold of significance.

Response to Comment M35

Refer to Response to Comment M34. The two examples cited in the letter are addressed through Mitigation Measure HH 5. The radiological anomaly found at IRP Site 2 (radium dial) was found on the surface of the site. Perchlorates were identified as part of the required regular groundwater monitoring at the base. In the case of the radiological anomaly, HH 5 requires the preparation of a protocol plan to guide responses to the discovery of unexpected contamination. The plan must include a response to the discovery of a radiological entity as well as more common toxic contaminants. Were the DON to identify additional contaminants of concern in particular geographic locations, protocol plans may be revised. Mitigation Measure HH 5 is amended to read:

“Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities.”

While the DON is reasonably certain that they have identified all potential locations of concern at the former MCAS El Toro, they are prepared to respond to any future identification of potential contamination following transfer of the fee title to the property. This is a prudent approach where complete certainty is not possible.

Response to Comment M36

Refer to Responses to Comments H65, H67, and M27 for information regarding the City of Irvine’s Solvents Study. Refer to Response to Comment M26 for information pertaining to protection of human health and the environment from known or suspected carcinogens, including TCE.

Response to Comment M37

Refer to Responses to Comments H65, H67, and M26 for information regarding the City of Irvine’s Solvents Study.

Response to Comment M38

See Response to Comment H65. The DON responded to the City of Irvine Solvent Study in the April 2003 Draft Final EBS. In its response, the DON concludes that the City of Irvine Solvent’s Study methodology was faulty in regards to the magnitude of solvent use and potential releases via the sanitary sewer system and that the likelihood of releases was small. The DON concluded that the lack of significant releases associated with Building 307, the Laundry and Dry Cleaning Facility, supported its prior conclusion that the sanitary sewer system is not a significant conduit of contamination to subsurface soil or groundwater.

Response to Comment M39

See Responses to Comments H65 and M38.

Response to Comment M40

See Responses to Comments H65 and M38. The April 2003 Draft Final EBS specifically evaluated the City of Irvine Solvent’s Study and concluded that the methodology presented in the study was faulty. Upon review of the April 2003 Draft Final EBS, the City of Irvine now accepts this assessment.

Response to Comment M41

See Response to Comment H65, M38, and M40.

Response to Comment M42

There is no evidence to suggest that unknown contaminated soils are likely to be discovered during excavation of the project site. Refer to Response to Comment M26 for information pertaining to the protection of human health and the environment from known or suspected carcinogens. Per the Mitigation Measures outlined in Section 5.6.5 *Geology and Seismicity Mitigation Measures*:

“Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site...The purpose of the subsurface evaluation is to further evaluate the subsurface conditions in the area...”

In the unlikely event that unidentified contaminants are discovered, the EIR provides an appropriate Mitigation Measure to deal with this scenario. Section 5.5.5 *Public Health and Safety Mitigation Measures* has been amended and read as follows:

“Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities.”

Response to Comment M43

Refer to Responses to Comments M35 and M42. There is no evidence to suggest that unknown contaminated soils are likely to be discovered during excavation of the project site. The former MCAS El Toro will be remediated to an exposure level acceptable to human health and the environment. Mitigation Measure HH 5 addresses this potential issue by requiring grading permit applicants to prepare a protocol plan that responds to unidentified contamination. Refer to the document *Reusing Cleaned Up Superfund Sites: Recreational Use of Land Above Hazardous Waste Contaminant Areas* – EPA Office of Emergency Response (March 2001) for technical information on how sites with waste contaminated areas have been safely reused for recreational purposes while ensuring the integrity and protectiveness of the remedy are maintained.

Response to Comment M44

Refer to Responses to Comments H65, M35, M38, M40, M42, and M43.

Response to Comment M45

Refer to Responses to Comments H65, M35, M38, M40, M42, and M43. The City of Irvine accepts the DON's conclusion in the April 2003 Draft Final EBS that widespread unidentified contamination is not likely to exist at the base. However, if unidentified contamination is discovered, Mitigation Measure HH 5 has been amended and responds to the potential for such localized unidentified contamination to exist and be encountered during grading activities.

Response to Comment M46

Refer to Responses to Comments H65, M35, M38, M40, M42, and M43. The DON is required to complete all necessary remedial actions before the fee title to the former MCAS El Toro is transferred from federal ownership. Even after the title is transferred, the federal government is required to conduct further remediation if additional contamination caused by DON actions is discovered or if a remedy fails to perform adequately. Federal law also provides that DON may be required to indemnify the new owners or certain other parties for liabilities arising from claims for personal injury or property damage resulting from the release or threatened release of any hazardous substances, pollutants or contaminants, or petroleum or petroleum derivatives attributable to DON activities on military installations. Refer to the following letters that are attached in the Appendix to this Response to Comments document: H.T. Johnson, Assistant Secretary of the Navy, Installations and Environment, Letter to the Editor, Los Angeles Times, 5 August 2002; and the letter to the City of Irvine from the DON dated 25 April 2003. Also see the "DOD Policy on Responsibility for Additional Environmental Cleanup after Transfer of Real Property" electronically at:

[http://www.dtic.mil/envirodod/Policies/BRAC/brac_flu.htm]. Using the proposed Mitigation Measure GS2 will require geotechnical assessment for specific development prior to construction; construction delays using this methodology will likely not occur.

Response to Comment M47

Refer to Response to Comment M46.

Response to Comment M48

Refer to Responses to Comments H78 and M46. The DON is required to complete all necessary remedial actions before the fee title to the former MCAS El Toro is transferred from federal ownership. Even after the title is transferred, the federal government is required to conduct further remediation if additional contamination caused by DON actions is discovered or if a remedy fails to perform adequately. Federal law also provides that DON may be required to indemnify the new owners or certain other parties for liabilities arising from claims for personal injury or property damage resulting from the release or threatened

release of any hazardous substances, pollutants or contaminants, or petroleum or petroleum derivatives attributable to DON activities on military installations. Refer to the following letters that are attached in the Appendix to this Response to Comments document: H.T. Johnson, Assistant Secretary of the Navy, Installations and Environment, Letter to the Editor, Los Angeles Times, 5 August 2002; and the letter to the City of Irvine from the DON dated 25 April 2003. Also see the “DOD Policy on Responsibility for Additional Environmental Cleanup after Transfer of Real Property” electronically at:
[http://www.dtic.mil/envirodod/Policies/BRAC/brac_flu.htm].

Response to Comment M49

Refer to Response to Comment M46. The comment acknowledges that federal law requires the DON to remediate any contamination attributable to their actions and indemnify the community from its effects; there is no basis to speculate that the DON will not comply with the law. While the purpose of an EIR is to evaluate environmental and not economic impacts, no economic consequences would result due to the DON’s indemnification.

Response to Comment M50

Refer to Responses to Comments H65, M26, M35, M43, and M46.

Response to Comment M51

Refer to Responses to Comments H65, M35, M38, M40, M42, M43, and M46.

Response to Comment M52

Refer to Responses to Comments H65, M26, M35, M43, M44, and M46. The DON’s initial 1995 EBS and April 2003 Draft Final EBS outline specific areas of soil contamination that will require remediation prior to ownership transfer. The DON has stated that some land-use controls (i.e., easements, covenants, institutional controls, ordinances, etc.) will be required in order to restrict public access on approximately seven Installation Restoration Plan (IRP) sites. The DON will employ limited land use controls at IRP Sites 2, 3, 5, 16, 17, 18, 24; the use of such controls has yet to be determined for IRP Sites 1, 8, 11, and 12. This action has been deemed necessary until the IRP Sites in question can be remediated to the above mentioned acceptable exposure levels.

Response to Comment M53

Refer to Responses to Comments M54 through M58.

Response to Comment M54

The study included explicit phase and analysis for 2007 conditions (short-term), 2025 (long-term), and post-2025 (General Plan buildout) conditions. This is consistent with requirements of the City of Irvine Traffic Impact Analysis guidelines. The 2007 analysis was included specifically to identify necessary phasing of short-term and long-term improvements. The City of Irvine has also developed an implementing mechanism in the form of the North Irvine

Transportation improvement Mitigation (NITM) program. Ongoing monitoring of study area conditions, as a feature of the NITM program, is in the form of an interim and 5-year review.

Response to Comment M55

The EIR, in conjunction with NITM, provides significant detail regarding the timing of construction of necessary roadways, and links development to the completion of the roadways. The information regarding the timing of construction of facilities presented in the referenced tables was obtained directly from the agency responsible for each improvement or the environmental document that required associated with each improvement. Construction of those improvements in the subject tables that are related to future development is tied to the development as required mitigation measures, and/or conditions of approval, that must be constructed in conjunction with the specified development. The tables referred to in the comment represent the best knowledge available regarding the timing of future development and anticipated roadway improvements.

Response to Comment M56

Refer to Responses to Comments M54 and M55. The EIR and NITM provide for comprehensive phasing for all necessary traffic improvement. For non-NITM improvements, Mitigation Measure Trans 4 specifically requires their construction by the developers of the Great Park, with construction phased in relation to Great Park development. The non-NITM improvements are designed to mitigate the specific impacts for which these improvements are required in the EIR. With respect to NITM improvements, the NITM program allocates funding responsibility for all improvements on a proportioned basis between Great Park and other properties generating traffic that necessitate the improvement. NITM also sets forth a phasing program for construction.

Response to Comment M57

Refer to Response to Comment M56.

Response to Comment M58

Refer to Response to Comment M56.

Response to Comment M59

The statement that no peak hour impacts were identified is incorrect. The segment of University Drive between the I-405 southbound ramps and Michelson Drive was identified for 2025 conditions as a roadway segment where an additional southbound through lane was required. The results of the daily and peak roadway segment analysis, in conjunction with the peak hour intersection analysis, did in fact accurately and adequately identify potential project impacts and required mitigation measures (mid-block or through travel lanes).

The key difference between the roadway segment daily and peak hour analysis is that the daily capacities assume a variety of impediments to capacity, including

the presence of cross-street intersections that consume a substantial proportion of available capacity. The peak hour capacities are focused on identifying the potential need for mid-block travel lanes based on unimpeded mid-block conditions.

The basic assumptions of the daily segment analysis and the peak hour segment analysis are different, corresponding to the different purposes of the two types of analysis. The daily segment analysis is intended to be utilized as a very general measure of roadway performance and includes the potential capacity reductions due to mid-block intersections. The peak hour segment analysis is intended to evaluate the specific need for mid-block travel lanes in the absence of cross-street interference.

Response to Comment M60

Refer to Response to Comment M59.

Response to Comment M61

The policy addressed in the comment is an already existing rather than proposed General Plan policy. The proposed project merely makes PA 30 subject to Policy B-1 of the General Plan Circulation Element. The application of the existing policy to PA 30 has been specifically analyzed in the EIR and the analysis concludes that the application of this policy allows for LOS E at two intersections (EIR Page 5.2-58). It is the prerogative of the City of Irvine to establish appropriate performance standards within its local jurisdiction.

Response to Comment M62

Refer to Response to Comment M61. The issue of thresholds of significance (impact) is separate from the concept of the local jurisdiction's right to establish the appropriate performance standard for the community.

Response to Comment M63

The comment deals with additional analysis provided by the EIR to examine future conditions if the City approves the General Plan Amendment and Zone Change for PA 40 (the "probably future project"). This project was previously approved but subjected to a litigation challenge. The PA 40 impacts and PA 40's responsibility to fund its proportionate share of traffic mitigation are set forth in the NITM program. Application of the NITM program will generate sufficient fees to timely fund construction of all traffic improvements necessary for the development of the Great Park, PA 40, and the remainder of undeveloped north Irvine.

Response to Comment M64

The Great Park Traffic Impact Analysis does take into account all anticipated growth in traffic for surrounding communities and the entire region, based on adopted growth forecasts for the entire County of Orange and surrounding region. The area model (ITAM) includes existing development and regional

growth projections for Orange County and the relevant portions of Los Angeles County, Riverside County, San Bernardino County, and Ventura County, as well as projected increases in interactions with the surrounding areas via the regional roadway system.

Response to Comment M65

The Traffic Impact Analysis executive summary is simply a summary of the proposed mitigation program; they are discussed in greater detail on page 5.2-71 of the EIR. That analysis concludes that if such programs were not implemented by the responsible regional agencies the cumulative impacts would be significant and unavoidable. Also refer to Responses to Comments F36 and S6.

Response to Comment M66

The sources referenced in the comment represent specific funding sources that are responsible for implementing the roadway improvements identified in the Traffic Impact Analysis developed for the EIR. The funding sources generally fall into two categories; the first funding source category is development projects that have been approved. The implementation mechanism/assurance of funding is the specific condition of approval requiring that the improvement be constructed in conjunction with the approved development project. The second funding source category is local agencies that have included specific improvements within their capital improvement program. Projects are only included in the local agency capital improvement program when they are associated with a specific funding source identified by the local agency.

Response to Comment M67

Land use based trip rates and socioeconomic data (SED) based trip rates simply reflect two different but commonly accepted approaches to evaluating traffic. There are underlying differences in the ways that land use based models and SED based models are used to forecast future traffic. Traffic models validated using land use data or SED have both been shown to match (validate to) existing traffic volumes quite well. Traffic forecasts for the Great Park Traffic Impact Analysis that match the regional SED driven forecasts are now a mandatory modeling consistency requirements based on stated and federal legislation. The ITAM model incorporates the conversion from one approach to the other and has been validated to existing traffic volumes.

Response to Comment M68

A key difference between land use based and SED based models is how they treat "linked" trips. A land use based model treats linked trips as two shorter individual trips. A SED based model treats the same linked trip as a longer single trip. The land use model has higher trip generation because it assumes that longer trips have stops and computes one longer trip as multiple shorter trips. As a result, the 6,256 trips under the land use model is a different way of expressing the same number of trips under the SED because they are both based on the same vehicle miles traveled per day.

Response to Comment M69

Refer Responses to Comments M54 to M58.

Response to Comment M70

Both direct and indirect potentially significant noise impacts are discussed in detail in the EIR. Section 5.4.3 *Noise Environment Impacts* discusses noise impacts relating to project construction activities, post-construction, traffic noise, project land use noise, and off-project area noise. Refer to the EIR, pages 5.3-22 through 5.3-34, as well as the Environmental Noise Assessment technical report (Appendix H of the EIR), for presentation of noise data and a comprehensive discussion of potential noise impacts. Traffic noise impacts were analyzed and determined based on current, accepted FHWA and Caltrans modeling methods, as well as compatibility guidelines established by the local county and city jurisdictions. Beyond this program level analysis, more detailed traffic noise assessments may be conducted as specific projects are developed.

Response to Comment M71

Noise impacts related to traffic generated by the project both on- and off-site are discussed in Section 5.4.3 *Noise Environmental Impacts* from traffic volume data presented in Section 5.2.3 *Traffic/Circulation Environmental Impacts*. The potential traffic noise impacts on noise-sensitive receptors due to the Great Park Plan were evaluated in accordance with methodologies established by the FHWA and CALTRANS, as well as compatibility guidelines established by the local county and city jurisdictions. Beyond this program level analysis, more detailed traffic noise assessments may be conducted as specific projects are developed. Mitigation Measure Trans 1 does not indirectly confirm the conclusion surmised in Comment M71; part of the purpose of requiring a project applicant to apply for annexation to the Irvine Spectrum TMA is to address traffic, air and noise impacts. Mitigation Measure Trans 1 further states that should this annexation application not be approved, a TMA shall be developed and implemented for the project. Additionally, the EIR concludes that traffic impacts resulting from the proposed project would be reduced to a less than significant level with implementation of the identified Mitigation Measures.

Response to Comment M72

The comment is in reference to residential development located in the transit-oriented development area which is designed to be in close proximity to the Urban Transportation Center and railway. Section 5.4.1 *Noise Environmental Setting* states:

“The Irvine Transportation Center, a major multi-modal transit center linking bus, commuter rail, and Amtrak rail services, is located along the southern edge of the project area, adjacent to the Southern California Regional Rail Authority railroad.”

California Building Standards establish uniform minimum noise insulation performance standards to protect persons from the effects of excessive noise in multi-family dwellings. Furthermore, as stated in Section 5.4 *Noise California Building Standards*:

“Interior noise levels attributable to exterior noise source must not exceed 45dBA in an habitable room...When the exterior noise levels cause interior noise levels to exceed 45dBA, the building must be designed to prevent the transmission of exterior noise....The California Building Standards will apply to...habitable dwellings other than detached single-family homes within the project site.”

Response to Comment M73

Refer to Responses to Comments M70 through M72.

Response to Comment M74

Comment 74 is responded to in Responses to Comments M75 through M79.

Response to Comment M75

Refer to Figure 5.7-1 for drainage areas and topography information. Per the EIR, a Flood Control Master Plan has been adopted by the City of Irvine, the City of Tustin, the Irvine Company, and the Orange County Environmental Management Agency and is currently being implemented in phases by these agencies. The phasing of flood control system improvements in PAs 51 and 30 will be coordinated with street-phasing schedule so that stormdrains are installed prior to or in concert with road construction. The City's DAMP requires that BMPs be implemented in order to reduce increased runoff to stormdrains. The EIR concludes that the potential for flooding to occur both on- and off-site as a result of future development of the project area is considered a significant impact. To this end, Mitigation Measure H/WQ4 is provided to reduce that potential impact to one of less than significant.

Response to Comment M76

As described in the EIR, the project site is located within the San Diego Creek watershed. No formal delineation of the 100-year flood plain has been prepared by FEMA for the project site as it has been under federal ownership. However, as described in the EIR, the “Flood Control Master Plan for San Diego Creek” (John M. Tettemer and Associates, 1989) identified a range of flood control improvements for the San Diego Creek watershed that would control flood peaks based on a 100-year flood (EIR page 5.7-4). The proposed project will provide for the construction of drainage improvements that are consistent with the Flood Control Master Plan. While the EIR states that some flood control deficiencies remain in the existing condition, any potential flood control deficiencies would be corrected through the implementation of the drainage improvements identified on Figure 5.7-2 Proposed Drainage System of the EIR and through implementation of Mitigation Measures H/WQ 3 and H/WQ 4.

As described in the EIR, developers with property located in the newly delineated 100-year floodplain will be required to construct such improvements as necessary to remove the property from the 100-year floodplain and to prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the flood control facilities.

Response to Comment M77

Refer to Response to Comment M76.

Response to Comment M78

This comment incorrectly recites text from EIR page 5.7-6. The EIR does analyze the potential impacts resulting from stormwater volume, identifies appropriate mitigation measures, and addresses how well they will reduce the impacts to a level less than significant (see EIR pages 5.7-13 through 5.7-26).

As described in the EIR, as part of site planning for the reuse of the former MCAS El Toro, a hydrology study for the 100-year storm event was prepared. Design discharges were developed, and Table 5.7-3 of the EIR provides a quantified summary of the peak flows. (EIR, page 5.7-15, 16) A drainage concept plan has been prepared for the project which addresses stormwater flows on the project site. The locations and sizes of drainage pipes and the proposed drainage channels were determined based upon the level of anticipated runoff from various land uses so as to maintain and improve the existing level of flood control service within the project area.

Response to Comment M79

The requirement for Section 404 Permit and related wetlands and dredge/fill permits are a component of the project; the EIR identifies future potential permit requirements for project implementation, including the potential need to obtain a Section 404 Permit from the US Army Corps of Engineers (EIR, p. 3-30). Issues related to dredge and fill of regulated waters is also addressed on 5.9-17 with specific mitigation cited on page 5.9-25. Permits will be obtained as necessary as future projects are proposed within the project area. There is only a small amount of wetland habitat located on the project site. The provision of large “daylighted” earthen drainage corridors in addition to the proposed wildlife corridor will provide ample opportunity for the development of viable wetland habitats within the project area.

Response to Comment M80

Refer to Response to Comment M22. The development of the 14,000-acres previously contained in the AICUZ is not affected by this project.

Response to Comment M81

Refer to Response to Comment M22.

Response to Comment M82

The proposed project will accommodate regional drainage control facilities. The project does not rely upon flood control systems already in place to mitigate potential impacts; rather, the EIR analyzes water quality impacts and the project proposes a comprehensive approach to addressing drainage control through the provision of drainage and flood control facilities on-site that will accommodate both project-specific runoff volumes as well as provide for regional flood control facilities. Refer to EIR pages 5.7-13 through 5.7-26.

Response to Comment M83

This comment introduces Comments M17 and M87 through M94.

Response to Comment M84

Refer to Response to Comment M17.

Response to Comment M85

Refer to Response to Comment M17. The existing analysis in the EIR evaluates both demolition and construction impacts.

Response to Comment M86

Refer to Responses to Comments M17 and M85.

Response to Comment M87

To provide a reasonable means to estimate air construction emissions in the EIR, it was assumed that either plan (Base and Overlay Plan) is divided into two phases based on the reasonable utility and extent of development being considered at this stage of the project. The first phase is assumed to last ten years (2007-2016) and the second phase is assumed to last the remaining nine years (2017-2025). For each phase, construction activity was assumed to last for a period of three-years, but spread out over a four-year schedule for emission estimation purposes. At this stage of the project, the aforementioned phased methodology of estimating air construction emissions is a reasonable approach considering the level of broad environmental impact analysis. The air quality impact remains the same whether demolition and construction occurs over two, three-year time periods or a single twenty-year time period; the quantity of the construction-related air emissions does not change whether the construction occurs over a shorter or longer timeframe. By analyzing over a shorter time period the EIR evaluates the more intense development scenario for these emissions.

Response to Comment M88

Refer to Response to Comment M87.

Response to Comment M89

The comment misapprehends the restrictions set forth in the proposed General Plan amendment; the numerical limits for allowable uses within the Great Park are the maximum allowed intensity level. Refer to Responses to Comments M9

and M87. The air quality analysis presented in the EIR is based on the buildout limits of the Overlay Plan and the Base Plan.

Response to Comment M90

Refer to Response to Comment M89.

Response to Comment M91

Section 5.3.5 of the EIR outlines several proposed construction and operational air quality impact mitigation measures that are recommended by the South Coast Air Quality Management District (SCAQMD) that may be implemented during the various phases of the project. Mitigation Measures AQ1 through AQ4 are outlined on pages 5.3-53 through 5.3-55 and will be implemented during various phases of the project.

Response to Comment M92

The comment is in error; see Mitigation Measures AQ1 and AQ2 on pages 5.3-53 and 5.3-54 in the EIR. Refer to Response to Comment M91.

Response to Comment M93

Refer to Responses to Comments H67, H77, and M87.

Response to Comment M94

Refer to Responses to Comments H67, H77, and M19.

Response to Comment N1

Comment noted. Traffic studies prepared in conjunction with specific development applications within the project site will be forwarded to the TCA for review as appropriate.

Response to Comment N2

Comment noted.

Response to Comment N3

Comment noted.

Response to Comment N4

Comment noted.

Response to Comment O1

Comment noted. This letter concludes that the EIR includes a discussion of the proposed project's consistency with SCAG policies and applicable regional plans, which were outlined in the SCAG's 6 November 2002 letter on the Notice of Preparation for the EIR.

Response to Comment P1

The City of Irvine proposes the construction of natural drainage corridors as a major project feature in order to achieve drainage control as well as water quality, biological, and aesthetic benefits associated with wetland/riparian restoration. To that extent the City anticipates restoration efforts will involve, among other disciplines, urban stream restoration specialists. The City envisions that these areas will be planted with native species to the extent practicable.

Response to Comment P2

The City of Irvine recognizes that site-specific best management practices (BMPs) implemented for each specific construction project will need to comply with RWQCB NPDES requirements. As required by Mitigation Measure H/WQ 2, prior to issuance of a grading permit for site specific development, evidence shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TMDL) Implementation Plan adopted for this watershed.

Response to Comment P3

The City of Irvine intends to reconstruct the currently underground Bee Canyon Channel and Agua Chinon Channel into natural drainage corridors. However, it is not likely that any new flood plain delineations prepared for the project area will reflect historic zones of flooding, as they will need to reflect the existing and proposed hydrological condition within the project area, not historic conditions.

Response to Comment P4

As depicted in Figure 5.7-2 of the EIR, four potential Irvine Ranch Water District (IRWD) NTS Water Quality Basins are proposed within the project area. One basin is proposed at the northern portion of the project site (PAZ 1) within the Marshburn Basin, while the remaining three are proposed at the “downstream” end of the two drainage corridors, and the wildlife corridor. The placement of the NTS facilities allow for regional water quality to be addressed by the IRWD in its environmental assessment of their NTS project. However, the City of Irvine will also provide, as necessary to meet NPDES requirements, structural and non-structural BMPs on a site-specific basis to ensure that polluted runoff is minimized.

Response to Comment P5

Development is not proposed within the Serrano Creek; however, some drainage improvements are proposed within this area as part of the overall drainage concept plan. While implementation of the proposed project will result in some isolated wetland impacts, the overall quality and value of wetland habitat is anticipated to be significantly enhanced by the proposed natural drainage corridors.

Response to Comment P6

It is anticipated that the "Q" will change as a result of project development. For example, currently undergrounded drainage systems that are proposed to be daylighted and restored as part of the project would experience a change in Q as these areas will become vegetated, with a meandering alignment and varying topographic conditions. Also, these drainages will be designed to accommodate additional runoff created by new development within the project area. However, all drainage facilities are proposed so as to avoid impacts to downstream and/or off-site facilities.

Response to Comment P7

Comment noted.

Response to Comment P8

Comment noted.

Response to Comment Q1

For the Final EIR, the IRWD letter dated 4 April 2003 will be added to Appendix C of the EIR along with the supplemental material provided as part of this document. This supplement confirms the validity and does not materially affect the conclusions reached in the WSA prepared for the subject project.

Response to Comment R1

A traffic study area for the purpose of assessing the project's potential traffic impacts has been defined, and is illustrated in Figure 5.2-1 of the EIR. The limits of the study area are defined by the amount of trips resulting from the proposed project and the potential to impact circulation systems. As shown in Figure 5.2-1, the trip distribution of the proposed project would not extend into areas of Newport Beach and Huntington Beach, and a significant amount of traffic is not expected to utilize Pacific Coast Highway.

Response to Comment R2

Refer to Response to Comment R1.

Response to Comment R3

Estimating the number of airline passengers generated by the proposed project and determining which airports these passengers would utilize is speculative. Additionally, this information does not represent a potential environmental impact.

Response to Comment R4

The amount of urban runoff generated by the project that will be recycled or used for irrigation has not been quantified. Normally, urban runoff is not recycled and directly utilized for irrigation purposes. Reclaimed water, which is sewage that has been substantially treated, is the primary water source utilized for irrigation purposes in the City. However, the proposed project will provide unique project features that will offer opportunity for recharge of groundwater from runoff in the form of the construction of two major natural drainage corridors – the Bee Canyon Channel and Agua Chinon Channel. Both of these channels currently traverse the project site underground and do not contribute to recharge in the area. Reclaimed water will be provided to the project area to serve a majority of the landscaping needs on-site.

Response to Comment R5

Analysis of project impacts to public services as well as public health and safety is included in the EIR. There is no evidence to provide a link between homelessness, infectious disease, and lawlessness.

Response to Comment R6

There is no provision in the Orange County Great Park plan that dictates where residents should live and work. The Transit Oriented Development (TOD) land use designation proposed within the project area is intended to encourage the use of alternative modes of transportation by locating housing units in proximity to major public transit systems (e.g., the Metrolink station), employment centers, and shopping. Under the TOD designation, more refined TOD principles will be employed in this area as specific developments are proposed, such as the provision of pedestrian connections, to encourage the use of alternative modes of transportation.

Response to Comment R7

The Orange County Great Park plan does not dictate where employees working within the project site shall live. It is anticipated that persons residing in other communities will commute to the project site. This issue has been factored into the trip generation assumptions of the traffic analysis of the EIR.

Response to Comment R8

It is anticipated that the Orange County Great Park will be visited and used by a variety of people, who both live and work in the area, as well as tourists from other areas. The Orange County Great Park is envisioned to provide a variety of uses that will attract a large cross-section of people.

Response to Comment R9

Public transportation will be available to the project site. No determination has been made as to whether or not there will be a charge for parking in any portion of the project site, and if so, what that amount would be.

Response to Comment R10

The City has not determined the number of picnic tables that will be provided at the Orange County Great Park. This will be determined as site-specific park and recreational improvements are implemented within the various portions of the project site.

Response to Comment R11

No determination has been made whether the Orange County Great Park will provide a petting zoo feature, although this type of use is considered compatible with the type of uses envisioned for the park.

Response to Comment R12

No determination has been made whether the Orange County Great Park will provide a carousel, although this type of use is considered compatible with the type of uses envisioned for the park.

Response to Comment R13

The potential air quality impacts of the proposed are analyzed in Section 5.3 *Air Quality*. Table 5.3-12 depicts the Mitigated Construction Emissions for the development of the project area. These emission estimates conservatively account for demolition and grading/excavation activities as major sources of construction emissions.

Response to Comment R14

Construction noise, including the demolition of runways, is evaluated in Section 5.4 *Noise*. Table 5.4-8 depicts Typical Noise Levels for Construction Equipment. As shown, the noise level associated with the operation of unquieted jack hammers ranges between 75 and 85 dBA measured at 50 feet.

Response to Comment R15

The runway debris is proposed to be recycled onsite for use in constructing roadways and other supporting infrastructure for the project. As described on page 3-28 of the EIR, the runways can be removed in a sequential manner with stockpiling of materials onsite as required to permit maximum economy of scale in the operation.

Response to Comment R16

The runways will not be available for emergency landings once removal activities have been initiated.

Response to Comment R17

The demolition activities and runway removal will be phased with development onsite. Most of the supporting infrastructure will be constructed in the early phases of the development of the project site, which is expected in the first 3 to 5 years of project site development.

Response to Comment R18

Specific activities of any federal agency, including the Federal Aviation Administration (FAA) and Federal Bureau of Investigation (FBI) are subject to federal environmental regulations, including review under the National Environmental Policy Act (NEPA). Potential land use compatibility impacts would need to be evaluated based on the specific activity proposed by the federal agency. There is no information that indicates the FAA will use one-fourth of the former air station for aviation purposes, as such use is inconsistent with the Record of Decision adopted by the DON.

Response to Comment R19

Refer to Response to Comment R18.

Response to Comment S1

The comment states that the assumptions used in the analysis are theoretically within reason. The ITAM tool used to develop the future forecasts is consistent with the OCTAM travel demand forecasting tool, which is the regionally (County of Orange) adopted tool for developing future traffic forecasts on the regional roadway system, including the freeways and transportation corridors. Both ITAM and OCTAM have been validated against existing conditions including the freeways and transportation corridors.

Response to Comment S2

The planning level capacities used in the analysis (2,000 vehicles per hour per lane) are reduced to below their operational level capacities as observed in southern California (2,300 vehicles per hour per lane). It is reasonable to assume that including the additional capacity provided by an additional (truck climbing lane) offsets the loss of capacity that is already reflected in the planning level capacities used in this analysis. Regardless of capacity, the project contributes less than 0.03 to the volume capacity ration on the subject segments and accordingly does not exceed the CMP impact threshold for further analysis.

Response to Comment S3

Caltrans staff was contacted regarding ramp metering practices within the study area. No quantitative ramp metering plan was available for inclusion in the analysis and Caltrans could not provide a consistent schedule of ramp meter operations so it is impossible to determine where ramp metering will occur or when any given ramp meter will be operational. Therefore, it is appropriate to utilize the existing unmetered condition as the basis for projecting future traffic conditions and potential deficiencies. Storage of vehicles for a metered condition would of necessity utilize the arterial roadway system approaching the ramps to provide storage.

Response to Comment S4

The comment does not refer to any specific location(s) such that no site-specific response is possible. The Traffic Impact Analysis indicates that future traffic volumes are generally expected to increase over time. Isolated cases where improved future levels of service are projected to occur are most likely related to planned/funded improvements at the location in question.

Response to Comment S5

Proposed mitigation measures are based on environmental factors; the City of Irvine has no control over agreements entered into between Caltrans and other governmental agencies. The non-compete clause, for example, could result in one or more of the City of Irvine's mitigation measures not being implemented, but this is outside of the City of Irvine's control. The final EIR has been modified on page 5.2-71 to include discussion of the non-compete agreement and its potential effects on mitigating cumulative impacts. To the extent that the non-compete clause interferes with implementation of mitigation measures proposed

by the EIR, cumulative impacts would not be mitigated and thus remain significant and unavoidable. The following text has been added to Mitigation Measure Trans 7 on page 5.2-70 of the EIR:

“The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-compete clause or any similar agreement restricting a public agency’s authority to construct improvement.”

Response to Comment S6

The regional funding programs referenced in the EIR are not used as project mitigation. Rather, these programs are recognized as the regional approach to addressing cumulative impacts. The EIR mitigation measures address all project impacts that were identified in the Traffic Impact Analysis, subject to constraints such as those identified in Response to Comment S5 (TCA non-compete agreements).

Response to Comment S7

Comment noted.

Response to Comment T1

The EIR recognizes that the proposed Great Park project area currently and historically has had some wildlife movement; however, the project area does not currently serve as a significant wildlife movement corridor between the habitat preserve and the coastal habitat preserves. Additionally, by definition, a corridor is a linear habitat whose primary wildlife function is to connect significant habitat areas. Therefore, by definition, no wildlife corridor currently exists within the project area.

The Wildlife Corridor planning efforts are on-going, and the Orange County Great Park Plan land use concepts will accommodate this on-going planning effort to ensure that the proposed route of the new wildlife corridor is a viable one. Previously, as a part of the wildlife corridor feasibility study, preliminary "fatal-flaw" analysis was conducted on 15 August 1999, which has been examined on several subsequent occasions by wildlife biologists. The biologists examined the proposed route and its feasibility as a wildlife movement corridor. Additionally, a focused survey of the biological conditions along the proposed corridor was conducted on 7 September 1999. The biologists surveyed the extent of the route including the adjacent connective habitat at the start and end of the proposed corridor. Serrano Creek and Borrego Canyon Wash were also surveyed for use/potential use as wildlife corridors. Subsequent to these initial surveys, the proposed wildlife corridor has been informally surveyed by wildlife biologists and members of conservation groups.

As depicted in the Section 3.0 *Project Description* Figure 3-7 of this EIR, the riding and hiking trail is proposed to parallel Irvine Boulevard until it reaches the Habitat Preserve. At this point, the riding and hiking trail will extend north toward SR 241 and the Agua Chinon Reservoir. The biking and hiking trail does not enter the Wildlife Corridor.

As described in Figure 5.9-2, the proposed development within Planning Area 18 includes a golf course with a clubhouse and some residential uses. To ensure the compatibility with the Wildlife Corridor, the clubhouse and residential units will be subject to development regulations that will be created as part of a wildlife corridor master plan.

The City of Irvine will continue to work with State and federal agencies to implement the revegetation/restoration plan necessary to create a viable wildlife corridor within the project area.

Response to Comment U1

Considerations for remedial actions objectives are provided in 40 CFR 300.430(e)(2)(i) that states, "remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response." The DON will be responsible for remediation of the former MCAS El Toro to these exposure levels regardless of the land use designation or the population that resides there. The DON has publicly stated that it will indemnify new land owners of former air station property in order to mitigate potential soil contamination that is attributable to historic DON operations.

Response to Comment U2

The objectives of the proposed project are defined in Section 3.0 *Project Description* of the EIR. As described, Measure W amended the County of Orange General Plan to remove the designation of the project site as a commercial airport. Therefore, implementation of a commercial airport would not be consistent with Measure W.

Response to Comment V1

Comment noted. Refer to Responses to Comments V2 through V20 for a detailed response to each of the comments raised by the commentor.

Response to Comment V2

Page 5.2-41 of the EIR, under the heading Master Plan of Arterial Highways Amendment, discusses the issues of consistency with the MPAH and the proposed amendments. The EIR also recognizes that typically, a cooperative study would occur prior to the City amending its General Plan. However, since OCTA cannot recognize the City of Irvine's jurisdiction on the former MCAS El Toro until the annexation is complete, the EIR states that the City of Irvine will enter into a cooperative agreement as soon as possible following the annexation of the property to the City of Irvine.

Mitigation Measure Tran 6 addresses this issue:

"Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of any building permits within the base property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdiction to amend the Orange County Master Plan of Arterial Highways. Marine Way, Trabuco Road from the SR-133 tollway to College Road, and Y Street should be included on the MPAH."

Response to Comment V3

The post year 2025 roadway network is depicted in Figure 5.2-23. The assumed roadway network does not include the extension of Culver Drive north of Portola Parkway.

Response to Comment V4

The discrepancy is a typographical error on Table 5.2-11 (Table 5-15 of the Traffic Impact Analysis). These tables have been amended to reflect the correct figure of 9,732 trips. The figure of 9,732 trips was correctly utilized in both the air quality analysis and the actual traffic impact analysis.

Response to Comment V5

Refer to Response to Comment S6. Although the City of Irvine intends that the project will contribute its fair share towards mitigation/improvements on impacted freeway segment, the City of Irvine does not control the implementation process. Therefore a statement of overriding considerations is necessary if certain mitigation measures are not implemented by the responsible agency (Caltrans). Caltrans comments on the EIR, for instance, specifically identified their non-compete agreement with the Transportation Corridor Agency(ies) (TCA) as a potential impediment. The regional funding programs referenced in the EIR are not used as project mitigation. Rather, these programs are recognized as the regional approach to address cumulative impacts. The impact of OCTA providing extra-peak and off-peak train service was not evaluated in the Traffic

Impact Analysis, thereby making the analysis more conservative with regard to future traffic impacts.

Response to Comment V6

Refer to Responses to Comments H2 and V4. The City of Irvine has made every effort to accurately reflect anticipated project land uses and trip intensities in preparing the Great Park plan. However, in the event that the OCTA facility generates more traffic than was analyzed in the EIR, additional and separate environment analysis may be required for the OCTA facility. Any development proposed by OCTA, if it becomes a landowner in the future, which is not consistent with the proposed plan and EIR will require additional environmental evaluation.

Response to Comment V7

The explanatory variable of employment is intended to capture both actual employee trips and ancillary traffic, such as buses entering and leaving the facility, maintenance vehicles etc. Regarding any traffic not anticipated in the Great Park project description, refer to the Response to Comment V6.

Response to Comment V8

The City of Irvine intends to coordinate closely with OCTA regarding the realignment of Marine Way and any impact to the existing OCTA Bus Operations and Maintenance facility. Meetings have already taken place with regard to the realignment issue.

Response to Comment V9

The City of Irvine standard street design manual specifies transit amenities such as concrete bus pads, bus turnouts, layover areas, benches, and other amenities. All streets in the Great Park will be designed in compliance with the City of Irvine standard street design manual. The specifics of the transit system will be determined prior to the implementation of the project. As stated in Mitigation Measure Tran 7:

"Prior to issuance of any building permits on the Great Park property, the City of Irvine shall coordinate with the Orange County Transportation Authority to restructure transit service plans to provide effective service to the project area."

Mitigation Measure Tran 2 states:

"Prior to the first building permit, the City shall prepare a transit system/infrastructure fee program to fund improvements identified as mitigation measures for the project area."

The implementation of these two Mitigation Measures will provide the necessary detailed transit service and the associated funding which would subsequently be used for detailed identification of transit amenities.

Response to Comment V10

Comment noted. If development of the project requires temporary use of OCTA's right-of-way, appropriate agreements will be entered into prior to entry.

Response to Comment V11

During implementation phases of the proposed project, the City of Irvine will evaluate the demand for additional park and ride facilities to serve the project area. Additional parking area at the Irvine Transportation Center is included in the Overlay Plan.

Response to Comment V12

The various public uses and educational facilities may create the need for an internal shuttle service. This will be addressed during the implementation phases of the project as more detail on the operational aspects of the various land uses are known and the ability to finance an internal shuttle service is evaluated.

Response to Comment V13

The comment appears to refer to the extension of Marine Way as an at-grade crossing. Marine Way is intended to be a grade-separated over-crossing of the SCRRA rail lines.

Response to Comment V14

The traffic analysis of the EIR has addressed the Level of Service of the entire network serving the Great Park Plan, including all the streets mentioned in the comment.

Response to Comment V15

Refer to Responses to Comments C1 and V13.

Response to Comment V16

Use of the term "major event" in the comment is unclear. The operators of facilities located in the referenced location would be required to submit traffic and parking management plans as part of their master plans for the City of Irvine's approval. This EIR addresses the impacts and identifies mitigation measures for the Great Park Plan and zoning designations for the proposed project. Operational issues will be part of the future permit processing of those facilities.

Response to Comment V17

Comment noted.

Response to Comment V18

The City of Irvine General Plan Circulation Element has established policies to connect the City's trails to the regional trail network. The Great Park Plan will provide opportunities for the expansion of the trail system. As stated in the EIR, the City will continue to encourage such enhancement throughout the planning and implementation stages of the project. The Class II bike trail will remain along Irvine Boulevard and link to the Class I bike trails in the drainage corridors that traverse the Great Park.

Response to Comment V19

Refer to Responses to Comments C2 and H29. The City of Irvine is adding the County of Orange's proposed bike trail to its Trail Network. Were funding to become available through the County, or were the City to initiate the specific design of the Class I bike trail mentioned in the comment, coordination with OCTA would be required.

Response to Comment V20

Comment noted.

Response to Comment W1

Measure W was drafted in response to evidence that the citizens of Orange County opposed a commercial airport at El Toro and preferred a non-aviation reuse of the base property with public benefit uses such as open space, recreational, educational and cultural amenities. In order to change the airport designation of the former MCAS El Toro in the County's General Plan, Measure W also had to specifically override Measure A which had established the airport designation for the former MCAS El Toro in the Orange County General Plan. Until the annexation of the former MCAS El Toro is completed, the base property remains within the County jurisdiction. A ballot measure amending the County's General Plan does not apply to the City of Irvine.

Response to Comment W2

The first two websites cited dealt with the estimated number of homes during plan preparation; the third website deals with the actual project in the EIR of which 3,625 is the correct number in the Overlay Plan.

Response to Comment W3

The maximum number of dwelling units allowed under the Overlay Plan is 3,625.

Response to Comment W4

The maximum number of dwelling units (3,625) is established by the proposed General Plan and zoning standards within the project area. Any increase in the total number of residential units would require a General Plan amendment, zone change, and associated environmental review.

Response to Comment W5

Refer to Responses to Comments M3 and M4. It should also be noted that the majority of development intensity is located in PA30, the portion of the project area already in the City of Irvine and not affected by Measure W.

Response to Comment W6

The Measure W land use plan did not show a lake. Some conceptual drawings published by the proponents of Measure W included a lake in the Great Park. This EIR covers the annexation, General Plan Amendment and Zoning of the El Toro property. The detail design of the Great Park and its amenities, including landscaping, water features, hardscape design and materials and other such details will be prepared in the subsequent phases of the implementation of the project, subject to all applicable development and environmental policies and standards.

Response to Comment W7

The advertisements and commercials discussed in this comment were disseminated by the proponents of Measure W and not by the City of Irvine. Those materials depicted a conceptual representation of a future countywide park with an array of natural and manmade amenities. Neither Measure W nor

the Orange County Great Park Plan identify or specify any particular species of animals to be included in their project description.

Response to Comment W8

The comment does not address environmental issue relating to the EIR.

Response to Comment W9

The comment does not address environmental issue relating to the EIR.

Response to Comment W10

As required by CEQA, this EIR identifies, analyzes and discloses the potential environmental impacts of the proposed project and identifies feasible mitigation measures to minimize those impacts. CEQA does not require an economic analysis or a financing plan as a component of an EIR. Projections for economic and financial fluctuations are beyond the scope of this EIR.

Response to Comment W11

Refer to Response to Comment W10. The funding and financing strategy for the implementation of the proposed project are discussed in Section 3.0 *Project Description* and in the draft Development Agreement.

Response to Comment W12

The comment represents anecdotal information which is not relevant to the subject matter and scope of this EIR.

Response to Comment W13

The issues related to population, employment, and housing affordability are discussed extensively in Section 5.13 *Population and Housing*. As stated in Section 5.13.4, the jobs to housing imbalance will remain a significant impact and a statement of overriding consideration will have to be developed.

Response to Comment W14

Refer to Response to Comment W13.

Response to Comment W15

The future traffic impacts of the proposed project are based on the Irvine Transportation Analysis Model (ITAM 3.01). This model provides a quantitative and objective framework for projecting and analyzing future traffic conditions in the City of Irvine and roadways immediately adjacent to the City. The ITAM databases have been continually updated as new knowledge about development patterns and the circulation network has become available. The model is derived from the Orange County Transportation Analysis Model (OCTAM), which is a travel demand forecasting tool used by OCTA to evaluate circulation system needs throughout the County. The ITAM structure allows for the analysis of land use and roadway network alternatives using the data provided as input. For more information regarding land use assumptions and other parameters used in

the traffic model, refer to ITAM 3.01 Technical Documentation and ITAM 3.01 Primary Study Area Database Expansion Technical Supplement.

Response to Comment W16

Refer to Responses to Comments H71, H77, and M18. The air quality impact analysis is contained in Section 5.3 of the EIR.

Response to Comment W17

Refer to Responses to Comments H71, H77, and M20.

Response to Comment W18

Per page 5.4-24 of the EIR:

“The main noise producing activities are anticipated to occur primarily during the early phases of construction. Portions of the infrastructure construction activities and runway demolition may occur simultaneously. The sound levels associated with this worst case scenario were evaluated at the nearest off-project area residences. The combined sound level was estimated for: 20 pieces of large mobile equipment operating at a distance of 5,000 feet; five concrete breakers operating at a distance of 6,000 feet; and two crusher plants operating at a distance of 10,000 feet. These distances represent the closest possible location of the construction equipment to the nearest off-project area residences. Based on these equipment types and quantities, the combined effect of this equipment would result in a sound level of approximately 56dBA at the nearest off-project area residential locations during the heaviest construction period.”

General construction noise impacts, including runway demolition, are discussed in Section 5.4.3 of the EIR based on the program level analysis. As specific projects are developed and specific construction activities are planned, more detailed analysis of potential construction noise impacts may be conducted.

Response to Comment W19

Refer to Response to Comment M91. Per Section 5.3.4 *Air Quality Mitigation Measures*, prior to the start of demolition and construction within the project area adjacent sensitive receptors shall be informed of the planned demolition and construction activities. The erection of fences around construction areas, staggered use of equipment near sensitive receptors, diversion of trucks away from sensitive receptors shall be employed. Additional mitigation measures will be used as determined appropriate and necessary when greater detail is known regarding the exact construction phasing methodology and logistics are determined.

Response to Comment W20

Erection of fences such as wind fences or partial temporary barriers and enclosures provide a wind-sheltered region in the vicinity of the disturbed area.

The wind-shelter area reduces the mechanical turbulence generated by ambient winds, thus reducing the entrainment and wind erosion of small particulate matter.

Response to Comment W21

Construction would not be allowed to occur until contaminated soils are remediated to acceptable levels; therefore, it is not anticipated that the use of wash off stations for construction trucks will result in the generation of toxic water runoff.

Response to Comment W22

City inspectors, using professional judgment, will determine if the quantity of soil carried over to the streets constitutes substantial material. Street sweeping will be regularly practiced during construction activity to ensure soils are not washed into storm drains.

Response to Comment W23

Soil materials collected as a result of street sweeping will be recycled and disposed of on-site.

Response to Comment W24

Refer to Response to Comment H48. As described on page 5.15-20 of the EIR, demolition activities, including the removal of existing runways and buildings, at PA 51 will generate debris materials that will need to be disposed at local landfills. Additionally, green waste will be produced as a result of on-going park and landscaping maintenance. The City requires construction and demolition debris recycling for new development projects. This will allow the reuse of building materials and reduce waste volume requiring disposal. Additionally, Mitigation Measure SW2 is proposed that requires 75 percent reduction of solid waste of those materials that cannot be recycled. Mitigation Measure SW2 states:

“For solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant must submit a written plan to the City and implement such plan to ensure that 75 percent of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.”

The construction waste is anticipated to consist primarily of green waste and recyclable concrete. There will be very little solid waste sent to landfills; furthermore it is anticipated that this material will be significantly less when the project has been fully implemented.

Response to Comment W25

A substantial portion of the runway materials are proposed to be recycled on-site to the maximum extent feasible. It is anticipated that the remainder will be recycled in development projects located within the region. As a result, the truck hauling from the former MCAS El Toro will displace other truck hauling that would occur with no anticipated net increase in materials hauling.

Response to Comment W26

Refer to Response to Comment W25. Local construction hauling is assumed in the Traffic Impact Analysis. The anticipated quantity of traffic resulting from material hauling, which would only occur for materials not used on-site, is expected to be less than the volume of traffic resulting from the project itself.

Response to Comment W27

Refer to Responses to Comments M17 and M87. The total emission estimates from construction of the proposed project are presented in Tables 5.3-19 and 5.3-20 (page 5.3-25) of the EIR. As compared to the total projected emissions for the SCAB, the mitigated emissions after Base Plan implementation constitutes 0.05 percent (for ROG) to 0.20 percent (for CO) of the total SCAB emissions. The mitigated emissions after implementation of the Overlay Plan would constitute from 0.09 percent (for NOx) to 0.39 percent (for CO) for the total SCAB emissions.

Response to Comment W28

AQMD Rule 1196(d) lists the requirements for new fleet vehicles. A link to the AQMD fleet vehicles rule is: [http://www.aqmd.gov/news1/fleet_rule_home.htm].

These rules do not impose any emission limits but rather require the use of alternative fuel vehicles, dual-fuel vehicles and use of low emission vehicles. AQMD Rule 1620 provides emission credits for clean off-road mobile equipment.

The AQMD is seeking to gradually shift to low emissions and alternative fuel vehicles in order to reduce air pollution from motor vehicles pursuant to air quality management plans. Overall program direction for managing and reducing motor vehicle emissions is based on technology needs identified in AQMD's Air Quality Management Plan; state and federal rules and regulations; annual research and development coordination meetings with the California Air Resources Board; periodic meetings with various technology, clean fuel, and industry working groups, and annual meetings with the Technology Advancement Advisory Group.

Response to Comment W29

Although there is ample opportunity for a substantial amount of recycled runway materials to be utilized on-site, there will be some recycled runway materials that will be sold for construction purposes outside of the project area. The effect on the concrete recycling market cannot be predicted as the quantity and timing of

sales is not known. CEQA requires analysis of environmental not economic impacts.

Response to Comment W30

Refer to Response to Comment W29.

Response to Comment W31

Base Plan intersections were included in the EIR Traffic Impact Analysis and considered in the CO air quality impact analysis based on the following criteria (refer to Table 5.3-26 in the EIR). Since localized CO air quality impacts generally reach their peak in the vicinity of traffic congestion, only those intersections and roadways with the highest traffic congestion level of service (LOS) designations were considered in the air quality analysis. The high congestion intersections naturally represent the highest potential for localized air quality impact resulting from the project.

Roadway system performance with respect to traffic and congestion is generally described in terms of a LOS scale that ranges from designations of "A" to "F". Level of Service "A" represents the highest or best LOS, while LOS "F" represents the lowest or worst LOS. During peak hours, LOS A, B, C, and D are generally (at a minimum) considered acceptable, while LOS E and F represent degrees of deteriorating traffic system performance. Intersections with LOS designations of D, E, and F were included in the CO air quality impact analysis, while intersections and road way systems with LOS designations of A, B, and C were not.

Response to Comment W32

Refer to Response to Comment W31.

Response to Comment W33

Section 5.5 *Public Health and Safety* states:

"The Norwalk Pipeline was used as a jet fuel distribution system in support of the military mission at the former MCAS El Toro. The pipeline originates in Norwalk, California, enters the project site near the existing commissary located adjacent to Irvine Boulevard, and runs through the former air station housing to the former storage tank facilities. In May 1999, all the jet fuel was purged from the pipeline from Norwalk to the former air station using a pigging process and replaced with inert gas (nitrogen). The Defense Energy Support Center currently maintains the pipeline."

Response to Comment W34

Section 5.5 *Public Health and Safety* states:

“The County of Orange, in coordination with all other local jurisdictions and emergency response providers in the County, is responsible for the preparation, maintenance, and implementation of emergency response plans...for the County. The Orange County Emergency Plan is the official emergency plan for the County. The plan is a basic reference and training document for emergency preparedness, response, recovery, mitigation, and provides the authority and basis for the development of more detailed departmental and functional standard operating procedures”

Response to Comment W35

New air traffic routes in the vicinity of the former El Toro MCAS due to the lifting of air-space restrictions are not a function of the proposed Great Park Plan but rather the closing of the former air station. It is anticipated that these routes would remain whether or not the Great Park Plan was developed. Noise sampling of existing conditions recorded existing aircraft overflights as part of the existing ambient noise.

Response to Comment W36

The FAA may maintain some existing ancillary facilities within the 4,700-acre base property. The largest presence of the FAA will be in the +/-970-acre habitat area (which will remain in federal ownership) and where the FAA may continue to use some of its communication relay facilities. VORs are used as navigational devices within the National Airspace System (NAS). The VOR purpose is to provide azimuth (direction) and is transmitted in all directions and each signal can be considered a course or route, referred to as a radial. It works much like a road map when you're attempting to get from a departure point to a destination. For example, a hypothetical VOR at El Toro may be used by aircraft traveling from Los Angeles to San Diego, without the aircraft ever flying at such altitudes over the area where the VOR is located to generate additional aircraft noise impacts as a result of the existence of the device. In any event, the discussions about maintaining the existing VOR within the base property are still on-going between the FAA and the DON. However, since the operational closure of El Toro in 1999, that VOR has not been used and currently is not included in the navigational charts used by the FAA. Nor is El Toro's VOR on any approach/departures charts. In addition, historically, the VOR at El Toro was used for aircraft operations for the former MCAS El Toro only. As such, the subject VOR is not used as a navigation aid supporting the current flow of traffic in the Southern California area of operations.

Response to Comment W37

Based on Response to Comment W36, the existing VOR at the former MCAS El Toro is not used as a navigational device within the Southern California Airspace and discussions about its removal or relocation are underway. Radio wave transmissions from other FAA facilities may remain on the former air station. Detailed land use restrictions would accompany any sale that involved lands adjacent to and impacted by FAA radio waves.

Response to Comment W38

Refer to Response to Comment R18. It is likely that there will be use of live ammunition at the FBI training facility.

Response to Comment W39

Refer to Response to Comment R18.

Response to Comment W40

Refer to Response to Comment R18.

Response to Comment W41

The proposed acreage designated for agricultural activities under both the Base Plan and Overlay Plan represents a net decrease in acreage currently available for agricultural activities at the project site. Local water supplies would not be strained by these proposed reductions in agricultural activity; refer to the Irvine Ranch Water District Water Supply Assessment in Appendix C of the EIR.

Response to Comment W42

Refer to Response to Comment W41.

Response to Comment W43

The Irvine Ranch Water District will be the designated provider for domestic, recycled, and wastewater services for the proposed project.

Response to Comment W44

Agricultural producers that hire labors for agricultural activities are required to pay California Minimum Wages.

Response to Comment W45

Refer to Responses to Comments W13 and W14. Assessing the potential impacts to local traffic requires specific information regarding the future commuting options for day laborers; this information is not available and would prove speculative.

Response to Comment W46

The area proposed for agricultural use is currently being utilized for agricultural purposes. Any use of pesticides will need to be in compliance with US Department of Agriculture regulations. The City of Irvine envisions the proposed agricultural areas to become components of the City's Agricultural Legacy Program. To that extent, agricultural farming activities onsite may include organic farming activities, which would also reduce the amount of pesticides and fertilizers utilized in these agricultural areas.

Response to Comment W47

Refer to Response to Comment W46.

Response to Comment W48

Refer to Response to Comment W46.

Response to Comment W49

Refer to Response to Comment W46.

Response to Comment W50

Organic farming is a component of the City of Irvine's proposed agricultural heritage program which may be implemented, in part, in the portions of the project site designated for agricultural use.

Response to Comment W51

The City of Irvine is not aware of any claims by Native Americans as to any ancestral use of any portion of the project site.

Response to Comment W52

No specific development project is proposed; however, there will be opportunity for collaboration and involvement of Native Americans groups, should cultural facilities be constructed that involve Native American heritage.

Response to Comment W53

Comment noted.

Response to Comment W54

The Orange County Great Park will be served by the City of Irvine Police Department at the same level of service as other portions of the City.

Response to Comment X1

Following the passage of Measure W, and the subsequent issuance of a federal Record of Decision (ROD), on 23 April 2002, the Orange County Board of Supervisors acting as the Local Redevelopment Authority (LRA) with a majority vote decided to cease all further planning for El Toro by the County and to defer all further planning for El Toro to the City of Irvine and support the City's annexation of the property. In addition, on 25 February 2003, the Orange County Board of Supervisors adopted a resolution rescinding the Airport System Master Plan for El Toro in recognition of the fact that the future reuse of El Toro would be for non-aviation uses.

In addition to action taken by the County of Orange Board of Supervisors, the DON has been working with the City on the sale of property since April 2002.

Response to Comment X2

The intent of Measure W was to repeal Measure A and amend the Orange County General Plan by eliminating the airport land use designation for El Toro and to redesignate the property for a mix of non-aviation uses with a vast portion allocated to open space, recreational, educational and cultural uses.

Section Two B of Measure W states:

"Purpose. This Initiative will allow for the creation of one of America's greatest parks, with open space, sports and recreation facilities, museums, libraries, arts and cultural attractions, and a home for major universities and research centers. It will also not generate the traffic, congestion, noise, and air pollution associated with the development of a commercial airport."

Section Two J of Measure W states:

"Replaces the aviation use designation with non-aviation designations to ensure that the property will become a multi-use center for education, park, recreation, cultural and other public-oriented uses. These designations permit the development of El Toro over time, thus allowing future generations to determine specific uses consistent with this Initiative."

As such, the proposed project is consistent with the intent of Measure W by providing a non-aviation mixed use plan with a substantial portion allocated to open space and public uses.

Response to Comment X3

Measure W is an alternative that was analyzed in Alternative 6.1, the No Project/Measure W in PA 51 and Millennium Plan II in PA 30 alternative. This alternative is considered superior from an environmental analysis perspective.

When Measure W qualified for the ballot, it was assumed that the DON would transfer the property at no cost or very low cost to the public agency conducting the reuse of the property. Shortly after the Measure W election in March 2002, the DON announced its intention to sell virtually all of the former MCAS El Toro to the highest bidder. To the extent that the implementation of Measure W would require substantially greater governmental funding than if the land was provided at no cost, Measure W is less feasible today under the DON's chosen conveyance program.

Response to Comment X4

The Eastern Transportation Corridor is not identified as State Route (SR) 55 on EIR pages 1-5 and 5.1-8.

Response to Comment X5

In Figure 1-3 on page 1-7, Planning Area Zone 6 is proposed as Medium Density Residential development.

Response to Comment X6

Figures 1-2 and 1-3 depict the land use for each of the Planning Area Zone (PAZs). Furthermore, each PAZ has more detailed development data not shown in Figures 1-2 and 1-3. For example, the Project Description Table 3-3 of this EIR describes the development data for the Base Plan. Table 3-3 specifies that 60 Multiple-family residential units are proposed within the PAZ 10, and 165 multiple-family residential units are proposed within the PAZ 17a. Additionally, Table 3-4 describes the development data for the Overlay Plan. Table 3-4 proposes 850 single-family residential units for PAZ 2, 800 senior housing units for PAZ 6, 60 multiple-family residential units for PAZ 10, 165 multiple-residential units for PAZ 17a, 250 single-family residential units for PAZ 18, 635 multiple-family residential units for PAZ 24, 50 multiple-family residential units for PAZ 25, 170 multiple-family residential units for PAZ 27, 345 multiple-family residential units for PAZ 28, and 300 multiple-family residential units for PAZ 29.

Response to Comment X7

The County Counsel's impartial analysis of Measure W published in the voter pamphlets stated:

“This measure would amend the Orange County General Plan (“General Plan”) with respect to unincorporated land within the El Toro Marine Corps Air Station (“MCAS El Toro”), and repeal Measure A, which was adopted by the voters on 8 November 1994, designating much of MCAS El Toro for civil aviation and related uses.”

Therefore, Measure W was a voter approved General Plan Amendment of the County's General Plan via the initiative process. As such, Measure W applies only to the El Toro property while the property remains within the unincorporated county area and under the jurisdiction and land use authority of the County of

Orange. There are no provisions in the Measure W language mandating adherence by any other jurisdiction to the provisions of the measure. The proposed project includes the Annexation, General Plan Amendment, Pre-Zoning and Zoning of the unincorporated portion of the Planning Area 51.

Response to Comment X8

As described on page 5.1-15, the land use, safety, and noise restricted areas as identified in the AELUP, AICUZ, and the PIL for the former MCAS EL Toro facility are no longer impacted by aircraft noise from military operations now that the air station has closed for military use. The military mission at the former air station has been terminated and there are no actual noise or safety hazards generated by aircraft flight which would threaten the proposed development; implementation of the proposed project would not result in a significant land use compatibility impact, even through it would conflict with the adopted AELUP. Implementation of the Base Plan or Overlay Plan would result in a non-aviation reuse of the former MCAS El Toro property. On 17 April 2003 the ALUC formally acknowledged that the ALUC has no statutory jurisdiction over the proposed project.

Response to Comment X9

The Great Park Traffic Impact Analysis demonstrates that no measurable impacts to streets or intersections within the City of Tustin will occur as a result of the proposed Great Park project. The methodology applied to determine the extent of the study area is to examine the increase in intersection capacity utilization (ICU) value and determine whether or not the increase exceeds the impact significance threshold (0.02). This method of determining traffic impacts and hence the study area boundary is employed by jurisdictions throughout California, including many jurisdictions in Orange County. The analysis included in the EIR demonstrates that the increase in ICU value attributable to the project is less than 0.02 west of Culver Drive. Therefore it was not necessary for the EIR to analyze the roadway segments and intersections listed in the comment. The roadway segments and intersections listed in the Response to the NOP were analyzed. The analysis completed in the EIR showed steadily decreasing traffic impacts at an increasingly greater distance from the project. The increase in traffic caused an ICU increase of less than 0.02 prior to reaching the City of Tustin. It should be noted that the Great Park project is several miles from any part of the City of Tustin and no project impacts were identified beyond Culver Drive in the City of Irvine.

Concurrently with the proposed project, the City of Irvine is considering adoption of the North Irvine Transportation Improvement (NITM) program. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events. NITM aggregates the traffic mitigation requirements for Northern Sphere, Great Park, and PAs 1, 2,

and 40 and allocates funding proportionately among the projects. The NITM program provides fair share funding for four intersections within or at the border with the City of Tustin; Irvine Boulevard/Tustin Ranch Boulevard, Jamboree Road/Irvine Boulevard, Jamboree Road/El Camino Real, and Red Hill Boulevard/Irvine Boulevard.

Response to Comment X10

All of the projects identified in the comment were incorporated in the Traffic Impact Analysis. PAs 1 and 2 are included in the City's General Plan. As a result, traffic generation from these already approved projects or land uses were analyzed as the future conditions for purposes of analyzing Great Park traffic impacts.

Response to Comment X11

As stated in the comment, the direct contribution of the project to increased traffic on the I-5 Freeway is already minimized by the existing congestion on that roadway, and the resulting impacts to the arterial roadway system have been identified and analyzed.

Response to Comment X12

Refer to Responses to Comments M64 and X9. Application of traditional study area boundary determination methodologies concludes that project traffic is not contributing significantly to future traffic volume increases in the City of Tustin. Increased traffic volumes result from regional growth including, but not limited to, City of Tustin's plan for the reuse and urbanization of MCAS Tustin.

Response to Comment X13

Refer to Responses to Comment X9 and X12.

Response to Comment X14

Substantial improvements to parallel routes (Irvine Boulevard and Trabuco Road), funded by north Irvine developers and the Great Park, are expected to reduce the future traffic volumes on Bryan Avenue.

Response to Comment X15

Refer to Response to Comment X9. The project contributes fair share funding to four intersections that have been identified by the NITM program. No project impacts are anticipated in the City of Tustin. However, the NITM program does identify very small traffic shares (approximately 1.5 percent) towards which the project will be contributing at locations significantly impacted by other projects (e.g., Northern Sphere) located in closer proximity to the City of Tustin.

Response to Comment X16

The ITAM traffic forecasting tool has been developed explicitly in response to modeling consistency requirements and is the most appropriate tool for use in the Great Park traffic study. The OCTAM 2.8 tool referred to in the comment was

“retired” by the Orange County Transportation Authority (OCTA) several years ago and is no longer appropriate for any type of regional or subregional analysis.

Response to Comment X17

Mitigation measures aimed at reducing significant impact to sensitive receptors from air quality impacts are described in Section 5.3.5 *Air Quality Mitigation Measures*. Mitigation Measure AQ1 states:

“Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of trucks away from receptors; etc., shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.”

Response to Comment X18

Comment noted. Mitigation Measure AQ4 and AQ5 will be located underneath a subheader that reads: “Operational Emissions Mitigation.” Mitigation Measure AQ5 has been amended to read:

“Future employment generating non-residential development shall include measures to reduce vehicle trips, including: the promotion of carpool incentives and alternative work schedules; easy access to public transit systems; trail linkages between uses; low-emissions vehicle fleets; the provision of on-site facilities, such as banking machines, food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.”

Response to Comment X19

Refer to Response to Comment M17. Section 5.3.3 *Air Quality Environmental Impacts* states:

“The URBEMIS 2001 model is used for estimating construction emissions for all stages of development. Estimates of land use and acreage absorbed are obtained for the plan proposal and modification for the development. Due to the limited availability of specific data regarding construction activities and equipment requirements, the URBEMIS 2001 model default options were used.”

Response to Comment X20

Disposition of the fuel line outside of PA 51 is not part of the proposed project and beyond the City’s legal authority and jurisdiction. The portion of the pipeline

referenced in the comment is under the authority of the federal government. The EIR discusses information from the DON on that portion of the pipeline. Refer to Section 5.5.1 *Public Health and Safety Environmental Setting* (page 5.5-19) for a detailed discussion of the status of the jet fuel distribution system.

Response to Comment X21

Comment noted.

Response to Comment Y1

The project impacts to Jeffrey Road have been thoroughly and completely evaluated in the Great Park Traffic Impact Analysis and EIR and all project impacts have been mitigated to a level of insignificance.

Response to Comment Y2

The analysis of the traffic impacts of the Great Park project have been analyzed in the EIR and supporting Traffic Impact Analysis and there has been no reliance on other environmental documents. The North Irvine Transportation improvement Program (NITM) is a mechanism for implementing the required mitigation for the Great Park and other significant development projects located in close proximity to the Great Park.

Response to Comment Y3

Refer to Response to Comment F50.

Response to Comment Y4

Refer to Response to Comment F50.

Response to Comment Y5

Refer to Response to Comment F50.

Response to Comment Y6

Refer to Response to Comment F50.

Response to Comment Z1

The intersection referenced in the comment is not an intersection of two arterial roadways Towne Center Drive is not shown on the Orange County Master Plan of Arterial Highways. The analysis of required lanes at adjacent intersections included in the Great Park Traffic Impact Analysis does not indicate the need for additional through lanes on Alton Parkway at Town Centre Drive.

Response to Comment Z2

The cumulative impacts and resulting roadway infrastructure needs of the Great Park project and surrounding development are analyzed under typical weekday conditions. Substantially lower overall traffic conditions can be expected on a weekend (Saturday). Therefore, no additional weekend analysis is required to evaluate areawide traffic impacts. The Sportspark would be required to prepare and submit traffic and parking management plans as part of their master plans for the City of Irvine's approval. This EIR addresses the impacts and identifies mitigation measures for the Great Park Plan and zoning designations for the proposed project. Operational issues will be part of the future permit processing of those facilities.

Response to Comment Z3

Concurrently with the proposed project, the City of Irvine is considering adoption of the NITM program. This program includes concrete, feasible mitigation measures that, if fully funded, will bring intersections back to the appropriate level of service. The EIR Traffic Impact Analysis includes an entire chapter (Chapter 9 of the Traffic Impact Analysis) devoted to CMP compliance. As part of this analysis, the EIR Traffic Impact Analysis and NITM identified all intersections in the City of Lake Forest to which project traffic contributed to an unacceptable level of service. The NITM program imposes fair share fee obligations on the project and other properties in the City of Irvine and its sphere of influence to fund their proportionate share of the mitigation to bring that intersection to an acceptable or pre-project level of service, based upon the extent of the properties' contribution of traffic. The City of Irvine recognizes that as the agency with jurisdiction over the intersections and as the lead agency for the construction of intersection improvements, the City of Lake Forest must concur with the proposed mitigation measures if those mitigation measures are to be implemented.

Response to Comment Z4

The extensions of Portola Parkway and Alton Parkway have been analyzed in the post-2025 Great Park Traffic Impact Analysis. The extensions were not included in the scenarios analyzing conditions prior to 2025.

Response to Comment Z5

Comment noted.

Response to Comment AA1

Comment noted.

Response to Comment AA2

Per this comment, the following has been added to Section 5.14 *Public Services and Facilities* page 5.14-25:

“Based on Table 5.14-6, the IUSD estimated the cost for typical District elementary, middle, and high schools. According to the District, the estimated acreage needed for an elementary school is 10-acres with a total building area of 45,000 square feet and the estimated acreage for a middle school is 15-acres with a total building area of 65,000 square feet. The District also estimated that an acre of land would cost \$1-1.5million, resulting in a total building cost of \$218 per square foot for elementary and middle schools (not including land for Oak Creek Elementary School in 2000). According to the District, the total building area needed for a high school expansion would be 20,000 to 30,000 square feet, resulting in an estimated total cost of \$3.2million.”

Response to Comment AA3

The EIR states that at this General Plan analysis it is unknown where exactly the housing units will be placed within each individual planning area (i.e., whether the new units will be in IUSD or SVUSD). For analysis purposes, the highest number of potential units was used to estimate the “worse-case” scenario for both districts. As a result, the analysis overestimated the amount of new or expanded school facilities that would be needed to serve the project. Therefore, the number of new students generated by the project is most likely overestimated and the number of new students will most likely be well under the estimated number of 1,525.

In regard to this comment requesting the shifts in the school attendance boundaries, the EIR states the following on page 5.14-26:

“In the event that a new school is not built, IUSD may consider shifts in the school attendance boundaries for existing elementary, middle, and high schools. This could result in existing communities within IUSD to change from their current school assignment to another District school in order to better accommodate new growth within PAs 51 and 30.”

Response to Comment AA4

The following sentence has been added to Section 5.14 *Public Services and Facilities* page 5.14-25:

“The District’s consultants are currently analyzing the land bordering the existing El Toro Elementary site for purposes of realigning the property

lines and/or expanding the site from approximately 10-acres to 13-acres in order to better accommodate a K-8 school."

Response to Comment AA5

The EIR states on page 5.14-25:

"To accommodate the expected student growth from the project during buildout of the proposed project and prior to final construction of the new elementary school, IUSD may re-open the El Toro Marine Elementary School and/or assign students residing in the project area to various schools with available capacity."

Response to Comment AA6

In order to obtain development rights under the Overlay Plan the landowner must enter into a Development Agreement that requires, among other things, the dedication of a 13-acre school site at no cost to IUSD. State law (Government Code Section 65995 and following) establishes the exclusive means of obtaining developer impact mitigation for public school construction.

Response to Comment AA7

Comment noted.

Response to Comment AA8

Comment noted.

Response to Comment BB1

This comment generally recites the major components of the proposed project and the responsibilities of the US Fish and Wildlife Service.

Response to Comment BB2

This comment summarizes the responsibilities of the California Department of Fish and Game.

Response to Comment BB3

Comment noted. The portion of the project site designated for habitat preserve is consistent with the NCCP/HCP. This property will remain under the ownership of the Federal Aviation Administration (FAA).

Response to Comment BB4

The City of Irvine is a participant in the Special Area Management Plan/Master Streambed Alteration Agreement (SAMP/MSAA) process. The City anticipates continued participation and coordination with the wildlife agencies in constructing the proposed natural drainages on-site.

Response to Comment BB5

Refer to Responses to Comments BB6 through BB18 for a response to each of these issues.

Response to Comment BB6

A portion of PAZ 4 is sage scrub habitat that will be designated as agriculture under the OCGP. Habitat preservation is a permitted use in the agricultural land use designation. The EIR did quantify an impact to this area. The City of Irvine is a participant in the NCCP/HCP program and will ensure that adequate protections are implemented in accordance with those programs.

Response to Comment BB7

Comment noted. Original biological surveys have not indicated the presence of the sensitive species identified by the commentor. No development is proposed within the Habitat Preserve portion of the Great Park plan; therefore, sensitive resources that may be located in this area would not be impacted by proposed development activities.

Any future development activity within the project area will be reviewed to ensure potential impacts have been adequately addressed. In order to ensure that potential biological impacts of proposed development are addressed, Mitigation Measure Bio.1 has been modified as follows:

“Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl, shall be conducted. Prior to approval of a subdivision map for development within, or in proximity to Serrano Creek a focused survey shall be

conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher, of this species in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG)."

Response to Comment BB8

Comment noted. As described in the EIR, a significant amount of open space and foraging areas will remain under the project's proposed land use plan.

Response to Comment BB9

Refer to Response to Comment BB7.

Response to Comment BB10

Refer to Response to Comment BB7.

Response to Comment BB11

Refer to Response to Comment BB7.

Response to Comment BB12

Mitigation Measure Bio 1 is proposed to address potential impacts to sensitive species potentially occurring onsite, and not covered by the NCCP. Any subsequent development project within the project area will be reviewed as to its potential environmental impacts, including biological resources. The City of Irvine will require additional biological surveys as appropriate to address any potential impacts to biological resources as a result of subsequent development activity.

Response to Comment BB13

Comment noted.

Response to Comment BB14

The comment pertains to a separate report entitled *Draft Wildlife Corridor Plan*. The City of Irvine appreciates the input from the US Fish and Wildlife Service and the California Department of Fish and Game and will evaluate and address these comments as it proceeds to process the *Draft Wildlife Corridor Plan* separately from this EIR.

Response to Comment BB15

Refer to Response to Comment B14.

Response to Comment BB16

Comment noted. Refer to Response to Comment B14.

Response to Comment BB17

Refer to Response to Comment B14. It is anticipated that these details related to the proposed wildlife corridor will be resolved after the general wildlife corridor concept has been adopted, and more detailed aspects of implementation are initiated.

Response to Comment BB18

Comment noted. Refer to Response to Comment B14.

Response to Comment BB19

Comment noted. Refer to Response to Comment B14.

Response to Comment BB20

Comment noted. Refer to Response to Comment B14.

Response to Comment BB21

Comment noted.

Response to Comment CC1

Under the Overlay Plan, the Agriculture designation is proposed within PAZ 1 and PAZ 4. As stated on page 5.8-10 of the EIR, the proposed project will help to implement the City's proposed Agricultural Legacy Program by proposing agricultural land uses in the portion of PA 51 that is identified by the Irvine Agricultural Legacy Program Preliminary Sites Assessment (City of Irvine 26 November 2002). The City of Irvine recently amended its General Plan Objective L-10 with the purpose of addressing the cumulative loss of agricultural resources in Irvine and Orange County as a whole. The amendment shifts the emphasis from retention of agriculture for open space relief, to retention of smaller scale agricultural operations for heritage value. To that extent, the City of Irvine has committed to preservation of agriculture in these areas of the project site both by designating these areas for agriculture use and through the recently amended General Plan policy, which commits the City of Irvine to implementation of the Agricultural Legacy Program.

Response to Comment CC2

An Agricultural Preservation Program, as described in this comment, has been determined to be infeasible. No agricultural preserves or Williamson Act contracts exist within the City of Irvine or the project site. As stated in the EIR, (page 5.8-15), the County of Orange has not yet initiated the evaluation of such a program, and has no plans to implement such a program.

Response to Comment CC3

Comment noted.

Response to Comment DD1

Section 3.0 *Project Description Actions and Approvals of Other Agencies* has been amended to reflect the requirement that DTSC approve the acquisition and/or development of property for public schools. The added additional language reads as follows:

“California Department of Toxic Substances Control (DTSC) – Approval of acquisition and/or development of property for public schools based on hazardous materials evaluation.”

Response to Comment DD2

Section 5.5 *Public Health and Safety Environmental Setting* has been amended with the following wording:

“Certain LBP abatement and hazard disclosure requirements must be complied with prior to the transfer of the former MCAS El Toro site from federal responsibility. Housing units constructed prior to 1960 must be abated of LBP and LBP hazards. The presence of LBP and LBP hazards must be disclosed for housing units constructed between 1960 and 1978. Occupation of housing units scheduled for demolition due to the presence of LBP or LBP hazards is prohibited. Post-demolition sampling and response actions for any hazards due to lead in soil shall be conducted, consistent with regulatory requirements, prior to the occupancy of any newly constructed housing units to ensure public health and safety.”

This language has also been added to Section 5.5.3.

Response to Comment DD3

Per the regulations outlined in 40 CFR 300.430(e)(2)(i), “remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response.” The DON will be responsible for remediation of the former MCAS El Toro to these exposure levels. The DON has publicly stated that it will indemnify new land owners of former air station property in order to mitigate potential soil contamination that is attributable to historic DON operations.

Response to Comment DD4

Comment noted. Revisions will be made as referenced.

Response to Comment DD5

Section 5.5 *Public Health and Safety Environmental Regulations Affecting MCAS El Toro* has been amended to reflect the comment. Added wording is as follows:

“The Resource Conservation and Recovery Act (RCRA), adopted in 1976, provides the basic framework for federal regulation of hazardous waste. The State of California Department of Toxic Substances Control (DTSC) is authorized to implement the state hazardous waste program in lieu of federal RCRA regulations.”

Response to Comment DD6

Section 5.5 *Public Health and Safety Compliance Program Sites and Other Locations of Concern* has been amended with the following language:

“The DTSC states that the former MCAS El Toro contains two hazardous waste management units (HWMU). The HWMUs include a hazardous waste container storage area and an open burn/open detonation (OB/OD) hazardous waste treatment unit. A hazardous waste facility permit (a RCRA-equivalent permit) to operate the hazardous waste container storage area designated as Building 673-T3 was issued in August 1993 by the DTSC. The permit allowed the storage of hazardous wastes for longer than 90-days at Building 673-T3. In March 1996, the closure certification report was accepted by the DTSC and the container storage area was considered closed.”

Response to Comment DD7

Refer to Response to Comment DD6.

Response to Comment DD8

Comment noted. The City of Irvine has coordinated with the DON and concurs with the DON’s determination that corrective action at the former MCAS El Toro can overlap with other remediation or response actions. EIR text will be amended to read:

“The State of California considered any site from which hazardous constituents may migrate to be a SWMU, but corrective action can be addressed through the Federal Facilities Agreement for MCAS EL Toro or responses to petroleum releases with oversight provided by the Regional Water Quality Control Board.”

Response to Comment DD9

The EIR clearly states that Site 24 contains VOC contaminated soil; Site 18 is a groundwater plume, contaminated by VOCs leaching from Site 24, that is located both on- and off-site. Language has been added to the referenced section to read:

“In addition to an interim Record of Decision (ROD) for the contaminated soil of Site 24, a final ROD for groundwater contamination at Sites 18 and 24 was signed in June 2002. Please refer to the *Final Record of Decision, Operable Unit 1, Site 18 – Regional Volatile Organic Compound*

Groundwater Plume, Operable Unit 2A, Site 24 – VOC Source Area, Former MCAS El Toro, California (Bechtel National, Inc. 2002) for additional information.

Response to Comment DD10

The referenced section has been amended with the following added language:

“An interim ROD was signed in July 2000 for Site 2 and 17 to allow for the design of the landfill caps to proceed. However, construction of the landfill caps will not proceed until radiological survey/sampling is complete and the data have been evaluated to determine potential impact on the remedial design. Please refer to the *Final Interim ROD, Operable Unit 2B, Landfill Sites 2 and 17, MCAS El Toro, California* (Bechtel National, Inc. 2000) for additional information.”

Response to Comment DD11

The referenced section has been amended with the following added language:

“The draft version of the ROD for Sites 3 and 5 was issued in March 1999. The draft final ROD will be issued following evaluation of the results from radiological survey/sampling. Please refer to the *Draft ROD, Operable Unit 2C, Landfill Sites 3 and 5, MCAS El Toro, California* (Bechtel National, Inc. 1999) for additional information.”

Response to Comment DD12

The referenced section has been amended with the following added language:

“Site 7, Drop Tank Drainage Are No.2, and Site 14, Battery Acid Disposal Area, received concurrence for no further action in the final ROD signed June 2001. Please refer to the *Final ROD, Operable Unit 3B, No Action Sites 7 and 14, MCAS El Toro, California* (Bechtel National, Inc. 2001) for additional information.”

Response to Comment DD13

The referenced section has been amended with the following added language:

“Monitored natural attenuation is the selected remediation procedure for Site 16. A ROD is being prepared to document the selected remediation process. Please refer to the *Proposed Plan for Site 16, Crash Crew Training Pit No.2 at MCAS El Toro* (Bechtel National, Inc. 2002a) for additional information.”

Response to Comment DD14

The referenced section has been amended with the following added language:

“The DON is in the process of completing a remedial investigation to determine the nature and extent of contamination at Site 1. Please refer to the *Final Work Plan, Phase II Remedial Investigation, IRP Site 1, Explosive Ordinance Disposal Range, MCAS El Toro, California* (Earth Tech, Inc. 2001) for additional information.”

Response to Comment EE1

The Traffic Impact Analysis has been reviewed and revised in accordance with the new significance thresholds provided by the City of Laguna Hills. The additional analysis is provided as it confirms that the initial analysis adequately assesses the project's traffic impacts. A total of 16 intersections are located within the jurisdiction of the City of Laguna Hills or are shared with other local jurisdictions, including the City of Irvine.

Table EE-1 summarizes the 2007 intersection capacity utilization (ICU) analysis for the City of Laguna Hills intersections. As shown on Table EE-1, two intersections are impacted. Table EE-2 summarizes the 2025 intersection capacity utilization (ICU) analysis for the City of Laguna Hills intersections. As shown on Table EE-2, six intersections are impacted by either the Base Plan or the Overlay Plan. Table EE-3 summarizes the post-2025 intersection capacity utilization (ICU) analysis for the City of Laguna Hills intersections. As shown on Table EE-3, eight intersections are impacted for post-2025 conditions. Table EE-4 summarizes the proposed improvements at the intersections that are impacted by the Base Plan project alternative. Table EE-5 summarizes the proposed improvements at the intersections that are impacted by the Overlay Plan project alternative. The only intersection where additional impacts have been identified based on the revised impact criteria is Laguna Hills Drive at Paseo De Valencia, where very minimal mitigation improvements (modifying the traffic signal to provide an eastbound right turn overlap concurrent with the northbound left turns) would be required. (Note: All of the following referenced tables are included in the Appendix to this Response to Comments document.)

Response to Comment EE2

(Note: All of the following referenced tables are included in the Appendix to this document.) Cost estimates and the plan for funding the project fair share of improvements are included in the implementing mechanism (the NITM program) currently being developed by the City of Irvine as the next logical step in the development process. Funding for right of way acquisition, engineering, and construction is included in the NITM program. The City of Irvine recognizes that as the agency with jurisdiction over the intersections and as the lead agency for the construction of intersection improvements, the City of Laguna Hills must concur with the proposed mitigation measures if those mitigation measures are to be implemented. Table EE-6 summarizes the fair share traffic contributions and resulting cost share related to mitigation at the one intersection not specifically addressed in the NITM Program (Laguna Hills Drive at Paseo De Valencia). Table EE-7 then summarizes the project fair share traffic contribution at all of the locations impacted by the Base Plan alternative, along with the estimated cost contribution attributable to all NITM projects. Table EE-8 provides a similar summary for the Overlay Plan alternative.

Response to Comment FF1
Comment noted.

Response to Comment GG1

The comment regarding Irvine's urban water management plan is assumed to be in reference to the Irvine Ranch Water District's water supply assessment. The water supply assessment (WSA) contained in Appendix C complies with the most recent statutory requirements and concludes that adequate supplies are available to serve the proposed project. As noted in Response to Comment G2, the EIR is amended to reflect the statutory compliance of the water supply assessment prepared by the Irvine Ranch Water District.

Response to Comment GG2

The mitigation for loss of agricultural lands within the City of Irvine and surrounding areas was analyzed on a cumulative basis by the City when the General Plan agricultural policies contained in Objective L-10 were amended on 4 June 2002. The Great Park plan is full consistent with Objective L-10.

The EIR provides a comprehensive analysis of the feasibility of Mitigation Measures designed to reduce the project's impact to agricultural resources (see EIR pages 5.8-7 through 5.8-15). The EIR also identifies three feasible Mitigation Measures that will be implemented as part of the project (see Mitigation Measures AG 1 through AG 3 on pages 5.8-15 and 5.8-16). In this discussion, a variety of Mitigation Measures have been thoroughly analyzed including retention of agricultural uses. EIR pages Page 5.8-7 and 5.8-8 provide economic data to support the basis of conclusion of infeasibility of Mitigation Measures. Additionally, the City of Irvine's Legacy Program (as described in EIR page 5.8-14) promotes the preservation of agricultural resources city-wide, acreage from the Great Park of which are included in this program. On-site preservation of all existing agricultural lands on the Great Park property, to the exclusion of other City goals such as the provision of new open space through the park, job opportunities, and new housing would be inconsistent with the Objective L-10 as amended by the City of Irvine.

Response to Comment GG3

On page 5.13-9 of the EIR, the sections on long-term impacts for both the Base Plan and Overlay Plan indicate that the imbalance between jobs and housing will worsen and the impact is considered significant and unavoidable. This conclusion is repeated on pages 5.13-12 and 5.13-17. Also refer to Response to Comment KK1.

Response to Comment GG4

The base projections for the RHNA were completed in 1998 and assumed federal/military ownership of the site and it is likely that no RHNA allocation specific to the El Toro property was assigned. However, it is assumed that the upcoming 2004 RHNA, required under Government Code Section 65584 to allow the City of Irvine (and other jurisdictions) to undertake its required Housing Element updates, will reflect an appropriate allocation of future and existing regional housing need to the project site.

Response to Comment GG5

The City of Irvine has striven to integrate the Great Park with other planned development in the region, including the extension of public services. Preparation and planning with environmental documents such as this EIR is an important step in ensuring that this integration is seamless and coordinated. Section 5.14, *Public Services and Utilities*, considers potential impacts related to the extension of public services to the proposed project. Specific examples of planned development integration are considered in Section 7.1 *Cumulative Impacts*. The City of Irvine's Urban Services Plan will be made available to LAFCO as part of the annexation process undertaken with the Great Park. All impacts discussions in the EIR assume growth and development in the Northern Sphere as allocated in the Orange County Projection 2000 prepared by the Center for Demographic Research. (Note: The Urban Services Plan is included in the Appendix to this Response to Comments document).

Response to Comment HH1

Section 5.15.3 *Population and Housing Environmental Impacts* (5.13-12) states:

“Since the Orange County Subregion is anticipated to become increasingly jobs-rich over the next 20 years, the project-related employment would exacerbate the subregional jobs/housing imbalance. As a result, the proposed project will not improve and would only exacerbate the Orange County’s overall jobs/housing imbalance and the impact is considered significant and unavoidable.”

No mitigation is available to rectify conflicts with the numerical objectives of regional planning documents including the jobs/housing ratio. The imbalance between jobs and housing in Orange County may result in increased vehicle miles traveled since part of the work force consists of commuters who are drawn to the County for employment purposes. The EIR supports the SCAG objectives to reduce VMT and related congestion and air pollution. A CARB-commissioned report, entitled *Transportation-Related Land Use Strategies to Minimize Motor Vehicle Emissions: An Indirect Source Research Study*, analyzes the efficiency of numerous land use planning factors that have the greatest potential for reducing VMT and mobile source emissions. The study is outlined in the EIR, contains a list of recommended strategies, many of which have been incorporated into the Base Plan and Overlay Plan.

A portion of the project’s housing growth will be absorbed in residential projects currently being developed or planned in the surrounding area. Substantial new areas of residential development will be opened for development with the completion of several planned transportation improvement in the County. Housing projects developed under the Base Plan or Overlay Plan will be consistent with the City of Irvine’s Housing Element Affordable Housing Goal.

The Base Plan and the Overlay Plan were developed to reflect the intent of the voters of Orange County through the passage of Measure W. A higher development intensity alternative was analyzed (Alternative 6.5) in the EIR which evaluated 4,635 housing units. Alternative 6.5 concludes that a greater impact would occur on the following environmental elements: traffic/circulation; air quality; noise; geology and seismicity; hydrology and water quality; aesthetics; public services and facilities and utilities. Refer to the Alternatives (Section 6.0) in the EIR for further discussion. Moreover, the selection of an alternative that would include more housing and less commercial development would be infeasible since it would be in conflict with the City’s fiscal balance requirement for new planning areas and prevent the City from having the financial resources to implement the Great Park plan.

Response to Comment HH2

Under the proposed Base Plan 225 multi-family housing units would be developed; implementation of the Overlay Plan would result in the construction of

3,625 housing units. Implementation of either plan would be consistent with the affordable housing goals stated in the City of Irvine's General Plan Housing Element.

Response to Comment HH3

The EIR provides for a mix of housing densities in the residentially zoned areas. Implementation of the Base Plan would result in the construction of 225 multi-family housing units. It is beyond the scope of this EIR to "set-aside (future) City-owned sites for affordable housing sooner rather than later," increase densities in the transit areas from 40- to 60-units per acre, all farm-worker housing on or near agricultural areas, and include housing as an allowable use in all commercial, institutional, and industrial areas. These are policy matters that must be considered by the City of Irvine. Also refer to Response to Comment KK2.

Response to Comment II1

The Highway Capacity Manual (HCM) methodologies are most appropriate for near-term engineering and operational analysis. The many input data and factors required by HCM methodologies are not available for the long-range planning horizon addressed in this Traffic Impact Analysis. The planning level analysis in the Great Park Traffic Impact Analysis is an appropriate approach that has been utilized in various other traffic studies that have also been submitted to Caltrans.

The ITAM tool used to develop the future forecasts is consistent with the OCTAM travel demand forecasting tool, which is the regionally (County of Orange) adopted tool for developing future traffic forecasts on the regional roadway system, including the freeways and transportation corridors. The OCTAM model has been validated at both the peak hour and daily traffic volume levels of detail for freeway and transportation corridor mainline conditions. Use of a consistent modeling tool is a mandatory requirement, based on state and federal legislation.

Response to Comment II2

The lane assumptions for the I-5 Freeway corridor are correct and are based on existing field inventory and anticipated long-range improvements. The analysis may be inconsistent with OCTAM 3.1 because of the more accurate lane assumptions compared to the generalized OCTAM 3.1 inputs. The lane assumptions utilized in the Traffic Impact Analysis for the transportation corridors are based on the long-range capital improvement program (CIP) developed by the Transportation Corridor Authority(ies) (TCA).

Response to Comment II3

The analysis contained in the EIR and supporting Traffic Impact Analysis is unaffected by the status of the projects referenced in the comment. The ITAM model used in the Traffic Impact Analysis is based on a year 2000 validation scenario; therefore, all of the future forecasts included in the Traffic Impact Analysis accurately reflect the validation year conditions.

Response to Comment II4

The HOV lanes are identified in the TCA CIP. Ms. Macie Cleary-Milan of the Transportation Corridor Agency provided the following information on 7 May 2003 regarding the funding for HOV lanes on the transportation corridors:

The TCA has a list of all the projects that have been identified as part of the long-range concept plans for the various transportation corridors. Improvements are funded as the money is available, and as the need for the improvements is identified to provide acceptable traffic operations for the system. Priorities are set based on congestion or operational issues. If future traffic volumes result in a deterioration of levels of service, the TCA is dedicated to providing the improvements needed to provide the levels of service their patrons expect.

Therefore, it is reasonable to assume that the TCA would fund HOV improvements necessary to provide acceptable levels of service.

Response to Comment II5

Refer to Response to Comment S5.

Response to Comment II6

As demonstrated in the EIR and supporting Traffic Impact Analysis, adequate access to the Great Park is being provided. Major roadway improvements within and outside of the proposed park area include the widening of Trabuco Road, Bryan Avenue, Irvine Boulevard, and Sand Canyon Avenue. In addition, the Great Park project roadway system proposes a number of new arterial roadways, including Marine Way, College Road, and Y Street. The project also proposes substantial new or modified freeway/transportation corridor interchange improvements, including the I-5 Freeway/Bake Parkway interchange, the I-5 Freeway/Sand Canyon Avenue interchange, and the SR133 tollway/Trabuco Road interchange.

Concurrently with the proposed project, the City of Irvine is considering adoption of the North Irvine Transportation Improvement (NITM) program. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events. The NITM program also includes numerous other ramp improvements commensurate with other cumulative project impacts. In summary, the project has adequate access.

The EIR and supporting Traffic Impact Analysis have addressed both the changes in land use and the circulation system as a result of the proposed project. The issue raised in this comment is addressed either by the EIR analysis itself, or through the proposed mitigation measures. The key mitigation measure with respect to this comment is the requirement to enter into a cooperative Master Plan of Arterial Highways amendment study per the Orange County Transportation Authority (OCTA).

The portion of the comment related to the extension of Marine Way to Bake Parkway at the I-5 Freeway northbound ramps is noted. The City of Irvine is working closely with Caltrans to resolve the design issues related to the I-5 Freeway/Bake Parkway interchange.

Response to Comment II7

Refer to Response to Comment S6. The programs referenced in the comment will address ongoing regional traffic growth and are not related to the anticipated project impacts. The EIR mitigation measures address all project impacts that were identified in the Traffic Impact Analysis, subject to constraints such as those identified in Response to Comment S5 (TCA non-compete agreements).

The second part of the comment relates to the detailed implementation mechanism for mitigating project impacts. The City of Irvine is actively developing an implementation mechanism (NITM) for proposed Great Park (and other nearby) project mitigation measures/improvements. The NITM program includes conceptual engineering, cost estimates, and fair share contribution calculations as requested in this comment.

Response to Comment II8

Refer to Response to Comment II7. The City has created a pro rata fair share program (NITM program) that includes projects that mitigate impacts to the State facilities, including freeway mainline and ramp improvements.

Response to Comment II9

Refer to Responses to Comments II7 and II8.

Response to Comment II10

The comment pertains to a separate report entitled *Draft Wildlife Corridor Plan*. The City appreciates Caltrans input and will evaluate and address these comments as it proceeds to process the *Draft Wildlife Corridor Plan* separately from this EIR.

Response to Comment II11

Refer to Response to Comment II10.

Response to Comment II12

Refer to Response to Comment II10.

Response to Comment II13

Refer to Response to Comment II10.

Response to Comment II14

Refer to Response to Comment II10.

Response to Comment II15

Refer to Response to Comment II10.

Response to Comment II16

Refer to Response to Comment II10.

Response to Comment II17

Refer to Response to Comment II10.

Response to Comment II18

Refer to Response to Comment II10.

Response to Comment II19

Refer to Response to Comment II10.

Response to Comment II20

Refer to Response to Comment II10.

Response to Comment II21

Refer to Response to Comment II10.

Response to Comment II22

Comment noted.

Response to Comment JJ1

Comment noted.

Response to Comment JJ2

Comment noted.

Response to Comment KK1

Section 5.15.3 *Population and Housing Environmental Impacts* (5.13-12) states:

“Since the Orange County Subregion is anticipated to become increasingly jobs-rich over the next 20 years, the project-related employment would exacerbate the subregional jobs/housing imbalance. As a result, the proposed project will not improve and would only exacerbate the Orange County’s overall jobs/housing imbalance and the impact is considered significant and unavoidable.”

No mitigation is available to rectify conflicts with the numerical objectives of regional planning documents including the jobs/housing ratio. A portion of the project’s housing growth will be absorbed in residential projects currently being developed or planned in the surrounding area. Substantial new areas of residential development will be opened for development with the completion of several planned transportation improvement in the County. Housing projects developed under the Base Plan or Overlay Plan will be consistent with the City of Irvine’s Housing Element Affordable Housing Goal.

The Base Plan and the Overlay Plan were developed to reflect the will of the voters per Measure W. A higher development intensity alternative was analyzed (Alternative 6.5) in the EIR which evaluated 4,635 housing units. Alternative 6.5 concludes that a greater impact would occur on the following environmental elements: traffic/circulation; air quality; noise; geology and seismicity; hydrology and water quality; aesthetics; public services and facilities and utilities. Refer to the Alternatives (Section 6.0) in the EIR for further discussion.

Response to Comment KK2

While the number of multi-use residential units has been reduced from 2,313 to 1,500, the overall level of multi-use residential development has been increased from 3,261 to 3,625. The EIR examines two formulated plans: the Base Plan and the Overlay Plan. The EIR analyzes the environmental impacts from these plans and proposes mitigation measures to reduce impacts to levels less than significant. The current General Plan allows a maximum 3,261 dwelling units in Planning Areas 30 and 51 combined. Under the proposed Base Plan 225 multi-family housing units would be developed; implementation of the Overlay Plan would result in the construction of 3,625 housing units. Implementation of either plan would be consistent with the affordable housing goals stated in the City of Irvine’s General Plan Housing Element. As a result, the project provides for a mix of housing densities in the residentially zoned areas.

Section 5.13.3 *Population and Housing Environmental Impact* states:

“...housing project developed on the site under either the Base Plan or Overlay Plan will be required to be consistent with the City’s Housing Element Affordable Housing Goal, which states that:

- 5 percent of units should be affordable to households earning less than 50 percent of the County Median Family Income through rental housing.
- 5 percent of the actual number of units built should be affordable as either rental or ownership housing for households earning between 51 and 80 percent of the County Median Family Income.
- 5 percent of the units should be affordable to household earning between 81 and 121 percent of the County Median Family Income, satisfied through the development of ownership housing.”

Response to Comment KK3

Refer to Response to Comment KK2.

Volume I – Appendix A

Acronyms

The following list of acronyms has been prepared for reference.

ACM	Asbestos Containing Materials
ADT	Average Daily Traffic
AELUP	Airport Environs Land Use Plan
AICUZ	Air Installation Compatibility Use Zones
ALUC	Airport Land Use Commission
APZ	Accidental Potential Zone
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
ASMP	Airport System Master Plan
BCP	Base Realignment and Closure Cleanup Plan
BCT	BRAC Cleanup Team
BMP	Best Management Practices
BRAC	Base Realignment and Closure
BRAC-III	Base Realignment and Closure Act of 1993
CAA	Clean Air Act
CAA	Community Analysis Area
CAAQS	California Ambient Air Quality Standards
Cal-EPA	California Environmental Protection Agency
CALOSHA	California Division of Occupation Safety and Health
CALTRANS	California Department of Transportation
CMP	Congestion Management Plan
CARB	California Air Resources Board
CC&R	Covenants, Conditions and Restrictions
CCAA	California Clean Air Act
CDFG	California Department of Fish and Game
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Cleanup and Liability Act
CERFA	Community Environmental Facilitation Act
cfs	Cubic Feet per Second
CIWMP	Countywide Integrated Waste Management Plan
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
ACOE	U.S. Army Corps of Engineers
CRP	Community Reuse Plan
CSS	Coastal Sage Scrub
DAMP	Drainage Area Management Plan
dB or dBA	Decibel(s)
DBH	Diameter at Breast Height
DEIR	Draft Environmental Impact Report
DOD	Department of Defense

DOI	Department of the Interior
DON	Department of the Navy
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EOC	Emergency Operations Center
EOD	Explosive Ordinance Disposal
EPA	Environmental Protection Agency
ETC	Eastern Transportation Corridor
ETRPA	El Toro Reuse Planning Authority
FAA	Federal Aviation Administration
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FTC	Foothill Transportation Corridor
FTA	Federal Transit Agency
GMP	Growth Management Plan
GPA	General Plan Amendment
GPA/ZC	General Plan Amendment/Zone Change
HCP	Habitat Conservation Program
HOA	Home Owners Association
HRA	Historical Radiological Assessment
HRS	Hazard Ranking System
HVAC	Heating and Ventilation and Air Conditioning Systems
HUD	Department of Housing and Urban Development
I-5	Interstate 5 (Santa Ana Freeway)
I-405	Interstate 405 (San Diego Freeway)
ICU	Intersection Capacity Utilization
IRP	Installation Restoration Program
IRWD	Irvine Ranch Water District
ITAM	Irvine Transportation Analysis Model
IUSD	Irvine Unified School District
IWMD	Integrated Waste Management Department
JWA	John Wayne Airport
LAFCO	Local Agency Formation Commission Orange County
LBP	Lead Based Paint
LOMR	Letter of Map Revision
LOS	Level of Service
LRA	Local Redevelopment Authority
MAP	Million Air Passengers
MCAS	Marine Corps Air Station
MGD	Million Gallons per Day
MP	Millennium Plan
MPAH	Master Plan of Arterial Highway (Orange County)
MSF	Million Square Feet
MSL	Mean Sea Level
MOU	Memorandum of Understanding

NAAQS	National Ambient Air Quality Standards
NCCP	Natural Communities Conservation Plan (California)
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NOI	Notice of Intent
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRHP	National Register of Historic Places
NWR	National Wildlife Refuge
OCFCD	Orange County Flood Control District
OCFA	Orange County Fire Authority
OCTA	Orange County Transportation Authority
OCTAM	Orange County Traffic Analysis Model
OCX	Orange County International Airport
OCWD	Orange County Water District
OWS	Oil/Water Separator
PAZ	Planning Area Zone
PCB	Polychlorinated Biphenyl
PIL	Policy Implementation Line
psi	Pounds per Square Inch
PVC	Polyvinyl Chloride
RCB	Reinforcement Concrete Box
RCP	Resources Conservation Plan
RCPG	Regional Comprehensive Plan and Guide
RCRA	Resources Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROD	Records of Decision
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAMP	Sub Area Master Plan
SARA	Superfund Amendments and Reauthorization Act
SARWQCB	Santa Ana Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAG	Southern California Association of Government
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison Company
SCRRA	Southern California Regional Rail Authority
SED	Socioeconomic Data
SEM	Standardized Emergency Management System
SFHA	Special Flood Hazard Area
SIP	State Implementation Plan
SR-133	Eastern Transportation Corridor (State Route 133)
SR-241	Foothill Transportation Corridor (State Route 241)
SRA	Seismic Resonance Area
SRHP	State Register of Historic Places
SVE	Soil Vapor Extraction
SVUCD	Saddleback Valley Unified School District
SWAT	Special Operations Unit
SWMU	Solid Waste Management Unit

SWPPP	Storm Water Pollution Prevention Plan
TCA	Transportation Corridor Agency
TCE	Trichlorethane
TCM	Transportation Control Measures
TMA	Transportation Management Association
TMDL	Total Maximum Daily Loads
UBC	Uniform Building Code
UFC	Uniform Fire Code
UFO	Urban Forestry Ordinance
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Services
USMC	United States Marine Corps
USOSHA	Occupational Safety and Health Administration
USGS	United States Geological Survey
USP	Urban Services Plan
UST	Underground Storage Tanks
UWMP	Urban Water Management Plan
V/C	Volume to Capacity
VCP	Vitrified Clay Pipe
VMT	Vehicle Miles Traveled
VPD	Vehicles Per Day
VOC	Volatile Organic Compound
WDRs	Waste Discharge Requirements
WQCP	Water Quality Control Plan
WRMP	Water Resources Master Plan
WWII	World War II
ZC	Zone Change

1.0 Introduction

This Program Environmental Impact Report is prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code Section 21000 et seq.); the Guidelines for the Implementation of the California Environmental Quality Act (CEQA Guidelines) published by the Resources Agency of the State of California (California Administrative Code Sections 15000 et seq.); and the environmental review guidelines of the City of Irvine.

Overview of the Project

Assuring the reuse of the site of the former Marine Air Corps Station El Toro (MCAS El Toro) in accord with the Orange County Great Park Plan is of primary importance to the City of Irvine and the residents of Orange County. The City of Irvine has actively supported the development of a major park and related non-aviation uses on the site for a number of years. This Final Program EIR and the related project are part of the continuing process required to realize this objective.

Project

The project land area involves approximately 4,806 acres. At present, 414 acres are within the City of Irvine and the balance are unincorporated area as shown in Table 1-1. Of this acreage, 4,693 represent the former MCAS El Toro property.

**Table 1-1
Project Area Acreages**

Acres	Unincorporated Areas¹	City of Irvine²	Total
Former MCAS El Toro:			
Planning Area 51	4,279	16	4,295
Planning Area 30	0	398	398
Subtotal	4,279	414	4,693
Musick Jail & IRWD Parcel:			
Planning Area 35	113	0	113
Subtotal	113	0	113
Project Area Total	4,392	414	4,806

¹ Project area proposed for annexation. See Figure 3-1 in Project Description.

² Project area proposed for zone change. See Figure 3-1 in Project Description.

The project consists of the following actions: 1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; 2) Annexation of the unincorporated portion of Planning Area 35 (James A. Musick Branch Jail and the Irvine Ranch Water District Parcel); and 3) General Plan Amendment and Zone Change for Planning Area 30 which is presently in the City of Irvine; and 4) Approval of the form of a Development Agreement vesting approval of higher intensity overlay uses in consideration for dedication of land for public purposes and for developing and funding certain infrastructure improvements and maintenance of the public uses by the

purchaser/developer and subsequent landowners and funding for specific park, roadways, and other circulation facilities and infrastructure. Together, these actions establish the policy and legislative structure to guide the development of the former MCAS El Toro property and the implementation of the “Orange County Great Park.”

These actions are described in greater detail in Section 3.0 - Project Description. The reader should refer to Section 3.0 for a discussion of all actions included in the project.

Purpose

The purpose of the project is to assure that reuse of the former MCAS El Toro is consistent with the intent of Measure W approved by the voters in March, 2002 while responding to the decision of the federal government to sell the land. The City also wishes to assure the orderly development of public infrastructure and public open space amenities. Securing local control over land use decisions and the coordination of all infrastructure improvements is essential to meet the City’s objectives. Annexation of portions of the property not currently within the City limits and an amendment of the City’s General Plan and Zoning Ordinance are actions required to transfer complete land use control from the County of Orange to the City of Irvine.

Background

The decision to close MCAS El Toro was made by the Department of Navy (DON) under the Base Realignment and Closure Act in July, 1993. Since that time several plans for the reuse of the site have been prepared by various entities including the County of Orange, El Toro Reuse Planning Authority (ETRPA), and the City of Irvine. The current plan, called the Orange County Great Park Plan, is consistent with the concept for reuse of El Toro approved by the voters of Orange County in the March, 2002 initiative (Measure W). The Measure W initiative amended the County General Plan north of the Southern California Regional Rail Authority (SCRRA) Metrolink rail line to designate the unincorporated land for park, open space and other uses, removing the designation of the site as a commercial airport from the County General Plan. While the amendment to the County General Plan created by Measure W does not govern land use regulations in the City, the intent of providing significant public open space land use designations has been incorporated into the City’s Great Park Plan.

Orange County Board of Supervisors Actions

Following the passage of Measure W in March 2002, the City of Irvine immediately embarked on the refinement of the Orange County Great Park Plan. On April 16, 2002, the Orange County Board of Supervisors formally voted to cease further planning for the former MCAS El Toro and to support the annexation and land use planning of the property by the City of Irvine. The Board of Supervisors also decided not to pursue receipt of title to the former MCAS El Toro property and to negotiate with the DON to terminate the El Toro Master Lease existing between the County and the DON. The El Toro Master Lease between the County and DON was terminated in July 2002.

Decision by Navy to Sell El Toro Lands

On April 23, 2002, shortly after the passage of Measure W, the DON issued a Record of Decision (ROD) for the former MCAS El Toro property. The DON announced that the transfer of the property would be in accordance with the will of the people and the intent of Measure W. Subsequently the DON announced its intention to sell the property by public auction in accordance with federal surplus property disposal procedures.

Following the DON decision to sell the land at public auction, the City of Irvine concept plan was modified to assure that the orderly development of the “great park” could be realized through the private sector. The modification recognized that the land would not be transferred to the City or other public agency through a Public Benefit Conveyance or a no-cost Economic Development Conveyance. The Orange County Great Park Plan recognizes that sale of the land will require a reasonable economic return to the private sector buyer. At the same time the City and other local interests want to assure park, open space and other public areas are dedicated to the City or other non-profit or governmental entity in perpetuity and improved without cost to the local taxpayer.

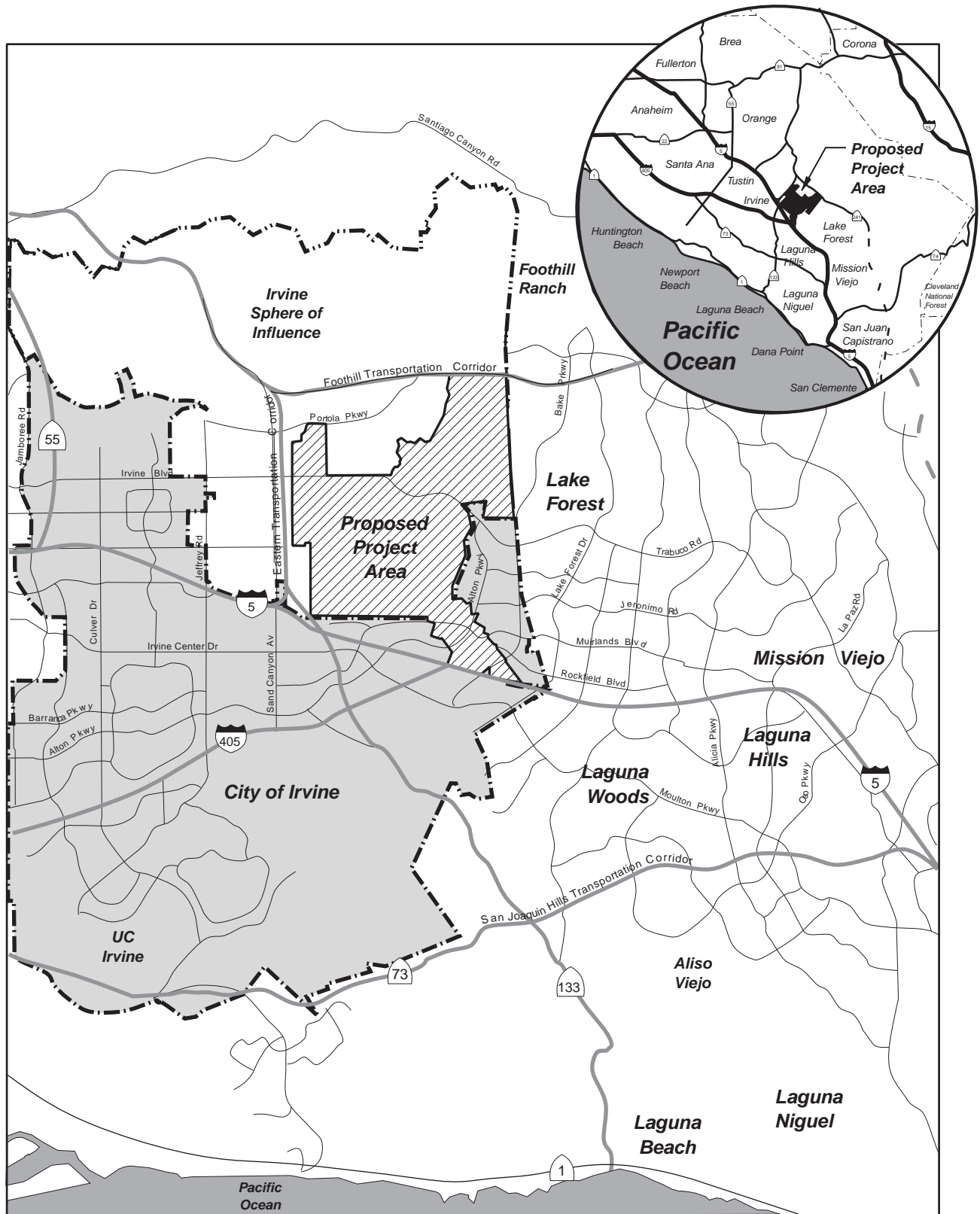
The City prepared a revised land plan that would allow for increased development intensities in exchange for the private sector participation in a development agreement that required the full dedication and improvement of public infrastructure and open space amenities. The City’s strategy is to allow for intensified private development under a Development Agreement arrangement in return for dedication of lands to be used for park, open space and public and institutional purposes. By also allowing for a less intense development plan as the base/underlying zoning designation, the future private sector owner’s decision as to whether to pursue the more development intense overlay zoning through a development agreement is voluntary.

Project Location

The project is located in the center of Orange County and includes land within the City of Irvine and unincorporated area. The project area is northeast of the intersection of Interstate 5 and the Eastern Transportation Corridor Toll Road. Figure 1-1 (Project Location) depicts the location of the project area in a regional and local context, respectively. The total project area encompasses approximately 4,806 acres or 7.5 square miles. The total area proposed for annexation is 4,392 acres.

The project area is generally bounded by the cities of Irvine and Lake Forest on the south and east, and unincorporated area in the County of Orange on the north. Other nearby local jurisdictions include the cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo and Tustin.

Major roadways bordering the project area include I-5 to the southwest, Sand Canyon Avenue to the northwest, Portola Parkway and Irvine Boulevard to the north, and Bake Parkway to the northeast. John Wayne Airport is located seven miles to the west of the project area. The Irvine Transportation Center, a major multi-modal transit center linking Orange County Transportation Authority (OCTA) bus, Metrolink commuter rail, and Amtrak rail services, is adjacent to the SCRRA tracks which traverse the site and separate Planning Areas 51 and 30.



Source: Cotton/Bridges/Associates, 2002.

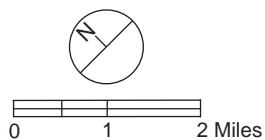


Figure 1-1
Project Location

The James A. Musick Jail Facility is located on a 105-acre parcel northwest of existing Bake Parkway and east of the future extension of Alton Parkway. The northern boundary of the Musick Jail site abuts the former MCAS El Toro. Existing buildings of the Irvine Spectrum abut the Musick Jail site to the west/southwest. An eight-acre (IRWD) parcel west of the Musick Jail contains the IRWD East Irvine Zone IV Pumping Station, Zone III 5.0 million gallon potable water reservoir, and a 7.0 million gallon potable water reservoir.

The Orange County Great Park Plan

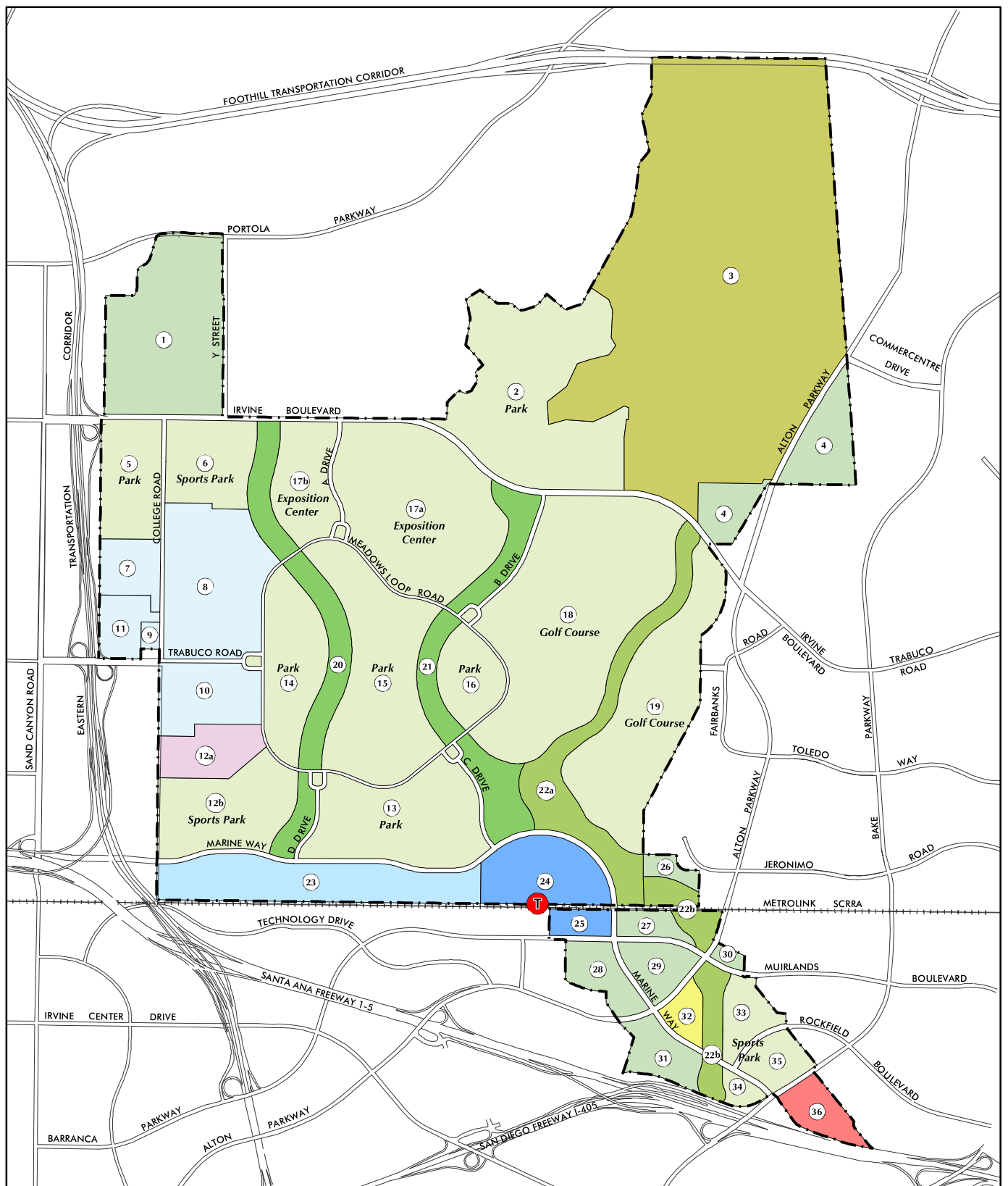
In 2001, the City of Irvine devoted substantial time and resources to prepare a plan for the reuse of the former MCAS El Toro property. The plan included large areas of park, recreational uses and open space. Other uses in the plan were institutional uses, research and development uses, agriculture, educational uses and various others. This concept plan was based on the assumption that the federal government would transfer the land to public entities at low or no cost via public benefit conveyances and/or economic development conveyances similar to other base reuse efforts.

With the prospect that the land would be sold to the private sector, a strategy was incorporated in the Plan to assure the realization of the park, open space and other public uses to dedicate to the City and other non-profit or governmental entities through a Development Agreement. To accomplish the goal of substantial public use of the site while providing economic return to potential buyers, the Great Park Plan is formulated as an overlay plan, i.e., a base plan with an overlay. Zoning for the project area has a zoning overlay. This is a tool traditionally used to permit more creative use of the land and possible increased intensity of use, just as it is proposed in this case by the City of Irvine.

The Base plan is illustrated in Figure 1-2 and represents the minimum level of development anticipated for the site. The Overlay Plan defines additional development rights which may be granted if the property owner enters into a Development Agreement with the City. The Development Agreement will include a requirement for the dedication of land for public uses and for funding of certain infrastructure and public open space amenity improvements and their long term maintenance by the purchaser/developer as well as any future owners of the property. Actual development of the El Toro site will occur at an intensity no greater than that shown in the Overlay Plan illustrated in Figure 1-3. Development intensities for the Base and Overlay plans are listed in Table 1-2.

Project Area Setting

The general locale and surrounding uses are shown in a recent aerial of the site (Figure 1-4). Surrounding land uses include the Irvine Spectrum business park, Wild Rivers Water Park and the Verizon Wireless Amphitheater to the southwest, industrial/business parks to the southeast, residential neighborhoods to the west within the City of Irvine, residential neighborhoods to the southeast within the City of Lake Forest, and agriculture and open space to the northeast.



- | | |
|---------------------------------------|-------------------|
| --- Orange County Great Park Boundary | Retail |
| Education | Auto Center |
| Institutional | Agriculture |
| Transportation Facilities | Riparian Corridor |
| Transit Oriented Development | Wildlife Corridor |
| Research and Development | Habitat Preserve |

- | |
|----------------------------------|
| Open Space |
| (17c) Planning Area Zone |
| (T) Irvine Transportation Center |

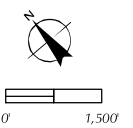
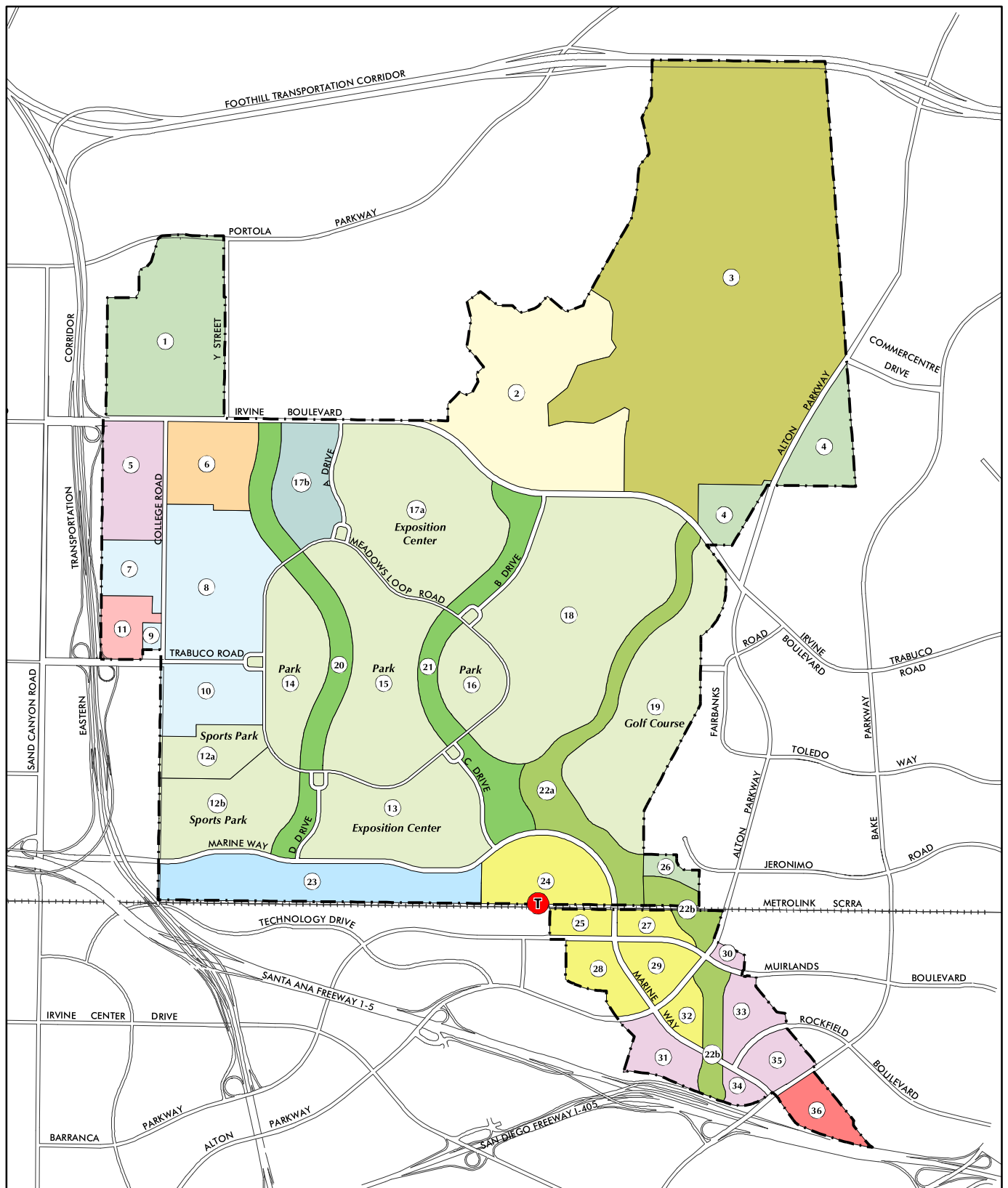


Figure 1-2
Orange County
Great Park Base Plan 2025



--- Orange County Great Park Boundary

Education

Institutional

Low Density Residential

Medium Density Residential

Transit Oriented Development

Research and Development

Retail

Auto Center

Cemetery

Agriculture

Riparian Corridor

Wildlife Corridor

Habitat Preserve

Open Space

(17c) Planning Area Zone

T Irvine Transportation Center



0' 1,500'

Figure 1-3
Orange County
Great Park Overlay Plan 2025

**Table 1-2
Great Park Land Use Summary
Base Plan and Overlay - 2025**

Land Use Type	OCGP Base				OCGP Overlay			
	Acres	Dwelling Units	Square Feet	Other Detail	Acres	Dwelling Units	Square Feet	Other Details
Residential								
Low Density Residential	--	--	--		320	1,100	--	
Medium Density Residential	15	60	--		95	860	--	
Medium-High Density Residential	--	--	--		145	1,500	--	
Education								
College/University	293	--	1,285,000	7,637 Students	260	--	1,452,594	7,800 Students
Elementary School	--	--	--		13	--	40,000	650 Students
Cultural and Institutional								
Cultural/Institutional	156	--	468,000		156	--	468,000	
Institutional	100	--	563,000		100	--	563,000	
Exposition Center	322	165	963,500					
Transportation Facilities								
OCTA Facility	35	--	122,500		35	--	122,500	
Transit-Related Public Uses	99	--	--	375 Parking Spaces	15	--	--	375 Parking Spaces
Remote Airport Terminal	10	--	9,000	675 Parking Spaces	10	--	9,000	675 Parking Spaces
Remote Airport Terminal Maintenance	10	--	44,500		10	--	44,500	
Research and Development								
Research and Development	50	--	300,000		200	--	2,600,000	
Retail and Office								
Retail	--	--	--		43	--	300,000	
Office	--	--	--		5	--	75,000	
Auto Center								
Auto Sales, Parking and Storage	34	--	50,000		34	--	102,000	
Agriculture								
Agriculture	438	--	--		303	--	--	
Open Space and Recreational Uses								
Open Space/Park	716	--	--		382	--	--	
Sports Park	272	--	26,000		165	--	26,000	
Golf Course	576	--	25,000	54 Holes	526	--	25,000	45 Holes
Habitat Preserve	974	--	--		974	--	--	
Drainage/Riparian Corridor	229	--	--		229	--	--	
Wildlife Corridor	179	--	--		179	--	--	

Table 1-2
Great Park Land Use Summary
Base Plan and Overlay - 2025

Land Use Type	OCGP Base				OCGP Overlay			
	Acres	Dwelling Units	Square Feet	Other Detail	Acres	Dwelling Units	Square Feet	Other Details
Fairgrounds/Commercial Rec.	--	--	--		236	165	708,000	
Cemetery	--	--	--		73	--	50,000	
Roadways								
Roadways	185	--	--		185	--	--	
Total	4,693	225	3,856,500		4,693	3,625	6,585,594	



Sources: IK Curtis Aerial Photography, 2000



Project Boundary



Irvine Transportation Center



0' 1,500'

Figure 1-4
Aerial Photograph

Former MCAS El Toro (PAs 51 and 30)

In 1993, in accordance with the Base Realignment and Closure Act (BRAC), the Department of Defense (DOD) listed MCAS El Toro for base realignment and operational closure by 1999, and subsequent transfer of the base to civilian control. Closure officially occurred in July, 1999.

Many existing buildings, structures, ancillary facilities, runways, etc. have been left on-site by the Navy. Portions of the site are currently utilized for agricultural operations. The Department of the Navy (DON) provides caretaker responsibilities for the former MCAS El Toro. The Navy is leasing some of the existing facilities for various interim activities, such as the golf course and equestrian facilities and the Cal State University, Fullerton Extension Campus, agricultural operations and recreational vehicle storage.

James A. Musick Jail Facility (portion of PA 35)

The James A. Musick Jail Facility is currently a minimum-security detention and corrections facility, housing approximately 1,250 inmates. This property is owned and operated by the County of Orange. Inmate housing and detention facilities are located in the northeast corner of the site. The remainder of the site is used for agriculture uses associated with inmate detention.

An expansion of the Musick Jail Facility was approved by the County. The proposed expansion was evaluated in County EIR 564. Depending on future need the expansion could potentially house 7,584 inmates in a minimum/medium/maximum security facility. This expansion would occur in three phases and include a Sheriff's Southeast Station, ancillary jail facilities (warehouse, central plant, food service, laundry, staff and visitor parking, etc.), and a relocated Interim Care Facility. The phasing of expansion would depend mostly on the availability; however, the County would like to complete the expansion project by 2006. Construction has not yet commenced.

IRWD Parcel (portion of PA 35)

An eight-acre parcel owned by the Irvine Ranch Water District contains the IRWD East Irvine Zone IV Pumping Station, Zone III 5.0 million-gallon potable water reservoir, and 7.0 million-gallon potable water reservoir. This parcel is west of the Musick facility abutting both the Musick site and the El Toro site.

Federal Disposal Process

Once a federal property has been selected for closure, disposal of the land or facility must follow federal guidelines. Generally, if a federal agency no longer has a need for real property it declares the property excess to its needs and reports the availability of the property to the General Services Administration for transfer or disposal. The excess property is then screened with other federal agencies to ascertain if other federal requirements exist. The excess property can be assigned to any federal agency that has demonstrated a need. Pursuant to this screening process, 905 acres were transferred to the FAA on December 3, 2001. The Navy also anticipates that 70 acres will be transferred to

the Department of Justice. At this point in time, the former MCAS El Toro property determined to be not surplus and therefore available for sale are illustrated on Figure 1-5. Subsequent decisions by the Navy regarding additional FAA sites, a California Air National Guard site, and other potential transfer opportunities may further reduce this surplus area.

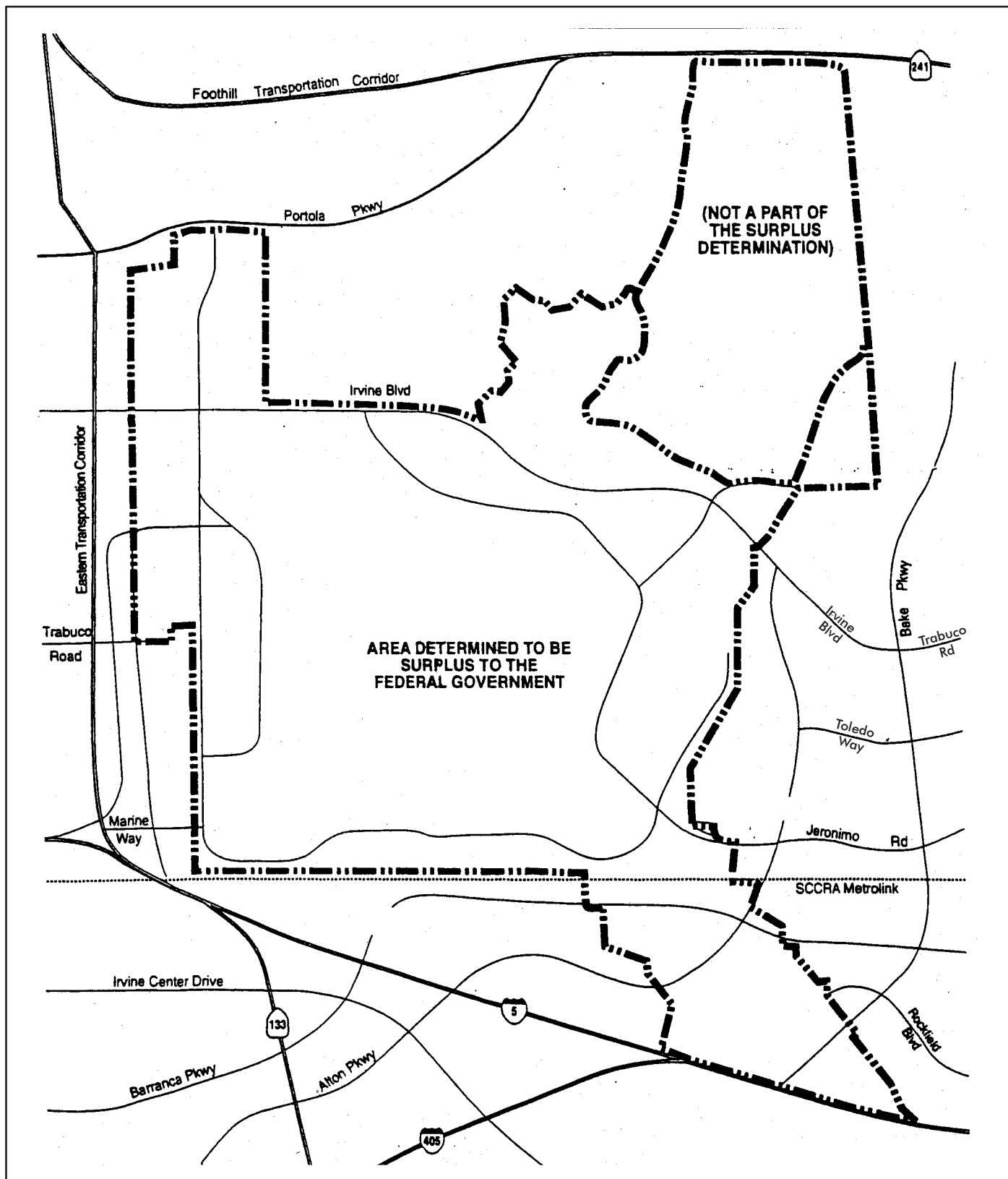
The federal screening process for possible conveyances began in 1995. Federally-recognized Native American tribes, providers of housing for the homeless, and public or private non-profit entities may request conveyances. The Community Reuse Plan (CRP) approved by the County of Orange County acting as the Local Redevelopment Authority [LRA] made recommendations to the DON for conveyances of MCAS El Toro property or buildings that were identified during the federal, state, local, and homeless screening processes. Nine conveyances are recommended under this process at this time. A list of these possible conveyances is contained in Appendix F. The DON is reviewing these conveyances and the manner in which these conveyances will be made is being determined. For purposes of this document the land uses represented in the conveyances are assumed to be a part of the project.

Reference Documents

Whenever existing documentation is used in the preparation of this Final Program EIR, the information is summarized for the convenience of the reader and referenced accordingly through the use of endnotes at the conclusion of each section.

The primary documents consulted in the preparation of this Final Program EIR are as follows:

- County of Orange. *Marine Corps Air Station El Toro Community Reuse Plan, Draft Environmental Impact Report No. 563, Vol. 1. SCH No. 96041043. August 1996.*
- County of Orange. *Responses to Comments on the Marine Corps Air Station El Toro Community Reuse Plan, Draft Environmental Impact Report No. 563, Comments and Responses, vols. 15-24. 1996.*
- County of Orange. *Draft Supplemental Analysis for the Marine Corps Air Station El Toro Community Reuse Plan FEIR No. 563 and Technical Appendices. SCH No. 96041043. February 1999.*
- County of Orange. *Recirculated Sections of Environmental Impact Report No. 564: James A. Musick Jail Expansion and Operation. SCH No. 96061024. September 1998.*
- County of Orange. *EIR No. 564 for James A. Musick Jail Expansion and Operation. SCH No. 96061024. August 1996.*
- Department of the Navy. *Base Realignment and Closure Cleanup Plan (BCP) for Marine Corps Air Station, El Toro, CA. March 1998.*



Source: County of Orange 1996

— · — · — · — Surplus Determination Boundary



No Scale

Figure 1-5
Surplus Determination
US Department of the Navy

- City of Irvine. *General Plan Amendment 37594-GA, Zone Change 37595-ZC, and Annexation No. 17 for MCAS El Toro and James A. Musick Branch Jail, FEIR.* SCH No. 98-111078. June 14, 1999.
- City of Irvine. *Planning Area 40/Spectrum 8 General Plan Amendment, Zone Change, Development Agreement, Annexation Draft Program EIR,* SCH No. 2000071014. January 2001.
- City of Irvine. *Planning Area 40/Spectrum 8 General Plan Amendment, Zone Change, Development Agreement, Annexation Draft Supplement to the Program EIR,* SCH No. 2000071014. November 2002.
- City of Irvine. *Northern Sphere Area General Plan Amendment and Zone Change Draft EIR,* SCH No. 2001051010. December 2001.

Section 8.0 – References provides a complete listing of references utilized in the preparation of this Final Program EIR. These documents are all incorporated by reference into this Final Program EIR. All of the documents listed in Section 8.0 are available for review at:

City of Irvine
Community Development Department
One Civic Center Plaza
Irvine, CA 92623-9575
Contact Glen Worthington at (949) 724-6370

EIR As An Information Document

This EIR is intended to provide information to public agencies, the general public, and decision makers, regarding the environmental impacts from the construction and operation of the proposed project. Under the provisions of CEQA, “The purpose of the Environmental Impact Report is to identify the significant effects of a project on the environment, to identify alternatives to the proposed project, and to indicate the manner in which significant environmental effects can be mitigated or avoided.” (Public Resources Code 21002.1(a)).

According to the CEQA Guidelines (Section 15168), a Program EIR may be prepared on a series of actions that can be characterized as one large project, are related geographically, and as logical parts in a chain of contemplated actions in connection with issuance of rules, regulations or plans. The Program EIR allows for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on separate individual actions, and ensures consideration of cumulative impacts that might not otherwise be addressed on a case-by-case basis. The proposed project involves several land use actions covering approximately 4,806 acres of land.

Full development of the project area in accordance with the Orange County Great Park Plan is estimated to take over 20 years. As such, the Program EIR provides a first-tier analysis of the proposed project by analyzing the broad environmental effects. Subsequent activities in the project area must be examined in light of the Program EIR to determine whether an additional environmental document must be prepared. If a subsequent project or later activity would have effects that were not examined in this Program EIR, or not examined at

an appropriate level of detail to be used for the later activity, an initial study would need to be prepared, leading to a negative declaration or an EIR. If the City finds that pursuant to Section 15152 of the CEQA Guidelines, no new effects could occur or new mitigation measures would be required for a subsequent project, the City can approve the activity as being within the scope of the project covered by this Program EIR, and no new environmental documentation would be required.

Numerous acronyms are used throughout the Final Program EIR. These acronyms and meanings are included in Appendix A of this EIR.

Notice of Preparation

The Notice of Preparation (NOP) of an EIR was distributed on October 2, 2002. The NOP, the NOP distribution list, and NOP comments are included in Appendix B and C. The comment letters to the NOP are on file at the City of Irvine, Community Development Department, One Civic Center Plaza, Irvine, California 92623-9575, contact Glen Worthington (949) 724-6370.

Scoping Session

On October 29, 2002, the City of Irvine held a scoping session at the Irvine City Hall to answer questions and permit discussion on the project. The University Village alternative land use plan was developed in response to public comments made at the meeting and subsequently provided as written responses to the NOP.

Public Review Period

Comments of all agencies and individuals on the Draft Program EIR were accepted during the 45-day public review period which opened on February 18, 2003 and closed on April 4, 2003. A Response to Comments document was published by the City of Irvine on May 15, 2003. In response to comments received, minor revisions were made to the EIR. These clarifications/modifications do not constitute significant additional information that changes the conclusions of the environmental analysis or requires re-circulation of the document (CEQA Guidelines Section 15088.5). All changes made were noted in the Response to Comments document and incorporated in to the Final Program EIR certified by the City Council.

2.0 Executive Summary

Project Description

The project consists of the following actions: 1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; 2) Annexation of the unincorporated portion of Planning Area 35 (James A. Musick Branch Jail and the Irvine Ranch Water District Parcel); and 3) General Plan Amendment and Zone Change for Planning Area 30 which is presently in the City of Irvine; and 4) Approval of the form of a Development Agreement vesting approval of higher intensity overlay uses in consideration for dedication of land for public purposes and for developing and funding certain infrastructure improvements and maintenance of the public uses by the purchaser/developer and subsequent landowners and funds for specified park, roadways, and other circulation facilities and infrastructure. Together, these actions establish the policy and legislative structure to guide the development of the former MCAS El Toro property and the implementation of the "Orange County Great Park."

These actions are described in greater detail in Section 3.0 - Project Description. The reader should refer to Section 3.0 for a discussion of all actions included in the project.

The purpose of the project is to assure that reuse of the former MCAS El Toro is consistent with the intent of Measure W approved by the voters in March, 2002 while responding to the decision of the federal government to sell the land at a public auction. The City also wishes to assure a financially viable development consistent with the intent of Measure W with the orderly development of public infrastructure and public open space amenities at no cost to the local taxpayer. Securing local control over land use decisions and the coordination of all infrastructure improvements is essential to meet the City's objectives. Annexation of the portions of the property not currently within the City limits and an amendment of the City's General Plan and Zoning Ordinance are actions required to transfer complete land use control from the County of Orange to the City of Irvine.

Project Location

The project is located in the center of Orange County and includes land within the City of Irvine and unincorporated area. The project area is northeast of the intersection of Interstate 5 and the Eastern Transportation Corridor Toll Road. Figure 1-1 (Project Location) depicts the location of the project area in a regional and local context, respectively. The former MCAS El Toro portion of the project area encompasses approximately 4,693 acres or 7.3 square miles. Approximately 4,279 acres of the former MCAS El Toro portion of the project area (PA 51) are located on unincorporated County land, but within the City of Irvine Sphere of Influence. Approximately 398 acres (PA 30) and 16 acres (PA 51) are within the city limits of Irvine. The James A. Musick Jail facility and the Irvine Ranch Water District (IRWD) parcel comprise approximately 113 acres, and are located on unincorporated County land. The total land area being annexed is 4,287 acres.

The project area is generally bounded by the cities of Irvine and Lake Forest on the south and east, and unincorporated area in the County of Orange on the north. Other nearby

local jurisdictions include the cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo and Tustin.

Major roadways bordering the project area include I-5 to the southwest, Sand Canyon Avenue to the northwest, Portola Parkway and Irvine Boulevard to the north, and Bake Parkway to the northeast. John Wayne Airport is located seven miles to the west of the project area. The Irvine Transportation Center, a major multi-modal transit center linking Orange County Transportation Authority (OCTA) bus, Metrolink commuter rail, and Amtrak rail services, is adjacent to the SCRRRA tracks which traverse the site and separate Planning Areas 51 and 30.

The James A. Musick Jail Facility is located on a 105-acre parcel northwest of existing Bake Parkway and east of the future extension of Alton Parkway. The northern boundary of the Musick Jail site abuts the former MCAS El Toro. Existing buildings of the Irvine Spectrum abut the Musick Jail site to the west/southwest. An eight-acre (IRWD) parcel west of the Musick Jail contains the IRWD East Irvine Zone IV Pumping Station, Zone III 5.0 million gallon potable water reservoir, and a 7.0 million gallon potable water reservoir.

Environmental Impacts

The City of Irvine has determined that an EIR is required pursuant to the CEQA Guidelines. The environmental issue areas identified for study in the Final Program EIR are land use, traffic/circulation, air quality, noise, public health and safety, geology and seismicity, hydrology and water quality, agricultural resources, biological resources, paleontological resources, cultural resources, aesthetics, population/housing, public services and facilities, utilities, cumulative impacts, growth-inducing impacts, and significant irreversible environmental changes. Table 2-1 presents a summary of the environmental impacts of the proposed project, mitigation measures to reduce potential significant impacts for the proposed project, and the level of significance of each impact after mitigation. Significant unavoidable project-level impacts have been identified for air quality, agricultural resources and population/housing. Cumulative unavoidable impacts have been identified for traffic/circulation, air quality, population/housing, and agricultural resources.

Potential Areas of Controversy

The primary area of controversy surrounding the proposed project is whether the former air station should be reused as a non-aviation use versus an aviation use. Until the recent passage of Measure W on March 5, 2002, the County of Orange was proceeding with plans for a commercial airport at the former MCAS El Toro site. While the Orange County voters approved Measure W, limited opposition remains to the non-aviation use of the property. Other issues related to the proposed project are addressed in Sections 5.1 through 5.15 of this Final Program EIR.

Alternatives to the Proposed Project

The alternatives evaluation during the analysis of the proposed project include:

1. No Project/Measure W/PA51/Millennium Plan II PA30

2. Existing City of Irvine General Plan (Millennium Plan II Land Uses)
3. Measure W PA 51/Millennium Plan II PA 30 - Modified
4. Alternative Land Use Plan – University Village
5. Increased Residential Alternative

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
5.1 Land Use		
Base Plan and Overlay Plan No significant land use impact has been identified.	Base Plan and Overlay Plan No mitigation measure is proposed, as no significant land use impact has been identified.	Base Plan and Overlay Plan Not applicable.
5.2 Traffic/Circulation		
Base Plan Tran B1. Implementation of the Base Plan will cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestion at intersections) in the 2007, 2025, and Post 2025 scenarios as follows: ROADWAY/FREEWAY/TOLLWAY/RAMP SEGMENTS Year 2007 I-5 Freeway Southbound off ramp at Alton Parkway Year 2025	Base Plan Locations experiencing peak hour deficiencies and significantly impacted by the project have been evaluated to determine what improvements are necessary to provide acceptable levels of service in accordance with City of Irvine and adjacent jurisdiction standards. Project mitigation in the form of (1) constructing new on-site arterial highways, (2) constructing new off-site roadway improvements, and (3) participating on a fair share basis to needed off-site freeway/tollway ramp improvements, have all been determined as part of the traffic analysis. The traffic impact study has presented a multi-phase analysis of the potential traffic related impacts that would be anticipated to occur under the Orange County Great Park proposed network and land use concepts. The following identifies the measures needed to mitigate the impacts that have been identified. As the planning process for the project proceeds, and the land use plan becomes more defined and refined, additional analyses will be required to determine the cost, assign responsibility and refine the phasing of mitigation measures.	Base Plan Less than significant.

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>I-5 Freeway at Jeffrey Road – southbound on ramp (AM/PM) I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM) I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM) I-5 Freeway at Bake Parkway – southbound off ramp (AM) I-405 Freeway at Jeffrey Road – northbound off ramp (PM) I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM) I-405 Freeway at Sand Canyon Avenue – southbound off ramp (AM)</p> <p>Post 2025</p> <p>I-5 Freeway from Jeffrey Road to Sand Canyon Avenue- southbound (AM) I-405 Freeway from Jeffrey Road Sand Canyon Avenue- southbound (AM)</p> <p>I-5 Freeway at Jeffrey Road – southbound on ramp (AM/PM) I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM) I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM) I-5 Freeway at Bake Parkway – southbound off ramp (AM) I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM) I-405 Freeway at Sand Canyon Avenue –</p>	<p>Tran 1. Prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) (“Spectrumotion”) in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs. The primary purpose of this mitigation measure is to reduce traffic, air quality and noise impacts. Should annexation into Spectrumotion not be approved, the landowner or subsequent project applicant shall develop and implement a similar transportation management plan containing the elements and meeting the criteria described below:</p> <p>Transportation Management Plan (TMP)</p> <p>The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for the Great Park Project. This document summarizes the key elements of the TMP.</p> <p>1.0 Introduction</p> <p>The purpose of this document is to provide an outline for a comprehensive TMP for the Great</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>southbound off ramp (AM)</p> <p>INTERSECTIONS</p> <p>Year 2007</p> <p>Please refer to Table 5.2-6.</p> <p>Year 2025</p> <p>Please refer to Table 5.2-7.</p> <p>Post 2025</p> <p>Please refer to Table 5.2-8.</p> <p>Tran B2. Implementation of the Base Plan will result in inconsistencies with the adopted Orange County Master Plan of Arterial Highways (MPAH). These inconsistencies are associated with Marine Way and Rockfield Boulevard.</p> <p>Tran B3. Implementation of the Base Plan will exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways in the 2025 scenario. The Base Plan will impact the following:</p>	<p>Park. This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.</p> <p>It is the intent to annex Planning Area 51 and a portion of Planning Area 35 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.</p> <p>In the event that annexation of PAs 51 and 35 into Spectrumotion is not approved, a TMP similar to that provided by Spectrumotion will be implemented. This document sets forth the components of the TMP should it be necessary.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>INTERSECTION</p> <p>Year 2025</p> <p>El Toro Road/Avenida de la Carlota</p>	<p>2.0 Transportation Management Plan Framework</p> <p>The key elements of the Great Park TMP are set forth below:</p> <p>New Hire Orientation: Inform newly hired employees of commuting services available to them.</p> <p>Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services ((i.e., OCTA buses, Metrolink, Amtrak, etc.).</p> <p>Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.</p> <p>On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.</p> <p>Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.</p> <p>Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>each other.</p> <p>Website: Maintain a website with all of their program information available.</p> <p>Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.</p> <p>Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.</p> <p>Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.</p> <p>3.0 Transportation Management Plan Implementation</p> <p>As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Great Park. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.</p> <p>Tran 2. Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of this EIR.</p> <p>Tran 3. Prior to issuance of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the project traffic study (Urban Crossroads, December 2002) to maintain satisfactory levels of service as defined by the City's General Plan, based on thresholds of significance, performance standards, and methodologies used in this EIR, Orange County Congestion Management Program, and established in the transportation system/infrastructure fee program described in Mitigation Measure Tran 2 above.</p> <p>Tran 4. Prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>traffic forecasts. The updated traffic study will evaluate the cumulative impact of the subject map and all previously approved or concurrently submitted maps. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City approved traffic study scope of work. The landowner or subsequent project applicant shall construct, bond for, or enter into a funding agreement for necessary improvements identified in the updated traffic study and/or participate in the City fee program (Tran 2 above) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of this EIR.</p> <p>Traffic signals that are on-site or directly related to the Great Park development will be installed as warranted through the mitigation implementation plan process.</p> <p>Tran 5. In conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the following actions:</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<ol style="list-style-type: none"> 1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-tollway ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in this EIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines. 2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency. 3. The landowner or subsequent project applicant shall enter into an agreement with the City prior to recordation of the first final map for each Master Tentative Map or equivalent to establish the method and timing of payment of the identified percentage responsibility. 4. The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or 	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>funding participation in a regional transportation improvement fee program, if adopted.</p> <p>Tran 6. The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.</p> <p>Tran 7. Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-compete clause or any similar agreement restricting a public agency's authority to construct improvement.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	Tran 8. Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of building permits with the base property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdictions to amend the Orange County Master Plan of Arterial Highways (MPAH). Marine Way, Trabuco Road from SR-133 tollway to College Road, and Y Street shall be included on the MPAH.	
Overlay Plan Tran O1. Implementation of the Overlay Plan will cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestion at intersections) in the 2007, 2025, and Post 2025 scenarios as follows: ROADWAY/FREEWAY/TOLLWAY/RAMP SEGMENTS Year 2007 I-5 at Alton Parkway – southbound offramp (AM) I-405 at Irvine Center Drive – southbound offramp (AM)	Overlay Plan Same as Base Plan mitigation.	Overlay Plan Less than significant.

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>Year 2025</p> <p>University Drive from the I-405 Freeway to Michelson Drive (AM)</p> <p>I-5 Freeway from Sand Canyon Avenue to Jeffrey Road – northbound (PM)</p> <p>I-5 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)</p> <p>I-405 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)</p> <p>I-5 Freeway at Jeffrey Road – southbound on ramp (AM)</p> <p>I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM)</p> <p>I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM)</p> <p>I-5 Freeway at Alton Parkway - southbound off ramp (AM)</p> <p>I-5 Freeway at Bake Parkway – southbound off ramp (AM)</p> <p>I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM)</p> <p>I-405 Freeway at Sand Canyon Avenue - southbound off ramp (AM)</p> <p>I-405 Freeway at Irvine Center Drive - southbound off ramp (AM)</p> <p>SR-241 Tollway at Lake Forest Drive – southbound off ramp (AM)</p> <p>SR-133 Freeway at Barranca Parkway – northbound direct on ramp (PM)</p>		

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>Post 2025</p> <p>I-5 Freeway from Sand Canyon Avenue to Jeffrey Road – northbound (PM) I-5 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM) I-405 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)</p> <p>I-5 Freeway at Jeffrey Road – southbound on ramp (AM) I-5 Freeway at Sand Canyon Avenue - northbound on ramp (PM) I-5 Freeway at Sand Canyon Avenue - southbound off ramp (AM) I-5 Freeway at Alton Parkway - southbound off ramp (AM) I-5 Freeway at Bake Parkway - southbound off ramp (AM) I-5 Freeway at El Toro Road – southbound off ramp (PM) I-405 Freeway at Jeffrey Road – northbound off ramp (PM) I-405 Freeway at Sand Canyon Avenue - northbound direct on ramp (AM/PM) I-405 Freeway at Sand Canyon Avenue - southbound off ramp (AM) I-405 Freeway at Irvine Center Drive – southbound off ramp (AM)</p>		

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>INTERSECTIONS</p> <p>Year 2007</p> <p>Please refer to Table 5.2-12.</p> <p>Year 2025</p> <p>Please refer to Table 5.2-13.</p> <p>Post 2025</p> <p>Please refer to Table 5.2-14.</p> <p>Tran O2. Implementation of the Overlay Plan will result in inconsistencies with the adopted Orange County Master Plan of Arterial Highways (MPAH). These inconsistencies are associated with Marine Way and Rockfield Boulevard.</p> <p>Tran O3. Implementation of the Overlay Plan will exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways in the 2007 and 2025 scenarios. The Overlay Plan will impact the following:</p>		

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Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>FREEWAY/TOLLWAY LOCATIONS</p> <p>Year 2025</p> <p>I-5 from Sand Canyon Avenue to Jeffrey Road – northbound (PM) I-5 from Jeffrey Road to Sand Canyon Avenue– southbound (AM) I-405 from Jeffrey Road to Sand Canyon Avenue- southbound (AM)</p> <p>INTERSECTIONS</p> <p>Year 2007</p> <p>El Toro Road/Avenida de la Carlota</p> <p>Year 2025</p> <p>El Toro Road/Avenida de la Carlota</p>		
5.3 Air Quality		
<p>Base Plan and Overlay Plan</p> <p>AQ1. Implementation of the proposed project will result in a significant air quality impact associated with the fugitive dust emissions resulting from the demolition of existing structures, and land preparation and excavation for the construction of proposed structures. Additionally, the operation of the project will result in a significant impact</p>	<p>Base Plan and Overlay Plan</p> <p>The following section provides a summary of the possible mitigation measures that could be implemented for the development of the former MCAS El Toro according to the proposed project. The limited availability of specific data to quantify air quality impacts for emission sources within the proposed project make it impossible to accurately quantify the effectiveness of each of the mitigation measures. However, these measures are identified as possibilities for the project,</p>	<p>BasePlan/Overlay Plan</p> <p>Due to the size of the project, certain impacts that result from development will be "unavoidable" as these impacts cannot be completely mitigated and most of these changes are irreversible. This is</p>

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Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>associated with motor vehicle emissions.</p>	<p>while some are recommended by the SCAQMD for all development projects within the SCAB. As expected, the implementation of some or all of the mitigation measures will result in an overall reduction in potential air emissions from the proposed project. However, the implementation of any of these emission mitigation measures cannot be guaranteed at this stage of the proposed project, because they may not be technically or economically feasible once actual development gets underway. Therefore, the emission mitigation measures discussed in the following sections are defined as alternate control measures that could be implemented for the proposed project.</p> <p>Construction Emissions Mitigation</p> <p>The major source of construction emissions are fugitive dust emissions resulting from the demolition of existing structures, and land preparation and excavation for the construction of proposed structures. Actual erection of structures is considered a minimal source of construction related dust emissions. The following mitigation measures are intended to effectively reduce pollutant emissions from construction activities. Some or all of the mentioned mitigation measures can be implemented as necessary, but quantification and application of these measures cannot be specified at this time.</p> <p>AQ1. Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as</p>	<p>considered a significant unavoidable impact, although the overall effect on air quality within the Basin for the life of the proposed project is estimated at less than one half of one percent. Construction-related emissions are expected to result in unavoidable short-term impacts in terms of ROG and NO_x, although implementation of mitigation measures during construction will minimize these impacts to the extent feasible. Short-term impacts on sensitive receptors are expected to be mitigated during construction and no long-term CO hotspots will be created that may affect sensitive receptors. Operational emissions from future development under the proposed project will consist of area source and motor vehicle emissions, which will exceed SCAQMD thresholds. These air quality emissions from future development</p>

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Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors; etc.; shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.</p> <p>AQ2. Prior to the commencement of construction activities required to demolish and/or remove existing DON infrastructure, including runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chose demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.</p> <ul style="list-style-type: none"> C Evaluate the availability and use, if available, of low-emission (i.e., methanol- or natural gas-powered) construction equipment instead of diesel for each construction phase. C Water exposed soils at least twice daily and maintain equipment and vehicle engines in good condition and in proper tune. C Wash off trucks leaving the site. C Replace ground cover on construction sites when it is determined that the site will be undisturbed for 	<p>under the proposed project will remain significant, even after mitigation.</p> <p>Area Source (Post-Construction) Emission Mitigation</p> <p>Emissions resulting from the post-construction and routine operation of various sources within a development contribute to long term impacts on air quality throughout its life. Some of the mitigation measures that could reduce energy consumption within the proposed project and thus, reduce associated emissions should be considered for implementation and are listed below.</p> <ul style="list-style-type: none"> C Central residential space heating and cooling for multi-dwelling units. C Orient buildings north/south for reducing energy-related combustion

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Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>lengthy periods.</p> <ul style="list-style-type: none"> C Reduce speeds on unpaved roads to less than 15 miles per hour. C Halt all grading and excavation operations when wind speeds exceed 25 miles per hour. C Suspend all emission generating activities during smog alerts. C Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible. C Properly maintain diesel-powered on-site mobile equipment. C Sweep streets at the end of the day if substantial visible soil material is carried over to the adjacent streets. C Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible. C Use of low-VOC asphalt. C Cover all trucks hauling dirt, sand, soil or other loose material to and from the site. C Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic. C Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible. C Reroute construction trucks away from congested streets, whenever feasible. C Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible. 	<p>emissions.</p> <ul style="list-style-type: none"> C Central commercial space heating. <p>These measures could be accounted for in the planning process such that the overall impact of the proposed project on prevalent air quality in the SCAB is minimized.</p> <p><i>Motor Vehicle (Operational) Emission Mitigation</i></p> <p>Motor vehicle emissions form a large portion of the total operational emissions from the proposed project. These emissions can be mitigated by the use of fuel-efficient vehicles and a well designed transportation system. However, most of the measures will be ineffective unless the occupants of various commercial and residential establishments within the project contribute their share in the mitigation effort. The implementation</p>

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Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>AQ3. Prior to the issuance of building permits for any future development, the applicant shall submit, and the Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.</p> <ul style="list-style-type: none"> C Utilize built-in energy-efficient appliances to reduce energy consumption and emissions. C Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions. C Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible. C Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning. C Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible. C Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods. C Centralize space heating and cooling for multiple-family dwelling units and commercial space. C Orient buildings north/south for reducing energy-related combustion emissions. C Use solar energy, when feasible. 	<p>of some of the measures cannot be stated with certainty, as they are owner and employer specific and related specific land use types within the proposed project. Development of the proposed project will identify motor vehicle mitigation measures that would result in reductions in emissions and thereby contribute to the overall improvement in air quality within the SCAB. The inclusion of the OCTA facility within the proposed project is aimed at encouraging the use of alternative transportation thereby reducing motor vehicle congestion and related air quality emissions and impacts. The implementation of an emission reduction program under SCAQMD Rule 2202 is also expected to result in reducing motor vehicle air quality emissions and impacts.</p>

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Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>C Use high rating insulation in walls and ceilings.</p> <p>AQ4. Information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find employment nearby.</p> <p>AQ5. Future employment generating non-residential development shall include measures to reduce vehicle trips including: the promotion of carpool incentives and alternative work schedules, easy access to public transit systems, trail linkages between uses, low-emissions vehicle fleets, and the provision of on-site facilities such as banking and food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.</p>	
5.4 Noise		
<p>Base Plan and Overlay Plan</p> <p>No significant noise impact has been identified.</p>	<p>Base Plan and Overlay Plan</p> <p>No mitigation measure is proposed, as no significant noise impact has been identified.</p>	<p>Base Plan and Overlay Plan</p> <p>Not applicable.</p>

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Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
5.5 Public Health and Safety		
<p>Base Plan and Overlay Plan</p> <p>HH 1. Construction activities involving demolition and possible substantial remodeling of existing structures in the project area as the project area develops could result in the disturbance of structures and soils containing ACMs or LBPs. This is considered a significant impact.</p> <p>The presence of ACMs and LBP in structures and soils of properties conveyed by the DON may pose a future hazard to the public if the materials degrade or are otherwise disturbed. This is considered a significant impact.</p> <p>HH 2. IRP Site 24 is located in zoning districts categorized as 6.1 Institutional and 1.5 Recreation. The site may be conveyed with temporary restrictions on use that are not appropriate for transportation facility use. This is considered a significant impact.</p> <p>Future uses of IRP Site 3 may be potentially constrained by the implementation of institutional controls. This is considered a significant impact.</p>	<p>Base Plan and Overlay Plan</p> <p>HH 1.</p> <ul style="list-style-type: none"> a. Prior to the conveyance of the property and issuance of subsequent grading permits, where the presence of ACMs is identified, the DON or its transferee shall ensure that all available information concerning ACMs has been provided to the City of Irvine, and the purchasers of the property, including: <ul style="list-style-type: none"> C The type, location and condition of ACMs C The results of any asbestos testing C Description of asbestos control measures taken, if any C The costs or time necessary to remove existing ACMs C The results of any site-specific asbestos inventory updates b. For any structures known to contain ACMs that will be renovated and/or demolished prior to transfer, the DON shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements. c. Prior to transfer of any structure constructed before October 1988, scheduled for renovation and/or demolition, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by the DON. This requirement can be waived if an 	<p>Base Plan/Overlay Plan</p> <p>Less than significant.</p>

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Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>HH 3. IRP Site 16 (Crash Crew Pit No. 2) is located in zoning district designation 1.5 Recreation. The site may be conveyed with temporary restrictions on use that are not appropriate for recreational land uses. This issue is considered a significant impact.</p> <p>The Habitat Preserve, Wildlife Corridor, and Recreational areas in the northeastern portion of PA 51 will be exposed to the highest level of fire risk from wildfires because these areas and adjacent areas area currently defined as having high risk for wildland fires. The proposed project will result in an increase in both population and structures adjacent to this high fire risk area and the impact is considered significant. Additionally, existing structures may not meet City fire safety requirements.</p>	<p>architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building material, and to the best of their knowledge, no ACMs were used as a building material.</p> <p>d. Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.</p> <p>e. Any renovation and/or LBP abatement activities on residential units at former MCAS El Toro shall be conducted in accordance with all applicable federal, state and local regulatory requirements.</p> <p>HH 2.</p> <p>a. Prior to transfer, the City of Irvine shall receive from the DON, with the concurrence of the appropriate regulatory agencies, a statement that the "Action Required" IRP Site 3 is to be conveyed for restricted use and that all institutional controls have been identified and implemented. The City of Irvine will adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries</p>	

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Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>and acreages are approximate and shall be established by master plan approval.</p> <p>b. Prior to transfer, if the DON chooses to impose temporary restrictions on the use of Sites 16 and 24 pending adequate remediation of groundwater, the City of Irvine shall receive from the DON a statement of temporary restrictions on the use of the sites and the release of the sites for unrestricted use following implementation of adequate remediation of groundwater. The City of Irvine shall adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.</p> <p>HH 3. The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for "Development Within and Exclusion from Very High</p>	

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Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>Fire Severity Zones” and “Fuel Modification Plans and Maintenance.” Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the proposed project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.</p> <p>HH 4. Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.</p> <p>HH 5. Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate</p>	

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	<p>regulatory agencies, and the Director of Community Development of the City of Irvine in a timely manner. Additionally, said protocol plan shall be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities.</p> <p>HH 6. The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells located on the former MCAS El Toro in a geographic information system (GIS). The City shall review all permit applications on the former air station for well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to wells shall be limited to authorized personnel.</p>	
5.6 Geology and Seismicity		
<p>Base Plan and Overlay Plan</p> <p>GS 1. Future development of the project area has the potential to result in the exposure of people or structures to strong seismic ground shaking in the event a major earthquake occurs along any one of the active faults in the region. This is considered a significant impact.</p> <p>GS 2. The level of seismic activity expected in the project area is similar to the County as a whole, and other areas of Southern California. As such, the risk of loss, injury or</p>	<p>Base Plan and Overlay Plan</p> <p>GS 1. Prior to issuance of a building permit, the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.</p> <p>GS 2. Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to</p>	<p>Base Plan and Overlay Plan</p> <p>Less than significant.</p>

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Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>death involving strong seismic ground shaking is similar to the risk associated with other regions within Southern California.</p> <p>GS 3. Some expansive soils may be present in localized areas within the project area. The presence of expansive soils could create risks to life or property through the post 2025 development levels. This impact is considered significant.</p> <p>GS 4. Many of the existing buildings on the former MCAS El Toro site may not have been constructed in a manner that is acceptable for its intended use. Temporary or permanent reuse of these facilities could expose people to a greater seismic risk than buildings that are constructed to applicable seismic codes. This is considered a significant impact.</p> <p>GS 5. Future development of the project area has the potential for impacts resulting from soil erosion or the loss of topsoil. This impact is considered significant through the post 2025 development levels.</p> <p>GS 6. Some expansive soils may be present in localized areas within the project area. The presence of expansive soils could create risks to life or property. This is considered a significant impact.</p>	<p>address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.</p> <p>1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be conducted. The purpose of the subsurface evaluation is to:</p> <ul style="list-style-type: none"> a. Further evaluate the subsurface conditions in the area of the proposed structures. b. Provide specific data on potential geologic and geotechnical hazards. c. Provide information pertaining to the engineering characteristics of earth materials in the project area. <p>From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural sections, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:</p> <p>C Seismic Ground Shaking - Measures to prevent risk of loss, injury or death involving</p>	

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	<p>seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.</p> <p>C Erosion or Loss of Topsoil – Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances.</p> <p>C Where Expansive Soils Exist – Measures for the design of foundations, slabs, flatwork and other improvements subject to drainage from expansive soils.</p> <p>Compliance with this measure shall be verified by the Community Development Department.</p> <p>GS 3. Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of any existing structure if a building permit is not issued, a seismic evaluation of the structure including recommendations for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.</p> <p>GS 4. Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading</p>	

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	activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.	
5.7 Hydrology/Water Quality		
<p>Base Plan and Overlay Plan</p> <p>H/WQ 1. Grading and excavation activities required for future development could result in the exposure of bare soils which could result in both wind and water-related erosion, and a significant water quality impact if not properly treated. Through buildout of the proposed project, wind and water related erosion has the potential to violate water quality standards or waste discharge requirements. This is considered a significant impact. Implementation of Mitigation Measures HW1 and HW2 will reduce the impact associated with the potential to violate water quality standards and waste discharge requirements to a level less than significant.</p> <p>Additionally, a Storm Water Pollution Prevention Plan (SWPPP), Water Quality Management Plan (WQMP) will be</p>	<p>Base Plan and Overlay Plan</p> <p>H/WQ 1. Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City of Irvine adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area . . . and residential construction sites that result in the disturbance of five acres or more . . . shall be required to develop and implement BMPs . . . to control erosion and siltation and contaminated runoff from the construction sites." Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of</p>	<p>Base Plan and Overlay Plan</p> <p>Less than significant.</p>

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Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>prepared. A Notice of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the City Engineer for: a) any disturbance of one acre or more of soil in the project area; b) General Dewatering NPDES Permit of the Santa Ana RWQCB; and c) provisions of the Countywide Permit.</p> <p>These measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned, designed, and constructed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future.</p> <p>H/WQ 2. Improvements to the flood control system shall be evenly scheduled during the various phases of development. However, a substantial increase in the rate or amount of surface runoff due to new development may occur, resulting in flooding on- or off-site depending on the future proposed</p>	<p>one acre or more.</p> <p>The City's standard conditions of approval indicate that a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.</p> <p>Additionally, prior to the issuance of a grading permit, project applicants must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.), and shall reference the location(s) of structural BMPs.</p> <p>Also in accordance with standard City project</p>	

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<p>development. The potential for flooding to occur on-or off-site as a result of future development of the project area is considered a significant impact. Implementation of Mitigation Measure HW3 will reduce this impact to a level less than significant.</p> <p>H/WQ 3. With recent improvements to upstream flood control facilities, the floodplain area has likely decreased and fewer areas of the project area are subject to inundation. The phasing of the flood control system improvements in PAs 51 and 30 will be coordinated with the street-phasing schedule so that the storm drains are installed prior to or in concert with road construction. Improvements to the flood control system shall be evenly scheduled during the various phases of development. However, a substantial increase in the rate or amount of surface runoff due to new development may occur, resulting in flooding on- or off-site depending on the future proposed development. This is considered a significant impact. Implementation of Mitigation Measure HW3 will reduce on- or off-site flooding due to surface runoff to a level less than significant.</p> <p>H/WQ 4. As per the requirements of the Regional Water Quality Control Board, proposed</p>	<p>permitting and approval procedures, Notices of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the Director of Community Development for any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES Permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.</p> <p>The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.</p> <p>H/WQ 2. Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with</p>	

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<p>projects occurring upstream of or discharging into impaired waterbodies listed on the Clean Water Act Section 303(D) list may be subject to additional controls (specifically Total Maximum Daily Loads or TMDLs) pursuant to that regulation. Depending on the specific type of project proposed, these controls could include discharge prohibitions, revisions to discharge permits or management plans to address water quality impacts. This is especially important in the Newport Bay watershed. At this program level of planning, the potential to degrade surface water quality is considered a significant impact. Implementation of Mitigation Measure HW1 will reduce the impact of future development on surface water quality to a level less than significant.</p> <p>Additionally, a Storm Water Pollution Prevention Plan (SWPPP), Water Quality Management Plan (WQMP), Notice of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the City Engineer for: a) any disturbance of one acre or more of soil in the project area; b) General Dewatering NPDES Permit</p>	<p>water quality requirements identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TDML) Implementation Plan adopted for this watershed.</p> <p>H/WQ 3. Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrology and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.</p> <p>H/WQ 4. Prior to issuance of a building permit, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.</p>	

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Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>of the Santa Ana RWQCB; and c) provisions of the Countywide Permit.</p> <p>The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Grading or building permit applicants will be required to submit and obtain approval of a Water Quality Management Plan (WQMP) from the City of Irvine prior to issuance of the permits. The WQMP will specifically identify BMPs that will be used on-site to control predictable pollutant runoff. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.), and shall reference the location(s) of structural BMPs.</p> <p>Future projects in the proposed project area will acknowledge and implement those additional requirements that may be</p>	<p>After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.</p> <p>H/WQ 5. Project development is proposed in areas of PAs 51 and 30. Existing and proposed development within these areas could be subject to potential flooding associated with a 100-year frequency storm. Mitigation Measure HW4 will reduce the impact of exposure of future residential development in the project area to a level less than significant.</p>		
5.8 Agricultural Resources		
<p>Base Plan and Overlay Plan</p> <p>Ag 1. The project Base Plan will convert 574 acres of Prime Farmland, 63 acres of Unique Farmland, and 46 acres of Farmland of Statewide Importance to non-agricultural use. The Overlay Plan will convert 651 acres of Prime Farmland, 63 acres of Unique Farmland and 88 acres of Farmland of Statewide Importance to non-agricultural uses.</p> <p>Ag 2. The project will involve changes in the existing environment, which, due to their location or nature, could result in conversion of existing farmland to non-agricultural use.</p>	<p>Base Plan and Overlay Plan</p> <p>Ag 1. In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operations, City Of Irvine Standard Discretionary Case Condition B.4 and City Of Irvine Standard Subdivision Condition 3.4 regarding disclosure statements shall be amended to include the following for subdivisions proposed adjacent to existing agricultural operations:</p> <p>Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The</p>	<p>Base Plan and Overlay Plan</p> <p>Significant and unavoidable.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:</p> <p>Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.</p> <p>Ag 2. Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.</p> <p>Ag 3. Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operation and adjacent urban uses.</p>	
5.9 Biological Resources		
<p>Base Plan and Overlay Plan</p> <p>Bio 1. The southern tarplant, a federal species of concern, may be affected by development of the site. This is considered a significant impact.</p>	<p>Base Plan and Overlay Plan</p> <p>Bio 1. Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. Prior to approval of a subdivision map for</p>	<p>Base Plan and Overlay Plan</p> <p>Less than significant.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>Bio 2. There is a limited amount of highly disturbed wetland habitat on the project site. The project may result in an impact to this habitat.</p> <p>Bio 3. PAs 51 and 30 contain a large number of trees, many of them mature, representing a wide range of species. Implementation of the proposed project may result in damage and destruction to the trees. A significant impact related to conflicts with the City of Irvine's Urban Forestry Ordinance may occur.</p>	<p>development within, or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).</p> <p>Bio 2. Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan subarea that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, re-creation (i.e. within the proposed wildlife corridor), and/or revegetation as deemed acceptable by the appropriate jurisdictional agencies.</p> <p>Bio 3. The City shall continue to work with State and federal agencies during the implementation of the proposed project to implement the revegetation/restoration plan for the wildlife corridor. Measures such as sight and</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>sound barriers, including artificial sound walls and natural diversions (e.g. hedges and tree lines) shall be incorporated into corridor design to ensure the viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the EIR.</p> <p>Bio 4. Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered "Significant Trees" under the City of Irvine's Urban Forestry Ordinance (UFO) (Section 5-7-401 et al) and the UFO shall apply to all trees included in this inventory.</p>	
5.10 Paleontological Resources		
<p>Base Plan and Overlay Plan</p> <p>P1. Earthmoving operations such as grading and trenching has the potential to impact buried paleontological resources in the moderately to highly sensitive areas in the coastal plain and washes, northeast, northwest and southern</p>	<p>Base Plan and Overlay Plan</p> <p>P1. Prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. (A qualified paleontologist is</p>	<p>Base Plan and Overlay Plan</p> <p>Less than significant.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>portions of PA 51. This is considered a significant impact.</p> <p>Additionally, pleistocene terrestrial vertebrates have been discovered four miles from PA 30. Similar beds of Pleistocene terrestrial vertebrates may underlie PA 30. This impact is considered significant.</p>	<p>defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.</p> <p>When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossils specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screen-washing operation on-site.</p> <p>Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
5.11 Cultural Resources		
<p>Base Plan and Overlay Plan</p> <p>Cult1. Grading activities associated with future development of the project area may cause a substantial adverse change in the significance of an archaeological resource. Mitigation Measures Cult B1 through Cult B3 will reduce this impact to a level less than significant.</p> <p>Cult2. Grading activities could uncover previously unknown human remains, including those interred outside of formal cemeteries. Mitigation Measure Cult B4 will reduce this impact to a level less than significant.</p>	<p>Base Plan and Overlay Plan</p> <p>The following measures have been developed to provide assurances that significant cultural resource impacts or potentially significant cultural resource impacts associated with the proposed project will be mitigated to a level less than significant. This assurance is obtained by verification, which would occur at subsequent levels of environmental review. Finally, in some instances, it is not possible at this program level of analysis to determine if cultural resource impacts would occur from the implementation of specific actions. For these situations, mitigation measures provide for further review at the time of specific development proposals in the project area. Increased planning detail developed at the development proposal level will clarify the specific impacts and options available for mitigation. As such, these measures are not intended to restrict the development of appropriate mitigation measures, as determined through analysis at a subsequent level of review.</p> <p>Cult1. Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PAs 51 and 30. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.</p>	<p>Base Plan and Overlay Plan</p> <p>Less than significant.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>Cult2. Monitoring of excavation and grading activities associated with future development in PAs 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure Cult1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and an assessment of their importance under CEQA and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.</p> <p>Cult3. Prior to the issuance of grading permits and/or building permits for any future development in PAs 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City of Irvine to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and scientific</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.</p> <p>Cult4. Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City of Irvine to address the accidental discovery or recognition of any human remains. The program shall include the following:</p> <p>There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:</p> <p>C <i>The county coroner must be contacted to determine that no investigation of the cause of death is required, and</i></p> <p>If the coroner determines the remains to be Native American:</p> <p>C <i>The coroner shall contact the Native American Heritage Commission within 24 hours.</i></p> <p>C <i>The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.</i></p> <p>C <i>The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods</i></p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p><i>as provided in Public Resources Code Section 5097.98, or</i></p> <p>C <i>Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.</i></p> <p>C <i>The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.</i></p> <p>C <i>The descendant identified fails to make a recommendation; or</i></p> <p>C <i>The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.</i></p> <p>Compliance with this measure shall be verified by the Community Development Department.</p>	
5.12 Aesthetics		
Base Plan and Overlay Plan	Base Plan and Overlay Plan	Base Plan and Overlay Plan
A1. Future development of PAs 51 and 30 pursuant to the proposed GPA and Zone Change, and consistent with the Orange County Great Park land use plan, will lead to the introduction of	A1. Prior to issuance of grading permits, lighting plans and signage plans for new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent	Less than significant.

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>new sources of light within the project area. These sources include street lighting along planned roadways and exterior lighting (including security lighting and parking lot lighting) for various educational and institutional developments, and lighting associated with athletic fields. The potential for a significant light impact may occur should proposed light sources be directed into or located near existing or planned residential uses, which are sensitive to light intrusion during nighttime hours. This is considered a significant impact. Implementation of Mitigation Measures A1 and A2 will reduce the impact to a level less than significant.</p> <p>A2. Future development of PAs 51 and 30 pursuant to the proposed GPA and Zone Change, and consistent with the Orange County Great Park Base Plan, will lead to the introduction of new sources of glare within the project area. Reflective materials and glazed or polished exterior surfaces associated with the research and development land uses may create glare, which could cause visual nuisance to residential land uses. This is considered a significant impact. Implementation of Mitigation Measures A1 and A2 will reduce the impact to a level less than significant.</p>	<p>residential areas occurs.</p> <p>A2. Prior to the issuance of grading permits, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.</p>	

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
5.13 Population and Housing		
Base Plan and Overlay Plan A significant impact to jobs/housing ratio will occur.	Base Plan and Overlay Plan No mitigation is available to rectify conflicts with the numerical objectives of regional planning documents including the jobs/housing balance.	Base Plan and Overlay Plan Although the proposed amendments to the City of Irvine General Plan will be incorporated into regional SCAG and County of Orange planning projections, the impact associated with jobs/housing balance will remain significant and unavoidable.
5.14 Public Services and Facilities		
<u>Law Enforcement</u> Base Plan and Overlay Plan The general significant impacts associated with the construction and operation of public facilities have been addressed within this EIR, including the possible construction and operation of a new police substation. The need for new public facilities will be mitigated by utilizing existing City standards.	<u>Law Enforcement</u> Base Plan and Overlay Plan Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of police facilities to serve new growth expected in the northern portion of the City.	<u>Law Enforcement</u> Base Plan and Overlay Plan Less than significant.
<u>Fire and Emergency Medical Services</u> Base Plan and Overlay Plan	<u>Fire and Emergency Medical Services</u> Base Plan and Overlay Plan	<u>Fire and Emergency Medical Services</u> Base Plan and Overlay Plan

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>The specific significant environmental impact of constructing new fire protection facilities that will be needed to serve the Base Plan cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new fire protection facilities. The need for new public facilities will be mitigated by utilizing existing City standards.</p> <p><u>Parks and Recreation</u></p> <p>Base Plan and Overlay Plan</p> <p>The specific significant environmental impact of constructing new recreational facilities that will be needed to serve the Base and Overlay Plans cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new recreational facilities. The need for new public facilities will be mitigated by utilizing existing City standards.</p> <p><u>School Services</u></p> <p>Base Plan and Overlay Plan</p>	<p>Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of fire protection facilities to serve new growth expected in the planning area.</p> <p><u>Parks and Recreation</u></p> <p>Base Plan and Overlay Plan</p> <p>Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of park and recreational facilities to serve new growth expected in the planning area.</p> <p><u>School Services</u></p> <p>Base Plan and Overlay Plan</p>	<p>Less than significant.</p> <p><u>Parks and Recreation</u></p> <p>Base Plan and Overlay Plan</p> <p>Less than significant.</p> <p><u>School Services</u></p> <p>Base Plan and Overlay Plan</p>

**Table 2-1
Environmental Impacts and Mitigation Measures**

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>The specific significant environmental impact of constructing new educational facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new educational facilities. The need for new public facilities will be mitigated by utilizing existing City standards.</p>	<p>Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of educational facilities to serve new growth expected in the planning area.</p>	<p>Less than significant.</p>
<p align="center">5.15 Utilities</p>		
<p><u>Potable Water</u></p> <p>Base Plan and Overlay Plan</p> <p>The specific significant environmental impact of constructing a new potable water facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new potable water facilities.</p> <p><u>Recycled Water</u></p> <p>Base Plan and Overlay Plan</p>	<p><u>Potable Water</u></p> <p>Base Plan and Overlay Plan</p> <p>Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new potable water facilities identified in this section to serve new growth expected in the project area.</p> <p><u>Recycled Water</u></p> <p>Base Plan and Overlay Plan</p>	<p><u>Potable Water</u></p> <p>Base Plan and Overlay Plan</p> <p>Less than significant.</p> <p><u>Recycled Water</u></p> <p>Base Plan and Overlay Plan</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>The specific significant environmental impact of constructing new recycled water facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new recycled water facilities.</p> <p><u>Sewer</u></p> <p>Base Plan and Overlay Plan</p> <p>The specific significant environmental impact of constructing new wastewater facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new wastewater facilities.</p> <p><u>Solid Waste</u></p> <p>Base Plan and Overlay Plan</p> <p>SW1. The project site may contain solid waste unsuitable for recycling or reuse. Also, the</p>	<p>Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new recycled water facilities identified in this section to serve new growth expected in the project area.</p> <p><u>Sewer</u></p> <p>Base Plan and Overlay Plan</p> <p>Mitigation Measures identified in other sections of this EIR (5.1 - 5.13) address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new wastewater facilities identified in this section to serve new growth expected in the project area.</p> <p><u>Solid Waste</u></p> <p>Base Plan and Overlay Plan</p> <p>SW1. It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other</p>	<p>Less than significant.</p> <p><u>Sewer</u></p> <p>Base Plan and Overlay Plan</p> <p>Less than significant.</p> <p><u>Solid Waste</u></p> <p>Base Plan and Overlay Plan</p> <p>Implementation of the proposed project will not</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
project will generate solid waste as result of demolition, operation of proposed land uses, and landscape maintenance.	<p>deconstruction of the aged structures and property, including but not limited to buildings and runways, at El Toro MCAS is contaminated with lead based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the El Toro MCAS site by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.</p> <p>If it is determined by the technical evaluation that the material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as "waste-to-energy" (WTE) plants.</p> <p>SW2. For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the</p>	result in a significant impact related to solid waste.

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>project applicant must submit a written plan to the City and implement such plan to ensure that 75% of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.</p> <p>SW3. For that solid waste which the technical study deems to be suitable for recycling, the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75% of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180. ("Recycling" does not include transformation, as defined in Public Resources Code Section 40201.)</p> <p>SW4. To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by "weight ticket" receipts from state-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.</p>	

**Table 2-1
Environmental Impacts and Mitigation Measures**

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
<p><u>Energy and Communications</u></p> <p>Base Plan and Overlay Plan</p> <p>The specific significant environmental impact of constructing new energy and communication facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new energy and communication facilities.</p>	<p>To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.</p> <p>SW5. For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50% of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.</p> <p><u>Energy and Communications</u></p> <p>Base Plan and Overlay Plan</p> <p>Mitigation Measures identified in other sections of this EIR address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new energy and communication transmission facilities identified in this section to serve new growth expected in the project area.</p>	<p><u>Energy and Communications</u></p> <p>Base Plan and Overlay Plan</p> <p>Less than significant.</p>

Table 2-1
Environmental Impacts and Mitigation Measures

Potential Impacts	Mitigation Measures	Level of Significance After Mitigation
No significant impact is anticipated related to substantial use of fuel and/or energy sources by the project was identified.		

3.0 Project Description

Project Characteristics

The project consists of the following actions: 1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; 2) Annexation of the unincorporated portion of Planning Area 35 (James A. Musick Branch Jail and the Irvine Ranch Water District Parcel); and 3) General Plan Amendment and Zone Change for Planning Area 30 which is presently in the City of Irvine; and 4) Approval of the form of a Development Agreement vesting approval of higher intensity overlay uses in consideration for dedication of land for public purposes and for developing and funding certain infrastructure improvements and maintenance of the public uses by the purchaser/developer and subsequent landowners and funds for specified park, roadways, and other circulation facilities and infrastructure. The proposed actions, by City of Irvine Planning Area are illustrated in Figure 3-1 and detailed in Table 3-1 entitled Proposed Action by Area.

Figure 3-2 depicts the proposed General Plan designations for the site. Figure 3-3 depicts the allowed uses within the Orange County Great Park (OCGP) designation by Planning Area Zone (PAZ). The base and overlay provisions of the OCGP designation are illustrated for each PAZ for all land being annexed and the portion of the project area currently in the City. The proposed General Plan land use designations and related zoning districts are summarized by PAZ in Table 3-2. Land uses planned in the project area are open space/park, residential, cultural facilities, transit oriented development, golf courses, habitat preserve/wildlife corridor, sports parks, agriculture, auto center use, educational, research and development, institutional, exposition centers, and transportation facilities.

The proposed zoning districts for the Base and Overlay Plans are illustrated in Figure 3-4. Certain zoning districts illustrated are not currently in the City's Zoning Ordinance at present and the creation of these districts constitutes an amendment to the City's Zoning Ordinance.

For purposes of the environmental analysis contained in this document, Tables 3-3 and 3-4 indicate the type and intensity of development permitted under the Base Plan and the Overlay Plan. The base line against which the impacts are analyzed is the existing conditions within the project area, including the present California State University-Fullerton satellite operation, golf course, and equestrian facilities.

Development standards for each PAZ are identified in terms of maximum acreage, maximum number of units, maximum square footage, and other development maximums. The proposed project represents a reduction of intensity of use compared to those uses that are presently designated in the City of Irvine General Plan. The proposed project includes street system modifications and other infrastructure improvements outside the area of the lands being annexed. These improvements are currently conceptual but are considered part of the project and are addressed in the Final Program EIR as related improvements.

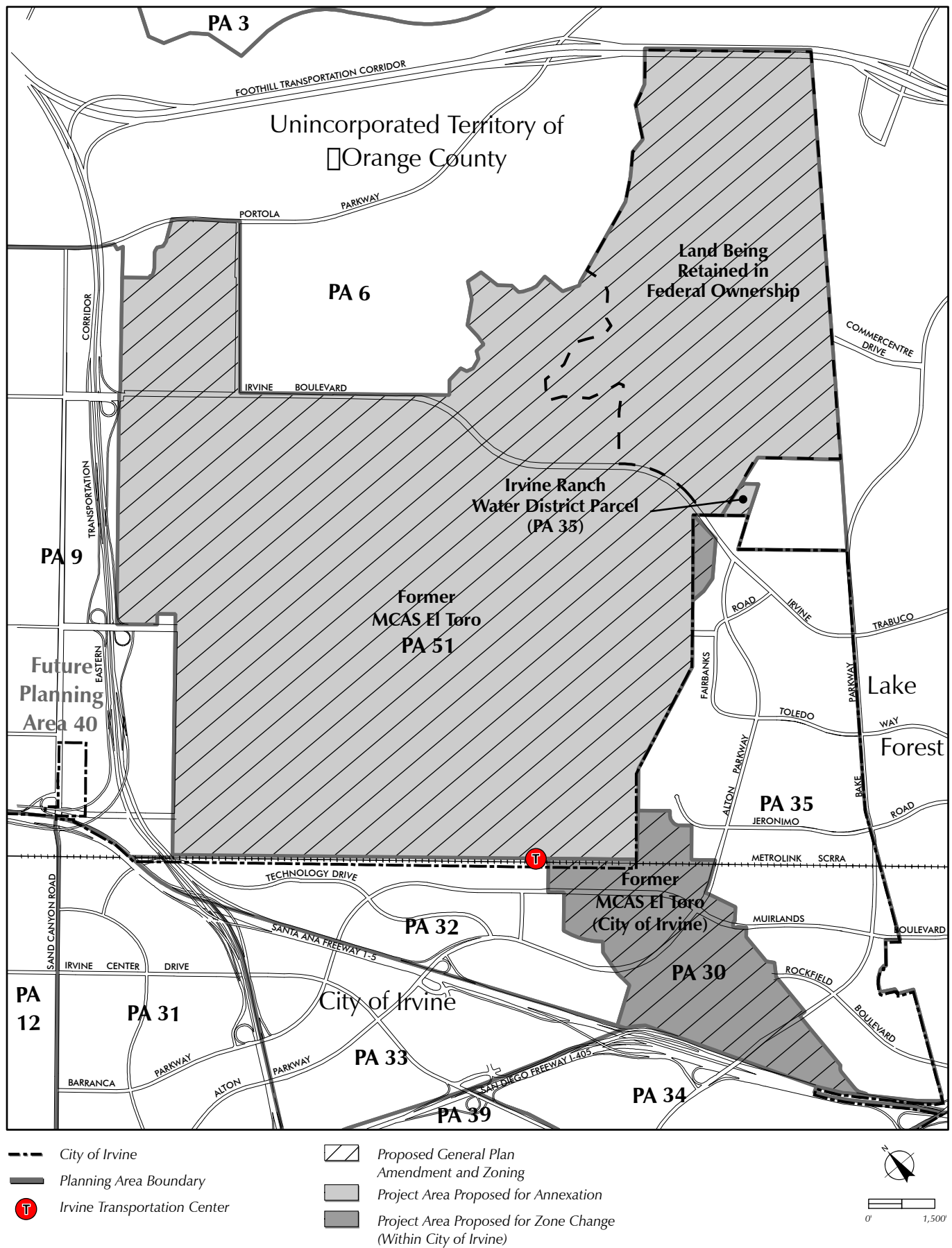
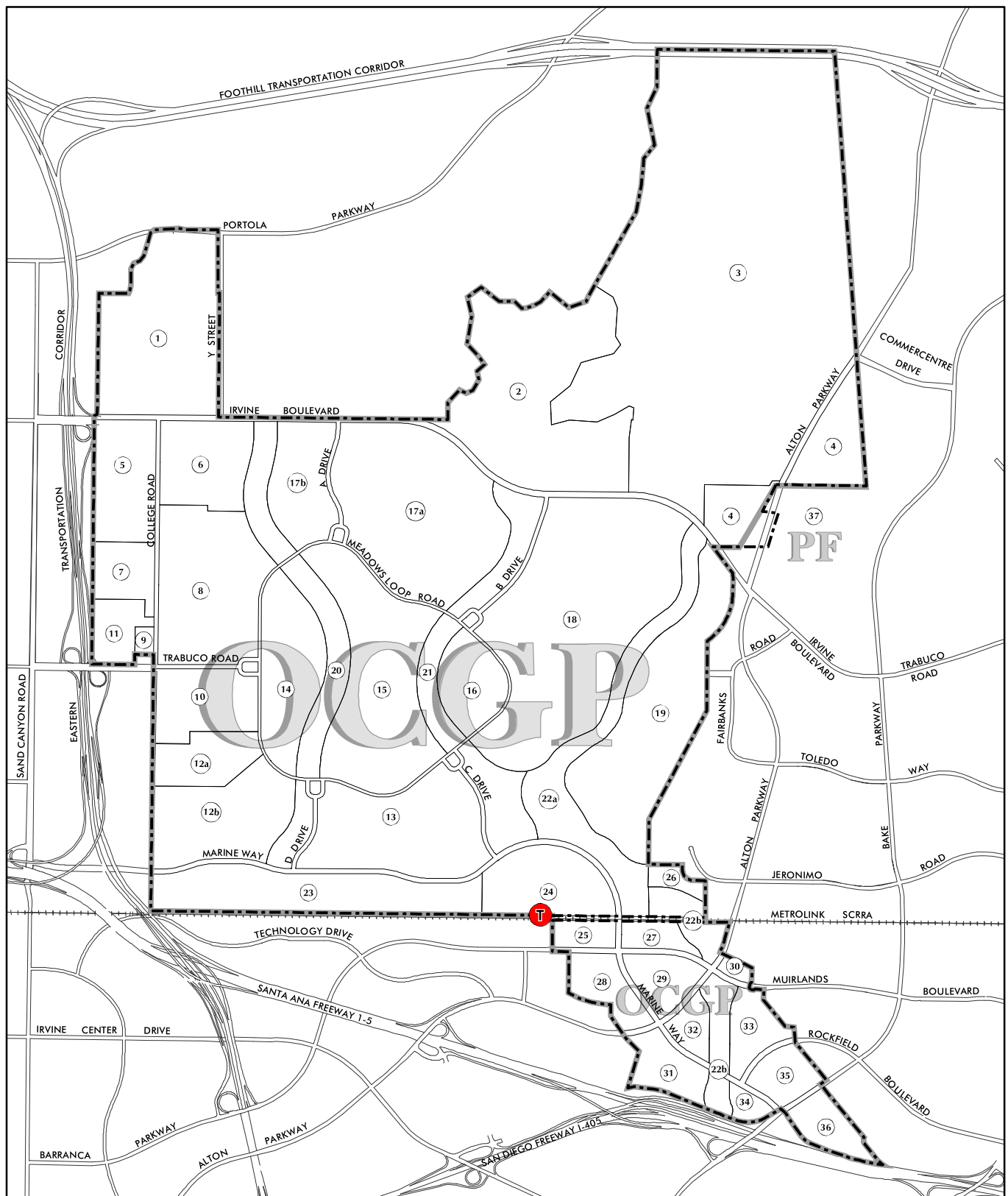


Figure 3-1
Proposed Actions

Table 3-1
Proposed Action By Area

Area	Proposed Actions
PLANNING AREA 51 Portion of MCAS El Toro in unincorporated County Portion of PA 51 located within City Limits	<ol style="list-style-type: none"> 1. Annexation of the majority of Planning Area 51 into City of Irvine. A small portion of Planning Area 51 is already in the City of Irvine. 2. General Plan Amendment to establish a land use category consistent with the Orange County Great Park Plan land use designations.* General Plan Amendments (Circulation Element) to realign Millennium Parkway as Marine Way and eliminate a portion of the extension of Trabuco Road, as well as modify the trails network. General Plan Amendment (Parks and Recreation and the Conservation and Open Space Elements) to establish land use policies consistent with the Orange County Great Park Plan land use designations. This amendment includes broadening the types of activities permitted in City park facilities, as well as modifying the location of recreational facilities and conservation/open space lands. 3. Pre-zoning prior to annexation and rezoning to permit implementation of the Orange County Great Park Plan designations. Creation of new or expanded zoning categories and overlay zones to implement the OCGP General Plan designation. <ol style="list-style-type: none"> 1. General Plan Amendment to establish a land use category consistent with the Orange County Great Park Plan land use designations.* 2. Zone Changes in Planning Area 51 to permit implementation of the Orange County Great Park Plan designations and zoning overlay. Creation of new or expanded zoning categories and overlay zones to address other components of the Great Park land use designations.
PLANNING AREA 35	<ol style="list-style-type: none"> 1. Annexation of a portion of Planning Area 35 (the Musick Jail Facility and IRWD parcel) to prevent creation of an unincorporated County island. 2. No General Plan amendment or zoning change is proposed.
PLANNING AREA 30 Portion of MCAS El Toro located within City limits	<ol style="list-style-type: none"> 1. General Plan Amendment to establish a land use category consistent with the Orange County Great Park Plan land use designations.* Circulation element revisions to realign Marine Way and Rockfield Boulevard and the trails network. Modification of the Parks and Recreation Element to relocate certain recreation facilities. 2. Zone changes in Planning Area 30 to permit implementation of the OCGP designations for the base zoning and the Overlay. Creation of new or expanded zoning categories and overlay zones to address the other components of the Great Park land use designations.

* The General Plan designation permits a base intensity of development with additional intensity available through compliance with criteria spelled out in a Development Agreement with the City and implemented through the City Zoning Ordinance.



- Project Boundary
- General Plan Designation Boundary
- ① Planning Area Zones
- ⓧ Irvine Transportation Center
- General Plan Designation**
- OCGP Orange County Great Park
- PF Public Facility

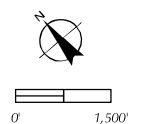
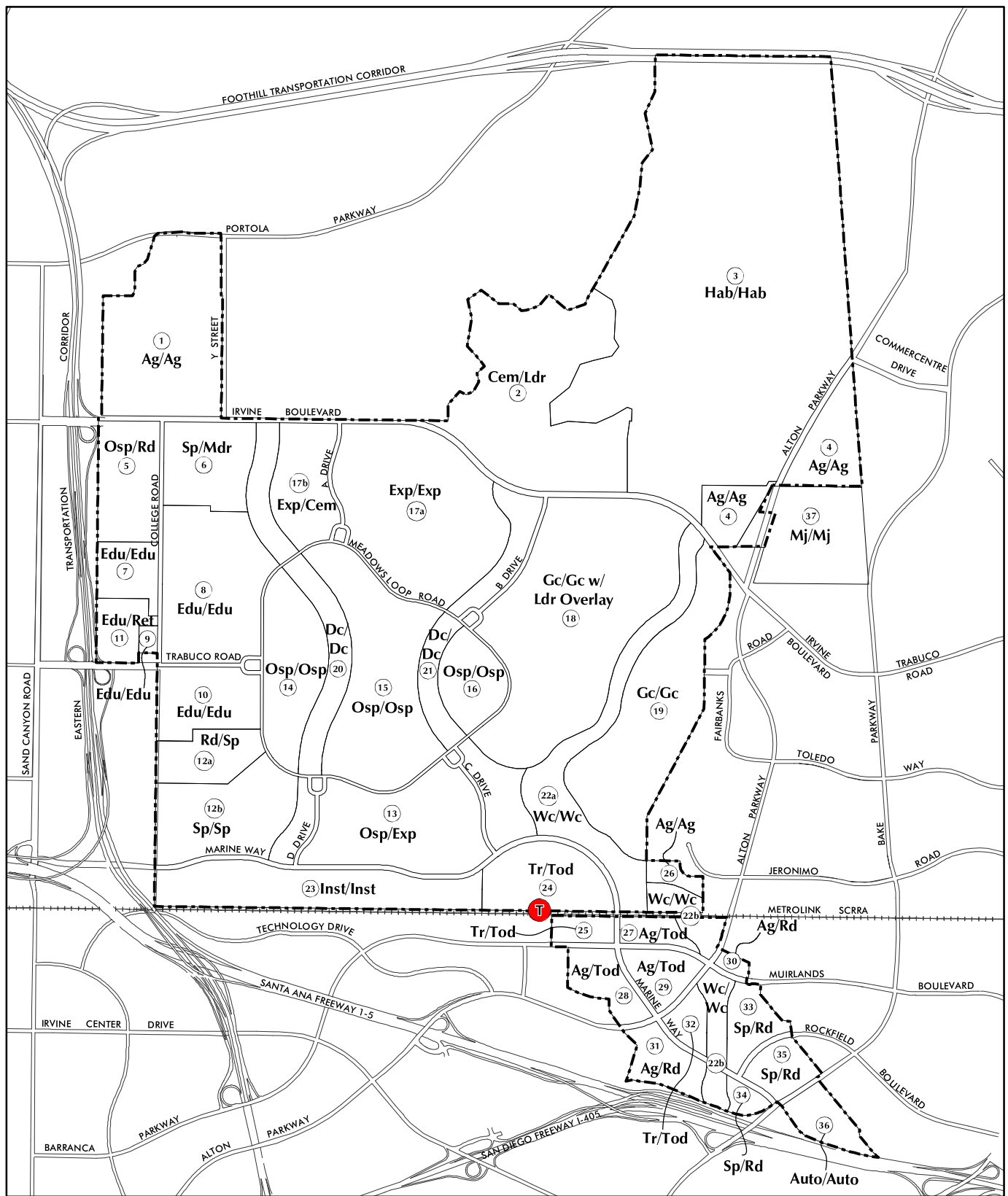


Figure 3-2
Proposed General Plan
Designations



--- Project Boundary

General Plan Uses [Base/Overlay]

Edu OCGP Education

Inst OCGP Institutional

Tr OCGP Transportation

Ldr OCGP Low Density Residential

Mdr OCGP Medium Density Residential

Tod OCGP Transit Oriented Development

Rd OCGP Research and Development

Ret OCGP Retail

Auto OCGP Auto

Cem OCGP Cemetery

Ag OCGP Agriculture

Dc OCGP Drainage Corridor

Wc OCGP Wildlife Corridor

Hab OCGP Habitat Preserve

Osp OCGP Open Space/Park

Sp OCGP Sports Park

Gc OCGP Golf Course

Exp OCGP Exposition Center

Mj Musick Jail/IRWD

① Planning Area Zones

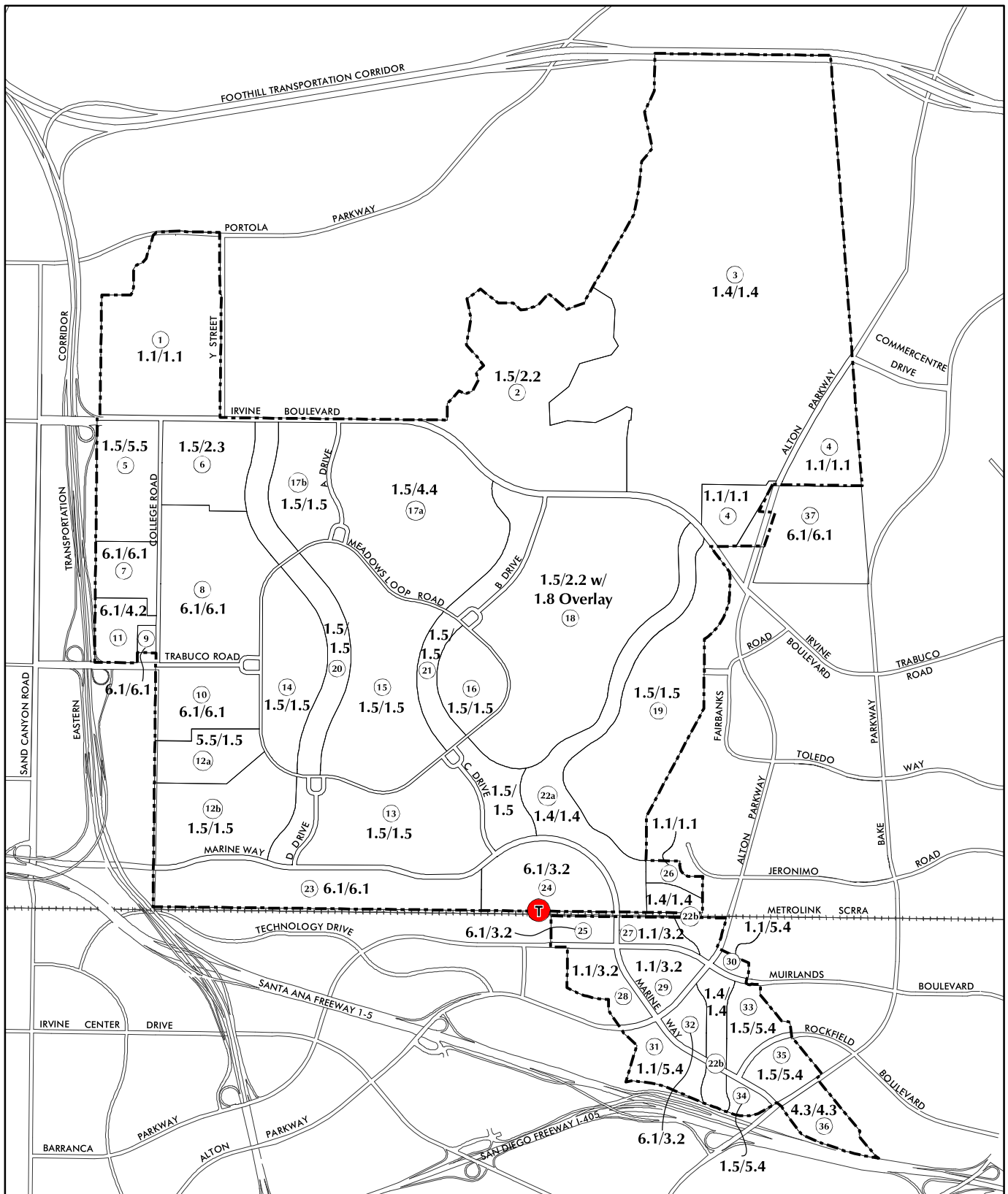
Ⓣ Irvine Transportation Center



0' 1,500'

Figure 3-3

Proposed General Plan Uses



--- Project Boundary

Zoning Designations [Base/Overlay]

1.1 Exclusive Agriculture

1.4 Preservation

1.5 Recreation

1.8 Golf Course Overlay
(0-6.5 du/ac)

2.2 Low Density Residential
(0-6.5 du/ac)

2.3 Medium Density Residential
(0-12.5 du/ac)

3.2 Transit Oriented Development

4.2 Community Commercial

4.3 Vehicle-Related Commercial

4.4 Commercial Recreation

5.4 General Industrial

5.5 Medical and Science

6.1 Institutional

(1) Planning Area Zones

(T) Irvine Transportation Center



0' 1,500'

Figure 3-4
Proposed Zoning
City of Irvine

Table 3-2
Orange County Great Park
General Plan Designation and Zoning

PAZ	General Plan Designation	General Plan Uses		Zoning District	
		Base	Overlay	Base	Overlay
1	OCGP (Orange County Great Park) ¹	OCGP Agriculture	OCGP Agriculture	1.1 Exclusive Agriculture	1.1 Exclusive Agriculture
2		OCGP Cemetery	OCGP Low Density Residential	1.5 Recreation	2.2 Low Density Residential (0-6.5 du/ac)
3		OCGP Habitat Preserve	OCGP Habitat Preserve	1.4 Preservation	1.4 Preservation
4		OCGP Agriculture	OCGP Agriculture	1.1 Exclusive Agriculture	1.1 Exclusive Agriculture
5		OCGP Open Space/Park	OCGP Research and Development	1.5 Recreation	5.5 Medical and Science
6		OCGP Sports Park	OCGP Medium Density Residential	1.5 Recreation	2.3 Medium Density Residential (0-12.5 du/ac)
7		OCGP Education	OCGP Education	6.1 Institutional	6.1 Institutional
8		OCGP Education	OCGP Education	6.1 Institutional	6.1 Institutional
9		OCGP Education	OCGP Education	6.1 Institutional	6.1 Institutional
10		OCGP Education	OCGP Education	6.1 Institutional	6.1 Institutional
11		OCGP Education	OCGP Retail	6.1 Institutional	4.2 Community Commercial
12a		OCGP Research and Development	OCGP Sports Park	5.5 Medical and Science	1.5 Recreation
12b		OCGP Sports Park	OCGP Sports Park	1.5 Recreation	1.5 Recreation
13		OCGP Open Space/Park	OCGP Exposition Center	1.5 Recreation	1.5 Recreation
14		OCGP Open Space/Park	OCGP Open Space/Park	1.5 Recreation	1.5 Recreation
15		OCGP Open Space/Park	OCGP Open Space/Park	1.5 Recreation	1.5 Recreation
16		OCGP Open Space/Park	OCGP Open Space/Park	1.5 Recreation	1.5 Recreation
17a		OCGP Exposition Center	OCGP Exposition Center	1.5 Recreation	4.4 Commercial Recreation
17b		OCGP Exposition Center	OCGP Cemetery	1.5 Recreation	1.5 Recreation <i>Modified regulations to allow cemetery use.</i>
18		OCGP Golf Course	OCGP Golf Course OCGP Residential Overlay	1.5 Recreation	2.2 Low Density Residential with 1.8 Golf Course Overlay (0-6.5 du/ac)
19		OCGP Golf Course	OCGP Golf Course	1.5 Recreation	1.5 Recreation
20		OCGP Drainage Corridor	OCGP Drainage Corridor	1.5 Recreation	1.5 Recreation

¹ The General Plan designation permits a base intensity of development with an overlay of additional intensity available through compliance with established criteria and in accord with Development Agreements entered into between the City and the future property owner.

**Table 3-2
Orange County Great Park
General Plan Designation and Zoning**

PAZ	General Plan Designation	General Plan Uses		Zoning District	
		Base	Overlay	Base	Overlay
20	OCGP (Orange County Great Park) ²	OCGP Drainage Corridor	OCGP Drainage Corridor	1.5 Recreation	1.5 Recreation
21		OCGP Drainage Corridor	OCGP Drainage Corridor	1.5 Recreation	1.5 Recreation
22a		OCGP Wildlife Corridor	OCGP Wildlife Corridor	1.4 Preservation	1.4 Preservation
22b		OCGP Wildlife Corridor	OCGP Wildlife Corridor	1.4 Preservation	1.4 Preservation
23		OCGP Institutional	OCGP Institutional	6.1 Institutional	6.1 Institutional
24		OCGP Transportation	OCGP Transit Oriented Development	6.1 Institutional	<i>New zoning district: 3.2 Transit Oriented Development</i>
25		OCGP Transportation	OCGP Transit Oriented Development	6.1 Institutional	<i>New zoning district: 3.2 Transit Oriented Development</i>
26		OCGP Agriculture	OCGP Agriculture	1.1 Exclusive Agriculture	1.1 Exclusive Agriculture
27		OCGP Agriculture	OCGP Transit Oriented Development	1.1 Exclusive Agriculture	<i>New zoning district: 3.2 Transit Oriented Development</i>
28		OCGP Agriculture	OCGP Transit Oriented Development	1.1 Exclusive Agriculture	<i>New zoning district: 3.2 Transit Oriented Development</i>
29		OCGP Agriculture	OCGP Transit Oriented Development	1.1 Exclusive Agriculture	<i>New zoning district: 3.2 Transit Oriented Development</i>
30		OCGP Agriculture	OCGP Research and Development	1.1 Exclusive Agriculture	5.4 General Industrial
31		OCGP Agriculture	OCGP Research and Development	1.1 Exclusive Agriculture	5.4 General Industrial
32		OCGP Transportation	OCGP Transit Oriented Development	6.1 Institutional	<i>New zoning district: 3.2 Transit Oriented Development</i>
33		OCGP Sports Park	OCGP Research and Development	1.5 Recreation	5.4 General Industrial
34		OCGP Sports Park	OCGP Research and Development	1.5 Recreation	5.4 General Industrial
35		OCGP Sports Park	OCGP Research and Development	1.5 Recreation	5.4 General Industrial
36		OCGP Auto	OCGP Auto	4.3 Vehicle-Related Commercial	4.3 Vehicle-Related Commercial
37	PF (Public Facilities)	Musick Jail/IRWD Parcel	Musick Jail/IRWD Parcel	6.1 Institutional	6.1 Institutional

² The General Plan designation permits a base intensity of development with an overlay of additional intensity available through compliance with established criteria and in accord with Development Agreements entered into between the City and the future property owner.

Table 3-3
Development Data for Base Plan 2025

PAZ and Use Description	Acres		Dwelling Units		Square Feet		Other Details	
	Quantity	Type	Quantity	Type	Quantity	Type	Quantity	Type
1 Open Space Agriculture	200	Agriculture						
Subtotal Area 1:	200							
2 Open Space Cemetery	270	Open Space / Park						
Subtotal Area 2:	270							
3 Open Space / Habitat Preserve	974	Habitat Preserve						
Subtotal Area 3:	974							
4 Agriculture	90	Agriculture						Portions may be used for low flow wildlife corrid. connection to Borrego Cyn Wash
Subtotal Area 4:	90							
5 Open Space Park	79	Open Space / Park						
Subtotal Area 5:	79							
6 Open Space Sports Park	80	Sports Park						
Subtotal Area 6:	80							
7 Education	38	College/University			185,083	College/University	1,102	Students
Subtotal Area 7:	38				185,083			
8 Education	162	College/University			789,035	College/University	4,697	Students
Subtotal Area 8:	162				789,035			
9 Education	5	College/University			24,352	College/University	145	Students
Subtotal Area 9:	5				24,352			
10 Education	15	Medium Density Residential	60	Multiple-Family Residential	125,800	College/University	736	Students
	55	College/University						
Subtotal Area 10:	70		60		125,800			
11 Education	33	College/University			160,730	College/University	957	Students
Subtotal Area 11:	33				160,730			
12a Research and Development	50	Research and Development			300,000	Research and Development		
Subtotal Area 12a:	50				300,000			
12b Open Space Sports Park	115	Sports Park			26,000	Sports Park		
Subtotal Area 12b:	115				26,000			
13 Open Space Park	156	Open Space / Park			468,000	Museum/Library Facilities		
Subtotal Area 13:	156				468,000			
14 Open Space Park	103	Open Space / Park						
Subtotal Area 14:	103							
15 Open Space Park	208	Open Space / Park						
Subtotal Area 15:	208							
16 Open Space Park	56	Open Space / Park						
Subtotal Area 16:	56							
17a Open Space Exposition Center	249	Open Space / Expo Center	165	Multiple-Family Residential	708,000	Exposition Center		
Subtotal Area 17a:	249		165		708,000			
17b Open Space Exposition Center	73	Open Space / Expo Center			255,500	Exposition Center		
Subtotal Area 17b:	73				255,500			
18 Open Space Golf Course	365	Golf Course					36	Golf Course Holes
Subtotal Area 18:	365							

Table 3-3
Development Data for Base Plan 2025

PAZ and Use Description	Acres		Dwelling Units		Square Feet		Other Details	
	Quantity	Type	Quantity	Type	Quantity	Type	Quantity	Type
19 Open Space Golf Course	211	Golf Course			25,000	Clubhouse	18	Golf Course Holes
Subtotal Area 19:	211				25,000			
20 Drainage Corridor	114	Drainage Corridor						
Subtotal Area 20:	114							
21 Drainage Corridor	115	Drainage Corridor						
Subtotal Area 21:	115							
22a Drainage / Wildlife Corridor Planning Area 51	118	Wildlife Corridor						
Subtotal Area 22a:	118							
22b Drainage / Wildlife Corridor Planning Area 30	61	Wildlife Corridor						
Subtotal Area 22b:	61							
23 Institutional	100	Institutional 35 OCTA Facility			300,000 Institutional 122,500 OCTA Facility 263,000 McKinney Act Warehousing		Includes Salvation Army (45,000 Bldg 360), St. Vincent De Paul (127,000 warehouse Bldg 319, 11,000 commercial kitchen Bldg 322), Orange County Community Housing Corporation (70,000 warehouse Bldg 360), Families Forward (10,000 admin Bldg 360)	
Subtotal Area 23:	135				685,500			
24 Transportation Facilities	81	Station-Related Public Uses					375	Parking Spaces In Structure
Subtotal Area 24:	81							
25 Transit	18	Station-Related Public Uses						
Subtotal Area 25:	18							
26 Open Space / Agriculture	13	Agriculture						
Subtotal Area 26:	13							
27 Open Space / Agriculture	19	Agriculture						
Subtotal Area 27:	19							
28 Open Space/ Agriculture	38	Agriculture						
Subtotal Area 28:	38							
29 Open Space / Agriculture	34	Agriculture						
Subtotal Area 29:	34							
30 Open Space / Agriculture	6	Agriculture						
Subtotal Area 30:	6							
31 Open Space / Agriculture	38	Agriculture						
Subtotal Area 31:	38							
32 Transit Oriented Development	10	Remote Airport Terminal 10 Remote Airport Maintenance			9,000 Remote Airport Terminal 44,500 Remote Airport Maintenance		675	Parking Spaces Parking and shuttle facility for LAX and Ontario
Subtotal Area 32:	20				53,500			
33 Open Space Sports Park	35	Sports Park						
Subtotal Area 33:	35							
34 Open Space Sports Park	11	Sports Park						
Subtotal Area 34:	11							

**Table 3-3
Development Data for Base Plan 2025**

PAZ and Use Description	Acres		Dwelling Units		Square Feet		Other Details	
	Quantity	Type	Quantity	Type	Quantity	Type	Quantity	Type
35 Research and Development	31	Research and Development			410,000	Research and Development		
Subtotal Area 35:	31				410,000			
36 Auto	34	Auto Sales, Parking and Storage			102,000	Auto Sales, Parking and Storage		
Subtotal Area 36:	34				102,000			
37 Musick Jail and IRWD Parcel	113	Musick Jail and IRWD Parcel						
Subtotal Area 37:	113							
Net Total:	4,621		3,625		6,585,594			
Roadways:	185		-		-			
Gross Total:	4,806		3,625		6,585,594			
Planning Area 51 (Proposed annexation, General Plan Amendment, pre-Zoning and Zoning)								
Net Total:	4,150		2,760		4,725,094			
Roadways:	145		-		-			
Gross Total:	4,295		2,760		4,725,094			
Planning Area 30 (Proposed General Plan Amendment and Zone Change)								
Net Total:	358		865		1,860,500			
Roadways:	40		-		-			
Gross Total:	398		865		1,860,500			
Planning Area 35 (Proposed annexation)								
Net Total:	113		-		-			
Roadways:	-		-		-			
Gross Total:	113		-		-			
Project area currently outside the City of Irvine								
Net Total:	4,247		2,760		4,725,094			
Roadways:	145		-		-			
Gross Total:	4,392		2,760		4,725,094			
Project area currently within the City of Irvine								
Net Total:	374		865		1,860,500			
Roadways:	40		-		-			
Gross Total:	414		865		1,860,500			

Table 3-4
Development Data for Overlay Plan 2025

PAZ and Use Description	Acres		Dwelling Units		Square Feet		Other Details	
	Quantity	Type	Quantity	Type	Quantity	Type	Quantity	Type
1 Open Space Agriculture	200	Agriculture						
Subtotal Area 1:	200							
2 Low Density Residential	270	Low Density Residential	850	Single-Family Residential				
Subtotal Area 2:	270		850					
3 Open Space / Habitat Preserve	974	Habitat Preserve						
Subtotal Area 3:	974							
4 Agriculture	90	Agriculture						Portions may be used for low flow wildlife corrid. connection to Borrego Cyn Wash
Subtotal Area 4:	90							
5 Research and Development	79	Research and Development			1,000,000	Research and Development		
Subtotal Area 5:	79				1,000,000			
6 Medium Density Residential	80	Medium Density Residential	800	Senior Housing				
Subtotal Area 6:	80		800					
7 Education	38	College/University			243,302	College/University (Sq. Footage expanded based on ratio (186 sf per student) and new student total)	1,306	Students (Students split between zones on a size-proportional basis)
Subtotal Area 7:	38				243,302			
8 Education	162	College/University			1,037,234	College/University	5,570	Students
Subtotal Area 8:	162				1,037,234			
9 Education	5	College/University			32,013	College/University	172	Students
Subtotal Area 9:	5				32,013			
10 Education	15	Medium Density Residential 55 College/University	60	Multiple-Family Residential	140,045	College/University	752	Students
Subtotal Area 10:	70		60		140,045			
11 Retail	33	Retail			225,000	Retail		
Subtotal Area 11:	33				225,000			
12a Open Space Sports Park	50	Sports Park						
Subtotal Area 12a:	50							
12b Open Space Sports Park	115	Sports Park			26,000	Sports Park		
Subtotal Area 12b:	115				26,000			
13 Open Space Exposition Center	156	Cultural/Institutional			468,000	Museum/Library Facilities		
Subtotal Area 13:	156				468,000			
14 Open Space Park	103	Open Space / Park						
Subtotal Area 14:	103							
15 Open Space Park	208	Open Space / Park						
Subtotal Area 15:	208							
16 Open Space Park	56	Open Space / Park						
Subtotal Area 16:	56							
17a Open Space Exposition Center	236	Fairgrounds/Commercial Rec 13 Elementary School	165	Multiple-Family Residential	708,000	Fairgrounds/Exposition Halls 40,000 Elementary School	Includes Equestrian Stables 650 Students	
Subtotal Area 17a:	249		165		748,000			
17b Open Space Cemetery	73	Cemetery			30,000	Mausoleum 20,000 Mortuary 50,000		
Subtotal Area 17b:	73							
18 Open Space Golf Course w/ Residential Overlay	315	Golf Course 50 Low Density Residential	250	Single-Family Residential	25,000	Clubhouse and Driving Range	27	Golf Course Holes
Subtotal Area 18:	365		250		25,000			

Table 3-4
Development Data for Overlay Plan 2025

PAZ and Use Description	Acres		Dwelling Units		Square Feet		Other Details	
	Quantity	Type	Quantity	Type	Quantity	Type	Quantity	Type
19 Open Space Golf Course	211	Golf Course					18 Golf Course Holes	
Subtotal Area 19:	211							
20 Drainage Corridor	114	Drainage Corridor						
Subtotal Area 20:	114							
21 Drainage Corridor	115	Drainage Corridor						
Subtotal Area 21:	115							
22a Drainage / Wildlife Corridor Planning Area 51	118	Wildlife Corridor						
Subtotal Area 22a:	118							
22b Drainage / Wildlife Corridor Planning Area 30	61	Wildlife Corridor						
Subtotal Area 22b:	61							
23 Institutional	100 Institutional 35 OCTA Facility				300,000 Institutional 122,500 OCTA Facility 263,000 McKinney Act Warehousing		Includes Salvation Army (45,000 Bldg 360), St. Vincent De Paul (127,000 warehouse Bldg 319, 11,000 commercial kitchen Bldg 322), Orange County Community Housing Corporation (70,000 warehouse Bldg 360), Families Forward (10,000 admin Bldg 360)	
Subtotal Area 23:	135				685,500			
24 Transit Oriented Development	8 Station-Related Public Uses 6 TOD Open Space Amenities 6 Retail 61 Medium-High Density Residential		635 Multiple-Family Residential		45,000 Retail		375 Parking Spaces In Structure Schools are permitted uses	
Subtotal Area 24:	81		635		45,000			
25 Transit Oriented Development	7 Station-Related Public Uses 1 TOD Open Space Amenities 5 Office 5 Medium-High Density Residential		50 Multiple-Family Residential		75,000 Office		Schools are permitted uses	
Subtotal Area 25:	18		50		75,000			
26 Open Space / Agriculture	13 Agriculture							
Subtotal Area 26:	13							
27 Transit Oriented Development	2 TOD Open Space Amenities 17 Medium-High Density Residential		170 Multiple-Family Residential				Schools are permitted uses	
Subtotal Area 27:	19		170					
28 Transit Oriented Development	3 TOD Open Space Amenities 2 Retail 33 Medium-High Density Residential		345 Multiple-Family Residential		15,000 Retail		Schools are permitted uses	
Subtotal Area 28:	38		345		15,000			
29 Transit Oriented Development	3 TOD Open Space Amenities 2 Retail 29 Medium-High Density Residential		300 Multiple-Family Residential		15,000 Retail		Schools are permitted uses	
Subtotal Area 29:	34		300		15,000			
30 Research and Development	6 Research and Development				80,000 Research and Development			
Subtotal Area 30:	6				80,000			
31 Research and Development	38 Research and Development				500,000 Research and Development			
Subtotal Area 31:	38				500,000			
32 Transit Oriented Development	10 Remote Airport Terminal 10 Remote Airport Maintenance				9,000 Remote Airport Terminal 44,500 Remote Airport Maintenance		675 Parking Spaces Parking and shuttle facility for LAX and Ontario	
Subtotal Area 32:	20				53,500			
33 Research and Development	35 Research and Development				460,000 Research and Development			
Subtotal Area 33:	35				460,000			
34 Research and Development	11 Research and Development				150,000 Research and Development			
Subtotal Area 34:	11				150,000			

Table 3-4
Development Data for Overlay Plan 2025

PAZ and Use Description	Acres		Dwelling Units		Square Feet		Other Details	
	Quantity	Type	Quantity	Type	Quantity	Type	Quantity	Type
35 Research and Development	31	Research and Development			410,000	Research and Development		
Subtotal Area 35:	31				410,000			
36 Auto	34	Auto Sales, Parking and Storage			102,000	Auto Sales, Parking and Storage		
Subtotal Area 36:	34				102,000			
37 Musick Jail and IRWD Parcel	113	Musick Jail and IRWD Parcel						
Subtotal Area 37:	113							
Net Total:	4,621		3,625		6,585,594			
Roadways:	185		-		-			
Gross Total:	4,806		3,625		6,585,594			
Planning Area 51 (Proposed annexation, General Plan Amendment, pre-Zoning and Zoning)								
Net Total:	4,150		2,760		4,725,094			
Roadways:	145		-		-			
Gross Total:	4,295		2,760		4,725,094			
Planning Area 30 (Proposed General Plan Amendment and Zone Change)								
Net Total:	358		865		1,860,500			
Roadways:	40		-		-			
Gross Total:	398		865		1,860,500			
Planning Area 35 (Proposed annexation)								
Net Total:	113		-		-			
Roadways:	-		-		-			
Gross Total:	113		-		-			
Project area currently outside the City of Irvine								
Net Total:	4,247		2,760		4,725,094			
Roadways:	145		-		-			
Gross Total:	4,392		2,760		4,725,094			
Project area currently within the City of Irvine								
Net Total:	374		865		1,860,500			
Roadways:	40		-		-			
Gross Total:	414		865		1,860,500			

In addition, interim activities may be conducted by the City or designee on properties to be conveyed to the City after the purchase of the property by private parties and prior to build-out of the Plan. Interim activities may include agricultural and nursery operation, and open storage. Extensive materials reclamation activities related to the removal of the runways and the recycling and distribution of concrete, asphalt, and other materials resulting from runway removal and recycling and/or removal of other facilities and buildings will also occur.

Other interim activities involving short-term use of the land or on-site buildings may also occur periodically. By the year 2007 a portion of the overall development will occur. The expected reuse of facilities and land and the new development projected is shown in Table 3-5. Some of the activities shown in the table currently exist on the site. Interim activities must be consistent with the interim uses allowed in the City's Zoning Ordinance.

Ownership and management of the land and buildings will ultimately transfer to the party or agency to whom title transfers as a result of the sale of the land. Demolition of buildings will occur if they interfere with the orderly development of the property or become obsolete or uneconomic to repair for reuse.

Certain lands within the former MCAS El Toro property are being retained in federal ownership. At present, these lands lie primarily north of Irvine Boulevard and are indicated as "Lands being retained in federal ownership" on Figure 3-1 Proposed Actions. Subsequent decisions by the Department of Navy may result in additional areas that will remain in federal ownership. Although these lands are within the project area and are considered a part of the project, land use control will remain with the federal government as the pre-empting agency. Any action proposed by a federal agency would require review under NEPA, as applicable.

Annexation Background and Rationale

Annexation is the procedure used by a city to extend its corporate boundaries. The Local Agency Formation Commission Orange County (LAFCO) is empowered to evaluate, consider, and approve proposals for city, county, and special district incorporations, formations and boundary changes. LAFCO acts within a set of state-mandated parameters that encourage planned, well-ordered, efficient urban development patterns, encourage the preservation of agricultural and open space lands, and discourage urban sprawl. A project area must be within a city's Sphere of Influence before annexation can be considered by LAFCO. As defined by State law (Government Code Section 56076), a Sphere of Influence is "a plan for the probable physical boundaries and service area of a local government agency." Once LAFCO approves an annexation, only protest from the affected landowners(s) or registered voters can terminate proceedings.

Spheres of Influence are adopted for each city by LAFCO. The Orange County LAFCO policy on Spheres of Influence states that spheres are a planning tool to guide LAFCO decisions and that the sphere boundaries are meant to facilitate the logical and economical extensions of government facilities and services: "Territory placed within a city's sphere indicates that the city is the most logical provider of urban services for development." (Sphere Policy Guideline #5).

Table 3-5
2007 Base Plan and Overlay Plan
Land Use Summary

Great Park Land Use Description	Units	Base Plan Quantity	Overlay Plan Quantity
Auto Center	TSF	50	50
Education	Students	3,000	3,000
Elementary School	Students	-	650
Retail	TSF	-	-
University Residential	DU	60	60
Interim Housing	DU	350	-
Senior Housing	DU		600
Transitional Housing	DU	-	-
Research & Development (N&S.)	TSF	300	1,250
Institutional Warehouse	TSF	263	263
OCTA Facility/Fly-Away Facility	TSF	54	53.5
Transportation Center/Fly-Away Center	Parking Spaces	675	675
Cultural/Institutional/Exposition	TSF	500	500
Agriculture	Acres	1,218	961
Golf Course	Acres	576	526
Habitat, Wildlife Corridor & Nature Walk	Acres	1,382	1,382
OS Park	Acres	-	-
Cemetery	Acres	-	73
Chapel/Mortuary1	TSF	-	50
Sports Park	Acres	192	115
TOD Residential	DU	-	750
TOD Retail	TSF	-	30
TOD Office	TSF	-	-
Residential/Golf Village	DU	-	850

Units:

TSF = Thousand Square Feet

DU = Dwelling Units

Source: Urban Crossroads

The City of Irvine's application for annexation to LAFCO states the City has determined that to ensure the most efficient and economical provision of public services, the City should be designated as the area's legal service provider through annexation. Annexation will provide the City with means to effectively plan for necessary public services. It will ensure coordination between public service agencies and encourage consistency in the development of service delivery and development standards. Annexation will also enable planning for infrastructure financing to ensure that services and facilities will be available at the time of need.

The City of Irvine is considered the logical local government service provider for the subject property because the unincorporated area is within the City's Sphere of Influence and a

portion of the former MCAS El Toro is already in the City. The proposed annexation area's northern perimeter is bounded by the dedicated Natural Communities Conservation Plan (NCCP) habitat preserve, which clearly defines the limits of potential urban growth. Reuse of the former MCAS El Toro will directly impact the City of Irvine by placing demands on existing City infrastructure and requiring extension of new facilities and services. Employees, residents, visitors, etc. will use City streets for access, be assisted by City law enforcement and shop and play in surrounding City areas.

The Orange County Sphere Guidelines include a specific policy on unincorporated county islands. Sphere Policy Guideline #4 states: "City spheres that include unincorporated islands of territory should be encouraged to annex the islands to the city. The Commission acknowledges that unincorporated islands are generally costly for county government to serve and often have service impacts on the surrounding city." Government Code Section 56375(a)(3) also discourages the creation of unincorporated County islands. As stated under Section 56375(a)(3), "As a condition to the annexation of an area that is surrounded, or substantially surrounded, by the city to which the annexation is proposed, the commission may require, where consistent with the purposes of this division, that the annexation include the entire island of surrounded, or substantially surrounded, territory." For this reason the annexation proposal includes the Musick Jail Facility and the IRWD parcel.

General Plan Element Amendments

The impacts of the amendment to the General Plan are those associated with the maximum intensity of development permitted by the Overlay provisions contained within the OCGP designation. A description of proposed amendments to the City of Irvine General Plan is provided below by General Plan element. In all the elements all existing references to Millennium Plan would be removed. Factual and technical information would be modified to reflect the General Plan Amendment.

Existing General Plan Policy is:

A. Land Use - Promote land use patterns which maintain safe residential neighborhoods, bolster economic prosperity, preserve open space, and enhance the overall quality of life in Irvine.

The objectives and implementing policies contained in the Land Use Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park.

The General Plan Amendment will make the following changes in the Land Use Element:

- The General Plan Land Use map (General Plan Figure A-3) will be amended to reflect the land uses contemplated in the Orange County Great Park plan using a designation of "OCGP." This designation is not presently contained within the General Plan.
- Figure A-4, Scenic Highways, will be amended to remove Millennium Parkway.
- Maximum land use intensity and density standards by Planning Area will be revised in Tables A-1 and A-2 as indicated in Tables 3-3 and 3-4 of this Final Program EIR.

B. Circulation - The majority of the objectives and implementing policies contained in the Circulation Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park. The project includes modification of Policy B-1(c) regarding Level of Service, as well as, roadway characteristics for roadways within the project area. These characteristics are enumerated in Table 3-6. Roadway classification and operation characteristics have been determined based on the volume of traffic and traffic characteristics (e.g., local versus through traffic).

The project will make the following changes in the Circulation Element:

- The General Plan Amendment will modify Policy B-1 (c) to add the following sentence:

In conjunction with individual subdivision map level traffic studies for development proposed in Planning Areas 30 and 51, a LOS "E" would be considered acceptable for application to intersections impacted in Planning Areas 13, 30, 31, 32, 34, 35, and 39.

- Figure B-1 "Master Plan of Arterial Highways" and Figure B-2 "Operational Characteristics" will be amended as illustrated in Figure 3-5 and Figure 3-6 to reflect the alignment of roadways within the Orange County Great Park as follows:

Major Highways:

- (a) Marine Way is aligned to join the Bake Parkway north bound exit ramp from I-5 and terminate at Sand Canyon at I-5.
- (b) Trabuco Road terminates at proposed Meadows Loop Road.

Primary Highway:

- (a) Realign Rockfield Boulevard to terminate at Marine Way.

Secondary Highways:

- (a) On-site circulation includes a new commuter highway/collector (Y Street) to serve the development between Irvine Boulevard and Portola Parkway.
- (b) Research Parkway is renamed College Road and modified to extend from Irvine Boulevard to Marine Way.

Table 3-6
Project Roadway Characteristics

Roadway	Limits	Facility Classification	Operational Classification
Irvine Boulevard	Eastern Project Boundary to Western Project Boundary	Major Highway	Thruway
Alton Parkway	Western Project Boundary to Barranca Parkway / Muirlands Boulevard	Major Highway	Parkway
Alton Parkway	Barranca Parkway / Muirlands Boulevard to Eastern Project Boundary	Major Highway	Thruway
Alton Parkway	Southern Project Boundary to Eastern Project Boundary	Major Highway	Thruway
Bake Parkway	Southern Project Boundary to Western Project Boundary	Major Highway	Parkway
Barranca Parkway	Western Project Boundary to Alton Parkway	Primary Highway	Parkway
Muirlands Boulevard	Alton Parkway to Eastern Project Boundary	Primary Highway	Parkway
Marine Way	Eastern Project Boundary to Western Project Boundary	Primary Highway	Thruway
"Y" Street	Portola Parkway to Irvine Boulevard	Primary Highway	Parkway
Trabuco Road	Eastern Transportation Corridor (SR-133) to College Road	Primary Highway	Parkway
Trabuco Road	College Road to Meadows Loop Road	Local Street	Local Street
Rockfield Boulevard	Western Project Boundary to Marine Way	Primary Highway	Parkway
College Road	Irvine Boulevard to Trabuco Road	Secondary Highway	Parkway
College Road	Trabuco Road to Marine Way	Commuter Highway	Community Collector
Meadows Loop Road	Entire Length	Local Street	Local Street
"A" Drive	Irvine Boulevard to Exposition Center Access	Primary Highway	Community Collector
"A" Drive	Exposition Center Access to Meadows Loop Road	Local Street	Local Street
"B" Drive	Irvine Boulevard to Meadows Loop Road	Local Street	Local Street
"C" Drive	Marine Way to Meadows Loop Road	Local Street	Local Street
"D" Drive	Marine Way to Meadows Loop Road	Local Street	Local Street

Source: Urban Crossroads 2002



- | | | |
|--------------------------------|---------------------------|--------------------------------|
| — City of Irvine Boundary | == Major Highway (6 Lane) | ① Planning Area Zones |
| — Sphere of Influence Boundary | — Primary Highway | Ⓡ Irvine Transportation Center |
| ● Interchange | — Secondary Highway | |
| == Freeway | == Commuter Highway | |
| ... Transportation Corridor | — Local Street | |
| Major Highway (8 Lane) | | |

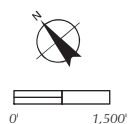
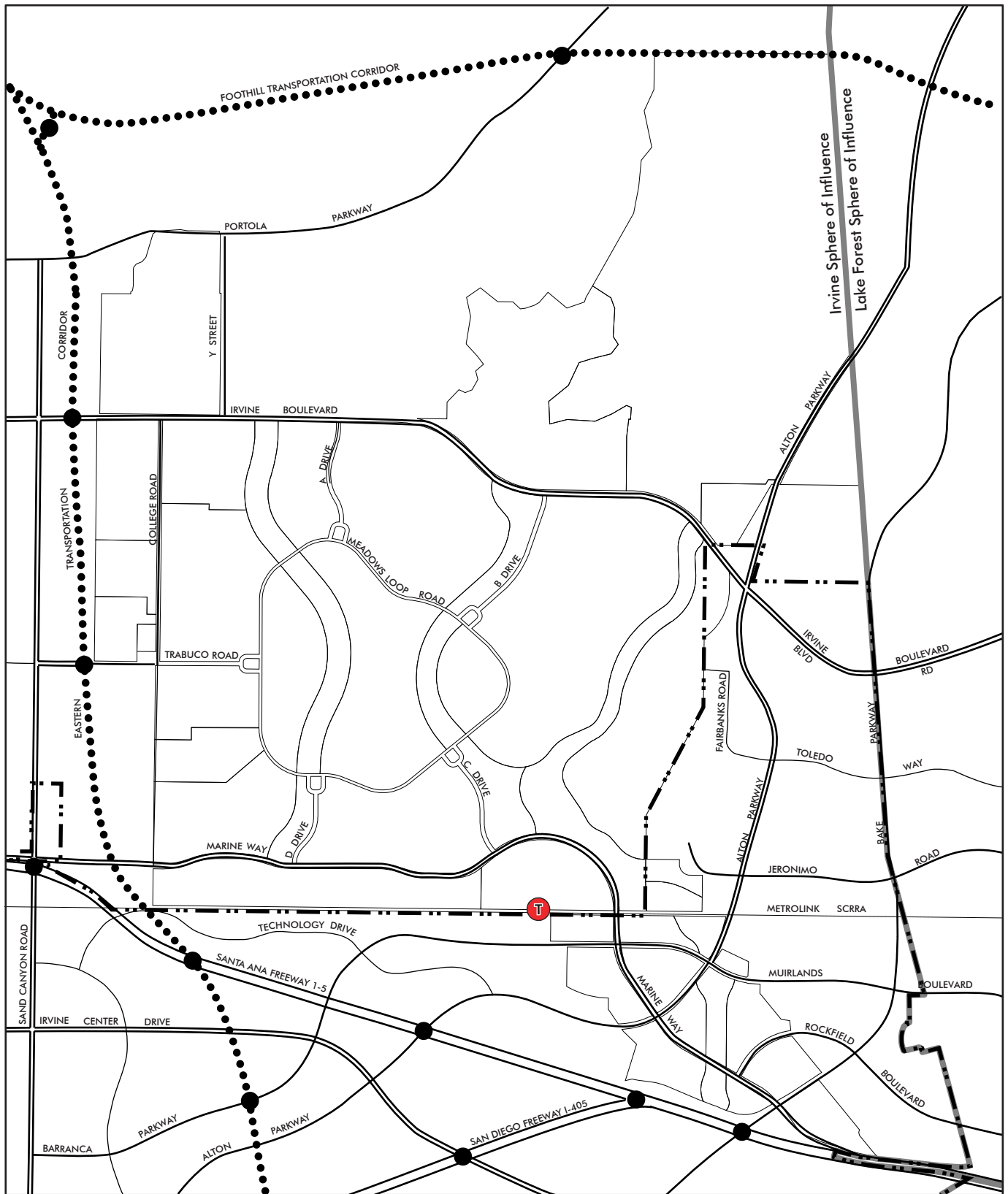


Figure 3-5
Proposed Master Plan of Arterial
Highways Amendments



- City of Irvine Boundary
- Sphere of Influence Boundary
- Interchange
- Freeway
- ... Transportation Corridor

- Thruway
- Parkway
- Collector
- Local Street

- ① Planning Area Zones
- T Irvine Transportation Center

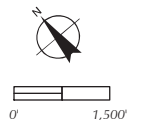


Figure 3-6
Proposed Irvine General Plan
Operational Characteristics Amendments

- Figure B-3 “Public Transit” will be amended to reflect the alignment of roadways within the Orange County Great Park. The potential for Inter-City and Local Feeder Transit Corridors on Trabuco Road and Marine Way will continue to be shown.
- Figure B-4 “Trails Network” will be amended to reflect the realigned roadways within the Orange County Great Park. Additional on-site Class I trails will link the recreational, educational, and cultural uses within the Orange County Great Park. In addition, the roadway network amendments to Figure B-1 Master Plan of Arterial Highways will result in an expansion of the Class II (On-Street) Bike Trail system through Planning Areas 30 and 51. Figure 3-7 illustrates the proposed Irvine General Plan Trails Network Alignments.

The Riding and Hiking Trail will be realigned parallel Irvine Boulevard until it reaches the Open Space/Habitat Preserve. At this point, the Riding and Hiking Trail will then extend north toward SR 241 and the Agua Chinon Reservoir. The Riding and Hiking Trail along Portola Parkway east of Jeffrey Road will be eliminated.

C. Housing - The objectives and implementing policies contained in the Housing Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park. Up to 3,625 new units may be added to the housing stock in the City with this amendment which will create and improved jobs-housing balance when compared to the existing General Plan.

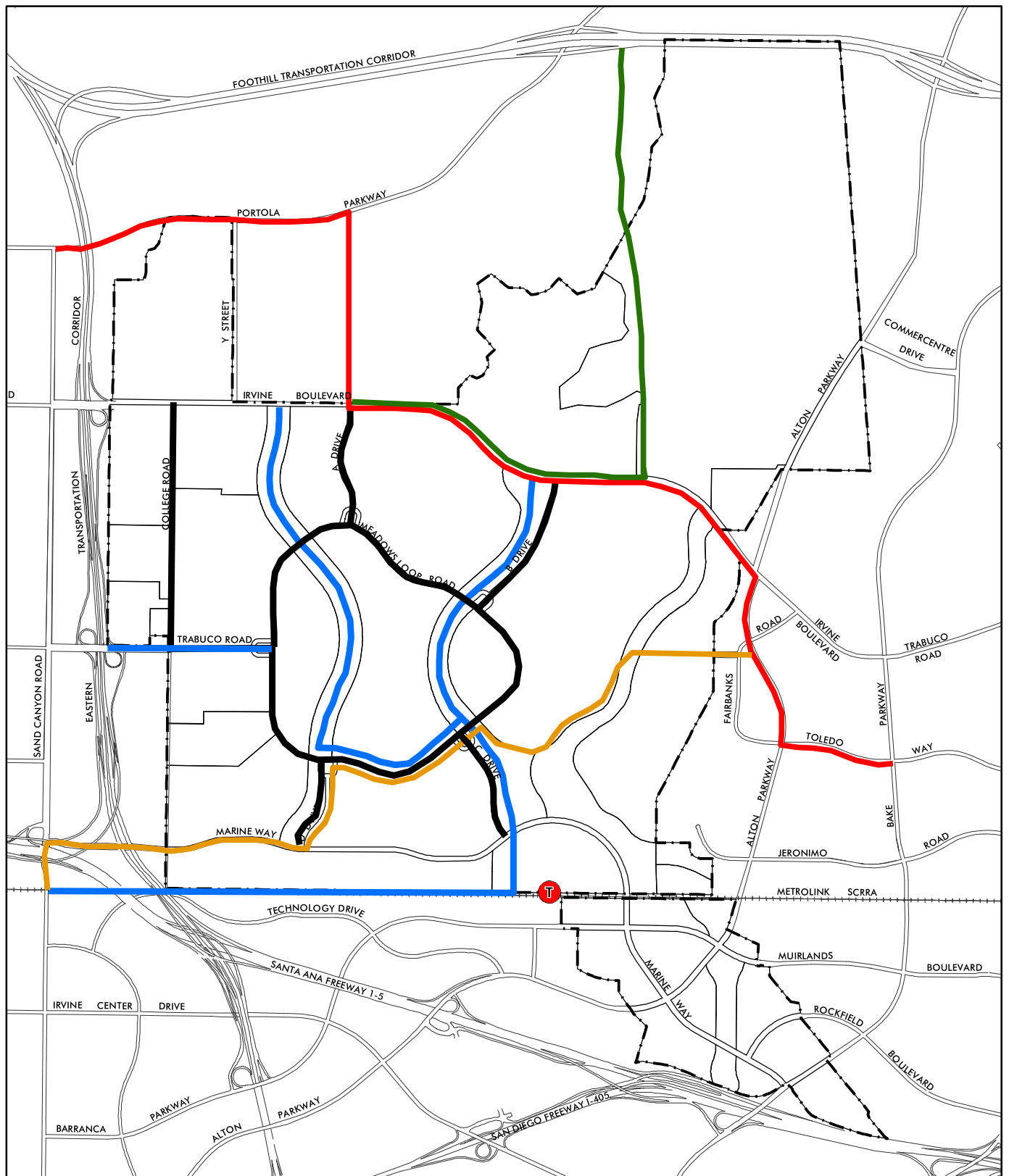
D. Seismic Element - The objectives and implementing policies contained in the Seismic Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park.

E. Cultural Resources - The objectives and implementing policies contained in the Cultural Resources Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park. Whether the amount of land available for development of cultural facilities will be increased by this amendment is not known at this time—substantial land area is designated for cultural facilities in the present General Plan and substantial land area is designated in the Orange County Great Park Plan.

F. Noise - The objectives and implementing policies contained in the Noise Element of the General Plan are unchanged by this amendment.

G. Public Facilities and Services - The objectives and implementing policies contained in the Public Facilities and Services Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park. Public facilities and service responsibilities will expand due to the land use changes associated with this amendment.

H. Integrated Waste Management - The objectives and implementing policies contained in the Integrated Waste Management Land Use Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park.



- Orange County Great Park Boundary
- Blue line Class I (off-street) Trails - Add
- Black line Class II (on-street) Trails - Add (all new OCGP streets)
- Green line Riding and Hiking Trails - Add

- Orange line Class I (off-street) Trails - Delete
- Red line Riding and Hiking Trails - Delete
- Red 'T' in a circle Irvine Transportation Center

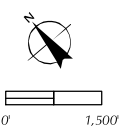


Figure 3-7
Proposed Irvine General Plan
Trails Network Amendments

I. Energy - The objectives and implementing policies contained in the Energy Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park.

J. Safety - The objectives and implementing policies contained in the Safety Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park.

K. Parks and Recreation - The objectives and implementing policies contained in the Parks and Recreation Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park.

The General Plan Amendment will make the following changes in the Parks and Recreation Element:

- Figure K-1 “Recreational Facilities” will be amended to add public golf courses, regional parks, and public and private exposition centers shown within the Orange County Great Park (Figure 3-8).

L. Conservation and Open Space - The objectives and implementing policies contained in the Conservation and Open Space Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park. Objective L-10 Agriculture is specifically implemented by the project. Agriculture uses are part of both the Base Plan and the Overlay Plan (see Section 5.8 Agricultural Resources for more detailed discussion related to this issue).

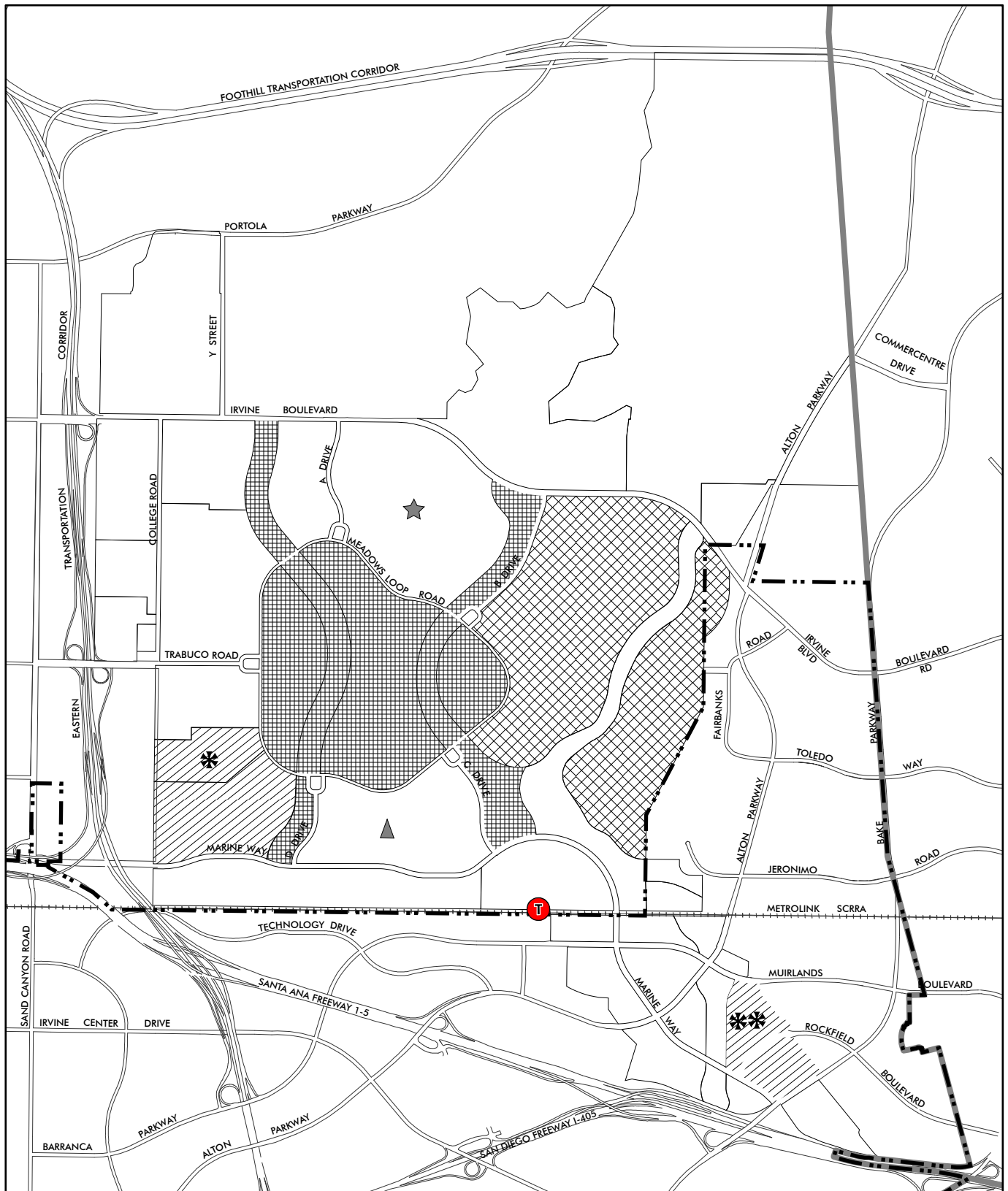
The General Plan Amendment will make the following changes in the Conservation and Open Space Element:

- Figure L-2 “Conservation and Open Space” will be amended to add Preservation, Recreation, and Agriculture areas, consistent with Orange County Great Park uses. (Figure 3-9).

M. Growth Management - The objectives and implementing policies contained in the Growth Management Element of the General Plan are unchanged by this amendment and will be implemented as part of future development of the Orange County Great Park.

The General Plan Amendment will contribute to the following actions in support of the Growth Management Element:

- The General Plan amendment will modify General Plan Figures B-1 “Master Plan of Arterial Highways” and B-2 “Operational Characteristics” in the City of Irvine Circulation Element. The County of Orange Master Plan of Arterial Highways currently reflects a military base at MCAS El Toro. The Circulation Element changes will lead to a cooperative study to be coordinated with the Orange County Transportation Authority (OCTA) and other inter-jurisdictional planning forums following annexation of the property to reconcile the circulation system differences between the County General Plan and the City General Plan.



Source: Fuscoe Engineering, City of Irvine, 2002.

- | | | |
|--------------------------------|--|---------------------------------------|
| — City of Irvine Boundary | ★ Potential Major Commercial Recreational Facilities | * Recreational with Overlay Plan Only |
| — Sphere of Influence Boundary | ① Planning Area Zones | ** Recreational with Base Plan Only |
| ▨ Regional Park | ⓧ Irvine Transportation Center | |
| ▤ Public Golf Course | ▲ Community Park | |
| ▧ Sports Park | | |

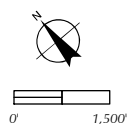
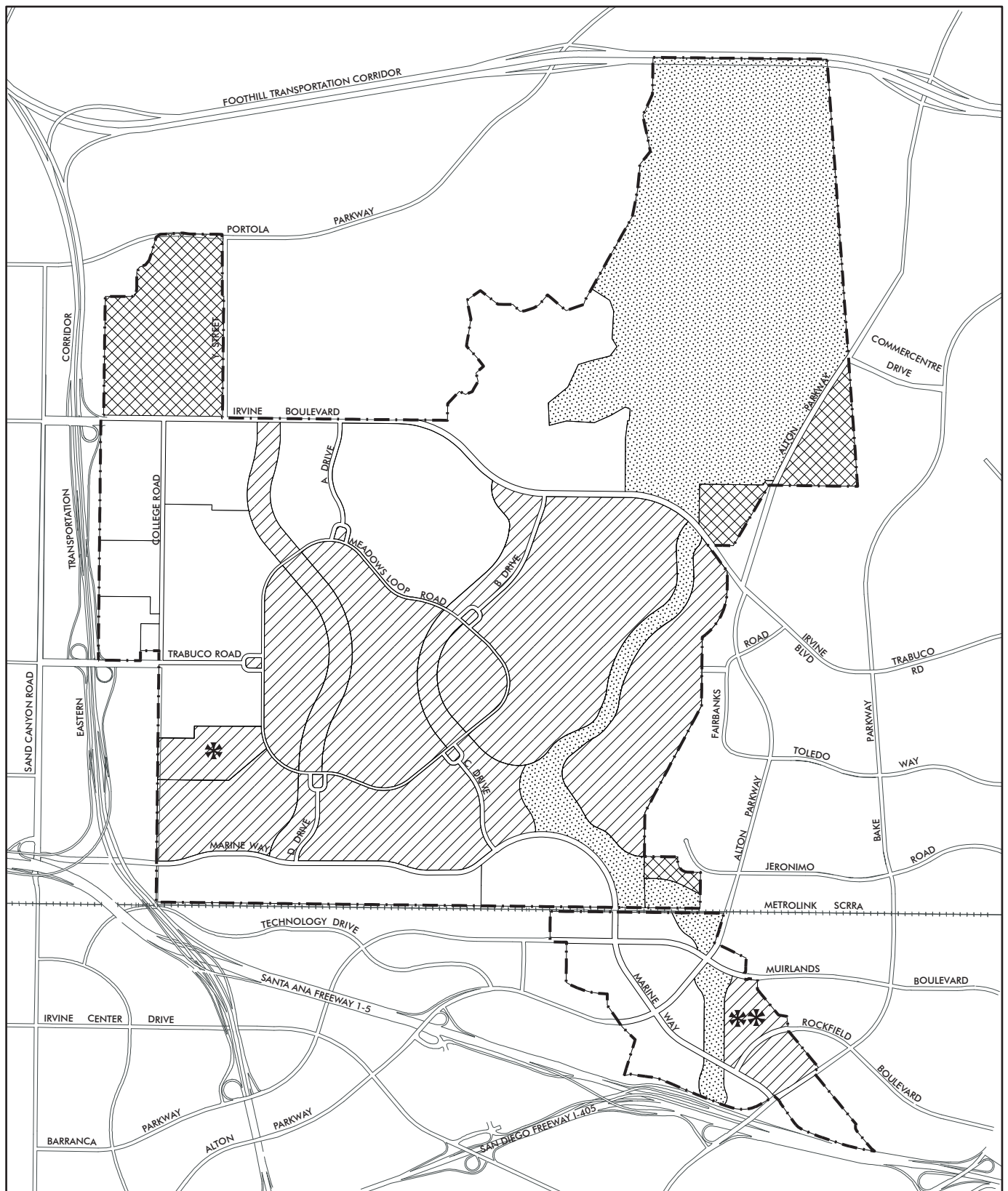


Figure 3-8
Proposed Irvine General Plan
Recreational Facilities Amendment



Source: Fuscoe Engineering, City of Irvine, 2002.

- Orange County Great Park Boundary
- ▨ Recreational
- ▤ Preservation
- ▩ Agriculture
- * Recreational with Overlay Plan Only
- ** Recreational with Base Plan Only

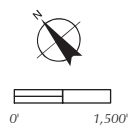


Figure 3-9
Proposed Irvine General Plan
Conservation and Open Space Amendment

- Objective M-6 “Balanced Growth” requires the City to consider the impact of any General Plan Amendment on the jobs/housing balance. Adoption of the project will create an improved jobs/housing balance for the project area over the job housing balance in the current general plan.

Implementation

The City of Irvine’s objective is to assure that the project is developed in an orderly fashion. The DON announced that the property will be disposed through a public auction and that the property will be sold in as many as four parcels. In response to the DON’s approach to sell the property, the City will allow the buyer(s) of the property to participate in a City (or its designee) coordinated approach to project wide permitting issues and construction of public infrastructure. This process will allow for a single point of responsibility to coordinate future project wide issues.

Development Agreement

The proposed project includes the approval of a Development Agreement. The Draft Development Agreement is provided in Appendix D of this Final Program EIR. The Development Agreement provides the link between the Base Plan and Overlay Plan. The Development Agreement will not allow any additional intensity than that identified for the proposed Overlay Plan.

The Development Agreement is strictly an agreement between the City and applicable property owner/developer that authorizes and vests development rights in accordance with the Overlay Plan in consideration for the property owners’ conveyance to the City of the Great Park, Sports Park, Drainage Corridor, Wildlife Corridor and other parcels, and pays to the City and participates in financing for the construction and maintenance of infrastructure and public improvements within the conveyed property. The proposed Development Agreement does not grant or approve any land use entitlements that are not otherwise allowed through the proposed General Plan amendment and zone change. Unless otherwise provided in the Development Agreement, the rules, regulations, and official policies governing permitted uses, density, design, improvements, and construction are those in effect when the agreement is executed. The environmental impacts of those proposed entitlement actions are addressed throughout this Final Program EIR.

Special Project Features

Wildlife Corridor

Presently there is no wildlife corridor within the project area. However, a major feature of the proposed project is the inclusion of a wildlife corridor land use which would allow for the creation of a wildlife corridor connecting the Lomas Ridge and the San Joaquin Hills. The proposed wildlife corridor alignment is depicted in Figure 3-3 (General Plan land use “Wildlife Corridor” – Subareas 22a and 22b). The wildlife corridor provides connection to the 995-acre habitat preserve, as well as the Limestone-Whiting Wilderness Park. To the

south, the corridor will connect to the Laguna Coast Wilderness Park through existing and future major open space linkages.

Drainage Corridors

The proposed project includes a land use category for the creation of drainage corridors through the project site (see Figure 3-3). The proposed drainage plan for the project is based on an earthen open channel and landscaped drainage corridor (corridor) method. A typical “corridor” consists of a trapezoidal channel cross-section that is 4 feet to 6 feet deep and up to 500 feet wide with side slopes climbing at a rate of five to ten percent depending on the location. A “strip” approximately 100 feet in width containing the streamline and the lowest portion of the side slopes is proposed to be protected by natural riparian plant types. Adjacent to the riparian strip, the corridor is proposed to be planted to the edges with a conventional landscaping palette. These drainage corridors offer an opportunity to control surface water flow, improve surface water quality, and create wetland/riparian habitats where none currently exist in the project area.

Runway Removal

Existing runways, parking aprons, and associated aviation facilities are located in a substantial portion of the former MCAS El Toro planned for urban use. In order to use the former MCAS El Toro for the purposes proposed by the Orange County Great Park, the runways must be removed. This requires the runways to be broken up into pieces suitable to fit into a crushing machine and crushed to a size for use as aggregate base for roadways and other potential uses both on-site and off-site. The runways can be removed in a sequential manner with stockpiling of material onsite as required to permit maximum economy of scale in the operation. The crushing and recycling operation will occur on the property in areas that later will become park and open space. The City will be responsible for managing the removal of runway materials within the portions of the property to be conveyed to the City. Those portions of the property in private ownership may participate in the City’s crush and recycle program for the runway removal.

Development Schedule

Total development of the project is expected to occur by 2025. Development sequencing will be linked to the availability of infrastructure, the completion of hazardous materials cleanup on MCAS El Toro, and the removal of the runways.

Statement of Objectives

The City has a substantial interest in the conversion of the former MCAS El Toro site from military use to civilian use since 440 acres are within the City’s boundaries and the balance of the site is within the City’s Sphere of Influence. This project is a part of the action by the City to initiate annexation proceedings and General Plan amendments and Zone Changes implementing the non-aviation uses for the former MCAS El Toro.

This statement of objectives serves as a benchmark to ascertain the environmental impacts and other purposes of a proposed project and associated alternatives. These objectives will

be used to evaluate the significance of the environmental impacts of the proposed project with the impacts of other alternatives for the former MCAS El Toro discussed in this document.

The City of Irvine's objectives are as follows:

1. Annex the former MCAS El Toro site and adjacent lands within the City's Sphere of Influence.
2. Convert the former MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
3. Amend the Irvine General Plan and Zoning Ordinance to implement proposed Orange County Great Park land use designations.
4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.
5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.
6. Respond positively and effectively to the DON's decision to sell the property to private interests by allowing private development of some land while ensuring the implementation of park and open space amenities.

Discretionary Actions

City of Irvine

The discretionary actions to be taken by the City of Irvine at (or as part of) the completion of the Final Program EIR may include, but are not limited to the following:

- CEQA related actions and approvals;
- Annexation related approvals;
- General Plan amendments (including amendments made to conform to actions by other agencies related to the project);
- Approval of Development Agreements and Covenants, Conditions and Restrictions (CC&Rs) governing the property;
- Ordinance actions, including zone changes and zoning code amendment;
- Actions to approve interim use activities;
- Approval of master plan for development;
- Actions related to real and personal property acquisition, leases, management and other approvals;
- Regulatory or other actions implementing mitigation measures or actions;
- Approval of master plans and subdivisions for development; and
- Approval of community facilities districts or other assessment districts.

Actions and Approvals of other Agencies

State and local agencies in addition to the City of Irvine may use the EIR in connection with any discretionary actions required to implement or otherwise assure development of the Great Park Plan including, but not limited to actions of the following types. Federal agencies may also use the document as a basis for providing environmental review and clearance in accord with the National Environmental Policy Act.

The agencies which may use this Program EIR and types of actions that these agencies may take in connection with the EIR include, but are not limited to the following:

- Local Agency Formation Commission Orange County (LAFCO) – Approval of annexation
- The United States Department of Defense/Department of the Navy (DOD/DON) and the General Services Administration –Sale and conveyance of property
- Airport Land Use Commission (ALUC) for Orange County – Amendment of the Airport Environs Land Use Plan (AELUP), dated 1995
- County of Orange – Revision of the County's General Plan
- Southern California Association of Governments (SCAG) – Revisions to regional models related to growth, development and airport plans.
- Transportation Corridor Agency (TCA)
- South Coast Air Quality Management District (SCAQMD)
- Regional Water Quality Control Board (RWQCB) – National Pollutant Discharge Elimination System (NPDES) Permit
- Army Corps of Engineers (Corps) – Section 404 (Dredge and Fill) Permit
- California Department of Transportation (Caltrans)
- California Department of Fish and Game – Approvals related to wildlife corridor and habitat areas
- Federal Department of the Interior (DOI) Fish and Wildlife Agency
- Southern California Regional Rail Authority (SCRRA)
- Orange County Transportation Authority (OCTA) – Revisions to the County Master Plan of Arterial Highways (MPAH)
- Irvine Unified School District
- Saddleback Unified School District
- California Public Utilities Commission – Highway Rail Crossings
- California Department of Toxic Substances Control (DTSC) – Approval of acquisition and/or development of property for public schools based on hazardous materials evaluation.

4.0 Environmental Setting

Physical Context

The proposed project area (which consists of City of Irvine Planning Areas (PA) 51, 30, and a portion of 35) is located in the central portion of Orange County, approximately 45 miles southeast of Los Angeles. Figure 4-1 depicts the location of the project area as shown on the El Toro and Tustin USGS quadrangles. Figure 1-4 (see Section 1.0 Introduction) provides an aerial photograph of the project area and surrounding land uses. The project area is generally bounded by the cities of Irvine and Lake Forest on the south and east, and unincorporated area in the County of Orange on the north. Other nearby local jurisdictions include the cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo, and Tustin.

The project area is located north of the Santa Ana (I-5) Freeway, east of the Eastern Transportation Corridor (SR-133), and south of the Foothill Transportation Corridor (SR-241). Major roadways bordering the project area include Barranca Parkway to the south, Sand Canyon Avenue to the west, Portola Parkway and Irvine Boulevard to the north, and Alton Parkway to the east.

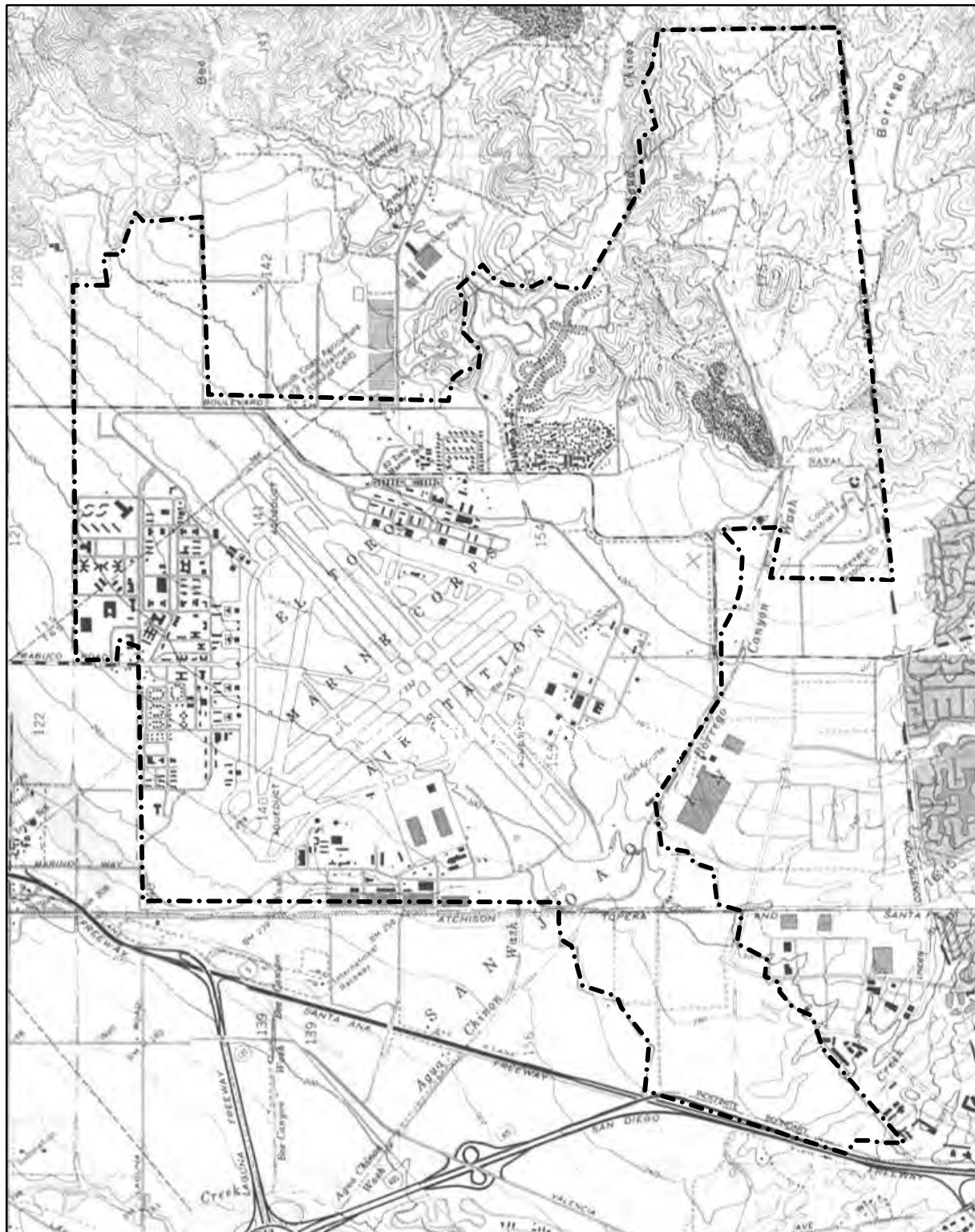
The Irvine Transportation Center, a major multimodal transit center linking Orange County Transportation Authority (OCTA) bus, Metrolink commuter rail, and Amtrak rail services, is adjacent to the Southern California Regional Rail Authority (SCRRA) tracks, which bisects the project area

Former MCAS El Toro (PA 51)

PA 51 encompasses approximately 4,295 acres. With the exception of 16 acres in the City of Irvine, PA 51 is unincorporated County jurisdiction, but within the City of Irvine's Sphere of Influence. The portion of the former MCAS El Toro north of the railroad is PA 51. A golf course occupies the southeastern portion of the PA 51. The northeastern portion of PA 51 is largely undisturbed and is designated as a habitat preserve. Former military buildings/facilities occupy the northeastern and northwestern portions of PA 51. Agricultural areas abut the east, north, and northwest boundary of PA 51. I-5 and urban areas of the City of Irvine abut the southwest boundary of PA 51. The southwestern boundary abuts the SCRRA, PA 32, and PA 30.

Former MCAS El Toro (PA 30)

PA 30 consists of approximately 398 acres within the City of Irvine. PA 30 is currently being utilized for agricultural production. The Irvine Spectrum is located east of PA 30. I-5 is south and southwest of PA 30. Urban areas of the City of Irvine are north and west of the site and PA 51 is north of PA 30.



Source: USGS 7.5-minute series, El Toro and Tustin quadrangles, photorevised 1982 and 1981.

--- Project Boundary

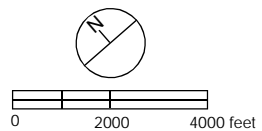


Figure 4-1
USGS Map of El Toro Area

James A. Musick Branch Jail (Portion of PA 35)

The James A. Musick Jail Facility is located on a 105-acre site within a portion of PA 35. The facility is northwest of existing Bake Parkway and easterly of the future extension of Alton Parkway. The northern boundary of the Musick Jail site abuts PA 51. The existing buildings of Irvine Spectrum abut the Musick Jail site to the west/southwest. Residential uses in the City of Lake Forest are, at the closest point to the Musick Jail site, approximately 700 feet to the southeast of the present jail fence.

IRWD Parcel (Portion of PA 35)

The eight acre IRWD parcel is also located in a portion of PA 35. The parcel contains the IRWD East Irvine Zone IV Pumping Station and Zone III 5.0 million gallon potable water reservoir and 7.0 million gallon potable water reservoir. This parcel is northwest of the Musick Jail facility. The northern portion of this parcel abuts PA 51. Agricultural fields are southwest of the parcel.

Project Area Conditions

Regulation of land use in PA 51 and 30 (the former MCAS El Toro) is currently the responsibility of the Department of Defense (DOD), while the James A. Musick Jail facility is owned and operated by the County of Orange and the IRWD parcel is owned by the Irvine Ranch Water District.

The project area is located within the South Coast Air Basin (SCAB). The SCAB is generally dominated by high-pressure systems over the Pacific Ocean and is arid, with little rainfall and plentiful sunshine. Moderate temperatures and comfortably low humidity are the predominant weather patterns in the region. Precipitation is limited, normally occurring from late November to April.

Noise heard on-site is primarily generated by traffic from surrounding roadways and freeways, including the Santa Ana (I-5) Freeway, the Eastern Transportation Corridor (SR-133), and the Foothill Transportation Corridor (SR-241).

The project area contains hazardous materials contamination associated with operations from former military activities (the majority of which are located in PA 51). These hazardous materials consist of petroleum-based products such as aviation and vehicular fuels, engine and lubricating oils, solvents, cleaners, paints, thinners, pesticides and herbicides; chlorinated/halogenated compounds, including polychlorinated biphenyls (PCB); some radioactive materials; ordinance munitions and propellants. Cleanup and remediation of hazardous materials on-site is currently underway under the Base Realignment and Closure Cleanup Plan (BCP).

The project area extends from the southern margin of the foothills of the Santa Ana Mountains to the southeastern edge of the alluvial Tustin Plain. The Santa Ana foothills are underlain by a tilted sequence of stratified sedimentary bedrock units which make up the hills and ridges. The Tustin Plain is a gently sloping alluvial plain underlain by alluvial fan sediments consisting of sand, silt, and clayey silty sand. There is no known active or potentially active fault crossing or projecting into the project area. Portions of PA 51 lie

within the San Diego Creek drainage basin and the remaining portion of the project area (PA 30 and a portion of PA 35) lie within the Borrego Canyon drainage system and drain into the Borrego Canyon Wash.

Notes and References

None.

5.0 Environmental Impacts and Mitigation Measures

This section of the Final Program EIR addresses the environmental setting for each impact area, the threshold for determining significance of environmental impacts, identification of environmental impacts, mitigation measures for those environmental impacts, which are deemed significant, and the environmental impact remaining after implementation of mitigation measures. Notes and references are also listed.

Each impact is discussed and analyzed in the sections that follow. Each environmental impact issue area is addressed according to the format identified below. For impacts where there is no material difference between those associated with the Base Plan and those associated with the Overlay Plan, a single discussion applicable to both plans is provided. For impacts where there are differences between the two plans, separate discussions are provided. Similarly, the attendant discussion of mitigation measures is either combined for both plans if there is no difference in impacts, or separated if they are particular to each plan.

Environmental Setting: A discussion of the existing conditions, services, and physical environment of the project area.

Threshold for Determining Significance: The amount or type of impact which contributes a substantial or potentially substantial adverse change in the environment, based on the thresholds contained in the Environmental Checklist contained in Appendix G of the CEQA Guidelines. Based on this criterion, project impacts can be classified as: significant and unavoidable; significant, but can be mitigated, avoided, or substantially lessened; or less than significant.

Environmental Impact: A discussion of the impacts of the proposed project according to the land use distribution and intensity as identified for the Base Plan and Overlay Plan, in quantitative and/or qualitative terms, based on the uses of land identified in the project description.

Mitigation Measures: A discussion of the measures required by the City of Irvine to avoid, mitigate or substantially lessen significant impacts associated with implementation of the Base Plan and Overlay Plan.

Impact After Mitigation: A discussion of the level of impact of the project following the implementation of required or recommended mitigation measures.

Notes and References: A list of reference sources indicating the document, person or data source for information contained within the section. A complete listing of references can be found in Section 8.0 – References of this Final Program EIR.

Areas of Potential Environmental Impact

1. Land Use
2. Traffic/Circulation
3. Air Quality
4. Noise
5. Public Health and Safety
6. Geology and Seismicity
7. Hydrology and Water Quality
8. Agricultural Resources
9. Biological Resources
10. Paleontological Resources
11. Cultural Resources
12. Aesthetics
13. Population/Housing
14. Public Services and Facilities
15. Utilities

Detailed discussions of these impacts are found in the following sections. Other long-term environmental issues, including cumulative environmental impacts caused by the project, growth inducing impacts, unavoidable significant environmental impacts, and areas of no significant impact are discussed in Section 7.0 – Analysis of Long-Term Effects of this Final Program EIR.

5.1 Land Use

5.1.1 Environmental Setting

Regional Setting

The project area (which consists of the City of Irvine Planning Areas (PAs) 51, 30, and a portion of 35) is located in the central portion of the County of Orange as shown in Figure 1-1 in the *Introduction* of this EIR. The former MCAS El Toro property (PAs 51 and 30) encompasses approximately 4,693 acres or 7.3 square miles. Approximately 4,279 acres of the former MCAS El Toro property are in unincorporated County territory within the Sphere of Influence of the City of Irvine. The remaining 414 acres are within Irvine city limits. The proposed project includes the annexation of approximately 4,392 acres which includes the James A. Musick Jail facility and the Irvine Ranch Water District parcel.

The project area is generally bounded by the City of Lake Forest on the south and southeast, the City of Irvine on the west and southeast, and the County of Orange on the north. Other nearby local jurisdictions include the cities of Laguna Hills, Laguna Niguel, Laguna Woods, Aliso Viejo, Mission Viejo and Tustin.

The project area is located northeast of the Santa Ana (I-5) Freeway, east of the Eastern Transportation Corridor (SR-133), and south of the Foothill Transportation Corridor (SR-241). Major roadways bordering the project area include Barranca Parkway to the south, Sand Canyon Avenue to the west, Portola Parkway and Irvine Boulevard to the north, and Alton Parkway to the east as shown in Figure 1-1, Vicinity Map (Section 1.0 – Introduction of this Final Program EIR).

The Irvine Transportation Center, a major multi-modal transit center linking Orange County Transportation Authority (OCTA) bus, Metrolink commuter rail, and Amtrak rail services, is adjacent to the Southern California Regional Rail Authority (SCRRA) tracks, which bisect a portion of the project area.

Existing Land Uses

Former MCAS El Toro (PAs 51 and 30)

The former MCAS El Toro base (PAs 51 and 30) was developed in 1942 on land purchased from The Irvine Company. The former base operated continuously as a military air facility from that time until it was closed in July 1999, as part of the federal 1993 Base Realignment and Closure (BRAC) process. The DON provides caretaker responsibilities for the former MCAS El Toro. Since closure, existing buildings, structures, ancillary facilities, runways, etc. have been left on-site by the DON. Portions of the site are also currently used for agricultural operations. The DON is leasing some of the existing facilities for various interim activities, such as the golf course and equestrian facilities and the Cal State University, Fullerton Extension Campus, agricultural operations, and recreational vehicle storage.

The former MCAS El Toro base generally consists of approximately 500 existing structures with approximately 4.6 million square feet of space. There are approximately 1,100 existing military housing units. Development includes the MCAS and COMCABWEST headquarters building and the officers club, unoccupied residential housing, maintenance, operation, and storage uses, the airfield operations building, an equestrian center, golf course and industrial uses, with predominantly hangers and warehouses.

The former base airfield includes five runways. There are two 10,000-foot long north-south parallel runways (Runways 16L/34R and 16R/34L). There are two 8,000-foot east-west runways (Runways 7L/25R and 7R/25L). There is also a 3,900-foot long limited-use runway (Runway 3-71), taxiways, and aircraft parking aprons.

Land uses within PA 51 northeast of Irvine Boulevard include unoccupied residential housing areas and an approximately 995-acre parcel of open space containing a pistol range, explosive ordnance disposal site, and archery area.

The northern boundary of PA 51 is adjacent to large open spaces in unincorporated Orange County, within the City's Sphere of Influence. The City of Irvine General Plan designates this "Northern Sphere" area for a mix of residential, industrial, commercial, recreational, institutional, and open space uses. PAs 51 and 30 abut portions of the Irvine Spectrum to the east and west (Irvine Industrial Complex East B (PA 35) and Irvine Technology Center B (PA 32). Existing and planned residential uses are north and east of the former base. The Irvine Transportation Center is on the southern boundary of PA 51 and on the eastern side of Barranca Parkway. An existing rail line crosses the southern part of PA 51 and is used for Metrolink commuter rail and Amtrak passenger and freight services. The James A. Musick Jail facility is adjacent to the eastern boundary of the base, as is the eight-acre IRWD parcel. There are some existing agricultural uses to the north and west of the project area.

James A. Musick Jail Facility (Portion of PA 35)

The James A. Musick Jail facility (portion of PA 35) is currently a minimum-security detention and corrections facility housing approximately 1,250 inmates. The inmate housing and detention facilities are located in the northeast corner of the site. The remainder of the site is used for agricultural activities associated with inmate detention.

IRWD Parcel (Portion of PA 35)

The IRWD parcel (portion of PA 35) is an eight-acre facility providing water storage and pumping. The parcel contains the East Irvine Zone 4 Pumping Station, and the East Irvine Zone 5.0 million gallon and 7.0 million gallon potable water reservoirs.

Local and Regional Plans

City of Irvine General Plan and Zoning Ordinance

The City of Irvine's General Plan represents the long-range vision of the City. It is a comprehensive statement of Irvine's development and preservation policies for all geographic areas of the City and its sphere of influence, and the relationships between

social, financial, environmental, and physical characteristics. The City's first General Plan was adopted in December 1973. According to the City's 1973 General Plan, after base closure, PAs 51 and 30 were planned for multi-use (non-aviation) development compatible with the City's and surrounding development patterns. The General Plan has been modified by City Council action over the years to address changing City priorities and planning goals.

In April 1993, the City initiated a multi-phased General Plan amendment (13309-GA) that proposed revisions to all elements of the General Plan to clarify and update the objectives, policies, supporting text, and diagrams consistent with current City policy, codes, and procedures. In August 1993, the City adopted General Plan Amendment (GPA) 13309-GA for the Phase I General Plan Update. In April 1995, the City adopted GPA 15032-GA for the Phase II General Plan Update. On March 9, 1999, the City adopted GPA 18930-GA for the Phase III General Plan Update. The Phase III Update revised the text and exhibits of the Land Use, Circulation, Seismic, Cultural Resources, Noise, Public Facilities and Services, Integrated Waste Management, Energy, Safety, Parks and Recreation, Conservation and Open Space, and Growth Management Elements. The General Plan was again amended in 2000 to reflect the changes in PAs 30 and 51 as a result of the previously approved Millennium Plan II for the El Toro Property (39399-GA, 39400-ZC). The General Plan Updates in March 1999 and February 2000 revised the General Plan to reflect the closure of MCAS El Toro. The General Plan was again updated in June 2002 to reflect the adoption of the General Plan Amendment for the Northern Sphere area as is described in more detail below.

The City has initiated two annexations to develop physical infrastructure in the vicinity of the project area. The 1972 annexation addressed most of what is now designated PA 30 (the southern portion of the former MCAS El Toro property). The 1984 annexation included what is now PA 32 (the Irvine Technology Center). The property owner at the time of annexation for both PA 30 and PA 32 was The Irvine Company. These annexations facilitated the development of local and regional circulation improvements such as Alton Parkway, Bake Parkway, and Barranca Parkway through PA 30. The federal government purchased the property in PA 30 from The Irvine Company in 1975 and added to it in 1988 for the clear zone for the flight approach for runways 34/R and 34/L.

In June 2002, the City adopted a General Plan Amendment and Zone Change for the Northern Sphere Area of the City, which consists of City of Irvine Planning Areas 3, 6, and 9, and a portion of Planning Areas 5 and 8. The Northern Sphere project amended the City's General Plan and Zoning Ordinance to permit development of a mix of residential, industrial, commercial, recreational, institutional uses, and open space dedications. Following adoption of the Northern Sphere project, the Irvine Company made a formal application to LAFCO for annexation of Planning Areas 8A and 9A.

The City's General Plan has thirteen elements, seven of which are mandated by State Law. The policy guidance in all of these elements will be applied to the future development of the project area consistent with the new land uses proposed as part of the OCGP GPA and Zone Change. The following discussion identifies the relationship of these elements to the project area.

Land Use Element. The goal of the Land Use Element is to "promote land use patterns that maintain safe residential neighborhoods, bolster economic prosperity, preserve open space, and enhance the overall quality of life in Irvine." The Land Use Element currently designates the unincorporated portion of the former MCAS El Toro property (PA 51) as Research and

Industrial, Community Commercial, Institutional, Multi-Use, Commercial Recreation, Low Density and Medium Low Density Residential, Recreation, and Preservation.

The portion of the former MCAS El Toro property within the City of Irvine (PA 30) is designated Community Commercial, Commercial Recreation, Research and Industrial, Institutional, Preservation, and Recreation in the General Plan. The zoning districts are: 4.3B Community Commercial; 4.4 Commercial Recreation; 5.5 Research and Industrial; 6.1 Institutional; 1.4 Preservation; and 1.5 Recreation.

Both the James A. Musick Jail facility and IRWD Parcel (portion of PA 35) are designated as Institutional in the adopted Irvine General Plan.

Circulation Element. The goal of the Circulation Element is to “provide a balanced transportation system.” The Circulation Element addresses four separate circulation systems: air, road, public transit, and trails.

Objective B-7, Air Transportation Program, Policy (c) states “oppose commercial use of El Toro MCAS and continue liaison with surrounding communities in organizing and supporting opposition to such use.” Policy (d) states:

“....Encourage use of Los Angeles and Ontario International Airports for continental and international flights. Explore commercial airport potential of existing and closing military facilities with Los Angeles, San Bernardino, Riverside and San Diego counties, as well as existing commercial airport and general aviation airports which have expansion potential in order to meet the growing passenger demand on a regional basis. Discourage the development or expansion of airfields which are not now operating as commercial airports, or the expansion of existing commercial airports which would adversely impact existing urban communities.”

Housing Element. The Housing Element’s goal is to “provide for safe and decent housing for all economic segments of the community.” A primary purpose of the Housing Element is to identify ways in which the City will encourage a variety of housing types to meet the City’s Regional Housing Needs as identified by SCAG. Objective C-7, Military Base Housing Reuse, Policy (c) states the City will “request release of MCAS El Toro base housing by the federal government, and pursue immediately civilian use.” Policy (c) further states the City will “pursue annexation of MCAS El Toro, and explore opportunities for maintenance of the housing stock.”

Seismic Element. The goal of the Seismic Element is to “minimize the loss of life, disruption of goods and services, and the destruction of property associated with an earthquake.” All areas of the City are classified as one of five Seismic Response Areas (SRA). Each SRA zone describes the magnitude and types of potential seismic hazards present. The majority of the site (flat elevations) is located within the SRA-2 zone. The hillside area north of Irvine Boulevard is SRA-3 and SRA-4 zones. The meaning of these zone classifications is as follows:

- SRA 1: Areas with soft or loose soils/high groundwater and a greater potential for ground failure in the form of liquefaction.
- SRA 2: Areas with denser soils/deeper ground water with ground failure posing the greatest seismic hazard.
- SRA 3: Areas with shallow alluvium over and abutting bedrock with ground motion posing the greatest seismic threat.

- SRA 4: Areas with highlands characteristically over 20 percent slope that are potentially less stable than SRA 3 areas due to the greater slope.
- SRA 5: Areas containing less stable geologic formations, such as mapped landslide areas.

Cultural Resources Element. The goal of the Cultural Resources Element is to “ensure the proper disposition of historical, archaeological, and paleontological resources to minimize adverse impacts, and to develop an increased understanding and appreciation for the community’s historic and prehistoric heritage, and that of the region.” The majority of the site (flat elevations) is identified as a low paleontological sensitivity zone. The hillside area north of Irvine Boulevard is identified as a high paleontological sensitivity zone.

Noise Element. The goal of this Element is to “contribute to a healthy and safe environment by minimizing noise impacts.” The Noise Element divides unwanted noise into two categories of noise sources - mobile and stationary. The Noise Element states:

“MCAS El Toro was closed in July 1999. In its place, the County of Orange has proposed a commercial airport, which will likely have an impact on aircraft noise as well as vehicular noise. The City of Irvine actively opposes a commercial airport.”

“The El Toro Reuse Planning Authority, which consists of the cities of Irvine, Mission Viejo, Laguna Hills, Lake Forest, Laguna Beach, Dana Point and Laguna Niguel, has prepared the Millennium Plan for the reuse of MCAS El Toro. The Millennium Plan consists of a mix of non-aviation land uses which may have different vehicular and stationary noise levels than currently associated with military activities at MCAS El Toro.”

Public Facilities and Services Element. The goal of the Public Facilities and Services Element is to “provide a full range of necessary public facilities and services that are convenient to users, economical, reinforce City and community identity, and reflect the participation of citizens.”

Integrated Waste Management Element. The Integrated Waste Management Element’s goal is to “encourage solid waste reduction and provide for the efficient recycling and disposal of refuse and solid waste material without deteriorating the environment.”

Energy Element. The Energy Element’s goal is to “promote energy conservation and the use of renewable energy sources throughout the City in a cost effective way.”

Safety Element. The goal of the Safety Element is to “minimize the danger to life and property from man made and natural hazards, including fire hazards, flood hazards, non-seismic geologic hazards and air hazards.” The portion of the project area north of Irvine Boulevard and east to Sand Canyon Avenue is designated a High Fire Severity Rating on Figure J-2, Fire Hazard Areas. Portions to the north of the project area are also identified as Flood Hazard Areas in Figure J-3. Policy J-1.d and Figure J-4, Clear and Accident Potential Zones, address hazards associated with aircraft operations. Policy J-1.d uses the most current available Airport Environs Land Use Plan as a planning resource for evaluating aircraft operations, land use compatibility, and land use intensity.

Parks and Recreation Element. The Parks and Recreation Element’s goal is to “provide park and recreation opportunities at a level that maximizes available funds and enables residents of all ages to utilize their leisure time in a rewarding, relaxing, and creative manner.”

Conservation and Open Space Element. The goal of the Conservation and Open Space Element is to “maintain and preserve the environmental systems as a major feature in the City.” This element locates the project area in the Northern Flatlands landform zone. The northeastern portion of PA 51 is also identified as NCCP Habitat Reserve.

Growth Management Element. The goal of this Element is “to ensure that growth and development are integrally planned with, and phased concurrently with, the City of Irvine’s ability to provide an adequate circulation system and public facilities.”

Orange County General Plan

The County General Plan shows the majority of PA 51, the James A. Musick Jail facility and IRWD parcel as Public Facilities. The northernmost arm of PA 51 is designated for Open Space. However, in 1994, the voters in Orange County approved Measure A. Measure A amended the County’s General Plan to designate the unincorporated portion of the former MCAS El Toro property (PA 51) for commercial aviation and related uses. Since that time, several plans for the reuse of the site have been prepared. In March of 2002, the voters of Orange County passed the “Orange County Central Park and Nature Preserve Initiative” (Measure W). This initiative amended the County General Plan north of the SCRRA Metrolink rail line (PA 51) to designate the unincorporated County land for park, open space, and other uses, effectively removing the designation of the site as a commercial airport from the General Plan. Following this initiative, the Board of Supervisors decided to cease further planning for El Toro and to support the annexation and land use planning of the property by the City of Irvine.

MCAS El Toro Land Use Compatibility Plans

The DOD established the Air Installations Compatible Use Zones (AICUZ) program to ensure compatible development in high-noise exposure areas, minimize public exposure to potential safety hazards associated with aircraft operations, and protect the operational capability of the air installation. In accordance with the Department of Navy’s instructions governing the AICUZ program, the AICUZ program recommends that communities adopt land use plans prohibiting land uses deemed incompatible with military air operations. The AICUZ itself does not impose any land use restrictions.

The Airport Land Use Commission (ALUC) for Orange County has Airport Environs Land Use Plans (AELUP) for John Wayne Airport (adopted 2002), Fullerton Municipal Airport (2002), Joint Forces Training Base Los Alamitos (2002), Heliports projects (2002), and for the former MCAS El Toro (1995). The purpose of the AELUP is to protect aviation facilities from encroachment by incompatible land uses. It establishes noise/land use acceptability criteria for sensitive land uses at 65 dB CNEL for outdoor areas and 45 dB CNEL for indoor areas of residential uses. The AELUP utilizes the AICUZ and Accident Potential Zones (APZ) for MCAS El Toro. Figures found in Appendix D of the 1995 AELUP depict the noise and safety zones for the former MCAS EL Toro. Figure 5.1-1 depicts the APZs for the former MCAS El Toro as shown in the 1995 AELUP.

The MCAS El Toro property is still owned by the federal government. The 1995 AELUP applicable to the property remains in effect and has not been amended. California Public Utilities Code Section 21670, et. seq. requires that local General Plans and Zoning be consistent

with the AELUP. The Public Utilities Code provides a method whereby a local jurisdiction may override an ALUC finding of inconsistency with the AELUP.

The County's Noise Element adopts the AELUP restrictions, including a Policy Implementation Line (PIL), which defines the area subject to land use development restrictions. Historically, this PIL has been the MCAS El Toro 1981 PIL 65 dB CNEL contour. The adopted PIL for the former MCAS El Toro is depicted in Figure 5.1-1. These land use, safety, and noise restricted areas as identified in the AICUZ, AELUP, and the PIL are still adopted by the ALUC, but no longer are impacted by aircraft noise from military air operations since the former base closed its operations in July 1999.

Contrary to the adopted Orange County General Plan (as amended by Measure W in March 2002), the adopted City of Irvine General Plan, the DON's Final Record of Decision (ROD) regarding the disposal and reuse of the former base property, and all current regional planning activities regarding air transportation resources in Southern California, the ALUC on December 16, 2002 continued to plan for an airport at the former MCAS El Toro site. The plan reflects the AELUP for the airbase adopted in November 1995. This plan is based on the 1981 AICUZ.

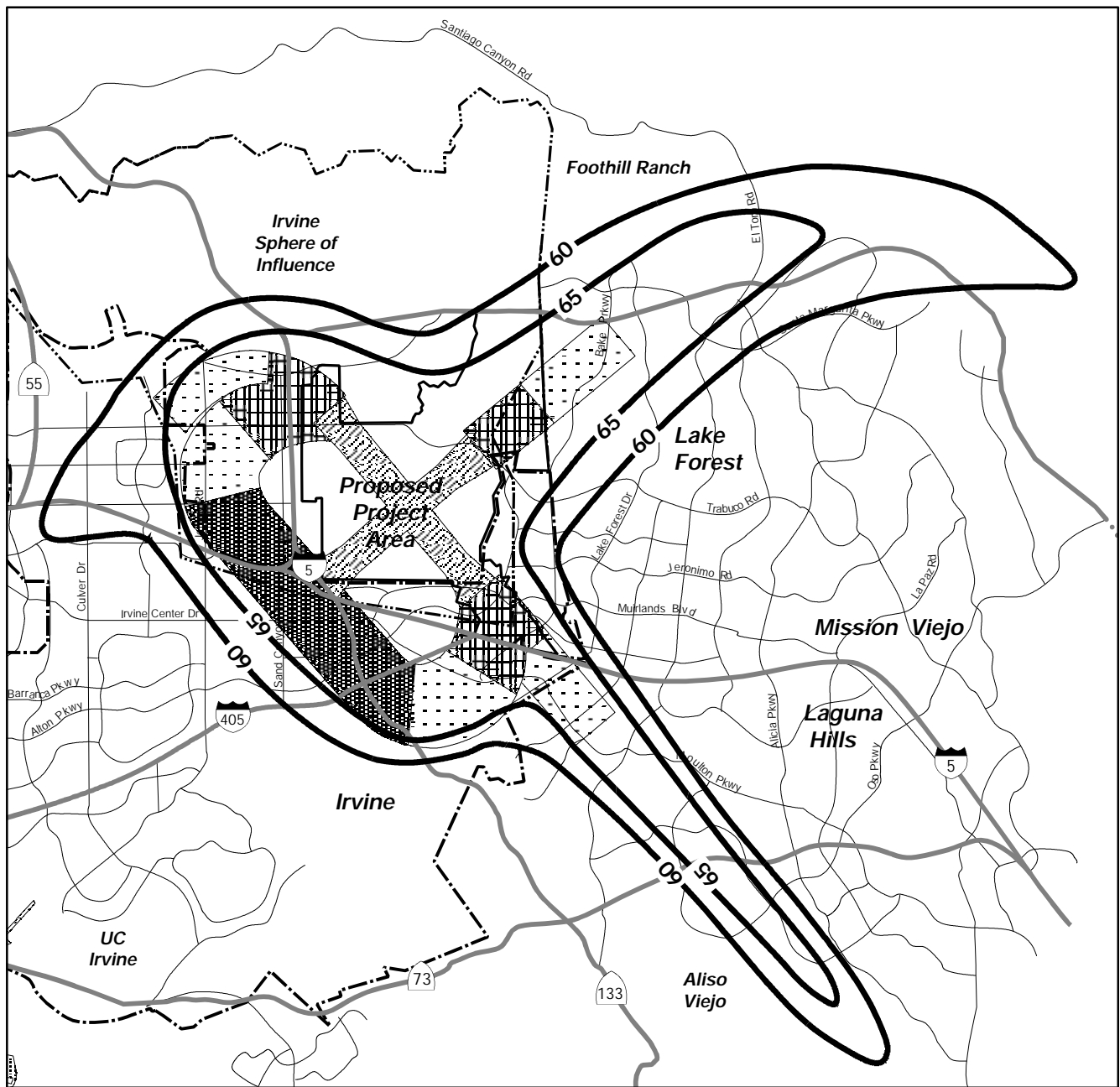
Specifically, all other federal and local agencies with jurisdiction over the site have concluded that MCAS El Toro will not be used as a military or commercial aviation facility. A letter dated October 9, 2002 from Deputy Assistant Secretary of the Navy Wayne Arny states, "the Navy has formally determined to close MCAS El Toro and has no plan to recommission the site as a military installation." Mr. Arny's letter continues, "the 1981 AICUZ is not applicable to the closed military facility and should not be used as a basis for any land use planning effort undertaken by the ALUC."

James A. Musick Jail Facility Expansion Plan





The County has approved the expansion of the Musick Jail facility to house 7,584 inmates in a minimum/medium/maximum security facility. This expansion would occur in three phases and include a Sheriff's Southeast Station, ancillary jail facilities (warehouse, central plant, food service, laundry, staff and visitor parking, etc.), and a relocated Interim Care Facility. However, construction has not yet commenced on the expansion.



Orange County Master Plan of Arterial Highways

The County of Orange Master Plan of Arterial Highways (MPAH) forms part of the Orange County General Plan and designates the arterial system in the circulation element of the General Plan. Defined according to specific arterial functional classifications, the MPAH serves to define the intended future roadway system for the County. Cities within the



Source: City of Irvine, General Plan,
P & D Consultants, Inc.

-  Clear Zone - Extreme Hazard
-  APZ-1 - Limited Hazard
-  APZ-2 - Minimal Hazard
-  Local Corridor - Minimal Hazard

-  Adopted Community Noise Equivalent Level (CNEl) Contours (1981) for the Former MCAS El Toro
-  PIL (65 CNEl)

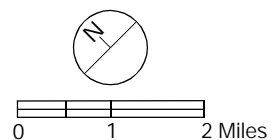


Figure 5.1-1
Former MCAS El Toro AICUZ and PIL

County are expected to achieve consistency with the MPAH in individual General Plan circulation elements.

Southern California Association of Governments (SCAG)

Orange County and the City of Irvine are located at the western edge of a six-county metropolitan region composed of Orange, Los Angeles, Ventura, Riverside, San Bernardino and Imperial Counties. The Southern California Association of Governments (SCAG) serves as the federally recognized Metropolitan Planning Organization for this Southern California region. Orange County and its jurisdictions constitute the Orange County Subregion within the SCAG region. The Orange County Subregion is governed by the Orange County Council of Governments (OCCOG).

Regional Comprehensive Plan and Guide

SCAG has developed a Regional Comprehensive Plan and Guide (RCPG) to help coordinate transportation and infrastructure, open space and environmental planning with population, housing, and employment growth within the multi-county region. The RCPG adopted in 1995 presents policies addressing planning priorities for the region adopted by SCAG's governing board, the Regional Council. Some of these are "core" policies that implement state or federal mandates, while most of the policies are "ancillary" or advisory only guidance for local jurisdictions and public agencies.

SCAG's RCPG includes a package of policies related to growth and development that seek to coordinate infrastructure with projected population and housing growth. In general, SCAG policies encourage job and housing opportunities to be balanced at the County or Regional Statistical Area. SCAG policies also encourage job growth to be concentrated near transit services and transit nodes, and existing freeways, high occupancy vehicle (HOV) lanes, and toll roads. Given the scope and expansive nature of the RCPG, not all of the RCPG policies apply to every project.

Regional Transportation Plan (RTP)

SCAG has also adopted a Regional Transportation Plan (RTP) to help coordinate development of the region's transportation improvements. SCAG's 2001 RTP designates the El Toro property as a commercial airport. However, in response to a recent lawsuit settlement with ETRPA, the SCAG Regional Council passed a resolution that the 2004 RTP will not include an airport at El Toro.

County of Orange Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP)

The County's Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) is a program designed to provide long-term regional protection of the natural vegetation and wildlife diversity of the region while allowing compatible land use and appropriate development to occur. In April 1996, the Orange County Board of Supervisors adopted the Central-coastal Subregion NCCP/HCP program. The habitat preserve area located in the eastern portion of PA

51 is identified for incorporation into the NCCP/HCP. Figure 5.9-1 in Section 5.9 Biological Resources of this EIR depicts the project site in relation to the NCCP/HCP.

Special Area Management Plan (SAMP)

The Army Corps of Engineers Special Area Management Plan (SAMP) consists of identification and characterization of aquatic resources, evaluation of alternatives for proposed impacts to aquatic resources, and identification of an aquatic reserve program. Under Section 404 of the Clean Water Act, the Corps of Engineers is authorized to regulate discharge of dredge or fill material into waters of the United States. By implementing Special Area Management Plans (SAMPs), the Corps can analyze potential impacts to waters of the United States at the watershed scale in order to identify priority areas for preservation, identify potential restoration areas, and determine the least environmentally damaging locations for proposed projects. The SAMP process is designed to complement the California Department of Fish and Game's (CDFG's) Natural Communities Conservation Planning (NCCP) program, as well as the U.S. Fish and Wildlife's Habitat Conservation Plan (HCP). The Corps continues to work with other agencies such as the U.S. Environmental Protection Agency and the Regional Water Quality Control Board to implement the SAMP in Orange County.

5.1.2 Threshold For Determining Significance

Appendix G of the CEQA Guidelines outlines the threshold significance criteria that a project is measured against for land use and planning.

Would the project:

1. *Physically divide an established community?*
2. *Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigation an environmental effect?*
3. *Conflict with any applicable habitat conservation plan or natural community conservation plan?*

5.1.3 Environmental Impact

Proposed Land Use

The entire project area is within the City of Irvine or has been within the City of Irvine's Sphere of Influence since 1973. A portion of the former base, PA 51, is in the unincorporated territory of the County of Orange. Currently, these two jurisdictions are responsible for the planning of the former MCAS El Toro property. Both the City's and County's General Plans designate land uses for reuse of the former base now that it has closed. The County had previously prepared an aviation land use plan; however, Measure W, which was passed in March 2002, amended

the County General Plan north of the Southern SCRRRA Metrolink rail line to designate the unincorporated land within PA 51 for park, open space, and other uses.

Base Plan and Overlay Plan

The project proposes to change the existing designations within the project area to a variety of non-aviation uses. Implementation of the proposed General Plan Amendment (GPA) and Zone Change would result in a non-aviation reuse of the former MCAS El Toro property, consistent with goals and policies contained in the adopted Irvine General Plan and as mandated by the voters of Orange County with the passage of Measure W. Figure 3-3 and Tables 3-3 and 3-4, in Section 3.0 – Project Description of this Final Program EIR, depict and list the proposed land uses per the Base Plan and Overlay Plan.

As depicted in Table 3-3, buildout of the proposed Base Plan will result in approximately 225 dwelling units, a 272-acre sports park, and 3,856,500 square feet of non-residential land uses (including retail, education, research and development, cultural and institutional, transportation facilities, and other uses). Implementation of the Base Plan will result in over 62 percent of the project area being preserved for open space and recreational uses including a 974-acre habitat preserve consistent with the NCCP/HCP. Two golf courses providing 54 holes of golf, an outdoor sports complex, various neighborhood and community parks, and open space corridors and linkages will also be developed.

As depicted in Table 3-4, buildout of the Overlay Plan will result in approximately 3,625 dwelling units, a 165-acre sports park, and 6,585,594 square feet of non-residential land uses (including education, research and development, retail, fairgrounds/commercial recreation, cultural and institutional, transportation facilities, and other uses). Implementation of the Overlay Plan will result in the majority of the project area being preserved for open space and recreational uses including a 974-acre habitat preserve consistent with the NCCP/HCP. Two golf courses for public play providing 54 holes of golf, an outdoor sports complex, various neighborhood and community parks, fairgrounds/commercial recreation, a cemetery, and open space corridors and linkages will also be developed.

Under both the Base Plan and Overlay Plan, a wildlife corridor/natural area will be preserved along the southern portion of PA 51, crossing over to the northern side of PA 30. The golf courses and the wildlife corridor/natural area will be located adjacent to the NCCP/HCP preserve and will provide open space buffers between urban development and the habitat preserve.

Threshold 1: Would the project physically divide an established community?

Base Plan and Overlay Plan

All of the project area is located in the City of Irvine's Sphere of Influence, except for a portion that is already within City limits (PA 30 and a portion of PA 35). There are no residents living within the former MCAS El Toro site, nor on the IRWD parcel. While there are persons residing within the James A. Musick Jail facility, any community created within the facility is contained within the jail confines. In addition, no change is proposed for the James A. Musick Jail facility

under either the Base Plan or Overlay Plan. As a result, no significant impact to established communities is anticipated.

Threshold 2: *Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?*

Base Plan and Overlay Plan

City of Irvine General Plan and Zoning Ordinance

The site is currently planned and zoned for non-aviation uses. Several objectives, policies, and programs within the City's General Plan also oppose commercial aviation use of the former MCAS El Toro facility, and support continued liaison with surrounding communities in organizing and supporting opposition to such use.

The project proposes to amend the various Elements within the adopted Irvine General Plan to reflect the land use changes proposed for the former MCAS El Toro property as approved by the voters of Orange County with the passage of Measure W in March 2002 and ensure internal consistency within the General Plan. The following sections summarize the proposed changes to the General Plan Elements and a more detailed description is provided in Section 3.0 – Project Description of this Final Program EIR.

Land Use Element: The proposed project amends the Land Use Element to reflect a park oriented plan that implements a non-aviation plan for PAs 51 and 30. General Plan Figure A-3, Land Use, will be changed to reflect the proposed land uses designated in the GPA as shown on Figure 3-3. The General Plan's Figure A-4 Scenic Highways will be amended to remove Millennium Parkway. The General Plan's Table A-1, Maximum Intensity Standards by Planning Area, and Table A-2, Maximum Intensity Standards, will be revised to reflect the proposed land uses for Planning Areas 51 and 30.

The GPA will implement all of the Land Use Element objectives (i.e., promote land use patterns that maintain safe residential neighborhoods, bolster economic prosperity, preserve open space, and enhance the overall quality of life in Irvine) and implementing policies.

Circulation Element: Four General Plan circulation exhibits will be changed under the proposed GPA to reflect the proposed circulation system within PAs 51 and 30: General Plan Figure B-1, Master Plan of Arterial Highways as shown on Figure 3-5 of the Project Description; General Plan Figure B-2, Operational Characteristics as shown on Figure 3-6 of the Project Description; General Plan Figure B-3, Public Transit; and General Plan Figure B-4.

The General Plan Amendment will modify Policy B-1 (c) to add the following sentence:

In conjunction with individual subdivision map level traffic studies for development proposed in Planning Areas 30 and 51, a LOS "E" would be considered acceptable for application to intersections impacted in Planning Areas 13, 30, 31, 32, 34, 35, and 39.

The impact associated with the LOS “E” policy change is evaluated in Section 5.2 Traffic/Circulation of this EIR. Please refer to Section 5.2 for an analysis related to this issue.

The GPA will implement all of the adopted Circulation Element objectives (Roadway Development, Roadway Design, Pedestrian Circulation, Bicycle Circulation, Riding and Hiking Trail, Public Transit Program, Air Transportation Program, and Telecommunications Program) and implementing policies.

Housing Element: The GPA will not change the adopted Housing Element objectives (New Construction, Quality Design and Construction, Fair Housing, Housing Types, Existing Housing, Monitoring, Military Base Housing Reuse, and Balanced Employment/Residential Growth). All of the adopted objectives and implementing policies will be implemented as part of the proposed project. Policy (c) states the City will “pursue annexation of MCAS El Toro, and explore opportunities for maintenance of the housing stock.” The additional housing units that will be developed under either the Base Plan (225 dwelling units) or Overlay Plan (3,625 dwelling units) will help Irvine meet its Regional Housing Needs Assessment through 2025. Additionally, the project through the Development Agreement will convey 165 units to homeless providers.

Seismic Element: No objective (Potential Hazards, Response to Hazards, and Citizen Participation) or implementing policy of the Seismic Element will be changed by the proposed project. All of the adopted objectives and implementing policies will be implemented as part of the proposed project. Section 5.6 – Geology and Seismicity of this Final Program EIR analyze the potential impacts of the proposed project related to seismic issues.

Cultural Resources Element: No objective (Historical, Archaeological and Paleontological Surveys, and Hazard Occurrence) or implementing policy of the Cultural Resources Element will be changed by the proposed project. All of the adopted objectives and implementing policies will be implemented as part of the proposed project. Additionally, substantial land area is designated for cultural facilities in both the Base Plan and Overlay Plan.

Noise Element: No objective (Mobile Noise, Stationary Noise, and Noise Abatement) or implementing policy will be modified under the proposed GPA. All of the adopted objectives and implementing policies will be implemented as part of the proposed project.

Public Facilities and Services Element: The GPA will not change the adopted objectives (Public Facilities Development, Public Participation, City Services, and Maintenance and Rehabilitation) or implementing policies. All of the adopted objectives and implementing policies will be implemented as part of the proposed project. To implement the adopted objectives, the City of Irvine has involved the public in developing the proposed project. In addition, the City will prepare an Urban Service Plan for the project area to identify and plan for the future need for public facilities and services resulting from the implementation of the proposed project.

Integrated Waste Management Element: The GPA will not change the adopted objectives (Solid Waste, Waste, Wastewater, and Solid Waste Facility Siting Requirements) or implementing policies. All of the adopted objectives and implementing policies will be implemented as part of the proposed project.

Energy Element: The GPA will not change the adopted objectives (Energy Conservation, Retrofit Programs, and Municipal Conservation) or implementing policies. All of the adopted objectives and implementing policies will be implemented as part of the proposed project.

Safety Element: The GPA will not change the objectives (Hazard Occurrence, Disaster Response, and Insurance Programs) or the implementing policies. All of the adopted objectives and implementing policies will be implemented as part of the proposed project.

Parks and Recreation Element: The GPA will not change the objectives (Recreational Opportunities, Park Dedication, Park Location, and Park Maintenance and Rehabilitation) or implementing policies. The GPA amends the General Plan's Figure K-1 Recreational Facilities to add public golf courses, public and private exposition centers, and regional park as proposed for PAs 51 and 30.

Conservation and Open Space Element: The GPA will not change the objectives (Implementation Action Program, Biotic Resources, NCCP/HCP Implementation Areas, Geophysical Hazards, Geophysical Resources, Societal Hazards, Societal Resources, Preservation Areas, Recreation Areas, Permanent Agriculture, Landfill Overlay, Water) or implementing policies. Please refer to Section 5.8 – Agricultural Resources for a detailed discussion of how the project specifically implements Objective L-10 Permanent Agriculture. General Plan Figure L-2, Conservation and Open Space will be revised to reflect Preservation, Recreation, and Agriculture uses within PAs 51 and 30.

Growth Management Element: General Plan Figure B-1, Master Plan of Arterial Highways, as shown in Figure 3-5 of the Project Description, and General Plan Figure B-2 Operational Characteristics, as shown in Figure 3-6, will be modified as discussed above under the Circulation Element. The objectives (Cooperative Implementation, Integrate Land Use and Transportation Planning, Roadway Maintenance and Capacity Enhancement, Transportation Demand Management, Transit Systems and Service, Balanced Growth, Phased Growth, Monitoring, and Management of Funds) or implementing policies of the Growth Management Element will not be changed by the GPA.

The proposed project amends the various Elements within the adopted General Plan to reflect the land use changes proposed for the former MCAS El Toro property to ensure internal consistency within the General Plan. Implementation of the proposed Base Plan or Overlay Plan will not result in a significant adverse impact to the City's adopted General Plan. The amended General Plan will replace the currently adopted version of the City's General Plan.

No change is proposed to the General Plan designation of the Musick Jail facility, therefore, annexation of the jail will not result in a conflict with the adopted General Plan.

No change is proposed to the General Plan designation of the IRWD parcel, therefore, annexation of the parcel will not result in a conflict with the adopted General Plan.

Federal Property Conveyances

As part of the federal property disposal process, portions of closed military bases may be conveyed to other military departments; federal, State, and local agencies; federally-recognized Native American tribes; and homeless providers. The County of Orange, as the currently designated Local Redevelopment Agency (LRA), has made nine recommendations for conveyance to the DON. These proposed conveyances are provided in Appendix F of this EIR and include conveyances to the Salvation Army, Orange County Community, Community Housing Assistance Program, SBC Community Homeless Coalition, Council of Orange County Society of St. Vincent de Paul, Orange County Community Housing Corporation, Orange County Social Services Agency, Families Forward, and American Riding Club for the Handicapped. The City of Irvine supports the conveyance process and will incorporate any approved conveyances that are compatible with the City's proposed land uses for this area. The DON will sell the remaining portions of the base by means of a public auction managed by the General Services Administration.

The proposed project does not modify the designated land uses for the Musick Jail facility. Under the proposed jail expansion plan, the jail facility may be expanded to house 7,584 inmates in a minimum/medium/maximum security facility if all appropriate approvals and environmental analyses are completed in a legally valid manner.

The proposed project does not modify the designated land uses for the IRWD parcel.

Zoning Ordinance

The proposed project involves zone changes in PA 51 and 30 to implement the Orange County Great Park designations for the Base Plan and Overlay Plan. The project also involves the creation of new or expanded zoning categories and overlay zones to address the other components of the Great Park land use designations. Interim uses may occur within the project area consistent with these zoning designations. No conflict with the zoning ordinance is anticipated.

Orange County General Plan

Since passage of Measure W in March 2002, the portion of the planning area within the jurisdiction of the County (i.e., the area north of the SCRRRA Metrolink rail line) has been designated for park, education, open space, and other uses, effectively removing the previous County General Plan designation of the site as a commercial airport. Following this initiative on April 16, 2002, the Board of Supervisors decided to cease further planning for El Toro and to support the annexation and land use planning of the property by the City of Irvine.

Orange County Master Plan of Arterial Highways

As part of the proposed project, the City will amend both the Land Use Element and the Arterial Plan contained in the General Plan. This is a necessary part of the proposed project to ensure internal consistency of the Irvine General Plan and the proposed project. The amended Arterial Plan will not be consistent with the adopted Orange County Master Plan of Arterial Highways (MPAH). The Orange County MPAH will need to be amended to reflect the GPA and Zone

Change. This potential impact is addressed in Section 5.2 –Traffic/Circulation of this Final Program EIR.

MCAS El Toro Land Use Compatibility Plans

The land use, safety, and noise restricted areas as identified in the AELUP, AICUZ, and the PIL for the former MCAS El Toro facility are no longer impacted by aircraft noise from military air operations now that the base has closed for military use. The MCAS El Toro property is still owned by the federal government. The 1995 AELUP applicable to the property remains in effect and has not been amended. California Public Utilities Code Section 21670, et. seq. requires that local General Plans and Zoning be consistent with the AELUP. The Public Utilities Code provides a method whereby a local jurisdiction may override an ALUC finding of consistency with the AELUP. On December 16, 2002 the ALUC chose not to amend the AELUP to reflect the base closure and future non-aviation uses for the site as agreed upon by the voters of the County of Orange and agencies with jurisdiction over the land (Department of Navy, the County of Orange, and the City of Irvine). Since with base closure there are no actual noise or safety hazards generated by aircraft flight which would threaten the proposed development, implementation of the proposed project would not result in a significant land use compatibility impact, even though it would conflict with the adopted AELUP. Proposed land uses will remain in conflict with the AELUP until the AELUP is amended to reflect the non-aviation uses.

During operation of the former MCAS El Toro, communities in Orange County adopted and implemented land use plans that attempted to achieve compatibility with the noise and other hazards associated with the aircraft and other operations of the active base. In response to the passage of Measure W and the subsequent designation of the former base property for non-aviation uses, several jurisdictions within the area have begun reevaluating existing and planned land uses within areas that were formerly affected by noise and other hazards associated with aircraft overflight. For example, the City of Lake Forest is currently studying the potential to change land use designations on approximately 950 acres of vacant land within the City that were previously encumbered by the 65 CNEL contour as a result of that portion of the City's proximity to the former base. Implementation of the Base Plan or Overlay Plan would result in a non-aviation reuse of the former MCAS El Toro property; as such, the project would be consistent with these plans.

James A. Musick Jail Facility Expansion Plan

The proposed annexation of the Musick Jail will not conflict with the jail's proposed expansion plan since no change in the General Plan or zoning designation is proposed. EIR No. 564 does not identify any land use impacts for the jail expansion. The County has requested that 40 acres within PA 51 to the north and east of the jail facility be conveyed to the jail for agricultural use to off-set the agricultural land which will be lost with the expansion of the jail facility.

The areas proposed in EIR No. 564 for mitigation are located within land designated for agriculture in the proposed Orange County Great Park project. If the jail is expanded, the proposed project would allow for the loss of agricultural land resulting from the proposed jail expansion to be mitigated as identified in the recirculated sections of EIR No. 564. As such, there is no conflict between the proposed project and the jail expansion plan mitigation measure for loss of agriculture. No significant impact to this issue is anticipated.

Southern California Association of Governments

Consistency with SCAG RCPG Policies

The Growth Management Chapter of the Regional Comprehensive Plan and Guide (RCPG) contains a number of policies that are particularly applicable to the proposed project.

Core Regional Plan Policies

The population, housing and jobs forecasts, which are adopted by SCAG's Regional Council, and that reflect local plans and policies, shall be used by SCAG in all phases of implementation and review.

The project's consistency with SCAG's population, housing and jobs forecasts is analyzed in Section 5.13 – Population and Housing of this Final Program EIR. Please refer to Section 5.13 for this analysis.

- 3.01 The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies.

The Base Plan includes development of approximately 225 dwelling units, a 272-acre sports park, and 3,856,500 square feet of non-residential land uses (including retail, education, research and development, cultural and institutional, transportation facilities, and other uses). Under the Overlay Plan approximately 3,625 dwelling units, a 165-acre sports park, and 6,585,594 square feet of non-residential land uses (including education, research and development, retail, fairgrounds/commercial recreation, cultural and institutional, transportation facilities, and other uses) would be developed. These uses will be phased between 2007 and 2025.

Existing and planned public facilities, utility systems, and transportation systems consistent with SCAG's regional plans will be available to serve the site. A traffic study has been prepared for the project, which indicates that existing arterials can be improved to serve the project within acceptable levels of service or perform no worse than the level of service for the no project condition. Sections 5.14 – Public Services and Facilities and 5.15 – Utilities explain that the project will provide for the construction and operation of necessary services and facilities to serve the area. Property owners will also be required to enter into service agreements with utility and service providers prior to operation of any future new development. As part of the annexation application to LAFCO, the City will prepare an Urban Services Plan which demonstrates the City's ability to provide public services, facilities, and utilities to serve the unincorporated portion of the project site (PA 51 and PA 35) upon annexation into the City. These on-site improvements, extension of infrastructure, and required service agreements make the project consistent with this core policy.

The 1998 Regional Transportation Plan (RTP) also has policies, all of which are core, that pertain to this project. The RTP links the RCPG goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic, and commercial limitations. Among the relevant policies in the RTP are the following:

4.01 Transportation investments shall mitigate environmental impacts to an acceptable level.

SCAG has adopted the following Regional Performance Indicators and associated objectives in support of this policy:

Mobility – Transportation Systems should meet the public need for improved access, and for safe, comfortable, convenient, and economical movements of people and goods.

Accessibility – Transportation Systems should ensure the ease with which opportunities are reached. Transportation and land use measures should be employed to ensure minimal time and cost.

Environment – Transportation Systems should sustain development and preservation of the existing system and environment. (all trips)

Safety – Transportation Systems should provide minimal risk, accident, death, and injury. (all trips)

Livable Communities – Transportation Systems should facilitate Livable Communities in which all residents have access to all opportunities and travel times. (all trips)

Equity – The benefits of transportation investments should be equitably distributed among all ethnic, age, and income groups.

Cost effectiveness – Maximize return on transportation investment. (all trips)

The proposed project addresses this policy and SCAG's performance measures for Mobility, Accessibility, Environment, and Livable Communities in several ways. First, with proposed improvements and mitigation, all intersections in the project vicinity will operate at acceptable levels of service and perform no worse than levels of service for the no project condition. Second, the project is located adjacent to the Santa Ana Freeway and the Foothill and Eastern Transportation Corridor toll roads, all with available capacity. Third, the project is located near existing major employment centers including the Irvine Business Center and the Irvine Spectrum, which are major employment and activity centers. The uses proposed by the project maximizes the use of existing urbanized areas and increases alternatives to the single-occupant vehicle, both of which minimize emissions and congestion impacts. Fourth, the proposed project provides a wide range of housing opportunities that will be available to a variety of income groups. By providing additional housing near existing and proposed employment centers, the project will also increase opportunities to shorten or eliminate trips and the associated congestion and air quality impacts. In addition, the project is in proximity to rail service at the existing Metrolink stop in Irvine Spectrum.

4.02 Transportation investments shall mitigate environmental impacts to an acceptable level.

Section 5.2 – Traffic/Circulation of this Final Program EIR identifies various transportation impacts and details measures to mitigate these impacts. Roadway and intersection improvements adjacent to and in the vicinity of the proposed project are identified in Section 5.2, which mitigate the traffic impacts of the proposed project.

Project-specific transportation improvements will be constructed prior to operation of proposed development. The project is consistent with this core policy.

4.04 Transportation Control Measures shall be a priority.

Various Transportation Control Measures are set forth in the South Coast Air Quality Management District AQMP as set forth in the subsequent two year segment of the Regional Transportation Improvement Program), including:

- High Occupancy Vehicle projects and pricing alternatives, park and ride lots, and intermodal facilities.
- Transportation improvements, urban freeway system management improvements, smart corridors TSM programs, railroad consolidation programs, CMP-based demand management strategies, vanpool programs, and bicycle and pedestrian facilities.
- Marketing information services for employers and activity centers to encourage shared rides and transit use, and transit pass centers.

Transportation Control Measures (TCMs) consist of regionally significant transportation projects in the first two years of the Regional Transportation Improvement Program. The proposed project supports SCAG's policy by addressing two relevant categories of TCMs: 1) High Occupancy Vehicle projects and pricing alternatives, park and ride lots, and intermodal facilities; and 2) transit improvements, urban freeway system management improvements, smart corridors, TSM programs, railroad consolidation programs, CMP-based demand management strategies, vanpool programs, telecommunications facilities, demonstration programs, and bicycle and pedestrian facilities.

The project will increase densities around the Foothill and Eastern Transportation Corridor toll roads, thereby increasing the use of these priced alternatives to HOV lanes. The Foothill and Eastern Transportation Corridors are TCMs within SCAG's 2001 RTP and the applicable 1997 Air Quality Management Plan. Increase use of the toll roads will relieve congestion and related emissions.

Project components and mitigation measures identified throughout the EIR will enhance the provision of TCMs such as transit improvements and bicycle and pedestrian facilities, which will extend the local transit system and encourage its use. The proposed project supports TCMs and is consistent with this policy.

4.07 Projects proposed for the Regional Transportation Improvement Program that do not indicate a reasonable phasing of construction between segments will not be approved.

The proposed project does not interfere with the provision of any new transportation projects that are included in the RTIP. Consistent with the intent of this policy, project-specific transportation improvements will be constructed prior to occupancy of development.

The Air Quality Chapter core action that is generally applicable to the project is as follows:

5.11 Through the environmental document review process, ensure that plans at all levels of government (regional, air basin, county, subregional, and local) consider air quality, land

use, transportation, and economic relationships to ensure consistency and minimize conflicts.

Section 5.3 – Air Quality of this Final Program EIR addresses the matter of regional transportation and air quality modeling consistency. Regional transportation/air quality impacts are mitigated by traffic improvements, increased accessibility to priced transportation alternatives, energy conservation measures, transit improvements, housing opportunities within proximity to employment centers, required Transportation Control and Transportation Demand Management measures, and pedestrian and bicycle improvements.

The Water Quality Chapter core recommendations and policy options relate to the two water quality goals: to restore and maintain the chemical, physical, and biological integrity of the nation's water; and to achieve and maintain water quality objectives that are necessary to protect all beneficial uses of all waters. The core recommendations and policy options that are particularly applicable to the project include the following:

- 11.02 Encourage “watershed management” programs and strategies, recognizing the primary role of local government in such efforts.

Section 5.7 – Hydrology/Water Quality of this Final Program EIR addresses the subject of watershed management strategies and project components and mitigation measures that have been incorporated into the project. The project provides opportunities to enhance regional drainage and water quality facilities on the project site (PAZs 22a and 22b). The project is consistent with this core RCPG policy.

- 11.05 Support regional efforts to identify and cooperatively plan for wetlands to facilitate sustaining both the amount and quality of wetlands in the region.

Section 5.9 – Biological Resources of this Final Program EIR acknowledges the loss of some highly disturbed wetland/riparian habitat that can be mitigated to restore significant wetland resources. Additionally, wetland creation would occur within the proposed Wildlife Corridor (see PAZs 22a and 22b) on Figure 3-3. The establishment of the Wildlife Corridor and Drainage Corridor will sustain important wetland resources in the project area.

- 11.07 Encourage water reclamation throughout the region where it is cost effective, feasible, and appropriate to reduce reliance on imported water and wastewater discharges. Current administrative impediments to increased use of wastewater should be addressed.

Reclaimed water will be used for park area and landscaping. The project is consistent with this core policy.

Ancillary (Advisory Only) Regional Plan Policies

- 3.04 Encourage local jurisdictions' efforts to achieve a balance between the types of jobs they seek to attract and housing prices.

The Base Plan would provide 225 multi-family units while the Overlay Plan would provide 1,100 low density, 860 medium density, and 1,500 medium-high density residential dwelling units, as well as 165 multi-family units that will be ensured for homeless providers through the Development Agreement. These additional housing units will be developed for a variety of income levels, which will help achieve the workforce housing goals of the City of Irvine 2000-2005 Housing Element, which is designed to achieve the SCAG-prepared Regional Housing Needs Assessment targets. The project is consistent with the intent of this ancillary RCPG policy.

- 3.05 Encourage patterns of urban development and land use that reduce costs on infrastructure construction and make better use of existing facilities.

The proposed project redevelops a property that was previously developed and used for military operations. The project is located in and adjacent to an existing urban area, allowing the optimal use of existing facilities, and orderly expansion of facilities, when necessary. Sections 5.14 and 5.15 of this Final Program EIR include a discussion of utilities and service systems. Since existing infrastructure is used to the extent possible, the project is supportive of this ancillary RCPG policy.

- 3.09 Support local jurisdictions' efforts to minimize the cost of infrastructure and public service delivery, and efforts to seek new sources of funding for development and the provision of services.

As discussed in Sections 5.14 and 5.15 of this Final Program EIR, infrastructure and services necessary to serve the site are readily available on-site and adjacent to the project site. The proximity and available capacity minimizes the cost of extending infrastructure into the project area. Funding improvements have been and will be made to ensure that these improvements are accomplished in a cost effective manner. Therefore, the project is fully supportive of this ancillary policy.

- 3.10 Support local jurisdictions' actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.

The proposed project includes a General Plan Amendment and Zone Change for an approximately 4,400 acre project. Annexation of this area is anticipated by the end of 2003. This approach to processing the proposed project is consistent with this advisory policy.

- 3.11 Support provisions and incentives created by local jurisdictions to attract housing growth in job rich subregions and job growth in housing rich subregions.

The proposed Base Plan will allow for the creation of approximately 11,380 jobs on-site and 225 dwelling units. The 11,380 jobs are within the OCP 2000 projections for this area; however, the 225 housing units are additional units that are proposed in order to partially address that the project is located in a jobs rich subregion.

The Overlay Plan is expected to result in 1,100 low density, 860 medium density, and 1,500 medium-high density residential dwelling units as well as 165 multi-family units and 16,510 jobs on-site at buildout. The number of jobs does not exceed current OCP 2000 projections for the project area. Since the Orange County subregion is

considered to be jobs-rich and housing-poor, the provision of these housing units in terms of the subregional jobs/housing balance is considered beneficial.

Although the Subregion and City are expected to continue to be jobs rich in the future due to their attractive characteristics for business and economic forces in the region, the proposed project will provide housing in excess of OCP 2000 projections for the area.

- 3.12 Encourage existing or proposed local jurisdictions' programs aimed at designing land uses that encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike.

As shown and discussed in Section 3.0 – Project Description of this Final Program EIR, the Base Plan proposes 99 acres of Transportation and Transit related facilities and 20 acres of Transit Oriented Development in the southern portion of the project area. The Overlay Plan proposes 210 acres of Transit Oriented Development in the southern portion of the project area. These land use proposals take advantage of the existing commuter rail station (the Irvine Multimodal Transportation Center) located within the project vicinity and encourage the increased use of transit in this area. As is also shown in the Section 3.0, both the Base Plan and Overlay Plan provide Class 1 trail facilities that traverse the project area. Additionally, as mitigation for the project, the City will coordinate with the Orange County Transportation Authority to restructure transit service plans to provide effective service to the project area.

- 3.13 Encourage local jurisdictions' plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment.

The project is surrounded by existing development to the south, east and west and an existing rail line crosses the southern part of PA 51, which is used for Metrolink commuter rail and Amtrak passenger and freight services. By developing immediately adjacent to an existing urbanized area and in the vicinity of commuter rail and passenger facilities, the project enhances the options for non-motorized access throughout the larger area. The project proposes pedestrian sidewalks, bikeways and transit routes that will link to surrounding trails, land uses, and activity centers. Additionally, as mitigation for the project, the City will coordinate with the Orange County Transportation Authority to restructure transit service plans to provide effective service to the project area.

- 3.14 Support local plans to increase density of future development located at strategic points along the regional commuter rail, transit systems, and activity centers.

The proposed project is located in close proximity to the Irvine Multimodal Transportation Center, the I-5, the Foothill and Eastern Transportation Corridor toll facilities, and activity centers such as the Spectrum and Irvine Business Center. The proposed mix of land uses would create a major activity center at the project site, and would result in additional residents and businesses in proximity to these commuter rail, transit systems, and other major activity centers. The project is supportive of this ancillary policy.

- 3.15 Support local jurisdictions' strategies to establish mixed use clusters and other transit-oriented developments around transit stations and along transit corridors.

The proposed project is located in close proximity to the Irvine Multimodal Transportation Center, and the I-5, the Foothill and Eastern Transportation Corridor toll facilities. As shown in Section 3.0 – Project Description of this Final Program EIR, the Base Plan proposes 99 acres of Transportation and Transit related facilities and 20 acres of Transit Oriented Development in the southern portion of the project area. The Overlay Plan proposes 210 acres of Transit Oriented Development in the southern portion of the project area. These land use proposals take advantage of the existing commuter rail station (the Irvine Multimodal Transportation Center) located within the project vicinity, encouraging the increased use of transit in this area. The project is supportive of this ancillary policy.

- 3.16 Encourage developments in and around activity centers, transportation corridors, underutilized infrastructure systems, and areas needing recycling and redevelopment.

Per SCAG's policy, the proposed project is located in close proximity to the Irvine Multimodal Transportation Center, the Foothill and Eastern Transportation Corridor toll facilities, and activity centers such as the Spectrum and Irvine Business Center. Existing infrastructure serves the site, which was previously developed for military uses. Closure of the military base created a large area in the region that offered opportunity for recycling and redevelopment. The proposed project will redevelop the area, using some of the available capacity of the toll roads and the existing infrastructure on-site. Use of the existing toll roads will have benefits throughout the County, as the toll roads relieve congestion on competing free routes. SCAG's RTP supports the development of toll corridors as an innovative means of providing mobility and reducing congestion. Payment of fees and toll revenue provides additional funding sources for buildout of the transportation corridor system, while use of some of the existing infrastructure on-site provides for an economical and efficient use and extension of services and utilities in the subregion. The project is supportive of this ancillary policy.

- 3.17 Support and encourage settlement patterns that contain a range of urban densities.

As described in Section 3.0 – Project Description, the Base Plan will provide for the development of approximately 225 high density multi-family dwelling units on-site. The addition of multi-family units into this area will help provide a range of densities in a subregion that is largely developed with single-family homes. The Overlay Plan is expected to result in 1,100 low density, 860 medium density, and 1,500 medium-high density residential dwelling units, as well as 165 multi-family units, providing a range of urban densities within the project site. The project is supportive of this ancillary policy.

- 3.18 Encourage planned development in locations least likely to cause adverse environmental impact.

The project proposes redeveloping an area in which significant portions were previously disturbed by years of military use. The most environmentally and agriculturally significant areas of the project area will be preserved within the proposed Habitat Preserve, Open Space, Agriculture, Drainage/Riparian Corridor, and Wildlife Corridor

designations. Table 2-1 acknowledges that all biological impacts will be mitigated to a level less than significant. The project is supportive of this ancillary policy.

- 3.19 SCAG shall support policies and actions that preserve open space areas identified in local, state, and federal plans.

The Base Plan will preserve 716 acres within Open Space/Park, 438 acres of Agriculture, 974 acres of Habitat Preserve, 229 acres of Drainage/Riparian Corridor and 179 acres of Wildlife Corridor, which is consistent with the NCCP and City of Irvine agricultural preservation policies and programs. The Overlay Plan will preserve 382 acres within Open Space Park, 303 acres of Agriculture, 974 acres of Habitat Preserve, 229 acres of Drainage/Riparian Corridor, and 179 acres of Wildlife Corridor. The project is supportive of this ancillary policy.

- 3.20 Support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and lands containing unique and endangered plants and animals.

Section 5.9 – Biological Resources of this Final Program EIR acknowledges the loss of some biological resources. Impacts to biological resources will be mitigated to a level less than significant with proposed mitigation and project components. For example, under either the Base Plan or Overlay Plan, wetland creation would occur within the proposed Wildlife Corridor (see Subareas 22a and 22b) on Figure 3-3. The establishment of the Wildlife Corridor and Drainage Corridor will sustain important wetland resources in the project area. Additionally, under both projects, the most significant ecological and agricultural areas are preserved within the Habitat Preserve, Drainage/Riparian Corridor, Wildlife Corridor and Agricultural Areas. The project supports this ancillary policy.

- 3.21 SCAG shall encourage the implementation of measures aimed at preservation and protection of recorded and unrecorded cultural and archaeological sites.

Section 5.11 – Cultural Resources includes a discussion of potential impacts to cultural and archaeological sites and proposes mitigation measures appropriate to reduce these impacts to a level less than significant. The project supports this ancillary policy.

- 3.22 SCAG shall discourage development, or encourage the use of special design requirements in areas with steep slopes, high fire, flood, and seismic areas.

Section 5.6 – Geology and Seismicity addresses potential hazards associated with steep slopes and seismicity. Sections 5.5 – Public Health and Safety and 5.7 – Hydrology and Water Quality address high fire and flood hazards and propose mitigation to reduce these hazards to a level less than significant. The project supports this ancillary policy.

- 3.23 Encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to develop emergency response and recovery plans.

Various sections of this Final Program EIR (5.4 – Noise, 5.9 – Biological Resources, 5.6 – Geology and Seismicity, and 5.5 – Public Health and Safety) provide mitigation for potential impacts related to these environmental issue areas. The project supports this ancillary policy.

- 3.24 Encourage efforts of local jurisdictions in the implementation of programs that increase the supply and quality of housing and provide affordable housing as evaluated in the Regional Housing Needs Assessment.

The proposed project contributes to the City's Housing Element Goal of providing more housing for workers in the City. As described in Section 3.0 – Project Description, the Base Plan will provide for the development of approximately 225 high density multi-family dwelling units on-site. The addition of multi-family units into this area will help provide a range of densities in a subregion that is largely developed with single-family homes. The Overlay Plan is expected to result in 1,100 low density, 860 medium density, and 1,500 medium-high density residential dwelling units as well as 165 multi-family units, providing a range of urban densities within the project site. Each of the proposed project's will help meet the needs of different types of workers and will help meet the City's fair share allocation through 2025. The project supports this ancillary policy.

- 3.27 Support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement and fire protection.

Sections 5.14 – Public Services and Facilities and 5.15 – Utilities explain how the project will provide effective services to the project area. Section 5.13 – Population/Housing addresses how the Base Plan and Overlay Plan will provide a variety of additional housing opportunities for the City's workers. The project supports this ancillary policy.

- 9.01 Provide adequate land resources to meet the outdoor recreation needs of the present and future residents in the region and promote tourism in the region.

As described in Section 3.0 – Project Description of this Final Program EIR, the Base Plan will provide for 1,564 acres of Open Space/Park, Sports Park, and Golf Course uses as well as 478 acres of Cultural/Institutional and Exposition Center uses. The Overlay Plan will provide for 1,073 acres of Open Space/Park, Sports Park, and Golf Course uses as well as 156 acres of Cultural/Institutional uses. Each of the proposed projects is intended to help meet the City's and region's parks and recreational needs, as well as draw tourists to the area. The proposed project supports this ancillary policy.

- 9.02 Increase the accessibility to open space lands for outdoor recreation.

As described in Section 3.0 – Project Description of this Final Program EIR, the Base project will provide for 1,564 acres of Open Space/Park, Sports Park, and Golf Course uses as well as 478 acres of Cultural/Institutional and Exposition Center uses. The Overlay project will provide for 1,073 acres of Open Space/Park, Sports Park, and Golf Course uses as well as 156 acres of Cultural/Institutional uses. Bicycle and pedestrian

paths will also traverse the project site. The project's location and proximity to regional activity centers, transit, and regional corridors will increase accessibility to open space for outdoor recreation. The project supports this ancillary policy.

9.03 Promote self-sustaining regional recreation resources and facilities.

Discussions occur throughout the Final Program EIR regarding the project's recreation resources and facilities. The project is supportive of this ancillary policy.

9.04 Maintain open space for adequate protection of lives and properties against natural and man-made hazards.

Preservation of areas of permanent open space within the project area will protect lives and properties against natural and human-caused hazards by avoiding development within areas where developmental hazards occur. The project is supportive of this ancillary policy.

9.05 Minimize potentially hazardous development in hillsides, canyons, areas susceptible to flooding, earthquakes, wildfire, and other known hazards, and areas with limited access for emergency equipment.

Preservation of areas of permanent open space within the project area will protect lives and properties against natural and human-caused hazards by avoiding development within areas where developmental hazards occur. The project is supportive of this ancillary policy.

9.06 Minimize public expenditure for infrastructure and facilities to support urban type uses in areas where public health and safety could not be guaranteed.

Preservation of areas of permanent open space within the project area will protect lives and properties against natural and human-caused hazards by avoiding development within areas where developmental hazards occur. Retaining these areas as permanent open space will reduce the need for the extension of infrastructure and facilities into these areas. The project is supportive of this ancillary policy.

9.07 Maintain adequate viable resource production lands, particularly lands devoted to commercial agriculture and mining operations.

Both the Base Plan and Overlay Plan will impact land currently used for agricultural production. Section 5.8 – Agricultural Resources provides a detailed discussion of how the project will help protect and preserve remaining viable agricultural resources by helping to implement the Agricultural Legacy Program.

9.08 Develop well-managed viable ecosystems or known habitats of rare, threatened, and endangered species, including wetlands.

Section 5.9 – Biological Resources acknowledges that the Base Plan and Overlay Plan have the potential to impact the southern tarplant, which is a federal species of concern, disturbed wetland habitat, and a wide range of mature trees. However, under both the Base Plan and Overlay Plan, the most significant of these resources will be retained or

restored in the 974-acre Habitat Preserve area and within the Wildlife Corridor and Drainage/Riparian Corridor areas. Additional mitigation measures will reduce impacts to these ecosystems to a level less than significant. The project supports this ancillary policy.

Threshold 3. Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

Both the Base Plan and Overlay Plan incorporate the 974-acre NCCP Habitat Preserve into the project design. The Habitat Preserve has been conveyed to the Federal Aviation Administration, with the Department of the Interior managing the land as part of the NCCP/HCP. Since inclusion of the Habitat Preserve in the NCCP/HCP is consistent with the adopted NCCP/HCP, the proposed project will not result in an impact to any applicable conservation plan or natural community conservation plan.

Special Area Management Plan (SAMP)

The SAMP process is designed to complement the California Department of Fish and Game's (CDFG's) Natural Communities Conservation Planning (NCCP) program, as well as the U.S. Fish and Wildlife's Habitat Conservation Plan (HCP). Both the Base Plan and Overlay Plan incorporate the 974-acre NCCP/HCP Habitat Preserve into the project design. Additionally, under both the Base Plan and Overlay Plan, wetland creation would occur within the proposed Wildlife Corridor (see Subareas 22a and 22b) on Figure 3-3. The establishment of the Wildlife Corridor and Drainage Corridor will sustain important wetland resources in the project area. Additionally, all future projects developed in the project area will be required to meet federal, state, regional and local requirements regarding potential impacts to sensitive resources, which includes waters of the U.S., riparian and wetland areas, and streambeds. No impact associated with the SAMP will occur.

5.1.4 Significant Impacts

Base Plan and Overlay Plan

No significant land use impact has been identified.

5.1.5 Mitigation Measures

Base Plan and Overlay Plan

No significant land use impact has been identified. As a result, no mitigation measure is proposed.

5.1.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Not applicable.

Notes and References

1. City of Irvine. *General Plan*. March 1999.
2. County of Orange. *EIR No. 564: James A Musick Jail Expansion and Operation, Relocation of Interim Care Facility, Southeast Sheriff's Station*. August 1996.
3. County of Orange. *EIR No. 564: James A. Musick Jail Expansion and Operation - Recirculated Sections*. September 1998.
4. County of Orange. *General Plan*. 1987-1996.
5. Naval Facilities Engineering Command. *Air Installations Compatible Use Zones Study, MCAS El Toro*. March 1981.
6. Airport Land Use Commission for Orange County. *Airport Environs Land Use Plan, adopted November 1995*.

5.10 Paleontological Resources

5.10.1 Environmental Setting

Former MCAS El Toro (PAs 51 and 30)

Paleontology is the study of forms of life existing in prehistoric or geologic times. Paleontological resources within the project area include: fossil specimens; three recorded and an undetermined number of unrecorded fossil sites, associated geologic and geographic site data; and fossil-bearing rock units. The potential for discovering paleontological resources varies depending upon the geologic formations, or rock units underlying the project area. Certain formations or units are characterized as having a high potential for yielding significant paleontological resources due to the abundance, densities or importance of fossils that have been uncovered in the region. Other formations are characterized as low or moderate as the formations have historically produced lesser amounts of fossils of importance.

A fossil specimen is considered scientifically highly important if it is identifiable, complete, well-preserved, age diagnostic, useful in environmental reconstruction, a type of specimen, a member of a rare species and/or a species that is part of a diverse grouping. Identifiable land mammal fossils, for example, are considered scientifically highly important because of their potential use in providing very accurate age determinations and environmental reconstructions for rock units in which they occur. Such remains are comparatively rare in the fossil record. While the paleontological importance of a rock unit is a measure of its potential for yielding valuable material, any fossil site containing identifiable fossil remains and the fossil bearing layer are considered highly important paleontologically.

The majority of Planning Areas 51, 35, and 30 (PAs 51, 35, and 30) lie on the Tustin Plain, a coastal alluvial plain. Alluvium from the Late Pleistocene to Holocene Epochs (approximately 2 million to 11,000 years ago) immediately underlies the majority of the project area, including the part occupying the coastal plain and the washes in the eastern portion of PA 51.

The eastern portion of PA 51 occupies the western foothills of the northern Santa Ana Mountains. The hills and ridges in the eastern part of PA 51 are composed of older, underlying, marine and nonmarine rock units of early Oligocene to late Pleistocene age (23 million to 2 million years ago). In order of decreasing geologic age, these latter rock units include the undifferentiated Sespe and Vaqueros Formations, Topanga and Monterey Formations, Oso Member of the Capistrano Formation, Niguel Formation, and Nonmarine Terrace Deposits. Nonmarine Terrace Deposits also underlie the terraces at the south corner of the PA 51. The northwestern corner of PA 51 contains a small portion of the Santa Ana Mountain foothills, which were separated from the main formation by erosion. This small portion is composed of undifferentiated late Cretaceous (135 million years ago) marine Williams Formation. The rock units underlying parts of PA 51 have previously yielded scientifically highly important fossil remains at recorded fossil sites on and near the site.¹ Three recorded fossil sites have been identified in PA 51 (vicinity of former MCAS El Toro).² These fossil sites occur in undifferentiated Sespe and Vaqueros Formation and in

Topanga Formation, dating from the early Oligocene to the early and middle Miocene (38 million to 15 million years ago). Fossil types include marine invertebrates and vertebrates, continental vertebrates, land plants, and land mammals. The three recorded fossil sites lie within the proposed habitat preserve portion of PA 51.

The majority of PA 30 is underlain by Pleistocene Alluvium. This formation is widespread in the Tustin Plain area, and is believed to extend to depths of 1,000 feet in PA 30. A significant deposit of Pleistocene terrestrial vertebrates was recovered during excavation of a flood control basin 4 miles from the PA 30. These finds were buried approximately ten feet below existing grade and consisted of partially articulated skeletons of camel, sloth, mammoth, horse, and bison. It is possible that similar beds underlie PA 30.³

In addition to already identified paleontological resources, as described previously, various rock units can be assigned levels of paleontological importance. The paleontological importance of a rock unit reflects its potential productivity and the scientific importance of the fossils it has produced locally. Potential paleontological productivity is based on the abundance or densities of fossil specimens and/or recorded fossil sites in exposures of the rock unit on or near the site. Exposures of a specific rock unit in the project area are most likely to yield fossil remains similar in species quantities and densities to nearby rock units. The location and paleontological importance of the rock units found in the project area is summarized in Table 5.10-1. Figure 5.10-1 depicts the paleontological sensitivity zones of the project area and surrounding areas.

**Table 5.10-1
Paleontological Importance of Rock Units
Found Within the Project Area**

Rock Unit	Project Area Vicinity	Planning Area	Paleontological Importance
Alluvium Less than 8' in depth Greater than 8' in depth	Coastal Plain and Washes	51, 35, 30	Low Moderate
Sespe and Vaqueros Formations, Topanga and Monterey Formations, Oso Member of the Capistrano Formation, Niguel Formation, nonmarine terrace deposits	Northeastern Hills and Ridges	51	Moderate to High
Nonmarine terrace deposits	South Corner	51	Moderate
Undifferentiated marine Williams Formation	Northwestern Corner	51	High

Source: County of Orange, MCAS El Toro Community Reuse Plan
Draft Environmental Impact Report #563, August 1996

Notes: 1. The James A. Musick Jail Expansion and Operation EIR No. 564.

**Figure 5.10-1
Paleontological Sensitivity Zones**



Source: City of Irvine, General Plan

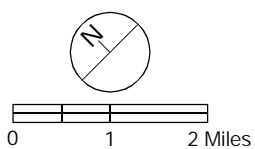


Figure 5.10-1
Paleontological Sensitivity Zones

A portion of the project area has been subject to substantial disturbance during more than 50 years as an operational military base. Base operations including ordnance storage, explosions, as well as runway and other facilities construction and operations may have previously impacted paleontological resources.

James A. Musick Jail Facility (Portion of PA 35)

James A. Musick Branch Jail is a relatively small portion of PA 35. The Musick Jail site lies on the Tustin Plain, a coastal alluvial plain. The site is located roughly northeast of the center of PA 51, near the western foothills of the northern Santa Ana Mountains. The Borrego Wash lies to the west/northwest of the jail site. As shown in Figure 5.10-1, the jail site is located in a low paleontologically sensitive zone. Areas in this zone typically have altered or geologically young rocks exposed at the surface and generally do not yield significant paleontological resources.

IRWD Parcel (Portion of PA 35)

The Irvine Ranch Water District (IRWD) parcel is also a relatively small portion of PA 35. The IRWD parcel also lies on the Tustin Plain, a coastal alluvial plain. The IRWD parcel lies roughly northeastern of the center of PA 51, near the western foothills of the northern Santa Ana Mountains. As shown in Figure 5.10-1, the IRWD parcel is located in a low paleontologically sensitive zone. Areas in this zone typically have altered or geologically young rocks exposed at the surface and generally do not yield significant paleontological resources.

5.10.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for paleontological resources.

Would the project:

1. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

5.10.3 Environmental Impact

The following analysis focuses on the potential paleontological impacts associated with implementation of the Base Plan and the Overlay Plan for the Former MCAS El Toro (PAs 51 and 30). The Musick Branch Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. Additionally, these parcels are located in a low paleontologically sensitive zone, as depicted in Figure 5.10-1, and this area is unlikely to produce fossils. As a result, implementation of the proposed project will not result in a

significant paleontological impact associated with the annexation of the James A. Musick Jail Facility and the IRWD Parcel.

Threshold 1: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Base Plan and Overlay Plan

Direct impacts to paleontological resources occur when earthwork activities, such as grading and trenching operations, cut into the geologic deposits (formations) within which fossils are buried. These impacts will occur during buildout of the project area. These direct impacts are in the form of physical destruction of fossil remains and could result in the loss of paleontological resources, including, an undetermined number of unrecorded fossil sites, associated geologic and geographic site data, and fossil bearing rocks. As shown in Table 5.10-1, future grading in the project area associated with future development has the potential to impact paleontological resources in the coastal plain and washes, northeast, northwest and southern portions of PA 51. These areas are identified as moderately to highly paleontologically sensitive. Earthmoving operations, such as grading and trenching, have the potential to impact buried paleontological resources.

The three previously recorded fossil sites in PA 51 lie within the proposed habitat preserve portion of PA 51. No development is proposed in this portion of the project area under the proposed land uses. No significant impact to these sites is anticipated from implementation of the proposed project. The proposed habitat preserve has been identified for ownership by the US Department of the Interior to complement the adjacent Natural Community Conservation Program/Habitat Conservation Program (NCCP/HCP) Reserve System (refer to Section 5.9 for a discussion of the NCCP/HCP). Any activities in this area will be under the discretion of the Department of the Interior, upon transfer of the land from the DON.

Pleistocene terrestrial vertebrates were discovered four miles from PA 30. Similar beds of Pleistocene terrestrial vertebrates may underlie PA 30. Development proposed by the OCGP Base Plan, including the transit oriented development, sports park, agriculture, and autocenter land uses, may impact beds of Pleistocene terrestrial vertebrates located in the area. According to the proposed Overlay Plan, development in this area would include low density residential, research and development, and autocenter uses, which may impact beds of Pleistocene terrestrial vertebrates.

The scientific knowledge associated with paleontological resources and formations can benefit from uncovering buried resources during development activity. For example, fresh exposure of fossil bearing rock could allow for the discovery of an undetermined number of unrecorded fossil sites and the recovery of scientifically highly important fossil remains that otherwise might not have been exposed without the earth moving. These remains and associated geologic and geographic data, instead of being lost to grading or unauthorized fossil collecting, would be preserved in an institution, where they would be available for future study by qualified investigators. There is potential that some of these remains might represent new or rare species, new geologic or geographic records and/or more complete specimens for some species than have been found previously in the fossil bearing rock unit of Orange County. These remains would provide a more comprehensive paleontological

resource inventory of the project site and the surrounding area than is now available or would have been available without the proposed project.

5.10.4 Significant Impacts

Base Plan and Overlay Plan

- P1.** Earthmoving operations such as grading and trenching has the potential to impact buried paleontological resources in the moderately to highly sensitive areas in the coastal plain and washes, northeast, northwest and southern portions of PA 51. This is considered a significant impact.

Additionally, pleistocene terrestrial vertebrates have been discovered four miles from PA 30. Similar beds of Pleistocene terrestrial vertebrates may underlie PA 30. This impact is considered significant.

5.10.5 Mitigation Measures

Base Plan and Overlay Plan

- P1.** Prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. (A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.

When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossils specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screen-washing operation on-site.

Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.

5.10.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Less than significant.

Notes and References

1. County of Orange. *MCAS El Toro Community Reuse Plan Draft EIR No. 563, Volume 1, section 4.13.1.2.* 1996.
2. City of Irvine. *GPA, ZC, and Annexation for MCAS El Toro and James A. Musick Branch Jail FEIR*, pg. 4.10-1. June 14, 1999.
3. City of Irvine. *Irvine Planning Area 30, GPA/ZC #21633-GA/#21635-ZC FEIR*, pg. 4.4-1. November 26, 1996.
4. County of Orange. *MCAS El Toro Community Reuse Plan Draft EIR No. 563, Volume 1.* 1996.
5. City of Irvine. *General Plan.* March 9, 1999.

5.11 Cultural Resources

Cultural resources include archaeological and historical resources. The CEQA Guidelines define “historical resources” in Section 15064.5. When a project will impact an archaeological site, CEQA requires a determination of whether the site is a historical resource.

The following analysis of cultural resources is based on Marine Corps Air Station El Toro Reuse Plan Technical Report J: *Cultural and Scientific Resources*, Greenwood and Associates, July 16, 1996.

The report referenced above is included as Appendix J of the County of Orange MCAS El Toro Community Reuse Plan Draft Environmental Impact Report No. 563 (DEIR 563).

5.11.1 Environmental Setting

Carbon dating indicates human habitation of the Southern California coastline began as long as 14,800 to 17,150 years ago. The first human inhabitants of this area have been described as small bands of roaming hunters, probably arriving in search of pristine hunting grounds. The majority of artifacts identified from this period consist of stone tools for hunting and butchering, with a marked absence of grinding implements. Few prehistoric sites from this period have been recorded, and there are only a handful of sites in Los Angeles and Orange counties.

By about 7,500 years ago, an increase in the use of grinding implements became visible in the archaeological record initiating a new phase in California’s prehistory. Often referred to as the Milling Stone Horizon, this period demonstrates an increase in the size and duration of prehistoric settlements. More is known about this cultural horizon because a greater number of archaeological sites from this period have been recorded, especially in the Southern California coastal region where numerous archaeological surveys have been conducted.

Between 1,500 and 2,500 years ago, the cultural groups of Southern California were subject to the intrusion of a culture that migrated west from the Great Basin area. The new culture brought new technologies and practices, as well as a new language known as Shoshonean. Shoshonean groups are believed to have been well established in Southern California a minimum of 1,200 years ago and possibly as early as 3,000 years ago. Resident coastal and inland populations were apparently displaced to the north and south by the Shoshoneans, forming a wedge between the linguistically similar Hokan-speaking Chumashan and Yuman peoples.

The Shoshoneans were the dominant culture in the Los Angeles Basin until the arrival of Spanish Missionaries in the early 16th century. Mission San Gabriel was established in 1771 and began slowly integrating the surrounding population. The Shoshonean culture inhabited portions of the project area. The project area fell within the sphere of influence of

Mission San Gabriel and the native population in this area became known as Gabrielinos. Three miles south of the project area is Aliso Creek, the dividing line between the Gabrielinos and the Juanenos, similarly named after the Mission San Juan Capistrano.

Former MCAS El Toro (PAs 51 and 30)

James Irvine, a Scotch-Irish pioneer, created the Irvine Ranch (the predecessor to The Irvine Company) between 1864 and 1876 by purchasing three distressed ranchos: San Joaquin, Santiago de Santa Ana and Lomas de Santiago. He consolidated 110,000 acres, including a portion of the project area, into what became known as the Irvine Ranches. The land was devoted primarily to agricultural production of cattle, fruits and vegetables. In 1942, a military pilot's fleet operational training facility was established through condemnation of a portion of the project area, approximately 2,340 acres of the Irvine Ranch Corporation. In the following year, the facility was commissioned as MCAS El Toro. No permanent structures existed on the property prior to those built by the military.

Historic Cultural Resources

National Register criteria for evaluation (36 CFR 60.4) state that ordinarily a property that has achieved significance within the past 50 years shall not be considered eligible for the National Register unless it is of exceptional importance. However, in 1991 Congress created the Legacy Cold War Project (Public Law No. 101-511, §8120) to be carried out by the DOD. The project's purpose is to aid in the preservation of physical and literary properties and objects from the Cold War period (from the end of World War II (WWII) to the break-up of the former Soviet Union in 1991). Because this period was mostly within the last 50 years, many Cold War Legacy sites might not otherwise be eligible for the State or National Register of Historic Places (SRHP, NRHP). Portions of PA 51 and 30 (the former MCAS El Toro) were established during WWII, and no structure earlier than this period is present at the former MCAS El Toro. Therefore, the historical significance of any structures at the former MCAS El Toro would be as part of the Cold War Legacy. However, surveys by the US Army Corps of Engineers and the DON prepared in conjunction with the closure of MCAS El Toro concluded that there were no structures eligible for designation as Cold War Legacy or for inclusion on the NRHP.

There are no features or characteristics of the project area that define or include unique ethnic cultural values. There are no known or documented religious or sacred uses associated with the project area.

Prehistoric Cultural Resources

Ten prehistoric archaeological sites and eight isolated prehistoric artifacts have been recorded in the northeastern habitat preserve portion of PA 51 (Orange County General Plan Planning Area Zone 3). The known sites occur on ridges between Borrego Canyon Wash and Agua Chino Wash. The sites appear to be ineligible for inclusion in the State's Sparse Lithic Scatters Program (Jackson, et al. 1988:1). The US Corps of Engineers, with concurrence of the State Office of Historic Preservation, recommended that seven of the recorded prehistoric sites be evaluated to determine eligibility for nomination to the NRHP. As part of the Base Realignment and Closure Cleanup Plan for MCAS El Toro further

evaluation of one additional archaeological site located in the central portion of PA 51 was recommended.

There are two prehistoric sites, CA-ORA-551 and -602, and one prehistoric isolate located within a one-half mile radius of PA 30 (potentially located in PA 51). There are no recorded prehistoric or historic sites within PA 30, although approximately 95 percent of PA 30 has yet to be surveyed.

James A. Musick Jail Facility (Portion of PA 35)

Historical/archaeological resources were not analyzed in the County of Orange James A. Musick Jail Expansion and Operation EIR No. 564. According to the City of Irvine General Plan (Figure E-1), there are no historical/archaeological resources identified on the Musick Jail site.

IRWD Parcel (Portion of PA 35)

The IRWD parcel contains two water storage reservoirs and associated pumping and distribution facilities. According to the Irvine General Plan (Figure E-1), there are no historical/archaeological resources identified on the IRWD parcel.

5.11.2 Threshold For Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for cultural resources.

Would the project:

1. *Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5 of the CEQA Guidelines;*
2. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5 of the CEQA Guidelines; or*
3. *Disturb any human remains, including those interred outside of formal cemeteries?*

5.11.3 Environmental Impact

The following analysis focuses on the potential cultural resources impacts associated with implementation of the Base Plan and the Overlay Plan for the Former MCAS El Toro (PAs 51 and 30). The Musick Branch Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. Additionally, Figure E-1 of the City of Irvine General Plan indicates there are no historical/archaeological resources on the Musick Jail site. As a result, implementation of the proposed project will not result in a significant cultural

resources impact associated with the annexation of the James A. Musick Jail Facility and the IRWD Parcel.

Threshold 1: Would the project cause a substantial adverse change in the significance of a historical resource?

Base Plan and Overlay Plan

Demolition of existing structures on the former MCAS El Toro site (PA 51) and future development of the former MCAS El Toro could potentially degrade historical resources. The DON has determined that buildings on-site are not Cold War Legacy eligible, nor are they eligible for the NRHP. No significant impact to National Register-eligible property will result from implementation of the Base Plan or Overlay Plan.

The historical museum/collection that was previously located on former MCAS El Toro in Buildings 243 to 245 and the vintage aircraft on the base has been relocated to Marine Corps Air Station Miramar (MCAS Miramar) in San Diego, California. Therefore, implementation of the Base Plan or Overlay Plan will not result in a significant impact to the museum and the vintage aircraft.

Because there are no features or characteristics of the project area, which define or include unique ethnic cultural values, the Base Plan or Overlay Plan will not result in a significant impact to unique ethnic cultural values.

Because there are no known or documented culturally significant religious or sacred uses associated with the project area, the Base Plan or Overlay Plan will not result in a significant impact to culturally significant religious or sacred uses.

In summary, development of the project area according to the Base Plan or Overlay Plan will not cause a substantial adverse change in the significance of any historical resource.

Threshold 2: Would the project cause a substantial adverse change in the significance of an archaeological resource?

Base Plan and Overlay Plan

The majority of previously documented archeological resources in the project area are located in the portion of Planning Area 51 designated as Habitat Preserve. Under both the Base Plan and the Overlay Plan, this area will be used as natural open space to protect sensitive wildlife habitat. No intensive development is proposed under the Base Plan or Overlay Plan in this area and no significant impact to this issue is anticipated. Public access will be limited in keeping with the habitat management plan (see Section 5.9 – Biological Resources).

There are two prehistoric sites, CA-ORA-551 and -602, and one prehistoric isolate located within a one-half mile radius of PA 30. There are no recorded prehistoric or historic sites within PA 30, although, approximately 95 percent of PA 30 has not been surveyed. Development is proposed in this area, and there is the potential that archaeological resources are present that may be disturbed during grading activities associated with future development of this area.

Grading activities associated with future development of the project area under the proposed Base Plan or Overlay Plan may result in a significant impact to archaeological sites in PA 51 and PA 30. Additionally, the proposed project would result in substantial soil disturbance in areas where construction is proposed. Construction activities may uncover previously unknown archaeological resources. The potential to encounter unknown archaeological resources is a significant impact.

Threshold 3: Would the project disturb any human remains, including those interred outside of formal cemeteries?

Base Plan and Overlay Plan

There are no known human remains in the project area. However, grading activities could uncover previously unknown human remains especially in PA 30 where 95 percent of the area has not been surveyed. Grading activities will result in a significant impact to this issue throughout development of the project area. Implementation of the Base Plan and the Overlay Plan has the potential to uncover previously unknown human remains, including those interred outside of formal cemeteries, and the impact is considered significant.

5.11.4 Significant Impacts

Base Plan and Overlay Plan

- Cult1.** Grading activities associated with future development of the project area may cause a substantial adverse change in the significance of an archaeological resource. Mitigation Measures Cult B1 through Cult B3 will reduce this impact to a level less than significant.
- Cult2.** Grading activities could uncover previously unknown human remains, including those interred outside of formal cemeteries. Mitigation Measure Cult B4 will reduce this impact to a level less than significant.

5.11.5 Mitigation Measures

The following measures have been developed to provide assurances that significant cultural resource impacts or potentially significant cultural resource impacts associated with the proposed project will be mitigated to a level less than significant. This assurance is obtained by verification, which would occur at subsequent levels of environmental review. Finally, in some instances, it is not possible at this program level of analysis to determine if cultural resource impacts would occur from the implementation of specific actions. For these situations, mitigation measures provide for further review at the time of specific development proposals in the project area. Increased planning detail developed at the development proposal level will clarify the specific impacts and options available for mitigation. As such, these measures are not intended to restrict the development of appropriate mitigation measures, as determined through analysis at a subsequent level of review.

Base Plan and Overlay Plan

Cult1. Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PAs 51 and 30. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

Cult2. Monitoring of excavation and grading activities associated with future development in PAs 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure Cult1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and an assessment of their importance under CEQA and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.

Cult3. Prior to the issuance of grading permits and/or building permits for any future development in PAs 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City of Irvine to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.

Cult4. Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City of Irvine to address the accidental discovery or recognition of any human remains. The program shall include the following:

There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

C The county coroner must be contacted to determine that no investigation of the cause of death is required, and

If the coroner determines the remains to be Native American:

- C *The coroner shall contact the Native American Heritage Commission within 24 hours.*
- C *The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.*
- C *The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or*
- C *Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.*
 - o *The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.*
 - o *The descendant identified fails to make a recommendation; or*
 - o *The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.*

Compliance with this measure shall be verified by the Community Development Department.

5.11.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Less than significant.

Notes And References

1. City of Irvine. *Irvine Planning Area 30, GPA/ZC #21633-GA/21635-ZC FEIR*, pg. 4.4-1. November 26, 1996.
2. Greenwood and Associates. *Marine Corps Air Station El Toro Reuse Plan Technical Report J: Cultural and Scientific Resources*. July 6, 1996.
3. County of Orange. *MCAS El Toro Community Reuse Plan DEIR No. 563, Volume 1*. 1996.
4. City of Irvine. *General Plan*. March 9, 1999.

5.12 Aesthetics

5.12.1 Environmental Setting

Project Area Viewsheds

Access to the project area is generally restricted. Public views are only available from adjacent roadways such as Irvine Boulevard, Trabuco Road, Alton Parkway, Sand Canyon Road, Barranca Parkway, I-5, SR-133, SR-241, and the Eastern Transportation Corridor. The major feature within the project area is the former MCAS El Toro property (PAs 51 and 30). Views of the former MCAS El Toro property include a variety of land uses, structures and facilities of differing types, sizes, architectural styles, and age. The structures include runways and aprons, hangars, warehouses, barracks housing, offices, commercial structures, recreational facilities, a golf course, single-family housing units, and agricultural areas. In addition, the Musick Branch Jail Facility and IRWD parcel (portions of PA 35) are located adjacent to the northeastern edge of the base. Views of the Musick Jail Facility are limited as it is surrounded by a security fence, as well as office and light industrial buildings within the bordering Irvine Spectrum and City of Lake Forest. The water storage and distribution facilities located on the IRWD parcel are visible from Irvine Boulevard. Due to the size of the entire project area, views from locations near the site are often limited to the immediate foreground area, while more distant locations afford panoramic views of the area.

There are no designated County or State scenic highways in or near the project area. However, Sand Canyon Avenue is a designated rural/natural character Scenic Highway in the City of Irvine General Plan. The General Plan also designates the Santa Ana (I-5) Freeway as an urban character Scenic Highway.

A number of residential areas near the site also have views of the project area. These include the residential areas west of Jeffrey Road in the City of Irvine, west of the project area. The residents of this area can view the western edge of the project area through the eucalyptus windrow trees on Sand Canyon Road. To the south, the residential areas of Laguna Woods, Laguna Hills and Aliso Viejo are at higher elevations than the project area and thus have panoramic views of the project area. Residences at Foothill Ranch to the northeast are also located at a higher elevation and have panoramic views of the project area.

Visual Quality

Former MCAS El Toro (PAs 51 and 30)

The physical qualities of the former MCAS El Toro property (PAs 51 and 30) depend on the land uses and structures found in various areas. The most prominent features of the central portion of the property are the aircraft runways, which, together with the connecting aprons between the runways, form a large concrete "X" on the ground when viewed from higher elevations. Turf areas are interspersed between and around the runways and aprons.

The areas north of Irvine Boulevard (PA 51) and south of Barranca Parkway (PA 30) (the northern and southern portions of the former MCAS El Toro property) are used for agriculture and are characterized by flat, open fields and low plantings. Agricultural areas are also located on the eastern section of the property along Irvine Boulevard and adjacent to the facility to the west, east, and southeast.

The eastern section of PA 51 (east of Irvine Boulevard) is a vacant rolling hillside area with one-story beige and brown single-family detached homes at the foot of the hill. This area is referred to as the Wherry Housing Area and is developed with nearly identical homes on curvilinear streets lined with mature trees. The vacant hillsides are occupied primarily by coastal sage scrub and are an extension of the hillside areas within Limestone Canyon Regional Park to the north and east. A dirt road winds through the undeveloped hillside area.

The southeastern section of PA 51 (west of the Borrego Canyon Wash and Alton Parkway) is developed with the Marine Memorial Golf Course and warehouse structures used for storage, maintenance, and operation of the facility. The golf course offers views of open grassy areas and stands of trees, while the warehouse structures are mainly cream-colored box buildings surrounded by pavement.

The northeastern section of PA 51 (west of Irvine Boulevard and Trabuco Road) is also occupied by a number of warehouse structures and paved areas around the runway and aprons. An elementary school is located within this area. A barbed wire fence surrounds the eastern edge of this area, with a few scattered trees. The land along Irvine Boulevard is used for agriculture and as an equestrian center.

The northwestern section of PA 51 (east of the Eastern Transportation Corridor) is developed with former barracks housing, commercial buildings, office structures, open fields, and recreational areas. The structures consist of one- to four-story buildings, with a mix of old and new structures, and reflecting a variety of architectural styles. Game fields, a tot lot, and picnic areas are found on the northern end and mature trees and landscaping are found throughout this area. This area has the highest intensity of development on the property. The range of land uses and structures within this area create visual variety not found in other areas of the facility.

The southwestern section of PA 51 (east of the Southern California Regional Rail Authority [SCRRA] railroad line) is developed with three aircraft hangars, warehouse buildings, storage areas, and paved areas for aircraft storage and circulation. The structures in this area are larger than most other structures found on the property and create an industrial section at the former military facility.

James A. Musick Jail Facility (Portion of PA 35)

The existing development within the Musick Jail Facility (located in PA 35) includes open areas used for agriculture on the western and southern portions of the jail site and scattered buildings at the northeastern section consisting of offices, men's and women's compounds, shops, warehouse, nursery, chicken coops, and maintenance facilities. The existing structures resemble light industrial and office buildings, similar to those found in the surrounding area. Public views of the jail facility are limited to the trees and security fencing along the perimeter of the site, and distant views of the on-site buildings.

IRWD Parcel (Portion of PA 35)

The IRWD parcel contains two water storage reservoirs and associated pumping and distribution facilities. These facilities are visible from Irvine Boulevard.

Light and Glare

Former MCAS El Toro (PAs 51 and 30)

Existing sources of light at the former MCAS El Toro property (PAs 51 and 30) include street lights along on-site roadways, runway lighting, lights along the runway aprons, parking lot lighting, and security lighting around the site and the buildings on-site. These light sources do not adversely affect adjacent land uses since only industrial, office and agricultural uses are found near the property. Residences with views of the facility are not impacted by existing light sources on the site since the residences are located at least two miles from the property. The agricultural areas to the north and south and the golf course to the east are not an existing light source. Sources of glare such as glass, metal and polished exterior building materials are not generally found on existing structures on the former MCAS El Toro property and do not create glare problems. However, the large expanses of concrete pavement and building walls on-site, as well as the overall lack of landscaping, generate some glare on adjacent uses.

James A. Musick Jail Facility (Portion of PA 35)

Exterior lighting at the jail (located in PA 35) consists of security lighting around buildings, with some light standards exceeding 16 feet in height. All lighting is directed toward buildings and not outward from the jail site. Agricultural lands surround the jail to the north and west. Structures housing light industrial uses surround the jail to the east and south. Thus, adjacent land uses are not adversely affected by lighting associated with the jail facility.

IRWD Parcel (Portion of PA 35)

On-site lighting for the IRWD parcel is provided for security reasons. The lighting is minimal and is directed toward the existing structures. Vacant land and the Musick Jail Facility surround the IRWD parcel. As a result, adjacent land uses are not adversely affected by on-site lighting.

Topography

Former MCAS El Toro (PAs 51 and 30)

The majority of the former MCAS El Toro property (PAs 51 and 30) has little topographic relief, with a slight slope (1.5 to 2.5 percent) to the west and southwest, and a gently sloping to steep hillside area at the eastern section of the site. Elevations in this portion of the project area range from approximately 200 feet above mean sea level (MSL) at the western corner of PA 51 to approximately 450 feet above MSL on Irvine Boulevard at the Wherry Housing Area and rising to over 750 feet above MSL at the eastern corner by the Foothill Transportation Corridor. The Santa Ana Mountains are north and east of the property and rise to 6,698 feet above MSL. The San Joaquin Hills south of the site rise to approximately 1,170 feet above MSL. The area south of Barranca Parkway has moderate slopes ranging from five to 20 percent. The former MCAS El Toro's general southwestern slope is interrupted by the manmade undulations at the Marine Memorial Golf Course (southeastern section) and the drainage areas along this course.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail Facility property (portion of PA 35) is relatively flat, with a slight slope to the southwest. No visually significant topographic features are present on the site.

IRWD Parcel (Portion of PA 35)

The IRWD parcel (portion of PA 35) is also relatively flat with no visually significant topographic features present on the parcel.

5.12.2 Threshold For Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for aesthetics.

Would the project:

1. *Result in the visible grading of over 5,000 cubic yards on any 20-acre portion of the project site; or visible cut and fill slope over 25 vertical feet?*
2. *Result in the obstruction of views from officially designated vista points or scenic routes?*
3. *Result in the creation of light spillover and glare effects that present a nuisance to residential land uses?*
4. *Result in the substantial alteration of the existing landform of the site or of a unique topographic feature on the site?*

5. *Substantially degrade the existing visual character or quality of the project area and its surroundings?*
6. *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historical buildings within a state scenic highway?*
7. *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

5.12.3 Environmental Impact

The following analysis focuses on the potential aesthetic impacts associated with implementation of the Base Plan and the Overlay Plan for the Former MCAS El Toro (PAs 51 and 30). The Musick Branch Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. EIR No. 564 was prepared by the County of Orange and identifies mitigation measures for aesthetic impacts that may occur with the expansion of the Musick Jail Facility. The mitigation measures address landscaping, building design, and screening walls to avoid negatively impacting neighboring areas. Should the jail be expanded in the future, it would not negatively impact land uses in the project area, as proposed land uses in this portion of PA 51 consist of habitat preserve, agricultural, and open space uses. As a result, implementation of the proposed project will not result in a significant aesthetic impact associated with the annexation of the James A. Musick Jail Facility and the IRWD Parcel.

Base Plan

Implementation of the proposed project will lead to the eventual demolition of the majority of the existing structures in the former MCAS El Toro property (PAs 51 and 30) and the possible reuse of some structures. Development sequencing will be linked to the availability of infrastructure, the completion of hazardous materials cleanup, and the removal of runways. Thus, the visual characteristics of the site will slowly change as parkland improvements are implemented, new structures are built and new roads and landscaping are provided. As defined in the OCGP Base Plan land use plan, the former MCAS El Toro property will be primarily developed with open space and recreational uses.

The northeastern section of the project area, referred to as PAZ3, is currently a generally undeveloped hillside area. This area is proposed as Habitat Preserve, and the existing open space within this area will be preserved. No changes to the visual character of the hillsides will occur under the proposed project.

The northwestern portion of PA 51 is proposed to be retained for agricultural land uses. The central and eastern portions of PA 51 will feature a park, sports park, and golf course. A wildlife corridor traverses PA 51 generally in north to south direction in the eastern portion of the area.

On the western site of PA 51, educational uses, research and development, and sports park uses are proposed.

The southern section of PA 51 and a portion of PA 30 will be developed with institutional uses and transportation facilities. Most of PA 30 consists of agriculture, sports park, and transit oriented development. The wildlife corridor traverses the planning area in a north to south direction. The southernmost portion of PA 30, south of Bake Parkway, will consist of an autocenter.

The primary land use component of the OCGP Base Plan will be open space. Open space land uses, including parks, golf courses, sports parks, and exposition center, will be provided throughout PAs 51 and 30, which will provide visual amenities to the entire area. Furthermore, this formerly restricted area will become accessible to the general public which will benefit from visual enhancements provided by the project with respect to the expanded golf course area, wildlife corridor, and central park. Landscaped parkways and pedestrian greenways will provide linkages to different areas of the community and between sectors and parks.

Overlay Plan

As defined in the OCGP Overlay Plan land use plan, the former MCAS El Toro property will be primarily developed with open space and recreational uses. Additionally, low density residential, transit oriented development, and research and development land uses would occupy substantial portions of the project area.

The northeastern section of the project area, referred to as PAZ3, is currently a generally undeveloped hillside area. This area is proposed as Habitat Preserve, and the existing open space within this area will be preserved. No changes to the visual character of the hillsides will occur under the proposed project.

The northwestern portion of PA 51 is proposed to be retained for agricultural land uses. The central and eastern portions of PA 51 will feature a park, sports park, and golf course. A wildlife corridor traverses PA 51 generally in a north to south direction in the eastern portion of the area. The southern section of PA 51 will be developed with mainly institutional and transit oriented land uses.

Most of the PA 30 consists of transit oriented development and research and development. The wildlife corridor traverses the planning area in a north to south direction. The southernmost portion of PA 30, south of Bake Parkway, will consist of an autocenter.

The primary land use component of the OCGP Overlay Plan will be open space. Open space land uses, including parks, golf courses, sports parks, and exposition center, will be provided throughout PA 51, which will provide visual amenities to the entire area. Furthermore, this formerly restricted area will become accessible to the general public which will benefit from visual enhancements provided by the project with respect to the expanded golf course area, wildlife corridor and central park. Landscaped parkways and pedestrian greenways will provide linkages to different areas of the community and between sectors and parks.

Threshold 1: Result in the visible grading of over 5,000 cubic yards on any 20-acre portion of the project site; or visible cut and fill slope over 25 vertical feet?

Base Plan and Overlay Plan

The portion of PA 51 proposed for development and park uses, and all of PA 30 consist of relatively flat or slightly sloping terrain, and grading activities associated with any future development of PAs 51 and 30 pursuant to the proposed GPA and Zone Change, and consistent with the Orange County Great Park land use plan, will not be expected to adversely affect existing topography of the site.

The hillside areas of PA 51 to the east (PAZ 3) will be preserved as a natural habitat area and no grading or cut and fill on slopes over 25 vertical feet will occur. The Marine Memorial Golf Course will likewise be retained and the manmade terrain on this golf course generally maintained. A portion of the existing agricultural area south of Barranca Parkway (PA 30) will be retained; however, the areas of PA 30 proposed for sports park and auto center under the Base Plan, and transit oriented development and research and development may require filling to achieve a flat terrain suitable for development. Grading, due to the implementation of the proposed project, on the flatter areas of the former MCAS El Toro facility are not expected to involve over 5,000 cubic yards on any 20-acre portion of the property since the proposed developments are expected to maintain the flat topography of the site. Only minor grading will be required to create level pads. No grading related aesthetic impacts on PAs 51 and 30 are anticipated to occur.

Threshold 2: Result in the obstruction of views from officially designated vista points or scenic routes?

Base Plan and Overlay Plan

Since there are no scenic routes in the area, no impact on the existing scenic resources of the City or the region is anticipated with new development resulting from implementation of the proposed project.

Threshold 3: Result in the creation of light spillover and glare effects that present a nuisance to residential land uses?

Base Plan and Overlay Plan

Future development of PAs 51 and 30 pursuant to the proposed GPA and Zone Change, and consistent with the Orange County Great Park land use plan, will lead to the introduction of new sources of light and glare within the project area. These sources include street lighting along planned roadways, exterior lighting (including security lighting and parking lot lighting) for various educational and institutional developments, lighting associated with auto center, and recreational sports field lighting. The project will involve development of athletic fields which will likely contain night lighting. The City has adopted a standard for athletic field lighting to minimize light spillover to adjacent property and reduce glare (City of Irvine Park Standards Manual). Section II Environmental Control requires that the luminaries used to provide light on the recreational athletic fields shall include reflectors and application technology designed to protect the environment surround the facility. However, the potential for a significant light and glare impact may occur should proposed light sources be directed into or located near existing or planned residential uses, which are sensitive to light intrusion during nighttime hours. Reflective materials and glazed

or polished exterior surfaces associated with the research and development land uses may create glare, which could cause visual nuisance residential land uses. This is considered a significant impact.

Threshold 4: Result in the substantial alteration of the existing landform of the site or of a unique topographic feature on the site?

Base Plan and Overlay Plan

No unique geologic or topographic feature exists within the project area. The majority of planned development proposed under the GPA and Zone Change, consistent with the Orange County Great Park Base Plan, will occur on the flat areas of the former MCAS El Toro facility (PAs 51 and 30). Under the proposed habitat preserve designation, in the eastern section of PA 51 the existing moderate to steep terrain and hillsides in this area will be preserved. No impact on the topography of the Santa Ana Mountains to the north and east is expected as a result of implementing the proposed project. The continued use of the Marine Memorial Golf Course will also preserve the manmade topography of the golf course area. The rolling area located south of Barranca Parkway may require filling to achieve a flat terrain for the sports park under the Base Plan, or research and development uses under the Overlay Plan. This is not expected to represent a significant impact since the surrounding properties all have flat terrain. Future development under the proposed project is expected to maintain the flat topography of the rest of the former MCAS El Toro property.

Threshold 5: Substantially degrade the existing visual character or quality of the project area and its surroundings?

Base Plan and Overlay Plan

New development proposed under the GPA and Zone Change, consistent with the Orange County Great Park Base Plan, would change the visual appearance of the former MCAS El Toro facility (PAs 51 and 30) from the current air station facilities and associated uses to that, in the western portion of the project area, of more intensive urban development. New buildings and roadways are proposed on the property, some of which may be several stories tall. These new developments would be visible to motorists along existing adjacent roadway (Sand Canyon Road) and from homes located west and at higher elevations southeast and northeast of the site. Additionally, under the Overlay Plan low density residential development is proposed for PAZ 2, located in the northern portion of the PA 51. New public roadways are planned in the project area that will increase the visibility of the area to the public. Educational, research and development, and institutional development will be readily visible within the western portion of the property. The visual characteristics of the site will slowly change as new structures are built and new roads and landscaping are provided. This change in the visual appearance of the project area has the potential to result in a significant aesthetic impact.

However, new development within PAs 51 and 30 will be required to comply with the development standards in the City's Zoning Ordinance. This entails City approval of architectural plans, landscape plans, and signage for each development to ensure new development is consistent with the City's Land Use Element, Circulation Element design policies, Zoning Ordinance, and the Landscape Ordinance and Guideline Manual of the City of Irvine, as well as surrounding land uses.

Threshold 6: *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historical buildings within a state scenic highway?*

Base Plan and Overlay Plan

There is no designated state scenic highway in the vicinity of the project area. Therefore, no impact to scenic resources within a state scenic highway would occur with the implementation of the project under the Base Plan and the Overlay Plan.

Threshold 7: *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

Base Plan and Overlay Plan

Future development of PAs 51 and 30 pursuant to the proposed GPA and Zone Change, and consistent with the Orange County Great Park land use plan, will lead to the introduction of new sources of light and glare within the project area. These sources include street lighting along planned roadways, exterior lighting (including security lighting and parking lot lighting) for various educational and institutional developments, the auto center and lighting associated with recreational sports fields. The potential for a significant light and glare impact may occur should proposed light sources be directed into or located near existing or planned residential uses, which are sensitive to light intrusion during nighttime hours. This is considered a significant impact.

5.12.4 Significant Impacts

Base Plan and Overlay Plan

- A1.** Future development of PAs 51 and 30 pursuant to the proposed GPA and Zone Change, and consistent with the Orange County Great Park land use plan, will lead to the introduction of new sources of light within the project area. These sources include street lighting along planned roadways and exterior lighting (including security lighting and parking lot lighting) for various educational and institutional developments, and lighting associated with athletic fields. The potential for a significant light impact may occur should proposed light sources be directed into or located near existing or planned residential uses, which are sensitive to light intrusion during nighttime hours. This is considered a significant impact. Implementation of Mitigation Measures A1 and A2 will reduce the impact to a level less than significant.
- A2.** Future development of PAs 51 and 30 pursuant to the proposed GPA and Zone Change, and consistent with the Orange County Great Park Base Plan, will lead to the introduction of new sources of glare within the project area. Reflective materials and glazed or polished exterior surfaces associated with the research and development land uses may create glare, which could cause visual nuisance to residential land uses. This is considered a significant impact. Implementation of

Mitigation Measures A1 and A2 will reduce the impact to a level less than significant.

5.12.5 Mitigation Measures

Base Plan and Overlay Plan

- A1. Prior to issuance of grading permits, lighting plans and signage plans for new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent residential areas occurs.
- A2. Prior to the issuance of grading permits, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.

5.12.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Less than significant.

Notes and References

None.

5.13 Population and Housing

This section incorporates by reference a general discussion of the population, housing, and employment trends cited in the City of Irvine's Northern Sphere Area General Plan Amendment and Zone Change EIR¹¹ as well data projections from the Orange County Great Park Plan and its supporting technical documents.³

5.13.1 Environmental Setting

The former MCAS El Toro is currently in caretaker status. A limited number of military and civilian staff work at the site to carry out continuing base closure and maintenance activities; however, no one lives at the base. The number of vacant dwelling units on the site is as follows: 4,380 group quarter units and 1,209 residential family units.⁴

Local and Regional Planning Projections

The project area's demographics are best examined in the context of existing and projected population for the Orange County region and the City of Irvine. Information on population, housing, and employment for the project area is available from several sources:

U.S. Census Data

The United States Bureau of the Census publishes population, household and employment data gathered through the decennial census. This data provides a record of historic growth rates in Orange County and the City of Irvine. Table 5.13-1 shows Orange County's population, housing, and employment and its rate of growth since 1980. Table 5.13-2 presents City of Irvine's population, housing, and employment and its rate of growth since 1980.

Table 5.13-1
Orange County Population, Housing, and Employment
1980 Through 2000

	1980	1990	2000
Population	1,932,709	2,410,556	2,846,289
Households	721,514	875,072	969,484
Employment	847,793*	1,301,235**	1,502,434***

Source: U.S. Centennial Census

* Orange County Progress Report, July 1980 estimate

** Composite of Census and California Employment Development Department estimates, OCP-92.

*** 2000 Census data not yet available; estimate from OCP-2000 controlled to California Employment Development Department Labor Force estimate, June 2000.

Table 5.13-2
City of Irvine Population, Housing, and Employment
1980 Through 2000

	1980	1990	2000
Population	62,134	109,706	143,072
Households	22,514	42,221	53,711
Employment	68,741*	152,441**	176,986***

Source: U.S. Centennial Census

* Orange County Progress Report, July 1980 estimate

** Composite of Census and California Employment Development Department estimates, OCP-92.

*** 2000 Census data not yet available; estimate from OCP-2000 controlled to California Employment Development Department Labor Force estimate, June 2000.

Orange County Projections

Orange County jurisdictions and public agencies develop demographic estimates and projections to provide a common foundation for regional and local planning, policymaking, and infrastructure provision. Orange County agencies have executed a Memorandum of Understanding with the Orange County Council of Governments (OCCOG) to contract with the Center for Demographic Research at California State University, Fullerton, to develop and periodically update demographic projections for Orange County. OCCOG adopted the most recent projections, entitled Orange County Projections 2000 (OCP-2000), at the Jurisdiction, Regional Statistical Area, Community Analysis Area, and Census Tract levels. In addition, the Center for Demographic Research and the Orange County Transportation Authority distribute OCP-2000 projections to small geographic areas called Traffic Analysis Zones (TAZ) for small scale planning purposes. For example, OCP-2000 TAZs can be aggregated to approximate the boundaries of the proposed project.

OCP-2000 provides the best available projections of anticipated growth for Orange County. OCP-2000 projects the amount and distribution of population, housing, and employment growth based on detailed information about growth trends, development and local land use provided by Orange County jurisdictions and public agencies; infrastructure, utility and service providers; and the private sector. The process for developing the projections is described in "Orange County Projections 2000." (California State University, Fullerton, Center for Demographic Research, September 2000).

The OCP-2000 projections correlate closely with the 2000 US Census results. Orange County's 2000 census population is within 1.2 percent of the OCP-2000 figure. The City of Irvine's OCP-2000 population for 2000 varies less than one percent from the census count. Likewise, both the City's and the County's census housing counts are less than one percent below OCP-2000. Direct comparisons of employment projections are not possible at this time, as 2000 Census employment estimates will not be released until sometime in 2003. In the interim, the Center for Demographic Research adjusts OCP projections to reflect California Employment Development Department employment projections.

Table 5.13-3 presents OCP-2000 projections for Orange County and City of Irvine population, housing and employment for the 2000 through 2025 period.

Table 5.13-3
OCP-2000 Projections for Orange County and the City of Irvine
2000 Through 2025

	2000	2005	2010	2015	2020	2025
Population						
County	2,853,757	3,031,440	3,168,942	3,270,677	3,342,829	3,416,037
Irvine	144,802	173,182	179,836	182,933	192,836	194,913
Dwelling Units						
County	978,004	1,018,873	1,056,882	1,080,430	1,096,824	1,115,823
Irvine	53,750	63,200	64,904	66,686	68,439	68,883
Employment						
County	1,502,434	1,667,778	1,796,726	1,897,350	1,975,074	2,043,665
Irvine	176,986	209,464	227,879	248,731	252,940	261,309

Source: OCP-2000, adopted by the Orange County Council of Government, June 2000.

Note: Projections are for July, 2000, 2005, 2010, 2015, 2020, and 2025.

Regional Projections

OCP-2000 projections are submitted as Orange County's input to regional growth projections prepared for the six-county Southern California region by the Southern California Association of Governments (SCAG). OCP-2000 provided the background for SCAG's adopted 2001 Regional Forecast for Orange County which is similar, but not identical, to OCP-2000 for 2025. SCAG's regional forecast modifies the OCP-2000 growth distribution to reflect regional transportation and housing policies and is not constrained by local general plans like OCP-2000.

Population Growth – Orange County

Population growth in Orange County has maintained a strong but diminishing pace in recent decades. From 1980 to 1990, population increased 47,785 annually, slowing to an average annual increase of 43,573 people during the 1990's. Orange County's current population is 2,846,289 as reported by the 2000 Census.

Based on Orange County's historic share of California's and the region's employment growth; migration and immigration trends; fertility rates; and local General Plans and zoning, OCP-2000 projects that this trend will continue at a diminished rate, with the County growing by an average of 22,491 people per year, from 2000 to 2025. Population growth will be fueled in large part by natural increase. Births are expected to account for 85 percent of the County's future population growth (The Orange County Planner, August/September 2001).

Population Growth – City of Irvine

The City of Irvine mirrors the County's growth. During the 1980's the City's population increased 77 percent, an annual average increase of 4,757 people. This rate cooled in the 1990's, yielding a 30 percent increase (3,337 annual average increase) over the decade. The 2000 Census reports that the City's current population is 143,072.

OCP-2000 projects how population growth within the County will be distributed over the next 25 years. OCP-2000 projects an annual average population increase of 2,004 between 2000 and 2025. In 2000, the City of Irvine's population represented 5.07 percent of the total County population. In 2025, this proportion is projected to climb to 5.71 percent.

Housing Growth – Orange County

Housing growth in Orange County has not matched the pace set by population growth. From 1990 to 2000, Countywide households increased 11 percent at an annual average rate of 9,441 units.

At present, Orange County has 969,484 households, with 2.9 persons per household on average; approximately 62 percent of the County's housing stock is single family units (2000 Decennial Census). The California Department of Finance estimated the January 2001 vacancy rate at 3.52 percent. As approved with input from local jurisdictions, OCP-2000 projects that the County's housing stock will increase by 137,819 units (14.1 percent) by 2025, an average rate of 5,513 dwelling units per year. Thus, the number of persons per household is projected to rise slightly to accommodate a population that is growing faster than the housing stock.

Housing Growth – City of Irvine

The City of Irvine reflects the County's housing growth. During the 1990's the City's housing increased 27 percent, at an annual average rate of 1,149 units. By 2025, OCP-2000 projects a 28 percent increase of 15,133 units (an average of 605 units per year), a housing growth rate half that experienced during the 1990's. In 2025, the City's housing units would grow to 6.2 percent of the County total despite the projected slowdown in housing production rates.

Table 5.13-4 summarizes the City's current housing stock. In 2000, the City of Irvine's dwelling units represented 5.5 percent of the total County housing stock. The City's housing stock is 64 percent single-family units, compared with 61 percent countywide. According to the California Department of Finance, January 2001 vacancy rate was 4.68 percent, above the countywide rate of 3.52 percent. The City's 2000-2005 Housing Element defines 3.1 percent as an optimal vacancy rate.

Table 5.13-4
City of Irvine 2000 Housing Units by Type

	Units	Percent of Total Units
Single-Family Detached	20,191	39.7
Single-Family Attached	12,262	24.1
Multi-Family, 2-4 Units	3,084	6.1
Multi-Family, 5 or More Units	14,307	28.1
Mobile Homes	1,000	2.0
Total Units	50,844	100.0

Source: California Department of Finance, January 2000 estimate.

Note: 2000 Census details on housing units by type is not yet available.

Housing affordability and availability have become major housing policy issues within the City, regions and state. The City of Irvine prepared the 2000-2005 Housing Element of its General Plan to provide a long-term blueprint for housing within the context of local and regional trends and housing production and housing affordability goals.

Housing affordability is a function of income and housing cost. Housing costs in Irvine have escalated steeply in recent years. Median home sales prices in the City ranged from \$304,000 to \$337,000, depending on zip code, as of August 2001 (DataQuick, August 2001). The City of Irvine's Housing Element adopted the objective of increasing affordable housing opportunities through new construction, and establishes a citywide Affordable Housing Needs goal of devoting five percent of units built for households earning less than 50 percent of the County's median family income, and five percent of units for households earning 81 to 120 percent of the County's median family income. These goals may be satisfied through on-site or off-site construction based on the availability of financial incentives (City of Irvine, 2000-2005 Housing Element, November 2000).

The Housing Element notes that the Affordable Housing Needs goal and implementation programs are needed to meet new production targets set by California's Department of Housing and Community Development to encourage each jurisdiction in the state to provide its fair share of very low, low and moderate income housing needed during the 2000-2005 time period. These numerical housing production goals are known as Regional Housing Needs Assessment (RHNA) targets. State law requires that the Housing Element of the General Plan identifies RHNA targets and document programs designed to meet the targets. To this end, the Housing Element analyzes housing needs within the City's demographic context; reviews potential market, governmental, and other constraints to meeting the City's housing needs; evaluates the resources available to meet housing needs; and finally, establishes policies and objectives to make progress in meeting its housing needs during the five-year period. The Department of Housing and Community Development certified the City's Housing Element in May 2002.

Irvine's Housing Element contains a package of goals, objectives and policies designed to meet its 2000-2005 RHNA targets as well as other housing needs in the City. Table 5.13-5 shows the City's RHNA goal of providing 10,782 additional units to meet the needs of very low, low, moderate, and upper income households in the City.

Table 5.13-5
City of Irvine Regional Housing Needs Assessment Targets
2000-2005

Household Income Category	Target
Very Low Income	1,942 units
Low Income	1,186 units
Moderate Income	2,049 units
Upper Income	5,605 units
Total	10,782 units

Source: City of Irvine, 2000-2005 Housing Element, November 2000.

Notes:

Very Low = 0-50% of Area Median Family Income (MFI)

Low = 51-80% of MFI

Moderate = 81-120% of MFI

Upper = Greater than 120% of MFI

Employment Growth – Orange County

From 1990 to 2000, countywide employment increased 15.1 percent, an average of 19,734 jobs annually. As of June 2000, Orange County has 1.5 million jobs. California's Employment Development Department estimates the current unemployment rate at 2.5 percent. OCP-2000 projects the County will continue to grow by 541,231 jobs, an average of 21,649 jobs per year through 2025. This constitutes a 36 percent increase over the 25-year period.

Employment Growth – City of Irvine

The City of Irvine's employment increased 16 percent during the 1990's, with an annual average increase of 2,555 jobs. The City's 2000 employment base was 176,986 jobs. The City's resident labor force is composed of 71,280 workers, with an unemployment rate of 1.9 percent. (California Employment Development Department, June 2000). The City of Irvine estimates that 13 percent of these workers both reside and work within the City (GPA 40 EIR: Larson, City of Irvine, 2000). Universities, bio-medical and high technology firms are the largest employers within the City.

OCP-2000 projects a 48 percent employment increase of 84,323 jobs, an annual average increase of 3,373 jobs between 2000 and 2025. In 2000, the City of Irvine's employment represented 11.8 percent of the total County employment. In 2025, Irvine is projected to garner 12.8 percent of county employment.

Jobs/Housing Ratio

The ratio of jobs to housing units in the area has environmental implications related to transportation and air quality. According to SCAG, areas having a jobs/housing ratio greater than the regional average are considered jobs-rich, while areas with ratios lower than the regional average are considered housing-rich. The SCAG regional average jobs/housing ratio was 1.25 in 1997, whereas the Orange County subregion had a jobs/housing ratio of 1.52 during the same period. The SCAG 2001 Regional Transportation Plan adopted forecast and the OCP-2000 data both indicate that the area surrounding the former MCAS El Toro and Orange County as a whole are considered jobs-rich and housing-poor. Thus, a major focus of regional planning efforts has been to improve the balance in all affected subregions in order to reduce vehicular trips, costly infrastructure improvements, and resultant air emissions.

Vehicle miles traveled (VMT) relates directly to the amount of vehicular air pollutants produced in a given region. Therefore, the Air Quality Management Plan (AQMP)⁷ adopted by the South Coast Air Quality Management District (SCAQMD) attempts to reduce VMT via trip reduction incentives and programs, including the analysis of new development to determine its effect on the subregional jobs/housing balance. According to SCAG projections, the Orange County subregion's jobs/housing balance will worsen through 2025 as the number of jobs surpasses gains in housing.

5.13.2 Threshold For Determining Significance

The CEQA Environmental Checklist, Appendix G of the CEQA Guidelines, outlines the thresholds for determining significance for population/housing.

Would the Project:

1. *Induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example through extension of roads or other infrastructure).*
2. *Displace substantial numbers of existing housing necessitating the construction of replacement housing elsewhere.*
3. *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.*

Section 15131 of the Guidelines indicates that socioeconomic impacts may be considered significant if a physical change caused by the project results in a social or economic impact, or if the economic or social impact results in a physical change in the environment. Section 21082.2 of CEQA states that "social or economic impacts which do not contribute to, or are not caused by, physical impacts on the environment . . ." do not qualify as evidence to support the finding of a potentially significant impact. Since the mere occurrence of social or economic impacts are not considered potentially significant unless causally related to a particular change in the physical environment, economic, and social impacts can only be ascribed significance if currently available analytical evidence suggests such an impact.

5.13.3 Environmental Impact

The following analysis focuses on the potential impacts associated with implementation of the Base Plan and the Overlay Plan for the Former MCAS El Toro (Pas 51 and 30). The Music Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. As a result, implementation of the proposed project will not result in a significant population and housing impact associated with the annexation of the James A. Music Jail Facility and the IRWD Parcel.

Threshold 1: Induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example through extension of roads or other infrastructure).

Base Plan

The proposed OCGP Base Plan will result in provision of housing (and related population), businesses (and related employment), and infrastructure. Direct population growth from provision of on-site housing is examined in this section. Indirect growth inducement (from provision of infrastructure and employment) is examined in Section 7.2 – Growth Inducing Impacts.

Population

The proposed Base Plan is expected to result in the provision of 225 dwelling units. Based on the City of Irvine's zoning categories planned for the site, these dwelling units could accommodate up to 500 people. This increase in population will not substantially exceed OCP-2000 projections for the site. As discussed previously, the provision of on-site housing and the associated population will be beneficial in regards to Orange County's jobs/housing ratio. No significant impact associated with this issue will occur.

Housing

The proposed Base Plan is expected to result in 225 dwelling units at buildout. The provision of these housing units will not substantially exceed projections contained in OCP-2000. This is not considered a significant impact. Since the Orange County subregion is considered to be jobs-rich and housing-poor, the provision of these housing units in terms of the subregional jobs/housing balance is considered beneficial.

Employment – Short-Term Impacts

Temporary short-term construction jobs will be created during the lifetime of the proposed project. The number and type of jobs will fluctuate over time depending on the type and size of construction projects. Since construction jobs will be created for the duration of the project buildout, consideration of all types of employment is discussed below in regards to long-term impacts for the entirety of project implementation. No significant project-related, short-term impact will occur in terms of population and housing concentrations because adequate infrastructure and public services will be required prior to construction of residential units.

Employment – Long-Term Impacts

The proposed Base Plan is expected to result in the generation of approximately 11,380 jobs on-site. These jobs will not exceed OCP-2000 projections for the site. However, the provision of these jobs will contribute to worsening Orange County's jobs/housing ratio imbalance. This impact is considered significant.

Overlay Plan

Population

The proposed Overlay Plan is expected to result in provision of 3,625 dwelling units as discussed above. Based on the City of Irvine's zoning categories planned for the site, these dwelling units could accommodate up to 9,000 people. This increase in population will not substantially exceed projections contained for the site in OCP-2000, and this impact is not considered significant. As discussed previously, the provision of on-site housing and the associated population will be beneficial in regards to Orange County's jobs/housing balance.

Housing

The proposed Overlay Plan is expected to result in 1,100 low density, 860 medium density, and 1,500 medium-high density residential dwelling units at buildout. Additionally, 165 dwelling units will be ensured for homeless providers through an agreement with the DON. The provision of these housing units will not substantially exceed projections contained in OCP-2000. Since the Orange County subregion is considered to be jobs-rich and housing-poor, the provision of these housing units in terms of the subregional jobs/housing ratio is considered beneficial. No impact associated with this issue will occur.

Employment – Short-Term Impacts

Temporary short-term construction jobs will be created during the lifetime of the proposed project. The number and type of jobs will fluctuate over time depending on the type and size of construction projects. Since construction jobs will be created for the duration of the project buildout, consideration of all types of employment are discussed in regards to long-term impacts below for the entirety of project implementation. No significant project-related, short-term impact will occur in terms of population and housing concentrations because adequate infrastructure and public services will be required prior to construction of residential units.

Employment – Long-Term Impacts

The proposed Overlay Plan is expected to result in approximately 16,510 jobs on-site. These jobs will not exceed OCP-2000 projections for the site. However, the provision of these jobs will contribute to worsening Orange County's jobs/housing imbalance. This impact is considered significant.

Other Considerations with the Base Plan and Overlay Plan

Project Plan Implementation

The primary purpose of the Orange County Great Park Base and Overlay Plans is to provide open space/park/recreational opportunities at the former MCAS El Toro. Another intention of the proposed project is to provide uses oriented toward a diverse range of jobs.

Base Closure Homeless Act Compliance

Objective C-7 of the City of Irvine Housing Element includes the preparation of policies and implementation plans for compliance with the Base Closure Community Redevelopment and Homeless Assistance Act of 1994.⁹ The County of Orange, as the designated LRA, has prepared a homeless assistance plan, which is the only such plan currently proposed for implementation at this time. The City supports this plan.

Infrastructure and Social Support Services Demanded by Increased Land Use Intensity

Despite employment and housing increases, development and infrastructure phasing will ensure that such increases are according to a plan that provides adequate physical and social support systems. Project growth has been determined by affected utility purveyors and service agencies to be compatible with existing and planned support systems (i.e., infrastructure, utilities, public services, housing, recreation, public health facilities, etc.). Housing and employment opportunities within the project area will serve to lessen vehicle trips outside of the project area and will enhance the interrelated nature of the project land uses.

Consistency With Regional Planning Projections

Table 5.13-6 shows the population, housing, and employment levels that are anticipated to result in the annexation area from development of the proposed project land uses. Relative differences among the proposed project, baseline conditions, and OCP-2000 are evident. Changes associated with the County's proposed expansion of the James A. Musick Jail are not incorporated into the figures since the proposed annexation is not determinant of the eventual outcome of that proposed expansion and will, therefore, not result in project-related changes at the jail site.

In net figures (i.e., project buildout minus baseline conditions), the proposed Base Plan would generate an estimated 11,380 new jobs; increase the project area population by approximately 500 persons; and provide up to 225 new residential units. The proposed Overlay Plan would generate an estimated 16,510 jobs; increase the project area population by approximately 9,000 persons; and provide up to 3,625 new residential units. In terms of consistency with 2001 SCAG population, housing, and employment figures, the project differences are potentially significant from a planning perspective. However, the same projections in SCAG's 1998 RTP differ from those currently adopted by SCAG. Table 5.13-7 shows 1998 and 2001 SCAG projections for future years.

**Table 5.13-6
Future Population, Housing, and Employment**

	Baseline (1999)	OCP-2020 (2025)¹	Base Plan (2040)	Overlay Plan (2040)
Population	0	5,468	538 ²	8,676 ²
Housing	1,209 residential family units and 4,380 group quarter units	2,079 dwelling units	225 multi-family residential units	3,625 single and multi- family residential units
Employment	0	28,931 jobs	11,380 jobs on-site	16,510 jobs on-site

¹ Column based on demographic projections provided by the County of Orange that assume a non-specific, mid-size aviation operation at the former MCAS El Toro for Community Analysis Area (CAA) 54. Since EIR 563, OCP-2000, and 1990 Census data do not identify specific growth estimates for the portion of the former MCAS El Toro within CAA 53 only, CAA 54 is used exclusively as the year 2025 estimate adopted in regional growth projections. Actual growth estimates for the former MCAS El Toro are slightly higher.

² Based on State Department of Finance Census 2000 per household population of 2.96 for the County of Orange.

Table 5.13-7
Variation in SCAG Projections for Orange County
1998 RTP and 2001 RTP

	2000	2010	2015
Population			
1998 RTP	2,868,000	3,105,500	3,165,400
2001 RTP	2,699,585	3,160,512	3,272,412
Projection Difference	-159,515	+55,012	+107,012
2025 Base Plan-Related Increase	500		
2025 Overlay Plan-Related Increase	9,000		
Housing			
1998 RTP	910,000	1,013,100	1,064,100
2001 RTP	917,169	1,009,370	1,035,379
Projection Difference	+7,069	-3,730	-28,721
2025 Base Plan-Related Increase	225		
2025 Overlay Plan-Related Increase	3,625		
Employment			
1998 RTP	1,381,700	1,717,400	1,882,600
2001 RTP	1,501,864	1,798,090	1,888,935
Projection Difference	+120,164	+80,690	+6,335
2025 Base Plan-Related Increase	11,380		
2025 Overlay Plan-Related Increase	16,510		

Sources: *Regional Transportation Plan 1998 and 2001*. Southern California Association of Governments.

Table 5.13-7 indicates that regional projections are dynamic and, as a compilation of local land use projections, reflect changing community views on the location and types of growth desired. The data also indicates the project's incremental effects on those projections are also variable in their significance when evaluated against those regional projections.

In addition, the environmental significance of the deviation from SCAG projections is weighed not only in terms of numerical differences but also in terms of the project's conformity with goals and policies relating to mobility, job creation, housing provision, and environmental protection.

Jobs/Housing Ratio

As noted previously, the area surrounding the former MCAS El Toro and the Orange County Subregion are considered jobs-rich and housing-poor. Therefore, SCAG seeks to encourage housing growth over job growth in the Orange County subregion. Theoretically, the relative abundance of employment and lack of housing opportunities in the Orange County subregion results in increased vehicle miles traveled (VMT) since part of the work force consists of commuters who are drawn into the Orange County region for employment.

The proposed Base Plan and Overlay Plan for the former MCAS El Toro site would substantially alter the projected employment generation characteristics of Irvine. Since the Orange County Subregion is anticipated to become increasingly jobs-rich over the next 20 years, the project-related employment would exacerbate the subregional jobs/housing imbalance. As a result, the proposed project will not improve and would only exacerbate the Orange County's overall jobs/housing imbalance and the impact is considered significant and unavoidable.

New employment opportunities on the former MCAS El Toro site would generate increased demand for a range of housing in the area as some new employees may relocate to be nearer to their jobs. According to the City of Irvine 2000-2005 Housing Element, an additional 10,782 housing units are needed to achieve the City's Regional Housing Needs Assessment (RHNA) goal. A portion of this housing demand is expected to be absorbed in existing residential projects currently being developed in the surrounding area. A portion of this induced housing growth would be absorbed in residential projects currently planned and/or under development. Additionally, the opening of new development areas as a result of completion of the Foothill and Eastern Transportation Corridors would thereby increase the potential supply of housing in the surrounding area.

A primary purpose of SCAG jobs/housing objectives is to reduce VMT and consequent congestion and air pollution. A study prepared for the California Air Resources Board (CARB) by JHK Associates in 1995 provides a well-documented methodology by which to analyze the land use effects of a given project. The report, *Transportation-Related Land Use Strategies to Minimize Motor Vehicle Emissions: An Indirect Source Research Study*, analyzes the efficiency of numerous land use planning factors that have the greatest potential for reducing VMT and mobile source emissions. The study contains a list of recommended strategies, many of which are present in both the proposed Base Plan and the Overlay Plan land use plans. The strategies listed below serve as confirmation that the land use tools and planning practices employed in the proposed project are supported by other objective planning research. A brief description of a few strategies employed in the formulation of the proposed project programs is provided below.

- C *Provide Pedestrian Facilities.* This strategy emphasizes pedestrian accessibility through the provision of convenient and direct pedestrian facilities, including sidewalks, crosswalks, and protection from fast vehicular traffic. The project plans will incorporate a network of interconnected pedestrian and biking trails, many of which are completely separated from roadway rights-of-way.
- C *Increase Density Near Transit Corridors.* This strategy consists of efforts to intensify land uses within walking distance of a transit corridor or surface transit route. This strategy is accommodated in the proposed project by the

concentration of recreation areas and employment centers in proximity to existing and planned commuter rail, bus, and transportation corridor facilities.

- C *Increase Density Near Transit Stations.* This strategy encourages efforts to intensify land uses around existing or planned high-capacity transit stations (bus and/or rail). It includes new development, infill and redevelopment, and incorporates direct and convenient pedestrian linkages, such as those planned in the project area.
- C *Encourage Mixed-Use Development.* This strategy encourages the location of compatible land uses within walking distance of each other. Mixed-use development such as that proposed in the proposed project land use plans typically results in a higher level of walking, as well as a greater potential for transit use, compared to single-use development.
- C *Strengthen Downtown and Urban Activity Centers.* The proposed project area is envisioned to serve as a commercial, employment, recreational, and cultural center that can encourage pedestrian travel within the area and also provide an important focal point for an area-wide transit system.

The above strategies, whether specifically for the purpose of reducing vehicular emissions or for creating a park/recreation destination, corroborate the land use planning principles presented in the proposed Base and Overlay Plans and will serve to offset some of the jobs/housing imbalance effects; however, the jobs/housing balance impact will remain significant and unavoidable.

Additionally, it should be noted that while the jobs/housing ratio is not met in terms of a mere calculation, when viewed from a more regional perspective the provision of additional jobs in the project area would provide jobs closer to South Orange County residents who would otherwise have to travel farther north or east to work. South Orange County Regional Statistical Areas have extremely housing-rich jobs/housing ratios. The 2000 jobs/housing ratio for RSA C-43 and RSA D-40 (See Figure 7-1 provided in Section 7.0 Cumulative Impacts) is .83 and .60, respectively. The 2020 projected job/housing ratio is 1.04 and .89, respectively.

Finally, the population-induced demand for public and private services will not be significantly adverse. Future development of the former MCAS El Toro in various different scenarios (both aviation and non-aviation reuse plans) has been consistently considered in public facilities planning for the past several years.

Housing Provisions

According to the City of Irvine 2000-2005 Housing Element, an additional 10,782 housing units are needed to achieve the City's RHNA goal. Therefore, a portion of the project's indirect housing growth will be absorbed in residential projects currently being developed or planned in the surrounding area. Based on the amount of planned and undeveloped residential land in the surrounding area, a substantial portion of this induced housing growth is expected to be absorbed in residential projects currently in the planning stages or under development. Furthermore, substantial new areas of residential development will be opened for development with the completion of several planned transportation

improvements in the County, including the Foothill Transportation Corridor (FTC) and Eastern Transportation Corridor (ETC). This effect of these transportation improvements could be to increase access to the potential supply of housing in the surrounding area.

Workforce Housing

The project will result in the generation of employment and workers are expected to live both on the project site, and in other portions of the County. Table 5.13-8 depicts the anticipated employment generated under the Base Plan and Overlay Plan and the number of workers that are expected to reside in the project area. As shown, under the Base Plan approximately 11,380 jobs will be generated and approximately 425 workers would be housed on-site. Under the Overlay Plan, approximately 16,510 jobs will be generated and approximately 6,851 workers will be housed on-site. A portion of the workers housed on-site would be expected to work within the project area.

Other workers are expected to reside in other portions of the County or in adjacent counties.

**Table 5.13-8
Project Employment Generation vs. Workers Housed On-Site**

	Base Plan	Overlay Plan
Employment	11,380	16,510 jobs
Total Workers House On-Site ¹	425	6,851
¹ Based on a factor of 1.89 workers per each housing unit.		

The City of Irvine provides a variety of ownership and rental housing opportunities for all income levels, including lower-income households. Unassisted average rental housing prices in the community range from about \$1,000 for a studio to \$1,600 for a 3-bedroom unit, while average sales prices range from about \$300,000 for a condo to \$480,000 for a single family home. As detailed in Irvine's 2000-2005 Housing Element, the City's success in providing integrated affordable housing development is evidenced by the extensive number of assisted rental projects in the community. In fact, of the more than 40,000 housing units in the City, more than 3,330 assisted rental units are currently available to very low and low income households in the City.

According to the 2000-2005 Housing Element, an additional 15,000 units, 6,647 of which would be affordable to very low- and low- income housing units, could be built within the City based on existing Zoning, redevelopment opportunities, and vacant land. This shows that the City has identified more than enough vacant and underutilized sites throughout the City to meet its Regional Housing Demand of 1,942 very low-income and 1,186 low-income units by 2005.

The Base Plan will help meet demands for housing units by allowing for the development of an additional 225 multi-family units on the project site. The Overlay Plan will help meet this demand by allowing for the development of 3,625 additional residential units on-site. Additionally, housing projects developed on the site under either the Base Plan or Overlay Plan will be required to be consistent with the City's Housing Element Affordable Housing Goal, which states that:

- Five percent of units should be affordable to households earning less than 50 percent of the County Median Family Income through rental housing.
- Five percent of the actual number of units built should be affordable as either rental or ownership housing for households earning between 51 and 80 percent of the County Median Family Income.
- Five percent of the units should be affordable to households earning between 81 and 120 percent of the County Median Family Income, satisfied through the development of ownership housing.

Surrounding housing-rich jurisdictions such as Lake Forest and Laguna Hills also provide a range of housing opportunities for workers. As shown in the Tables 5.13-9 and 5.13-10 below, surrounding Lake Forest and Laguna Hills provide a range of rental and homeownership opportunities for those working in the region. Each of these jurisdictions also have assisted units for low and very low income households and implement affordable housing programs through their adopted Housing Elements.

Table 5.13-9
Sales Prices in Irvine and Surrounding Jurisdictions

Jurisdiction	Units Sold	Average Sale Price
<i>Irvine (2001-2002)</i>		
Homes	1,744	\$480,738
Condos	1,532	\$306,478
<i>Lake Forest (1998-1999)</i>		
Homes	918	\$264,058
Condos	280	\$130,016
<i>Laguna Hills (2001-2002)</i>		
Homes	451	\$547,926
Condos	705	\$221,990

Source: City of Lake Forest General Plan, Irvine General Plan, DataQuick Services.

Table 5.13-10
Rental Prices in Irvine and Surrounding Jurisdictions

Jurisdiction	# of Units	Average Rent	Range
<i>Irvine (2000)</i>			
Studio	311	\$1,009	n.a.
1 BR	3,952	\$1,134	n.a.
2 BR	6,622	\$1,376	n.a.
3 BR	775	\$1,648	n.a.
<i>Lake Forest (1999)</i>			
Studio	35	n.a.	\$825-\$883
1 BR	590	n.a.	\$799-\$945
2 BR	795	n.a.	\$999-\$1,200
3 BR	45	n.a.	\$1,300
<i>Laguna Hills (2003)</i>			
1 BR	n.a.	n.a.	\$1,045 to \$1,166
2 BR	n.a.	n.a.	\$1,273 to \$1,410

Source: City of Irvine General Plan, City of Lake Forest General Plan, Springstreet.com, and Apartments.com.

Threshold 2: Displace substantial numbers of existing housing necessitating the construction of replacement housing elsewhere.

Base Plan and Overlay Plan

Military operations at the former MCAS El Toro ceased in July 1999, and direct population and employment levels on the site are now negligible. Therefore, the loss of military jobs and housing is not a project-related effect. Depending on the decisions of future property owners of the former MCAS El Toro, it is likely that some or all of the existing vacant housing stock may be demolished. However, the proposed project will provide the opportunity for additional housing on the site. The Base Plan will provide up to 225 dwelling units and the Overlay Plan will provide up to 3,625 dwelling units. Impact will be beneficial.

Threshold 3: Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Base Plan and Overlay Plan

Military operations at the former MCAS El Toro ceased in July 1999, and direct population and employment levels, and the associated population, on the site are now negligible. Therefore, the displacement of people is not a project-related effect. The proposed project will provide additional housing on the site to accommodate demand for housing in Orange County and the impact will be beneficial.

5.13.4 Significant Impacts

Base Plan and Overlay Plan

A significant impact to jobs/housing ratio will occur.

5.13.5 Mitigation Measures

Base Plan and Overlay Plan

No mitigation is available to rectify conflicts with the numerical objectives of regional planning documents including the jobs/housing ratio.

5.13.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Although the proposed amendments to the City of Irvine General Plan will be incorporated into regional SCAG and County of Orange planning projections, the impact associated with jobs/housing balance will remain significant and unavoidable.

Notes and References

1. County of Orange. *MCAS El Toro Community Reuse Plan, DEIR, No. 563, Volume 1*. August 1996.
2. County of Orange. *James A. Musick Jail Expansion and Operation, Relocation of Interim Care Facility, and Southeast Sheriff's Station, DEIR, No. 564*. August 1996.
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6. Orange County. *Orange County Projections - 2000*. Prepared by California State University Fullerton, Center for Demographic Research. June 22, 2000.
7. South Coast Air Quality Management District. *Air Quality Management Plan (plan not accepted by EPA)*. 1997.

8. County of Orange. *MCAS El Toro Community Reuse Plan, DEIR, No. 563, Volume 1, Pgs. 4-612 to 4-619.* August 1996.
9. *Base Closure Community Redevelopment and Homeless Assistance Act of 1994.* Pub. L. 103-421.
10. County of Orange. *MCAS El Toro Community Reuse Plan, DEIR, No. 563, Volume 1, Pg. 4-624.* August 1996.
11. City of Irvine. *Northern Sphere Area General Plan Amendment and Zone Change, Draft Environmental Impact Report, Volume I.* December 2001.

5.14 Public Services and Facilities

5.14.1 LAW ENFORCEMENT

5.14.1.1 Environmental Setting

Former MCAS El Toro (PAs 51 and 30)

The DON has contracted with the Orange County Sheriff to provide law enforcement to PA 51 during the interim caretaker period until final conveyance occurs. The Sheriff provides on-site, 24-hour protection to the former base, and staffs the front gate during daytime hours. The Irvine Police Department provides law enforcement to PA 30.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail facility is operated by the Orange County Sheriff's Department. The jail has a permanently assigned staff of approximately 160 personnel that guards the jail 24 hours a day. The staff includes deputies, special officers, and correctional service technicians.

IRWD Parcel (Portion of PA 35)

The Orange County Sheriff is currently responsible for patrolling and/or responding to the IRWD parcel.

City of Irvine

The City of Irvine has its own Police Department that is headquartered at the Irvine Civic Center Complex located at One Civic Center Plaza. Irvine's Police Department also has a satellite facility located in the Irvine Spectrum Entertainment Complex. The current police facilities are adequate to handle the personnel and equipment that are employed and utilized by the department.

The Irvine Police Department provides all services normally associated with a municipal law enforcement agency including uniform patrol, investigations, crime analysis, crime prevention, K-9 patrol, Special Operations Unit, forensic investigations, accident investigation/traffic enforcement, drug abuse resistance education, and emergency management/disaster preparedness. The Department has access to contract helicopter service through Costa Mesa Police Department. Mutual aid assistance agreements exist, providing support from other Orange County law enforcement jurisdictions, state and federal agencies.

The Irvine Police Department is a full service Community Oriented Policing organization with officers trained and encouraged to solve community issues before they become

problems. The Department also supports a high profile Preventive Services Program tied closely to COP and focuses on a pro-active preventive approach to community safety. As part of a comprehensive Crime Prevention philosophy, the Department has been active the past 24 years in Advanced Physical Planning and has a state of the art Building Security Code in place. The Department has also adopted a strategy to deal with the problem of police response to false alarms. A strong False Alarm Ordinance is in place. The Irvine Police Department coordinates the City of Irvine Emergency Management Program. Focused on disaster preparedness and using the State of California Standardized Emergency Management System model, the Department maintains a written plan document and a trained citywide liaison group. A new state of the art Emergency Operations Center has recently been completed.

The City of Irvine Police Department's current response guidelines are:

- C Responding to "emergency" events within six minutes, 85 percent of the time;
- C Responding to "crimes in progress" events within 10 minutes, 85 percent of the time;
- C Responding to "less serious crimes occurring now" events within 20 minutes, 90 percent of the time; and
- C Responding to "routine calls for service" within 60 minutes, 85 percent of the time.

Currently the Irvine Police Department is meeting these response time guidelines for "emergency" events and "routine calls for service." Response times to "crimes in progress" and "less serious crimes occurring now" are only about three percent below the desired percentage. Unfilled active police officer positions may have accounted for this slight decline, as there were an abnormally high number of officers who were either on disability or retired from the department, which has resulted in vacant positions. The ratio of police to population also has been reduced from a 1999 average of 1.13 officers per 1000 residents to the current ratio of 1.09 officers. At any given time, there is a mandatory minimum of nine officers and a maximum of as many as 23 officers available to respond to calls for service anywhere in the City.

The Irvine Police Department currently does not provide service to PA 51; however, the Irvine Police Department does provide service to PA 30 and will provide service to the entire base and IRWD parcel once the area is annexed. The Irvine Police Department also has a mutual aid agreement with the County Sheriff's Department and is available to assist the Sheriff with law enforcement at the Musick Jail facility if requested by the Sheriff.

Existing Approved Plans

City of Irvine

The City of Irvine Police Department is currently researching the expansion of their facilities. It is unknown at this time when or where the substation would be built and the size of the facility. Staffing goals are adjusted annually as addressed in the City's Strategic Business Plan to ensure that the City's emergency response standards identified above are met.

Orange County Sheriff

The Orange County Sheriff has proposed to construct a 20,000 square foot station on the Musick Jail property (referred to as the Saddleback Substation). This facility would operate as a substation to serve the surrounding areas with an estimated 218 personnel and provide back-up sheriff support to the permanent jail staff. At this time, there are not immediate plans to proceed with construction of the Saddleback Substation.

5.14.1.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for law enforcement services.

Would the project:

1. *Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service ratios, response times or other performance objectives for police protection?*

5.14.1.3 Environmental Impact

As defined by the thresholds for determining significance, impacts related to the provision of law enforcement services are described below:

Threshold 1: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service ratios, response times or other performance objectives for police protection?

Base Plan

The Irvine Police Department would be responsible for providing law enforcement to the entire Great Park area and PA35, after annexation. The Police Department will be instituting Geographic Policing in the near future. This will affect the manner in which the department will service the Great Park and PA35 and subsequent staffing levels. As Geographic Policing is still in the study stages, estimates of police personnel required are based upon current demand levels coupled with anticipated calls for service. The Base Plan contains very diverse land uses, some of which are not currently within the City and therefore without a history of demand on police services.

There will be 3,390 acres of Agriculture, Habitat Preserve, Wildlife Corridor, and Riparian Corridor that will contain natural areas, walking trails, agriculture, and open space areas. This large area with its unique terrain will need to be patrolled, thus requiring equipment and methods of patrolling, (e.g., equestrian) which will be new to the Police Department. Depending upon the type of events, the sports parks, recreational and cultural facilities, could require additional police personnel beyond the normal allocated for patrol. Demand on police resources of the various land uses will be evaluated when detailed information is available during the development review process as individual projects are proposed.

Based on the Department's current staffing formula and anticipated calls for service to the project area based on proposed land uses, personnel required to service the project would be five to ten sworn police officers, one to two sworn police supervisors, three to five non-sworn support staff, two to three police vehicles, two off-road vehicles, and an equestrian unit (unknown number). Through the continued implementation of the City's Strategic Business Plan and Budgeting process, adequate provision will be made for the maintenance of acceptable law enforcement levels of service. Police protection services for the project area under the Base Plan will be funded through the use of City General Fund revenues.

The general impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR in terms of planned land use, which could accommodate a new police substation should one be constructed. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the possible future construction and operation of a substation in the northern portion of the City. Project-level environmental review, at the time the specific location of a future police substation is known, and when specific development plans have been prepared, will also be required.

James A. Musick Jail Facility (Portion of PA 35)

Annexation of the Musick Jail will not change the provider of law enforcement services to the property. Since the jail is a County correctional facility, the Orange County Sheriff will continue to provide the same level of law enforcement services to the jail after annexation of this area to the City. Additionally, the proposed project will not result in a change in land use designation for this parcel. As such, implementation of the proposed project will not generate a demand for police protection for the jail facility that would require the construction or expansion of police facilities, and no significant environmental impact as a result of the proposed project is anticipated.

The Musick Jail facility may be expanded in the future to increase inmate capacity of the jail as described in Section 3.0 of this Final Program EIR. The expansion of the jail is a County of Orange initiated action, and the expansion is not proposed as part of this project. EIR No. 564 was prepared by the County of Orange and did not identify any potential impact to law enforcement that may result from the proposed jail expansion.

IRWD Parcel (Portion of PA 35)

Once the IRWD parcel is annexed, the City of Irvine Police Department will provide police protection to this parcel at approximately the same level of service that the parcel currently receives from the County Sheriff. This public facility parcel does not have any residents and no further development of this parcel is proposed as part of the proposed project, and none is expected in the future. Annexation of this parcel will not result in the need to construct or expand police facilities, and no significant environmental impact related to the provision of police facilities is anticipated.

Overlay Plan

The Irvine Police Department would be responsible for providing law enforcement to the entire Great Park area, and PA35, after annexation. The Police Department will be instituting Geographic Policing in the near future. This will affect the manner in which the department will service the Great Park and subsequent staffing levels. As Geographic Policing is still in the study stages, estimates of police personnel required for such as park are based upon current demand levels coupled with anticipated calls for service. The Great Park Overlay Plan contains very diverse land uses, some which are not currently within the City and therefore without a history of demand on police services.

There will be 3,070 acres of Agriculture, Habitat Preserve, Wildlife Corridor, and Riparian Corridor that will contain natural areas, walking trails, agriculture, and open space areas. This large area with its unique terrain will need to be patrolled, thus requiring equipment and methods of patrolling, (i.e. equestrian) which will be new to the Police Department. Depending upon the type of events, the sports parks, recreational, and cultural facilities, could require additional police personnel beyond the normal allocated for patrol. Demand on police resources of the various land uses will be evaluated when detailed information is available during the development review process as individual projects are proposed.

Based on the department's current staffing formula and anticipated calls for service to the project area based on proposed land uses, personnel required to service the project would be 17 to 22 sworn police officers, three to five sworn police supervisors, eight to 11 non-sworn support staff, six to nine police vehicles, two off-road vehicles, and an equestrian unit (unknown number). Through the continued implementation of the City's Strategic Business Plan and Budgeting process, adequate provision will be made for the maintenance of acceptable law enforcement levels of service. Police protection services for the park itself will be funded through the use of a special park assessment under the Overlay Plan.

The general impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR in terms of planned land use, which would accommodate the construction and operation of a new police substation. Mitigation Measures required for any significant impacts identified in preceding sections of this Final

Program EIR would apply to the future construction and operation of a substation within the project area. Project-level environmental review, at the time the specific location of a future police substation is known, and when specific development plans have been prepared, will also be required.

James A. Musick Jail Facility (Portion of PA 35)

Annexation of the Musick Jail will not change the provider of law enforcement services to the property. Since the jail is a County correctional facility, the Orange County Sheriff will continue to provide the same level of law enforcement services to the jail after annexation of this area to the City. Additionally, the proposed project will not result in a change in land use designation for this parcel. As such, implementation of the proposed project will not generate a demand for police protection for the jail facility that would require the construction or expansion of police facilities, and no significant environmental impact as a result of the proposed project is anticipated.

The Musick Jail facility may be expanded in the future to increase inmate capacity of the jail as described in Section 3.0 of this Final Program EIR. The expansion of the jail is a County of Orange initiated action, and the expansion is not proposed as part of this project. EIR No. 564 was prepared by the County of Orange and did not identify any potential impact to law enforcement that may result from the proposed jail expansion.

IRWD Parcel (Portion of PA 35)

Once the IRWD parcel is annexed, the City of Irvine Police Department will provide police protection to this parcel at approximately the same level of service that the parcel currently receives from the County Sheriff. This public facility parcel does not have any residents and no further development of this parcel is proposed as part of the proposed project, and none is expected in the future. Annexation of this parcel will not result in the need to construct or expand police facilities, and no significant environmental impact related to the provision of police facilities is anticipated.

5.14.1.4 Significant Impacts

Base Plan and Overlay Plan

The general significant impacts associated with the construction and operation of public facilities have been addressed within this Final Program EIR, including the possible construction and operation of a new police substation. The need for new public facilities will be mitigated by utilizing existing City standards.

5.14.1.5 Mitigation Measures

Base Plan and Overlay Plan

Mitigation Measures identified in other sections of this Final Program EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of police facilities to serve new growth expected in the northern portion of the City.

5.14.1.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

The general impacts associated with the construction and operation of public facilities has been addressed within the Final Program EIR. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of a police substation within the project area. Project-level environmental review, at the time the specific location of a future police substation is known, and when specific development plans have been prepared, will also be required and project specific mitigation measures identified and implemented.

Notes and References

1. Comment letter from the Irvine Police Department (2002).

5.14.2 FIRE AND EMERGENCY MEDICAL SERVICES

5.14.2.1 Environmental Setting

Former MCAS El Toro (PAs 51 and 30)

The County of Orange has contracted with the Orange County Fire Authority (OCFA) to provide primary fire protection to PAs 51 and 30 during the interim caretaker period while development plans are finalized. There is one operational fire station on the former base (Station No. 20). Station No. 20 provides fire protection service to both the former base property, as well as the surrounding off-base properties. This station currently provides adequate fire protection to the former MCAS El Toro property.

The proposed annexation area is currently served by OCFA stations No. 20, 26, 36, 51, and 38. Table 5.14-1 depicts the location, equipment, and staffing of the fire stations which provide initial response to former MCAS El Toro property and the rest of the annexation area.

**Table 5.14-1
Local Fire Stations**

Facility	Equipment	Staffing
Fire Station No. 38 (Temporary) 26 Parker, Irvine	Engine Medic Van	5 personnel/shift
Fire Station No. 26 4861 Walnut Ave., Irvine	Engine Medic Van Engine (Reserve)	5 personnel/shift
Fire Station No. 36 301 E. Yale Loop, Irvine	Paramedic Assessment, Engine	3 personnel/shift
Fire Station No. 20 The Former MCAS El Toro Property	Paramedic Assessment Engine	3 personnel/shift
Fire Station No. 51 18 Cushing, Irvine Division Chief Headquarters	Paramedic Assessment Engine	4 personnel/shift

Source: OCFA, 2002.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail facility is currently served by the OCFA facilities identified in Table 5.14-1.

IRWD Parcel (Portion of PA 35)

The IRWD parcel is currently served by the OCFA facilities identified in Table 5.14-1.

City of Irvine

Fire protection is also provided to the City of Irvine by the OCFA. The OCFA provides fire protection to 22 cities within the County of Orange, as well as the unincorporated areas of the County. The OCFA has 62 stations, which include structural engines, truck companies, paramedic units, airport crash trucks, hazardous materials response team, water dropping helicopters, and other various pieces of specialized equipment. OCFA provides fire suppression, emergency medical, rescue and fire prevention, hazardous materials coordination, and wildland management services. The OCFA is one of the largest regional fire service organizations in California. OCFA's goals for the provision of fire services are the following:

- C First-in engines should arrive on-scene to medical aids and/or fires within five minutes, 80 percent of the time;
- C First-in truck companies should arrive on-scene to fires within ten minutes, 80 percent of the time; and
- C First-in paramedic companies should arrive on scene at all medical aids within eight minutes, 90 percent of the time.

There are seven OCFA fire stations located within Irvine. An additional six nearby OCFA fire stations located outside of the City limits may respond to calls within the City if necessary.

Existing Approved Plans

OCFA is planning two additional fire stations. Station No. 55 will be located on the north side of Portola Parkway between Yale Avenue and Jeffrey Road, and Station No. 47 will be located near Sand Canyon and Interstate 405. These stations are in the planning stages and are anticipated to have a staffing level of four personnel per shift. Stations No. 38 and 20 are proposed for relocation, though specific locations have not been identified.

OCFA also has in place an agreement with The Irvine Company as part of the Northern Sphere Area that should provide adequate service to all areas around MCAS El Toro if development is constructed as currently planned.

5.14.2.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for fire services and facilities.

Would the project:

1. *Result in substantial adverse physical impacts associated with the provision of new physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service ratios, response times or other performance objectives for fire protection?*

5.14.2.3 Environmental Impact

As defined by the thresholds for determining significance, impacts related to the provision of fire and emergency medical service are described below:

Threshold 1: Would the project result in substantial adverse physical impacts associated with the provision of new physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service ratios, response times or other performance objectives for fire protection?

Base Plan and Overlay Plan

PA 51 will be served by the OCFA upon annexation to the City and PA 30 will continue to be served by OCFA. Before closure, MCAS El Toro provided fire protection service from three military fire stations at the base. One of these stations is currently being reused by OCFA for Station No. 20. While OCFA is unable at this time to calculate the exact extent of new services that will be needed to support the proposed project, there is a likelihood that additional fire services infrastructure, such as additional fire stations, will be required within the former MCAS El Toro area and funds will need to be identified to design,

construct, equip, and operate the fire station(s). The existing military fire stations within the former base may be used in the short-term, but will need to be replaced with new facilities that meet OCFA standards.

A final determination of fire station needs and locations will be made at a future date when more information is known about risk, density, construction, layout, and types of occupancy. Appropriate capital improvements and resources will be required to meet anticipated fire service delivery requirements.

The proposed project will accommodate fire protection facilities within the former MCAS El Toro property. A fuel modification program will also be developed for structures adjacent to the natural open space habitat preserve to assure an adequate level of fire safety.

Consistent with OCFA practices, major developers would be required to enter into secured fire protection agreements with the OCFA prior to the issuance of the first building permits to mitigate the impact of these individual projects that will be developed pursuant to the Base Plan. Such agreements would be based upon the needs created by the project beyond the current abilities of the OCFA to service them. As with all projects, all standard conditions and guidelines will be applied to the project during the normal review process.

Since the City of Irvine is a Structural Fire Fund member, the OCFA will also receive a portion of the property taxes from the new development to help fund the required fire protection and emergency medical services. As much of the annexation area may not produce property taxes in the short- and long-term, a funding agreement must be reached between the City of Irvine and OCFA regarding the provision of fire protection and emergency medical services to the proposed annexation area.

The specific environmental impact of constructing the new fire facilities that may be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of fire protection facilities within the project area. Project-level environmental review, at the time the specific location of future facilities is known, and when specific development plans have been prepared, will also be required.

James A. Musick Jail Facility (Portion of PA 35)

After annexation, the OCFA would continue to serve the jail facility and provide the existing level of service. Any new fire protection facilities that would be constructed in and/or adjacent to PAs 51 and 30 as would be needed as a result of the Base Plan, will also serve the Musick Jail property. Additionally, the proposed project will not result in a change in land use designation for this parcel. As such, implementation of the proposed project will not generate a demand for fire and emergency medical service for the jail facility that would require the construction or expansion of fire stations, and no significant environmental impact as a result of the proposed project is anticipated.

The Musick Jail facility may be expanded in the future to increase inmate capacity of the jail as described in Section 3.0 of this Final Program EIR. This is a County of Orange initiated action, and the expansion is not proposed as part of this project. EIR No. 564 was prepared by the County of Orange and addresses the impacts to fire and emergency medical protection that may result from the proposed expansion. The Recirculated Sections of EIR No. 564 identified a potential impact to the provision of emergency medical service as a result of the increase in the number of inmates requiring emergency medical treatment. Mitigation measures identified in the Recirculated Sections required that prior to expanding the jail, the Orange County Sheriff-Coroner prove that the increased on-site medical staff will reduce the demand for emergency medical treatment to a level less than significant. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

The OCFA will continue to serve the IRWD parcel at the existing level of service after annexation. The IRWD parcel is not expected to require additional fire or emergency medical services since no new growth is planned for the parcel.

Annexation of this parcel will not result in the need to construct or expand fire protection facilities, and no significant environmental impact related to the provision of fire protection facilities is anticipated.

5.14.2.4 Significant Impacts

Base Plan and Overlay Plan

The specific significant environmental impact of constructing new fire protection facilities that will be needed to serve the Base Plan cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR, which would include the construction and operation of new fire protection facilities. The need for new public facilities will be mitigated by utilizing existing City standards.

5.14.2.5 Mitigation Measures

Base Plan and Overlay Plan

Mitigation Measures identified in other sections of this Final Program EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of fire protection facilities to serve new growth expected in the planning area.

5.14.2.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

The general impacts associated with the construction and operation of public facilities has been addressed within the Final Program EIR, which would include the construction and operation of new fire protection facilities. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of fire protection facilities within the project area. Project-level environmental review, at the time the specific location of future fire protection facilities is known, and when specific development plans have been prepared, will also be required and project specific mitigation measures identified and implemented.

Notes and References

1. Information for the fire protection section is based on information from Mick Rohde of the Orange County Fire Authority in his letter (January 7, 2002) and personal conversation (March 2002), as well as previous information provided by Nancy Foreman of the Orange County Fire Authority in her letter (January 22, 1999), Response to Comment letter (May 15, 1999), Response to Notice of Preparation (September 15, 1999), and personal conversation (September 1999).

5.14.3 PARKS AND RECREATION

5.14.3.1 Environmental Setting

Former MCAS El Toro (PAs 51 and 30)

Acting in a caretaker's role, the DON currently offers public access to a variety of existing recreational services located on PA 51 including the Marine Memorial Golf Course and equestrian stables. As there is no resident living on PAs 51 and 30, there is no on-site demand for these facilities.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail provides a playing field on site for inmates. Because the jail is a correctional facility, it does not generate a demand for public parks and recreational services.

IRWD Parcel (Portion of PA 35)

The IRWD parcel does not contain any recreational facilities. Because the parcel contains a public water facility and no residential development, the parcel does not generate a demand for public parks and recreational services.

City of Irvine

The City of Irvine presently has approximately 13 community parks (including two senior centers) totaling 262 acres, two special facilities (Bommer Canyon Cattle Camp and Central Bark) for a total of 18 acres, 28 public neighborhood parks consisting of 131 acres, with numerous private neighborhood parks and landscaped public recreational trails.

The Irvine Park Code, which conforms with the Quimby Act, requires that developers of residential subdivisions dedicate park land, or pay in-lieu fees, at the rate of two acres of community parkland and three acres of neighborhood parkland for every 1,000 new residents. The City does not have parkland requirements for non-residential development.

Existing Approved Plans

Community and neighborhood parks are currently planned in the following City of Irvine PAs: PA 17, PA 27, PA 4 and the Northern Sphere (PAs 8A, 5A, 9, and 6).

The City of Irvine trail system is comprised of a single equestrian trail and numerous biking and hiking trails. These trails provide residents various recreational and commuter opportunities. Figure 3-7, in the Project Description of this Final Program EIR, shows the City of Irvine existing trails network and how it is proposed to be amended by the proposed project.

The County of Orange Master Plan of Regional Riding and Hiking Trails (MPRRHT) identifies two regional trails in the vicinity: Serrano Creek Trail along Serrano Creek from Whiting Ranch Wilderness Park to Trabuco Road and Hicks Canyon Trail along Hicks Canyon Wash from Limestone Canyon Wilderness Park toward the Peters Canyon Trail. Figure 3-7 shows the City of Irvine existing trails network and how it is proposed to be amended by the proposed project.

The Orange County Transportation Authority adopted a Strategic Bikeways Plan in 2001. Within the project area, this Plan identifies proposed Class I Bikeways along Borrego Canyon Wash and along the AT&SF railroad line. An adjacent Class I bikeway is proposed along Sand Canyon Avenue, that would be connected to the Peters Canyon Bikeway through the proposed Venta Spur Bikeway.

The County's Bikeways Plan identifies proposed Class I bikeways along Borrego Canyon Wash from the Whiting Ranch Wilderness Park to the Irvine Transportation Center and along Jeffrey Road from I-5 north to the Hicks Canyon Bikeway at Portola Bikeway.

5.14.3.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for parks and recreational facilities.

Would the project:

1. *Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service ratios, response times or other performance objectives for parks and recreational facilities?*
2. *Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur to be accelerated?*

5.14.3.3 Environmental Impact

As defined by the thresholds for determining significance, impacts related to the provision of parks and recreational facilities are described below:

Threshold 1: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service ratios, response times or other performance objectives for parks and recreational facilities?

Base Plan

The City of Irvine will provide for the park and recreational needs of PAs 51 and 30 after annexation. Based on the park threshold described above, the buildout of PAs 51 and 30 according to proposed land uses under the proposed Base Plan will generate a demand for an additional 2.6 acres of parkland, including one acre of community park and 1.6 acres of neighborhood park. Table 5.14-2 depicts the calculations of parkland need based on the Irvine Subdivision Ordinance household size assumptions for the Base Plan. Employees working at the non-residential uses allowed under the project may also choose to use local parkland facilities. The addition of new City personnel and equipment to maintain the new parks and recreational facilities will also be required at the same ratio as existing City facilities.

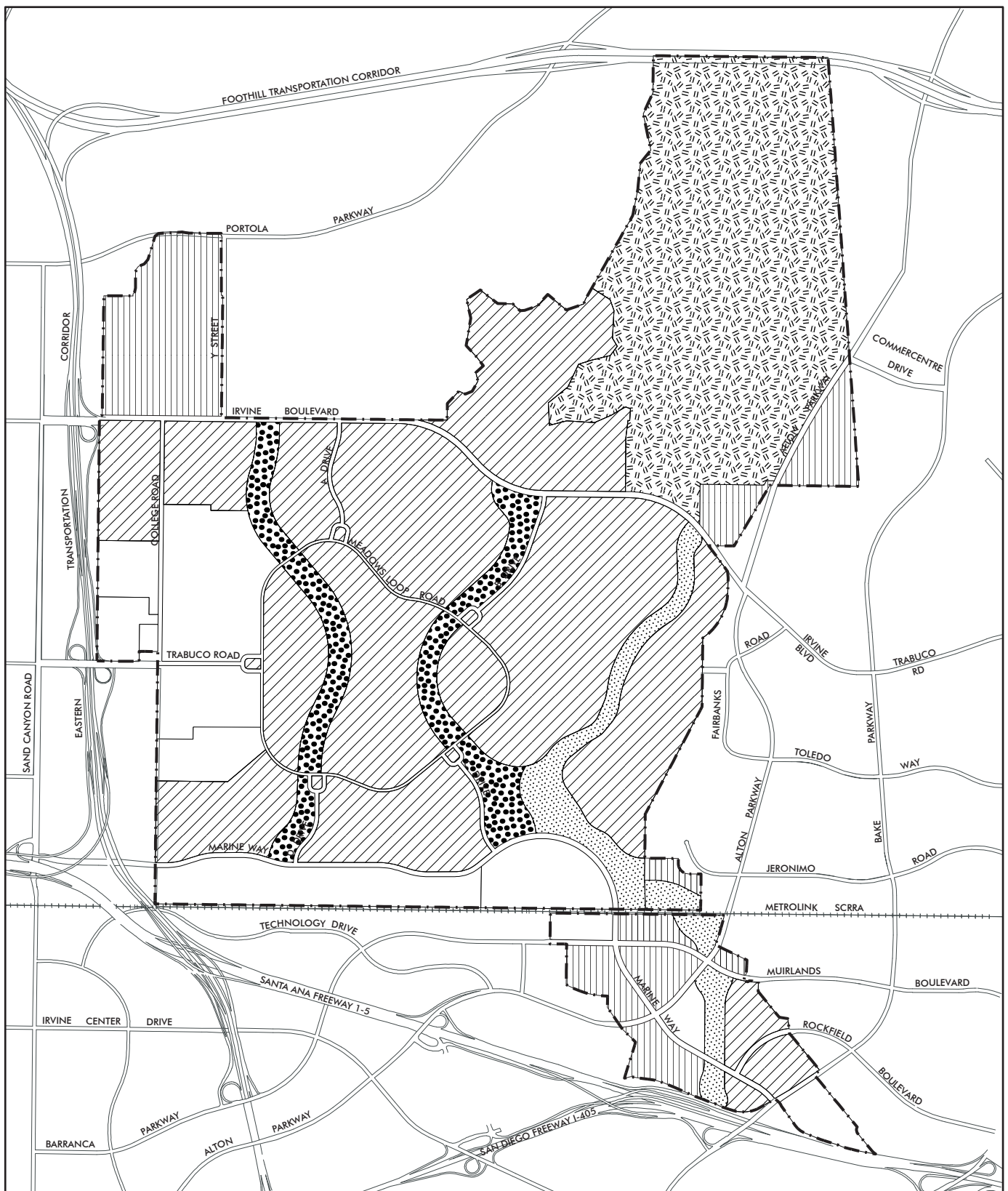
**Table 5.14-2
Base Plan Parkland Demand**

Dwelling Unit Type	# of Dwelling Units	Estimated Persons/HH	Required # of Total Parkland Acres
Low Density Residential	0	2.95	0
Medium Density Residential	60	2.60	0.8
Medium-High Density Residential	165	2.13	1.8
Total	225		2.6

According to the Base Plan, the majority of land uses in PAs 51 and 30 are proposed for open space and recreation. The Plan provides for a variety of open space features to serve the City and the surrounding region. These open space features include parks, sports parks, golf courses, habitat preserve, drainage and wildlife corridors, fairgrounds, and a cemetery. The parks and recreational features are identified in Figure 5.14-1. The parkland acreage proposed under the project will greatly exceed the existing City of Irvine's standards described above, providing a regional open space amenity consistent with Measure W. A portion of the required acres identified in Table 5.14-2 will need to go toward private neighborhood parks, primarily for pools and tot lots within close proximity of homes.

Overlay Plan

Based on the park threshold described above, the buildout of PAs 51 and 30 according to proposed land uses under the Overlay Plan will generate a demand for an additional 45 acres of parkland, including 18 acres of community park and 27 acres of neighborhood park. Table 5.14-3 depicts the calculations of parkland need based on the Irvine Subdivision Ordinance household size assumptions.



Source: Fuscoe Engineering, City of Irvine, 2002.

- · — Orange County Great Park Boundary
- ▨ Recreational
- ▤ Agriculture
- ▩ Riparian Corridor
- ▧ Wildlife Corridor
- ▦ Habitat Preserve

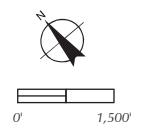


Figure 5.14-1
Recreational and Open Space Features
Base Plan

**Table 5.14-3
Overlay Plan Parkland Demand**

Dwelling Unit Type	# of Dwelling Units	Estimated Persons/HH	Required # of Total Parkland Acres
Low Density Residential	1,100	2.95	16.2
Medium Density Residential	860	2.60	11.2
Medium-High Density Residential	1,665	2.13	17.7
Total	3,625		45.1

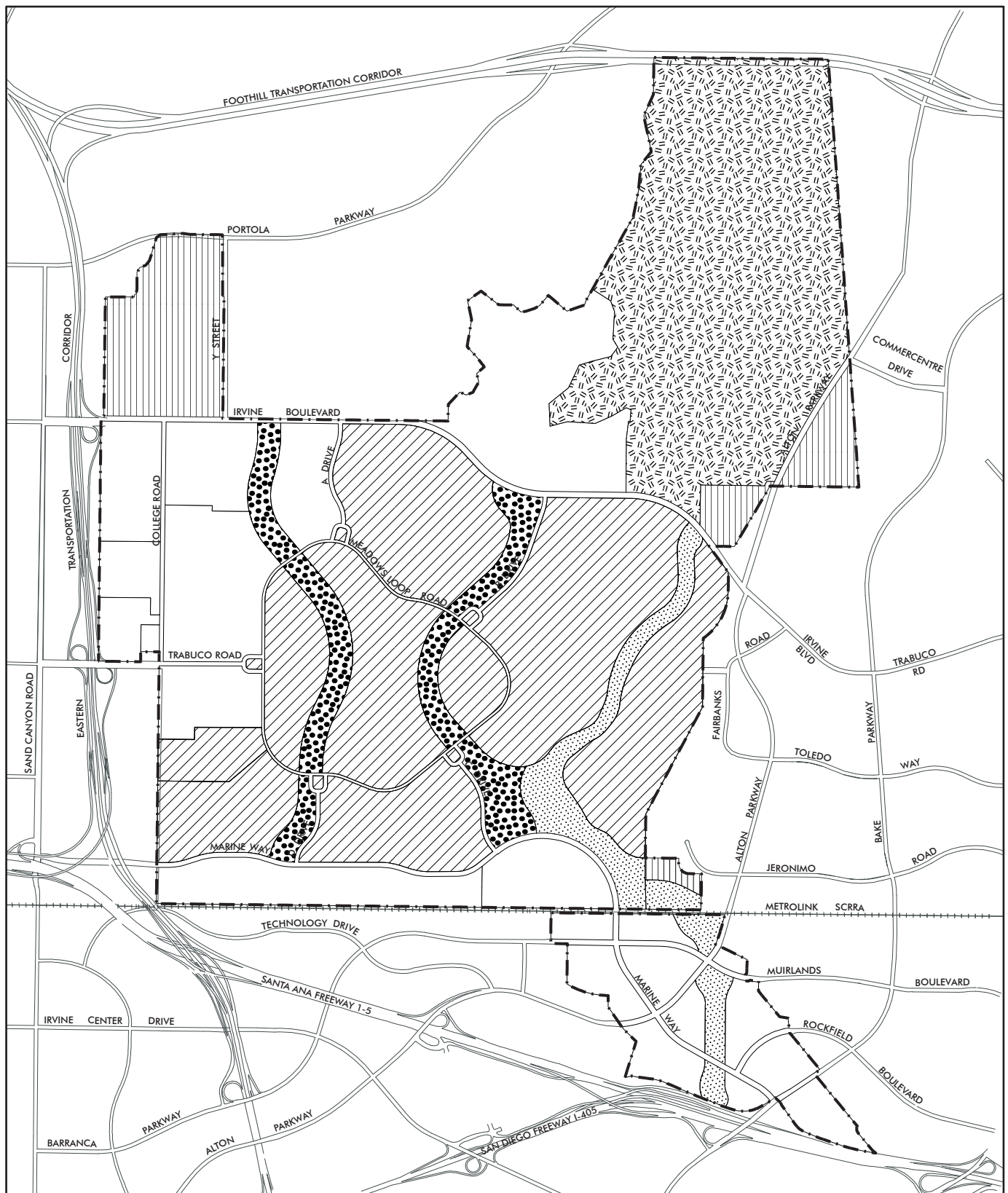
According to the Overlay Plan, the majority of land uses in PA 51 are proposed for open space and recreation. The Plan provides for a variety of open space features to serve the City and the surrounding region. These open space features include parks, sports parks, golf courses, habitat preserve, drainage and wildlife corridors, fairgrounds, and a cemetery. The parks and recreational features are identified in Figure 5.14-2. The parkland acreage proposed under the project will greatly exceed the existing City of Irvine's standards described above, providing a regional open space amenity for the benefit of all Orange County. A portion of the required acres identified in Table 5.14-3 will need to go toward private neighborhood parks, primarily for pools and tot lots within close proximity of homes.

Park and Recreational Plan

As stipulated in the Implementation Agreement Regarding the Natural Community Conservation Plan (NCCP) for the Central/Coastal Orange County Subregion of the Coastal Sage Scrub NCCP (July 1996), a Habitat Preserve will be established on approximately 974 acres in the northeastern portion of PA 51. This habitat preserve is intended to be conveyed to the US Department of the Interior to be administered by the USFWS for the preservation of coastal sage scrub and associated wildlife species. Activities within the Habitat Preserve will be restricted to those that are compatible with conservation goals, as determined by USFWS.

Two drainage corridors and one wildlife corridor are designated within the project area. One drainage corridor is located between the Marshburn and Bee Canyon Drainage Areas, while the other is located between the Bee Canyon and Agua Chino Drainage Areas. The wildlife corridor is located on the southern portion of the project area. This corridor links habitat areas north and south of the site. The wildlife corridor provides connection to the Habitat Preserve discussed above, as well as the Limestone-Whiting Wilderness Park. To the south, the corridor will connect to the Laguna Coast Wilderness Park through existing and future major open space linkages.

The Base Plan and Overlay Plan include opportunities for museums, theaters, gardens, and other cultural activities. North of the regional park located in the center of PA 51 (as shown in the Project Description Figure 3-3), there are approximately 250 acres designated for exposition center uses. PAZ 13, south of the central park, is 156 acres in size and can be used for cultural and institutional uses. The proposed project also provides for a sports park area totaling 165 acres.



Source: Fuscoe Engineering, City of Irvine, 2002.

- · — Orange County Great Park Boundary
- ▨ Recreational
- ▤ Agriculture
- ▧ Riparian Corridor
- ▩ Wildlife Corridor
- Habitat Preserve

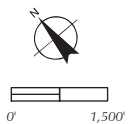


Figure 5.14-2
Recreational and Open Space Features
Overlay Plan

The project includes two golf course areas. The project incorporates the existing Marine Memorial Golf Course into a 211 acre course, with a second, larger 315 acre course proposed to the north of the existing golf course. In addition, the project includes a cemetery and other open space areas.

The project provides for a bikeways system interconnecting recreational, educational, and institutional uses to off-site trail systems enhancing the recreational opportunities for the community and the region. Both on-road (Class II) and off-road (Class I) bikeways are planned for the site, linking with the regional bikeway system. A riding and hiking trail will parallel Irvine Boulevard until it reaches the Habitat Preserve. This system also includes other non-vehicular forms of circulation, such as pedestrian corridors and sidewalks.

The specific environmental impact of constructing the new park and recreational facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general impacts associated with the construction and operation of public facilities has been addressed within this EIR, which would include the construction and operation of new park and recreational facilities. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of new park and recreational facilities within the planning area. Project-level environmental review, at the time the specific location of new park and recreational facilities is known, and when specific development plans have been prepared, will also be required.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail will continue to be responsible for the provision and maintenance of any necessary recreational facilities located within the facility after annexation. Additionally, the Overlay Plan will not result in a change in land use designation for this parcel. As such, implementation of the proposed project will not generate a demand for park and recreational facilities that would require the construction or expansion of park and recreational facilities, and no significant environmental impact as a result of the proposed project is anticipated.

The Musick Jail Facility may be expanded in the future to increase inmate capacity of the jail as described in Section 3.0 of this Final Program EIR. The expansion of the jail is a County of Orange initiated action, and the expansion is not proposed as part of this project. EIR No. 564 was prepared by the County of Orange and no impact to parks and recreation impacts was identified. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

Irvine would provide for any parks and recreational needs for the IRWD parcel after annexation. Since the IRWD is public facility without residential development, the parcel will not create future needs for open space and parkland. As a result, annexation of the IRWD parcel will not result in a parks and recreation impact.

Threshold 2: *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur to be accelerated?*

Base Plan and Overlay Plan

Future development under the Base and Overlay Plans will result in additional population growth, and a resulting increase in demand for existing park and recreational facilities. There will not be a significant impact on the existing facilities since implementation of the proposed project will provide new recreational opportunities that are in excess of the City of Irvine's adopted standards for parks and recreation.

5.14.3.4 Significant Impacts

Base Plan and Overlay Plan

The specific significant environmental impact of constructing new recreational facilities that will be needed to serve the Base and Overlay Plans cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR, which would include the construction and operation of new recreational facilities. The need for new public facilities will be mitigated by utilizing existing City standards.

5.14.3.5 Mitigation Measures

Base Plan and Overlay Plan

Mitigation Measures identified in other sections of this Final Program EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of park and recreational facilities to serve new growth expected in the planning area.

5.14.3.6 Significant of Impacts After Mitigation

Base Plan and Overlay Plan

The general impacts associated with the construction and operation of public facilities has been addressed within the Final Program EIR, which would include the construction and operation of new park and recreational facilities. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of park and recreational facilities within the planning area. Project-level environmental review, at the time the specific location of park and

recreational facilities is known, and when specific development plans have been prepared, will also be required and project specific mitigation measures identified and implemented.

Notes and References

None.

5.14.4 SCHOOL SERVICES

5.14.4.1 Environmental Setting

Former MCAS El Toro (PAs 51 and 30)

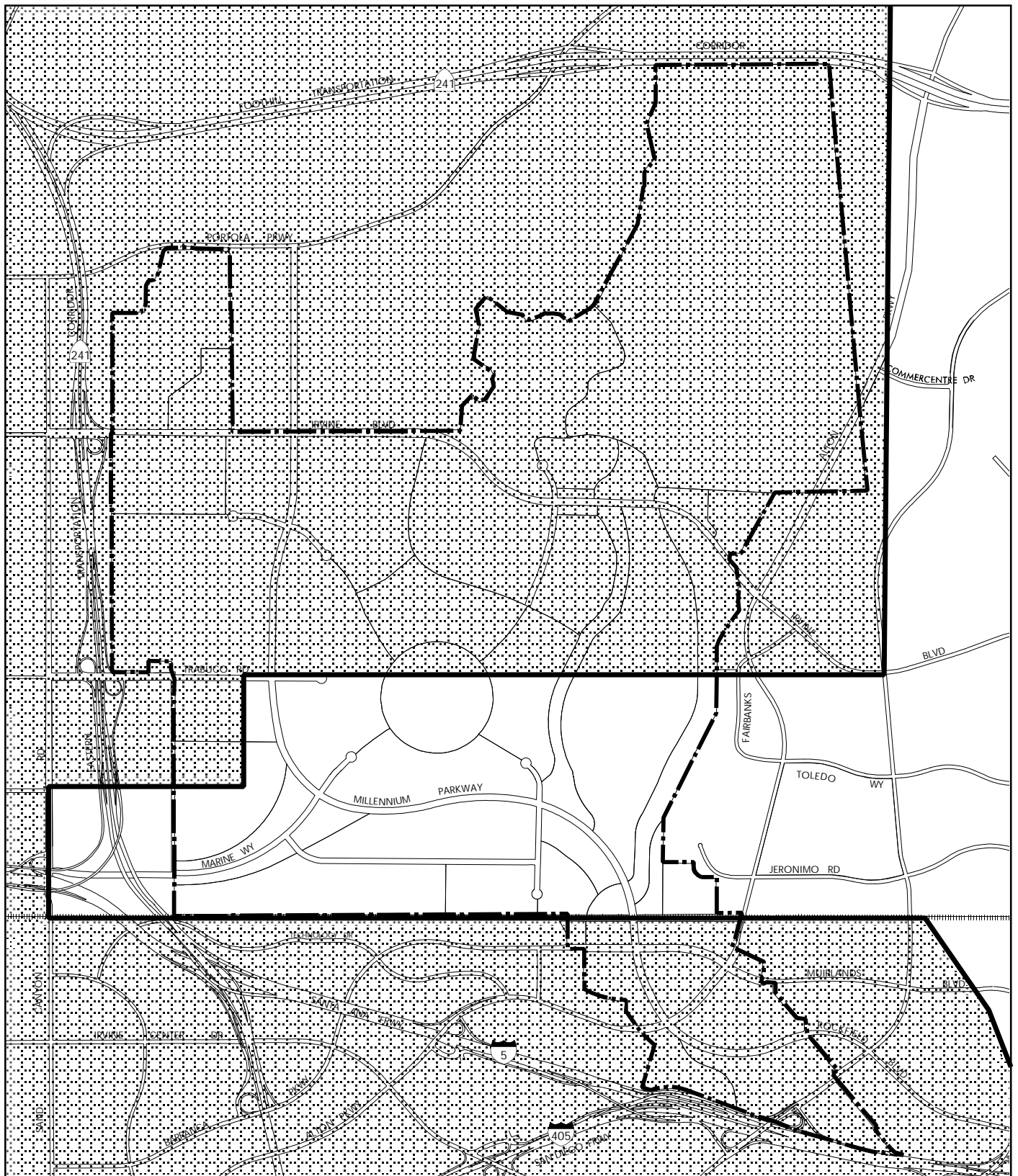
PAs 51 and 30 are within the school service boundaries of the Irvine Unified School District (IUSD) and the Saddleback Valley Unified School District (SVUSD). IUSD serves the majority of PAs 51 and 30 (northern and central sections of PA 51, and all of PA 30), with the Saddleback Valley Unified School District serving the southern section of PA 51. Figure 5.14-3 depicts the school district boundaries for the project area.



The existing El Toro Marine Elementary School at 8171 Southeast Trabuco Road at the northeastern edge of PA 51 is located on land owned by the federal government and leased to the IUSD through June 30, 2016. Prior to closure of the base in 1999, elementary school-age children at the MCAS El Toro facility attended this school. The school was built in 1949 and has a capacity for approximately 600 elementary school students. While the base was operational, middle school and high school students at the base attended the Rancho San Joaquin Middle School at 4861 Michelson Drive and the University High School at 4771 Campus Drive, respectively. Now that there are no students generated within the project area, there are no assigned schools serving the area.

The SVUSD serves the southern section of PA 51. Since this portion of PA 51 did not contain residential uses while MCAS El Toro was operational, the area is not included within any school service boundary of the district. All schools in SVUSD are currently overcrowded and relocatable classrooms have been utilized to accommodate all students. No new schools are planned in the near future.

James A. Musick Jail Facility (Portion of PA 35)

The James A. Musick Jail is not used for school-age children and inmates do not attend public or private schools outside the jail facility. Thus, the jail does not currently generate school-age students who would require school services from the Irvine Unified School District.



-  Irvine Unified School District Boundary
-  Saddleback Valley Unified School District Boundary

 Project Area

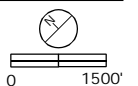


Figure 5.14-3
Irvine and Saddleback Valley
Unified School Districts

IRWD Parcel (Portion of PA 35)

The IRWD parcel is a public facility and does not contain residential development. Thus, the parcel does not generate a demand for schools and educational services.

5.14.4.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for public services and facilities.

Would the project:

1. *Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service ratios or other performance objectives for public school facilities?*

5.14.4.3 Environmental Impact

As defined by the thresholds for determining significance, impacts related to the provision of school facilities are described below:

Threshold 1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service ratios or other performance objectives for public school facilities?

Base Plan

Residential development proposed under the Base Plan includes a total of approximately 225 residential units, including 60 medium density and 165 medium-high density residential units. The majority of these units, approximately 165 to 225 units, will be within the Irvine Unified School District. The remainder, zero to 60 units will be within the Saddleback Valley School District.

The school district boundaries cross through PAZ 10, an area where residential uses are proposed. At this General Plan level of analysis, it is unknown where exactly the housing units will be placed within the planning area (i.e., whether the new units will be in IUSD or SVUSD). For analysis purposes of this Final Program EIR, the highest number of potential units is used to estimate the “worse-case” scenario for both districts. As a result, the analysis will over estimate the amount of new or expanded school facilities that will be needed to serve the project.

Irvine Unified School District (IUSD)

New development within PAs 51 and 30 has the potential to generate school-age children who would require school services from the IUSD. School-age children that would occupy the multi family units would require school services from the IUSD and would create a demand for new schools in the area. The IUSD has indicated that it is prepared to serve all K-12 students that will reside within the district boundaries. Table 5.14-4 estimates student generation by school and land use. Based on the IUSD factors, as many as 115 students could be generated.

Table 5.14-4
IUSD Estimated Students Generated by Base Plan

Student Type	Average Residential Generation Factor	Anticipated Maximum New Housing Units	Projected New Students
Elementary (K-6)	0.32	225	72
Middle (7-8)	0.07		16
High (9-12)	0.12		27
Total	0.50		115

Source: Irvine Unified School District for generation factors.

New development within this area will have to pay development fees to the IUSD. The maximum statutory school fees the District can collect for new residential development is \$2.14 per square foot. These fees will be used for the development of new schools, expansion or improvement of existing school facilities or to fund school services.

Due to the low number of students that would be generated with the buildout of the Base Plan, no new school facilities would be needed on-site. Most likely, students would be placed in existing schools and existing facilities expanded and modernized. IUSD may consider shifts in the school attendance boundaries for existing elementary, middle, and high schools when distributing the new students. This could result in existing communities within IUSD to change from their current school assignment to another District school in order to better accommodate new growth within PAs 51 and 30.

Saddleback Valley Unified School District

New development within PAs 51 and 30 has the potential to generate school-age children who would require school services from the SVUSD. School-age children that would occupy the multi family units would require school services from the SVUSD and would create a demand for new schools in the area. Based on the SVUSD factors, as many as 24 students could be generated. Table 5.14-5 depicts the number of students that may be generated within the project area.

**Table 5.14-5
SVUSD Estimated Students Generated by Base Plan**

Student Type	Average Residential Generation Factor*	Anticipated Maximum New Housing Units	Projected New Students
Elementary (K-6)	0.22	60	13
Middle (7-8)	0.056		3
High (9-12)	0.13		8
Total			24

* Student generation factors for detached residential are 0.34 for K-6, 0.065 for 7-8, and 0.16 for 9-12 and for attached residential are 0.10 for K-6, 0.046 for 7-8, and 0.10 for 9-12. An average of the two factors is used for this analysis.

Source: Saddleback Valley Unified School District for generation factors.

New development within this area will have to pay development fees to the Saddleback Unified School District in the amount of \$0.37 per square foot of non-residential development and \$2.13 per square foot of residential development to mitigate potential impacts to the district. These fees will be used for the development of new schools, expansion or improvement of existing school facilities or to fund school services.

The specific environmental impact of constructing new public educational facilities within the IUSD and SVUSD that will be needed to serve the Base Plan cannot be determined at this General Plan level of analysis. However, the general impacts associated with the construction and operation of public facilities within the project area has been addressed within this EIR, which would include the construction and operation of new educational facilities. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of new educational facilities within the planning area. Project-level environmental review, at the time the specific location of new educational facilities within the project area or expansion or modernization of existing facilities is known, and when specific development plans have been prepared, will also be required.

IRWD Parcel (Portion of PA 35)

The annexation of the IRWD parcel will not generate a demand for school services since no residential development is proposed on this parcel. As a result, annexation of the IRWD parcel will not result in an impact related to the construction and operation of public school facilities.

Overlay Plan

Residential development proposed under the Overlay Plan includes a total of approximately 3,625 residential units, including 1,100 low density, 860 medium density, and 1,665 medium-high density residential units. The majority of these units, approximately 2,680 to 2,990 units, will be within the Irvine Unified School District. The remainder, 635 to 945 units, will be within the Saddleback Valley School District.

The school district boundaries cross through two planning areas (PAZ 10 and 18) that propose residential uses. At this General Plan level of analysis, it is unknown where exactly

the housing units will be placed within each individual planning area (i.e., whether the new units will be in IUSD or SVUSD). For analysis purposes of this Final Program EIR, the highest number of potential units is used to estimate the “worse-case” scenario for both districts. As a result, the analysis will over estimate the amount of new or expanded school facilities that will be needed to serve the project.

Irvine Unified School District (IUSD)

New development within PAs 51 and 30 has the potential to generate school-age children who would require school services from the IUSD. School-age children that would occupy the single family and multi family units would require school services from the IUSD and would create a demand for new schools in the area. The IUSD has indicated that it is prepared to serve all K-12 students that will reside within the district boundaries. Table 5.14-6 estimates student generation by school and land use. Based on the IUSD factors, as many as 1,525 students could be generated.

Table 5.14-6
IUSD Estimated Students Generated by Project

Student Type	Average Residential Generation Factor	Anticipated Maximum New Housing Units	Projected New Students
Elementary (K-6)	0.32	2,990	957
Middle (7-8)	0.07		209
High (9-12)	0.12		359
Total	0.50		1,525

Source: Irvine Unified School District for generation factors.

Based on Table 5.14-6, the IUSD estimated the cost for typical District elementary, middle, and high schools. According to the District, the estimated acreage needed for an elementary school is 10 acres with a total building area of 45,000 square feet and the estimated acreage for a middle school is 15 acres with a total building area of 65,000 square feet. The District also estimated that an acre of land would cost \$1,000,000 to 1,500,000, resulting in a total building cost of \$218 per square foot for elementary and middle schools (not including land for Oak Creek Elementary School in 2000). According to the District, the total building area needed for a high school expansion would be 20,000 to 30,000 square feet, resulting in a total cost of \$3.2 million.

New development within this area will have to pay development fees to the IUSD. The maximum statutory school fees the District can collect for new residential development is \$2.14 per square foot. These fees will be used for the development of new schools, expansion or improvement of existing school facilities or to fund school services.

Based on the District’s initial analysis of the project, the District estimates that it will require at buildout a 13 acre K-8 site and school located central to the Overlay Plan service area, as well as funding for modernization and expansion of existing middle and high school facilities. A 13 acre school site has been identified in PA 17a. To accommodate the expected student growth from the project during buildout of the proposed project and prior to final construction of the new elementary school, IUSD may re-open the El Toro Marine Elementary School and/or assign students residing in the project area to various schools

with available capacity. The District's consultants are currently analyzing the land bordering the existing El Toro Elementary site for purposes of realigning the property lines and/or expanding the site from approximately 10-acres to 13-acres better accommodate a K-8 school. The Overlay Plan would be implemented through participation in the Development Agreement described in Section 3.0 of this EIR. The Development Agreement requires dedication of a school site to IUSD.

In the event that a new school is not built, IUSD may consider shifts in the school attendance boundaries for existing elementary, middle, and high schools. This could result in existing communities within IUSD to change from their current school assignment to another District school in order to better accommodate new growth within PAs 51 and 30.

Saddleback Valley Unified School District

New development within PAs 51 and 30 has the potential to generate school-age children who would require school services from the SVUSD. School-age children that would occupy the single family and multi family units would require school services from the SVUSD and would create a demand for new schools in the area. Based on the SVUSD factors, as many as 384 students could be generated. Table 5.14-7 depicts the number of students that may be generated within the project area.

**Table 5.14-7
SVUSD Estimated Students Generated by Project**

Student Type	Average Residential Generation Factor*	Anticipated Maximum New Housing Units	Projected New Students
Elementary (K-6)	0.22	945	208
Middle (7-8)	0.056		53
High (9-12)	0.13		123
Total			384

* Student generation factors for detached residential are 0.34 for K-6, .065 for 7-8, and .16 for 9-12 and for attached residential are 0.10 for K-6, .046 for 7-8, and .10 for 9-12. An average of the two factors is used for this analysis.

Source: Saddleback Valley Unified School District for generation factors.

New development within this area will have to pay development fees to the Saddleback Unified School District in the amount of \$0.37 per square foot of non-residential development and \$2.13 per square foot of residential development to mitigate potential impacts to the district. These fees will be used for the development of new schools, school facilities or to fund school services.

The specific environmental impact of constructing new public educational facilities within the IUSD and SVUSD that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis. However, the general impacts associated with the construction and operation of public facilities within the project area has been addressed within this Final Program EIR, which would include the construction and operation of new educational facilities. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of new educational facilities within the planning area. Project-

level environmental review, at the time the specific location of new educational facilities within the project area or expansion or modernization of existing facilities is known, and when specific development plans have been prepared, will also be required.

James A. Musick Jail Facility (Portion of PA 35)

The annexation of the site of the jail to the City of Irvine will not lead to the generation of students. Additionally, the proposed project will not result in a change in land use designation for this parcel. As such, implementation of the proposed project will not generate a demand for educational facilities for the jail facility that would require the construction or expansion of educational facilities, and no significant environmental impact as a result of the proposed project is anticipated.

The Musick Jail Facility may be expanded in the future to increase inmate capacity of the jail as described in Section 3.0 of this Final Program EIR. This is a County of Orange initiated action, and the expansion is not proposed as part of this project. The proposed expansion of the jail facility in the future is not expected to generate students from inmates or employees of the facility due to the short-term stay of inmates and the rotation of deputies to different law enforcement functions, including only temporary assignments to the jail, and EIR No. 564 did not identify any significant impacts related to the proposed jail expansion. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

The annexation of the IRWD parcel will not generate a demand for school services since no residential development is proposed on this parcel. As a result, annexation of the IRWD parcel will not result in an impact related to the construction and operation of public school facilities.

5.14.4.4 Significant Impacts

Base Plan and Overlay Plan

The specific significant environmental impact of constructing new educational facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR, which would include the construction and operation of new educational facilities. The need for new public facilities will be mitigated by utilizing existing City standards.

5.14.4.5 Mitigation Measures

Base Plan and Overlay Plan

Mitigation Measures identified in other sections of this Final Program EIR (5.1 - 5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of educational facilities to serve new growth expected in the planning area.

5.14.4.6 Significance of Impact After Mitigation

Base Plan and Overlay Plan

The general impacts associated with the construction and operation of public facilities has been addressed within the Final Program EIR, which would include the construction and operation of new educational facilities. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of educational facilities within the planning area. Project-level environmental review, at the time the specific location of educational facilities is known, and when specific development plans have been prepared, will also be required and project specific mitigation measures identified and implemented.

Notes and References

1. Comment letter from Don Chadd, Irvine Unified School District (October 31, 2002).
2. Personal conversation with Tom Tullar, Saddleback Valley Unified School District (December 2002).

5.15 Utilities

5.15.1 POTABLE WATER

5.15.1.1 Environmental Setting

The Irvine Ranch Water District (IRWD) is the jurisdictional agency responsible for providing plan approval and water service to the entire project area. The IRWD does not have any adopted expansion plans for the potable water system within the project area. The Metropolitan Water District of Southern California (MWD) is planning for a parallel pipeline to the Allen-McColloch Pipeline (AMP), which currently traverses the project area. The City of Irvine acknowledges that only existing infrastructure that meets current IRWD standards will be preserved for use in the future. Infrastructure considered below the IRWD standard will be replaced and/or upgraded based on IRWD recommendations during implementation of the proposed project.

Former MCAS El Toro (PAs 51 and 30)

A report, “The Orange County Great Park Program EIR Infrastructure Report” (Fusco Engineering, November, 21 2002) has been prepared for Orange County Great Park Plan. This report is provided in Appendix J of this Final Program EIR.

PAs 51 and 30 are located within Zone 3 North and Zone 4 of the IRWD water system. The original water system for the former MCAS El Toro property was designed and constructed as a stand-alone system. Currently, IRWD supplies potable water to the former base through four metered connections that connect to the IRWD Zone 3 North and Zone 4 water system. The on-site existing distribution system for the former MCAS El Toro property consists of a network of distribution system pipelines, six reservoirs, and two pump stations.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail is located within Zone 4 of the IRWD water system. The jail receives its potable water from IRWD through two connections located at the northwest corner of the site.¹

IRWD Parcel (Portion of PA 35)

The IRWD parcel contains the IRWD East Irvine Zone 4 Pumping Station and Zone 3 5.0 million-gallon potable water reservoir and 7.0 million gallon potable reservoir.

City of Irvine

The IRWD provides potable water to the entire City of Irvine. Potable water sources currently available to IRWD include water imported by MWD through the AMP, the East Orange County Feeder No. 2 (EOCF#2), and the Orange County Feeder; and groundwater

from the Irvine Subbasin/Irvine Desalter and the Dyer Road Wellfield (DWRF)/Deep Aquifer Treatment System (DATS).² The 66-inch, reinforced-concrete AMP is located in a 50-foot-wide permanent easement that traverses the project area in a generally northwest-southwest direction.

5.15.1.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for potable water.

Would the project:

1. *Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*
2. *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

5.15.1.3 Environmental Impact

As defined by the thresholds for determining significance, impacts related to the provision of potable water service are described below:

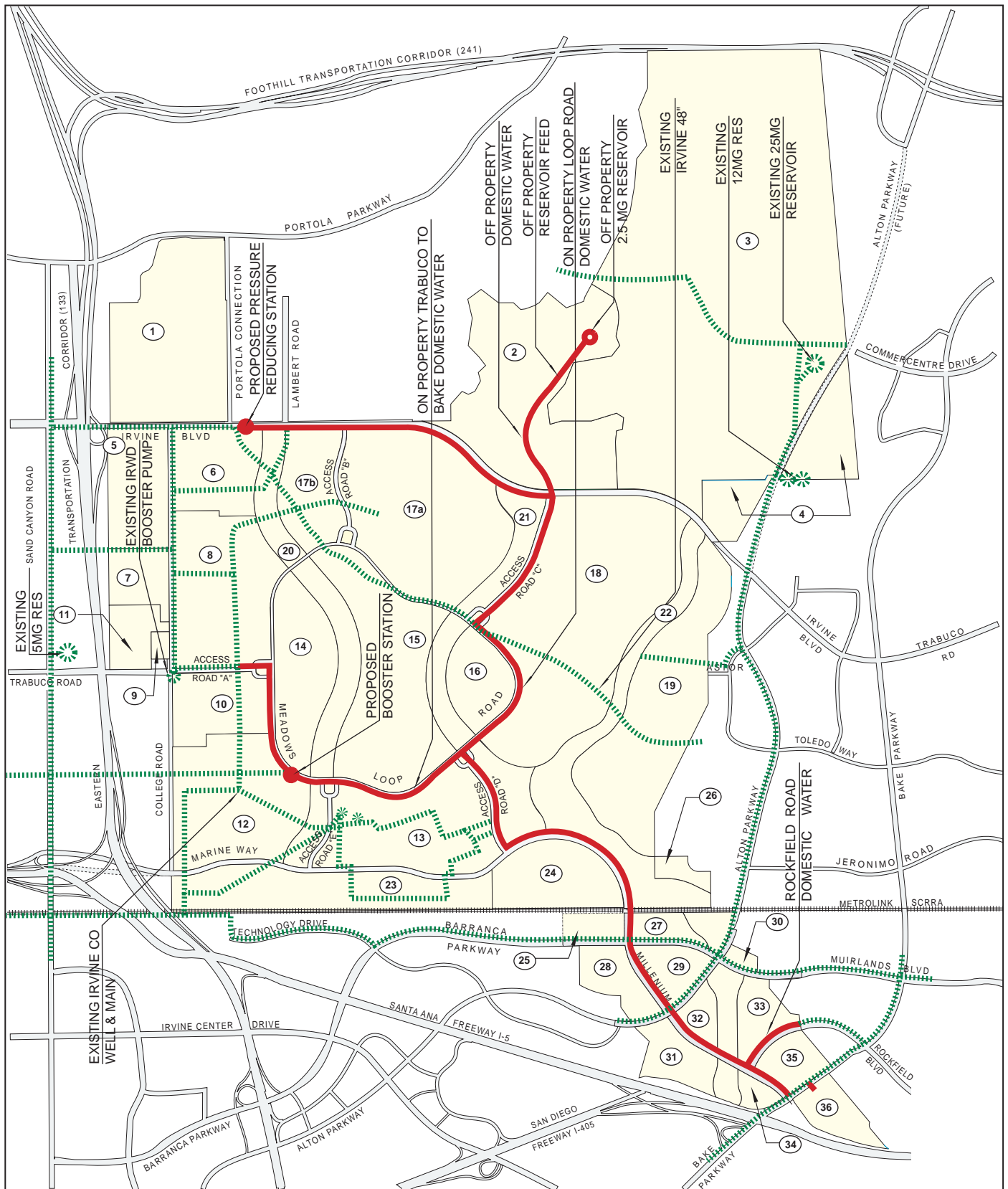
Threshold 1. Would the project require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Base Plan and Overlay Plan

Former MCAS El Toro (PAs 51 and 30)

Projected total average day buildout demand for potable water service based on the land uses proposed in the proposed project is expected to be less than the 1.75 million gallons per day (MGD) calculated for the Overlay Plan since the Base Plan proposed less intense development than the Overlay Plan. Appendix J of this Final Program EIR contains the generation assumptions that were utilized to estimate future demand for potable water service for the Overlay Plan.

The proposed backbone domestic water system for PAs 51 and 30 as proposed in the project is illustrated in Figure 5.15-1. The Base and Overlay Plans potable water system assumes that selected on-site facilities will be preserved in place and remain operational at plan build-out. The existing transmission capacity of the potable water system on-site will be expanded to serve the proposed project. The Base and Overlay Plan system expands the existing MCAS El Toro potable water system to fully integrate into the IRWD system and provide backbone service to all user areas in the project.



Source: Fuscoe Engineering, City of Irvine, 2002.

LEGEND

- Existing Domestic Water
- Proposed Domestic Water

① Parcel Number (Typical)

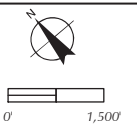


Figure 5.15-1
Potable Water System

A looped system is the conventional and preferred method for delivery of potable water supplies since multiple sources of supply make the system more reliable and flexible. The proposed looped system features multiple connections to existing potable water facilities with a network of 12-inch, 16-inch, and 24-inch diameter pipes that generally coincide with the routing of existing and proposed roadways circulating throughout the project area. Two new booster stations will need to be constructed. These stations will pump water through the proposed potable water network from Zone 3 to Zone 4. Conversely, pressure-reducing stations will return excess water to Zone 3 as necessary in response to local demand. Storage calculations using IRWD storage criteria indicated that a new Zone 4 reservoir measuring 2.5 million gallons will be necessary to balance projected potable water demand. The new reservoir is expected to be in the vicinity of the existing potable water reservoir in the "Wherry" site. Reuse of the existing Wherry reservoir is also assumed.

Additional IRWD maintenance personnel and equipment may be required to operate and maintain the proposed potable water system. The project proponent(s) of individual projects will be responsible for applicable costs associated with protection, relocation, repair, replacement, extension or expansion of water facilities.

As discussed above, the MWD has also identified that a new potable water pipeline that will be located parallel to the existing AMP is being planned within the project area. MWD will be responsible for the project-specific environmental review for that project. As project-level development occurs, the City of Irvine and MWD will review projects to ensure that they do not negatively impact the existing and planned MWD facilities and that construction of necessary water infrastructure improvements occurs prior to, or concurrent with development. Since the proposed project is a General Plan level of planning, the specific impact to the AMP cannot be determined at this time since the specific location of future development is unknown at this time. As specific projects are proposed, all existing easements will be reviewed and mitigation measures required if necessary.

The proposed project will require the expansion of potable water facilities to increase transmission capacity. The specific environmental impact of constructing new potable water facilities that will be needed to serve the proposed project cannot be determined at this program level of analysis as site specific plans for the installation of the potable water backbone system have not been prepared. However, the general impacts associated with the construction and operation of public utilities have been addressed within this EIR, which would include the construction and operation of the potable water system. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of the potable water system within the project area as this system is necessary for overall project construction. Project-level environmental review, at the time that specific development plans have been prepared will also be required.

James A. Musick Jail Facility (Portion of PA 35)

After annexation, the IRWD will continue to serve the Musick Jail facility at existing levels of service. Annexation of the jail facility will not result in the need to construct or expand potable water facilities, and no impact is anticipated.

According to EIR No. 564, in the event that the jail facility is expanded to the proposed 7,584 inmates, the existing potable water system has the capacity to service the jail. A third

connection is proposed in the jail expansion plan to provide additional reliability. No significant impacts were identified in EIR No. 564 related to potable water service. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

No additional service will be required for this parcel, therefore annexation of the project will not result in a significant environmental impact related to construction or expansion of potable water facilities.

Threshold 2: *Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

Base Plan and Overlay Plan

Former MCAS El Toro (PAs 51 and 30) ²

The proposed project's impact on water supply and the ability of the water provider to provide a water source to the project site has been assessed by the IRWD in accordance with the requirements of SB610 and SB221, both effective January 2, 2002, and the water supply assessment (WSA) contained in Appendix C complies with the most recent statutory requirements and concludes that adequate supplies are available to serve the proposed project. SB 901 requires an evaluation of the project's consistency with IRWD's most recent Urban Water Management Plan (UWMP), and an evaluation of supplies under normal, single, and multiple dry years within a 20-year projection.

On January 27, 2003 the Board of Directors of the Irvine Ranch Water District (IRWD) approved the assessment of water supply for the proposed project. The IRWD assessment of water supply is provided in Appendix C of this Final Program EIR. Based on the findings of the assessment, the IRWD has determined that a sufficient water supply is available to serve the project. The total water supplies available to IRWD during normal, single-dry and multiple-dry years within a 20-year projection will meet the project water demand of the project in addition to the demand of existing and other planned future uses, including, but not limited to, agricultural and manufacturing uses.

The status of a reliable water supply available to Southern California has recently come under question as a result of the failure to complete an agreement between MWD and the Imperial Irrigation District. This agreement would have allowed improved irrigation practices in the Imperial Valley and allowed the transfer of "saved" water from farms in the Imperial Irrigation District to other parts of Southern California. However, MWD has stated that the District will continue to meet all the region's demands for imported water in 2003, 2004, and beyond, primarily because of the investments urban Southern California has made over the past decade to conserve, diversify and stretch its portfolio of water resource options. Based on the water supply analysis prepared by IRWD, the district will have adequate water resources to meet future demand including the proposed project. IRWD has made a finding that it will have adequate water resources to meet the future water

demands of the project. No significant impact to water supply is anticipated. As a result, no significant impact resulting from the lack of availability of new water supplies is anticipated.

James A. Musick Jail Facility (Portion of PA 35)

After annexation, the IRWD will continue to serve the Musick Jail facility at existing levels of service. Annexation of the jail facility will not result in the need for additional potable water supplies, and no impact is anticipated.

According to EIR No. 564, in the event that the jail facility is expanded to the proposed 7,584 inmates, the existing potable water system has the capacity to service the jail. No significant impacts were identified in EIR No. 564 related to potable water service. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

No additional service will be required for this parcel, therefore no additional water supplies will be required. As a result, no significant impact related to the need for additional water supply will occur.

5.15.1.4 Significant Impacts

Base Plan and Overlay Plan

The specific significant environmental impact of constructing new potable water facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR, which would include the construction and operation of new potable water facilities.

5.15.1.5 Mitigation Measures

Base Plan and Overlay Plan

Mitigation Measures identified in other sections of this Final Program EIR (5.1 - 5.13) address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new potable water facilities identified in this section to serve new growth expected in the project area.

5.15.1.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

The general environmental impacts associated with the construction and operation of public utilities have been addressed within the Final Program EIR, which would include the construction and operation of new potable water facilities identified in this section. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR apply to the future construction and operation of potable water facilities within the project area. Project-level environmental review, at the time the specific plans for the potable water backbone system have been prepared, will also be required and project specific mitigation measures identified and implemented.

5.15.2 Recycled Water

5.15.2.1 Environmental Setting

IRWD is the jurisdictional agency responsible for providing plan approval and water service to the entire project area. The IRWD does not have any adopted expansion plans for the recycled water system within the project area.

Former MCAS El Toro (PAs 51 and 30)

A report, “The Orange County Great Park Program EIR Infrastructure Report” (Fusco Engineering, November, 21 2002) has been prepared for Orange County Great Park Plan. This report is provided in Appendix J of this Final Program EIR.

Recycled water is currently supplied to PAs 51 and 30 via a 12-inch IRWD Zone B pipeline that runs perpendicular to Technology Drive and connects to an eight-inch MCAS El Toro pipeline in the southwest corner of the base.

PAs 51 and 30 lies within three separate IRWD recycled water system pressure zones, Zone B East Irvine, Zone C East Irvine, and Zone D AMP East. Zone B East Irvine serves elevations from 114 to 300 feet, Zone C East Irvine serves elevations from 300 to 440, and Zone D AMP East serves elevations above 440 feet.

James A. Musick Jail Facility (Portion of PA 35)

Recycled water service to the Musick Jail is not available at this time. Historically, the Santiago Aqueduct Commission (SAC) pipeline supplied the Musick Jail facilities with untreated, imported water supply from the MWD. The untreated water was used primarily for agricultural applications. The untreated water service from the SAC pipeline has been abandoned due to pipeline damage. Repair of the pipeline damage is currently considered cost prohibitive. However, the IRWD staff has indicated that recycled water service to the Musick Jail has been considered and the IRWD Recycled Water System may be extended to

supply recycled water from the Michelson Water Reclamation Plant to the Irvine Industrial Complex and the Musick Jail in the future.

IRWD Parcel (Portion of PA 35)

The IRWD provides potable water to the parcel for use in irrigation.

City of Irvine

The IRWD provides recycled water service to the entire City of Irvine.

5.15.2.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for recycled water.

Would the project:

1. *Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

5.12.2.3 Environmental Impact

Threshold 1: Would the project require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Base Plan and Overlay Plan

Former MCAS El Toro (PAs 51 and 30)

The primary demand for recycled water within PAs 51 and 30 will be generated by the development of proposed land uses under the proposed project. The IRWD will continue to provide recycled water service, at existing levels of service, to PAs 51 and 30. IRWD has indicated in its Water Resources Master Plan that it will have sufficient capacity to meet the future recycled water requirements of Measure W Orange County Great Park Plan, which is similar to the proposed project.

On January 27, 2003 the Board of Directors of the Irvine Ranch Water District (IRWD) approved the assessment of water supply for the proposed project. The IRWD assessment of water supply is provided in Appendix C of this Final Program EIR. Based on the findings of the assessment, the IRWD has determined that a sufficient non-potable water supply is available to serve the project. The total non-potable water supplies available to IRWD during normal, single-dry and multiple-dry years within a 20-year projection will meet the project non-potable water demand of the project in addition to the demand of existing and other planned future uses, including, but not limited to, agricultural and manufacturing uses.

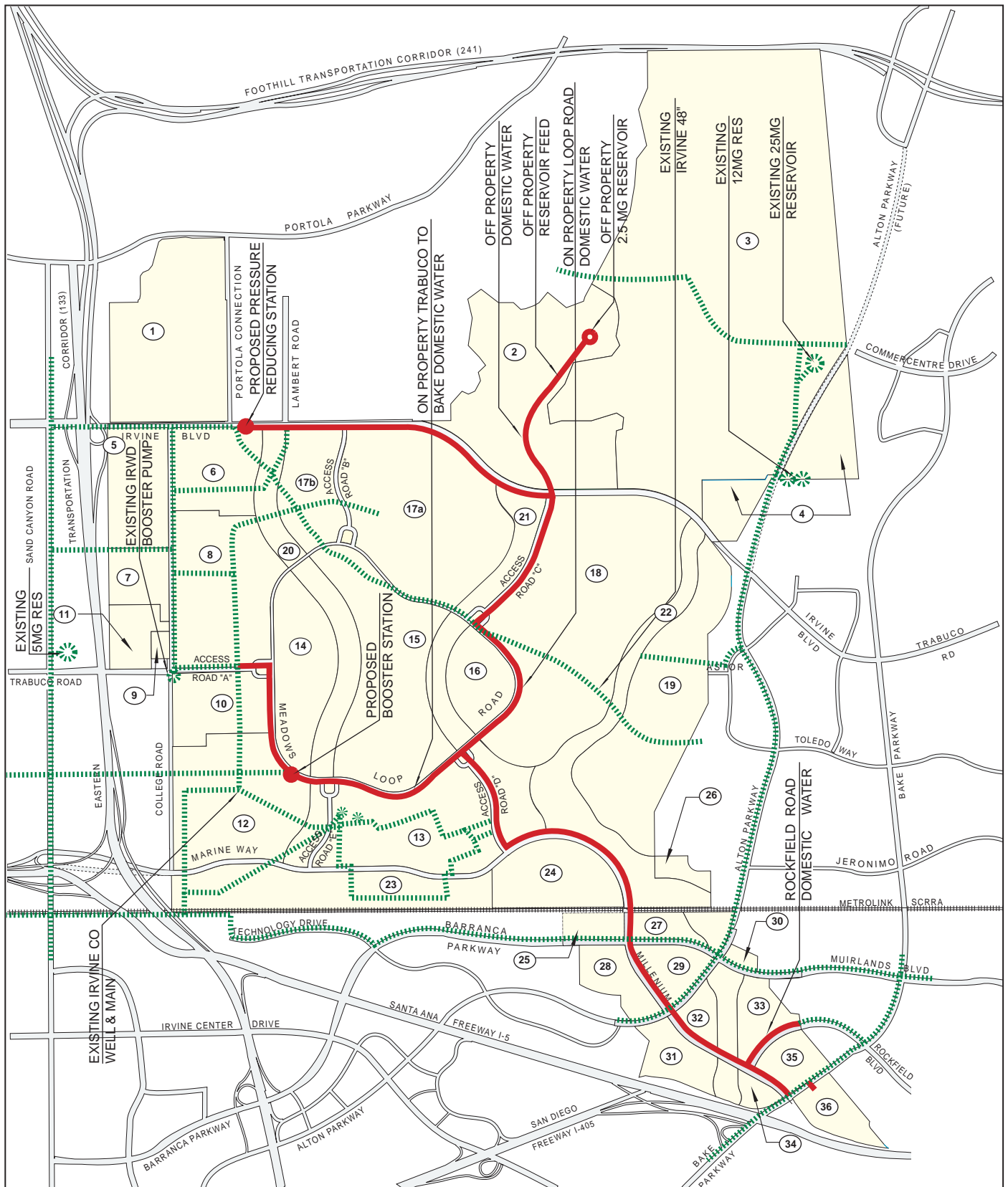
Projected average day water buildout demand for recycled water service based on the proposed land uses in PAs 51 and 30 under the Base Plan is expected to be less than the 5.6 million gallons per day (MGD) calculated for the Overlay Plan since the Base Plan is less intense. Appendix J of this Final Program EIR contains the generation assumptions that were completed to estimate the future demand for recycled water within PAs 51 and 30 under the Overlay Plan.

Implementation of the proposed project will require the expansion of recycled water transmission lines to serve the project. The recycled water system for the former MCAS El Toro property for the Base Plan and Overlay Plan is illustrated in Figure 5.15-2. The Base Plan and Overlay Plan recycled water system assumes that selected on-site facilities will be preserved in place and remain operational at buildout of the Plan. The Base Plan and Overlay Plan recycled water system design works to expand the limited existing MCAS El Toro system, fully integrating it into the IRWD system and providing backbone service to all user areas of the project site.

A looped system is the conventional and preferred method for delivery of recycled water supplies since multiple sources of supply make the system more reliable and flexible. The Base Plan and Overlay Plan recycled water system proposes an expansion of the facilities currently operated by IRWD. The proposed looped system features multiple connections to existing facilities with a network of 12-inch, 16-inch, and 24-inch diameter pipes that generally coincide with the routing of new and existing roadways circulating throughout the project. Two new booster stations will need to be constructed that will pump water through the network from Zone B through Zone C and Zone D. Conversely, pressure-reducing stations will return excess water from higher elevations to lower elevation zones as necessary in response to local demand by the project. Storage calculations using IRWD storage criteria reveal that a new Zone D reservoir measuring 2.0 million gallons will be needed to meet projected demand by the project. The reservoir is expected to be located in the vicinity of the existing potable water reservoir at the “Wherry” site. The balance of the projected demand will be met by drawing from the existing “Irvine Lake” system pipeline in the vicinity of the intersection of Irvine Boulevard and Lambert Road.

Additional IRWD maintenance personnel and equipment may be required to operate and maintain the proposed recycled water system. The project proponent(s) will be responsible for applicable costs associated with protection, relocation, repair, replacement, extension or expansion of recycled water facilities.

The specific environmental impact of constructing new recycled water facilities that will be needed to serve the proposed project cannot be determined at this program level of analysis as site specific plans for the installation of the recycled water backbone system



Source: Fuscoe Engineering, City of Irvine, 2002.

LEGEND

Existing Domestic Water

Proposed Domestic Water

Parcel Number (Typical)



0 1,500

Figure 5.15-2
Recycled Water System PAs 51 and 30

have not been prepared. However, the general impacts associated with the construction and operation of public utilities has been addressed within this Final Program EIR, which would include the construction and operation of the recycled water system. Mitigation measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of the recycled water system within the project area. Project-level environmental review, at the time that specific development plans have been prepared will also be required.

James A. Musick Jail Facility (Portion of PA 35)

IRWD will be the provider of recycled water to the jail in the event that a new recycled water connection is established. Annexation of the jail facility will not result in the need for the construction or expansion of recycled water facilities, and no impact is anticipated.

Repair of the SAC pipeline connection to provide untreated water service is not included in the proposed jail expansion plan due to the cost of repairing the pipeline connection. According to the IRWD, the property may be served with treated recycled water some time in the future. Currently recycled water is conveyed by the IRWD dual distribution system originating from the Michelson Water Reclamation Plant. IRWD is contemplating expanding this system into the Irvine Industrial Complex East area of the district in the future, which would increase the fiscal feasibility of providing recycled water to the jail facility. Similarly, with the proposed development of the PAs 51 and 30, the cost to install a new recycled water connection may decrease to a level that will allow new service to reach the jail facility.

IRWD Parcel (Portion of PA 35)

The IRWD parcel will not require additional recycled water service as a result of its annexation, therefore no significant impact related to the construction and or extension of recycled water service will occur.

5.15.2.4 Significant Impacts

Base Plan and Overlay Plan

The specific significant environmental impact of constructing new recycled water facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR, which would include the construction and operation of new recycled water facilities.

5.15.2.5 Mitigation Measures

Base Plan and Overlay Plan

Mitigation Measures identified in other sections of this Final Program EIR (5.1 - 5.13) address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new recycled water facilities identified in this section to serve new growth expected in the project area.

5.15.2.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

The general environmental impacts associated with the construction and operation of public facilities have been addressed within the Final Program EIR, which would include the construction and operation of new recycled water facilities identified in this section. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR apply to the future construction and operation of recycled water facilities within the project area. Project-level environmental review, at the time the specific plans for the recycled water backbone system have been prepared, will also be required and project specific mitigation measures identified and implemented.

5.15.3 SEWER

5.15.3.1 Environmental Setting

The Irvine Ranch Water District (IRWD) is the jurisdictional agency responsible for providing plan approval and sewer service to the entire annexation area. The IRWD does not have any adopted expansion plans at this time for sewer services serving the proposed annexation area.

Former MCAS El Toro (PAs 51 and 30)

A report, "The Orange County Great Park Program EIR Infrastructure Report" (Fusco Engineering, November, 21 2002) has been prepared for Orange County Great Park Plan. This report is provided in Appendix J of this Final Program EIR.

The primary sewer collection system that serves PAs 51 and 30 is a two-branched system with flow, mainly by gravity, from the northeast to the southwest. One lift station with two pumps is located in the southwest portion of PA 51 in Building 375. The existing sewer infrastructure system on PAs 51 and 30 consists of a series of polyvinyl chloride (PVC) and vitrified clay pipes (VCP) ranging in size from 6-inches to 15-inches in diameter.

Sewer discharge exits PAs 51 and 30 via two 12-inch lines at the southwest boundary of the base into the IRWD sewer system. The two 12-inch lines cross under the SCRRA railroad

tracks and connect with IRWD manholes southwest of the tracks. The flows then combine and exit via an 18-inch VCP pipe. The design capacity of this 18-inch pipe is about 1,200 gallons per minute (GPM). The flow continues through the IRWD Alton-Bake Parkway Trunk Sewer System to the San Diego Creek Interceptor on the north side of the San Diego (I-405) Freeway. The sewage is treated at the Michelson Wastewater Reclamation Plant.

James A. Musick Jail (Portion of PA 35)

The existing sewer system that serves the Musick Jail consists of eight- and ten-inch pipelines that connect to the external IRWD sewer system through a single 10-inch trunk sewer connection located at the southern edge of the jail property. The wastewater is treated at the Michelson Wastewater Reclamation Plant³.

IRWD Parcel (Portion of PA 35)

The IRWD parcel contains a domestic water storage and pumping facility, and does not generate sewage.

City of Irvine

The IRWD provides sewer service to the entire City of Irvine.

5.15.3.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for sewer services.

Would the project:

1. *Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*
2. *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*
3. *Exceed wastewater treatment requirements of the applicable Regional Water Quality Board?*

5.15.3.3 Environmental Impact

Threshold 1: *Would the project require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Base Plan and Overlay Plan

Former MCAS El Toro (PAs 51 and 30)

The primary demand for sewer within PAs 51 and 30 will be generated by the development of proposed land uses under the proposed project. The IRWD will continue to provide sewer service, at existing levels of service, to PAs 51 and 30. IRWD has indicated in the past that it will have sufficient capacity to meet the future sewer requirements of PAs 51 and 30 under more intense development plans (the Millennium Plan) than proposed development plan; therefore, IRWD would have adequate capacity to service the less intense Base Plan and Overlay Plan. However, additional wastewater treatment capacity may need to be purchased by the project proponents as specific development proposals come forward in PAs 51 and 30.

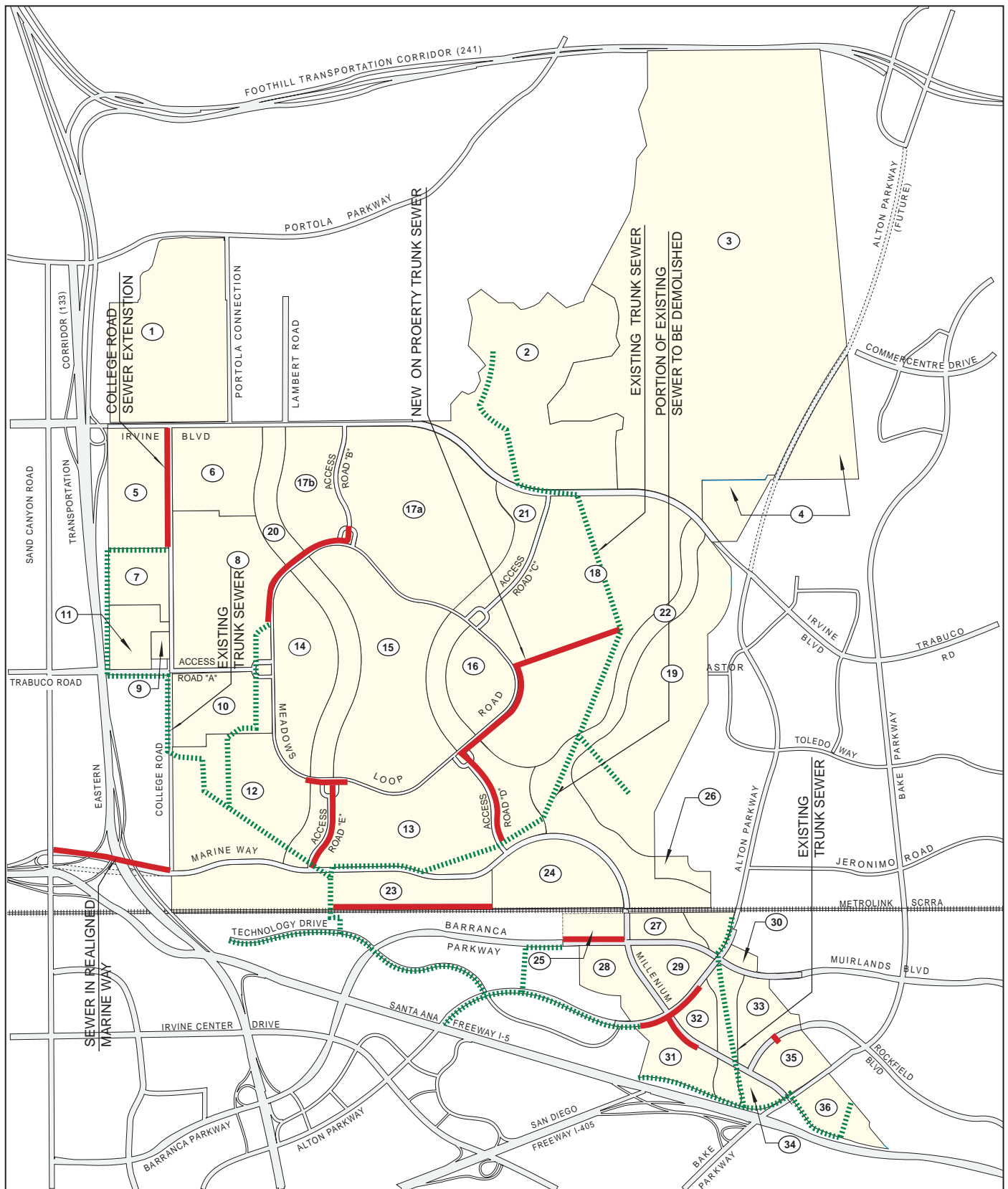
Projected buildout demand for sewer services based on the land uses proposed in the project is expected to be an average daily flow of 0.89 million gallons per day (MGD) calculated for the Overlay Plan and less than 0.89 MGD for the Base Plan, since the Base Plan is less intense. Appendix J of this Final Program EIR contains the generation assumptions that were completed to estimate the future demand for sewer within PAs 51 and 30 for the Overlay Plan.

The proposed project will require an increase of sewer transmission capacity in order to serve the project. The backbone sewer system for PAs 51 and 30 as proposed in the project is illustrated in Figure 5.15-3.

The proposed sewer system will preserve selected, existing on-site facilities in place and remain operational at plan build-out. The proposed Base Plan sewer system would expand rather than replace the existing MCAS El Toro system, fully integrating it into the IRWD system and providing backbone service to all user areas of the project. The proposed system would be transferred to IRWD control for operation and maintenance.

The new system includes extension of existing sewer lines with a series of eight-inch, ten-inch, and 12-inch diameter lines beneath the Metrolink Railroad. From there, separate flows will combine and continue to the IRWD Alton-Bake Trunk Sewer than to the San Diego Creek Interceptor Sewer on the north side of the San Diego Freeway in the vicinity of the I-5/I-405 interchange. Sewage effluent will be treated at the Michelson Wastewater Reclamation Plant.

Additional IRWD maintenance personnel and equipment may be required to operate and maintain the proposed sewer system. The project proponent(s) will be responsible for applicable costs associated with protection, relocation, repair, replacement, extension or expansion of wastewater facilities.



Source: Fuscoe Engineering, City of Irvine, 2002.

LEGEND

- Existing Sanitary Sewer
- Proposed Sanitary Sewer

① Parcel Number (Typical)

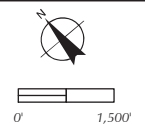


Figure 5.15-3
Sanitary Sewer System PAs 51 and 30

The specific environmental impact of constructing new sewer facilities that will be needed to serve the proposed project cannot be determined at this program level of analysis as site specific plans for the installation of the sewer backbone system have not been prepared. However, the general impacts associated with the construction and operation of public utilities has been addressed within this Final Program EIR, which would include the construction and operation of the sewer system. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of the sewer system within the project area. Project-level environmental review, at the time that specific development plans have been prepared will also be required.

James A. Musick Jail Facility (Portion of PA 35)

After annexation, IRWD will continue to serve the Musick Jail facility at its existing level of service. Annexation of the jail facility will not result in the need for the construction or expansion of sewer facilities, and no impact is anticipated.

Should the jail be expanded in the future, an average demand of 0.99 cfs, with a peak hour demand of 1.89 cfs, is expected³. The existing sewer collection system will support 3,840 inmates. Any expansion of the jail facilities to provide space for more than 3,840 inmates will require system improvements to expand the capacity of the sewer collection system serving the jail. No significant impacts were identified in EIR No. 564 related to sewer service. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

No sewer service is anticipated for this parcel since it does not generate sewage. As a result, no impact related to the construction or expansion of sewer facilities will occur.

Threshold 2: ***Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?***

Base Plan and Overlay Plan

Former MCAS El Toro (PAs 51 and 30)

The IRWD will continue to provide sewer service, at existing levels of service, to PAs 51 and 30. IRWD has indicated in the past that it will have sufficient capacity to meet the future sewer requirements of PAs 51 and 30 under more intense development plans (the Millennium Plan) than proposed development plan; therefore, IRWD would have adequate capacity to service the less intense Base Plan and Overlay Plan. However, additional wastewater treatment capacity may need to be purchased by the project proponents as specific development proposals come forward in PAs 51 and 30. Since the IRWD will be able to adequately provide sewer service to PAs 51 and 30, no significant impact related to treatment capacity is anticipated.

James A. Musick Jail Facility (Portion of PA 35)

The IRWD will continue to provide sewer service, at existing levels of service, to the Musick Jail facility. Annexation of the jail facility will not result in the exceedance of IRWD's capacity for wastewater treatment and no significant impact is anticipated. IRWD has indicated that it will be able to meet the future sewer requirements of the proposed jail expansion plan, but the improvements to the system, as described above, may need to be completed by the County of Orange, as well as purchasing additional wastewater treatment capacity. No significant impacts were identified in EIR No. 564 related to sewer service. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

As the IRWD parcel does not create a demand for sewer service and no future development is proposed for the parcel, annexation of the parcel will not result in a significant impact to the IRWD capacity for wastewater treatment.

Threshold 3: *Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Board?*

Base Plan and Overlay Plan

As discussed above, the proposed project will not result in the exceedance of the IRWD capacity to treat wastewater. IRWD is regulated by law to treat wastewater consistent with the requirements and standards of the Regional Water Quality Board. Since IRWD is required to treat wastewater at a standard consistent with the Regional Water Quality Board regulations, and the proposed project will not result in the exceedance IRWD's treatment capacity which would impede IRWD's ability to treat wastewater at a level consistent with the Regional Water Quality Board standards, no significant impact related to exceeding wastewater treatment standards is anticipated.

5.15.3.4 Significant Impacts

Base Plan and Overlay Plan

The specific significant environmental impact of constructing new wastewater facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR, which would include the construction and operation of new wastewater facilities.

5.15.3.5 Mitigation Measures

Base Plan and Overlay Plan

Mitigation Measures identified in other sections of this Final Program EIR (5.1 - 5.13) address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new wastewater facilities identified in this section to serve new growth expected in the project area.

5.15.3.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

The general environmental impacts associated with the construction and operation of public facilities have been addressed within the Final Program EIR, which include the construction and operation of new sewer facilities identified in this section. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR apply to the future construction and operation of the sewer system within the project area. Project-level environmental review, at the time specific development plans for the sewer backbone system have been prepared, will also be required and project specific mitigation measures identified and implemented.

5.15.4 SOLID WASTE

5.15.4.1 Environmental Setting

Former MCAS El Toro (PAs 51 and 30)

Solid waste is collected by private waste haulers in unincorporated areas of the County. Solid waste generated at the former MCAS El Toro property is collected by Waste Management Inc., a private solid waste hauler. Waste Management Inc. is also one of the private hauling firms permitted to work within the City of Irvine.

Solid waste collected at the former MCAS El Toro property is currently disposed of at the Frank R. Bowerman Landfill. The Bowerman Landfill is located at 11002 Bee Canyon Access Road. The County of Orange Integrated Waste Management Department (IWMD) owns and operates the facility.

James A. Musick Jail

The James A. Musick Jail currently disposes of its solid waste at the Frank R. Bowerman Landfill. Solid waste is collected by Waste Management, Inc., a private solid waste hauler.

IRWD Parcel

Since the parcel generates a minimal amount of solid waste, the IRWD collects the solid waste from the IRWD parcel. The solid waste is then disposed of at an IWMD facility.

City of Irvine

The City of Irvine's residential and village commercial communities' solid waste and recyclables are collected by Waste Management of Orange County, a private waste hauler with an exclusive contract with the City.

Solid waste produced by non-village commercial and industrial businesses is collected by one of the Irvine permitted solid waste haulers. The individual property owners select which permitted hauler the property owner will contract.

The City also offers to its residents, through Waste Management of Orange County, a curbside recycling program for glass bottles and jars, household paper products, aluminum and other metal cans, and greenwaste. All other permitted waste haulers are required to offer recycling services to their commercial customers. Construction and demolition recycling is a standard condition placed on development projects in Irvine.

Integrated Waste Management Department (IWMD)

The County of Orange IWMD owns and operates three landfills to serve the solid waste disposal needs of the County. The City of Irvine disposes of the majority of its solid wastes at the Frank R. Bowerman Landfill. The City of Irvine has a contract with IWMD to commit all of its wastes to the County landfill system (not a particular facility) until 2007. The IWMD also accepts wastes from outside Orange County. When the daily tonnage limit of a landfill is exceeded, waste imported to that facility is reduced accordingly. Thus, adequate capacity is expected to be available to serve future development in the County.

The California Integrated Waste Management Board requires that all counties have an approved Countywide Integrated Waste Management Plan (CIWMP). The Orange County IWMD's CIWMP was approved in 1996 and shows that sufficient solid waste disposal capacity is available in the County for the next 30 years, based on population projections for the area. Under AB 939, each city and county is also required to reduce 50 percent of wastes going to landfills, based on 1990 levels. Waste haulers are working with various jurisdictions on recycling programs and other measures to comply with this mandate.

A County operated Regional Collection Center for household hazardous materials is located near the intersection of Sand Canyon Avenue and Laguna Canyon Road. This center serves Irvine and the surrounding area. Sunset Environmental Industries, located near the intersection of Harvard Avenue and Warner Avenue, provides a public disposal site for

bulky items and purchases recyclables. There are several certified used oil recycling centers located in Irvine.

5.15.4.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for solid waste.

Would the project:

1. *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*
2. *Comply with federal, state, and local statutes and regulations related to solid waste?*

5.15.4.3 Environmental Impact

As defined by the thresholds for determining significance, impacts related to the disposal of solid waste are described below:

Threshold 1: Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Base Plan and Overlay Plan

Former MCAS El Toro (PAs 51 and 30)

Demolition activities, including the removal of existing runways and buildings, at PA 51 will generate debris materials that will need to be disposed at local landfills. Additionally, green waste will be produced as a result of on-going park and landscaping maintenance. As indicated earlier, the City requires construction and demolition debris recycling for new development projects in Irvine. This will allow the reuse of building materials and reduce waste volume requiring disposal. Also, California's Integrated Waste Management Act of 1989 (AB939) mandates that all cities in California divert from the landfill a minimum of 50 percent of the solid waste generated within their jurisdiction compared to base year levels. In addition, as part of AB939 compliance, a new state law (SB1374) requires that all cities implement ordinances or other measures that specifically require the diversion of 75 percent of all construction and demolition waste from landfills. Construction and demolition waste typically includes, but is not limited to, asphalt, brick, concrete, drywall, flooring, glass, gravel, metal, sand, soil, wood, and organics (greenwaste) and other landscaping debris. Therefore, to assure compliance with these statutes, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste from the demolition, dismantling, or other deconstruction of runways, buildings, structures, and other property at the former El Toro Marine Corps Air Station (MCAS) and the maintenance of parks and landscaping. This is considered a potentially significant impact.

Under the proposed project, PAs 51 and 30 will be served by a private solid waste hauler permitted by the City of Irvine. The level of service provided by the Irvine permitted hauler will be approximately the same as existing levels of service. For residential and City controlled land, Waste Management of Orange County will be responsible for the collection of solid wastes and recyclables. Those non-residential areas will be responsible for contracting with an Irvine permitted private waste hauler. Any County, State, or federally controlled lands within the area would be responsible for contracting with private waste haulers to collect their trash, and may be exempt from using a Irvine approved solid waste hauler.

Solid waste will continue to be disposed of in an IWMD facility. The IWMD has not adopted generation rates for solid waste. As shown in Table 5.15-1, using other generation rates, it is estimated that 12 tons per day of solid waste are anticipated to be generated within PAs 51 and 30 under the Base Plan. Table 5.15-2 shows that an estimated that 35 tons per day of solid waste are anticipated to be generated within PAs 51 and 30 under the Overlay Plan. Anticipated increases in solid waste generation resulting from the implementation of the proposed Base or Overlay Plans are not anticipated to exceed the capacity of IWMD facilities since the current capacity exceeds 30 years. Private solid waste hauling services will expand to meet the needs of the projected growth and development allowed under the proposed project.

**Table 5.15-1
Base Plan
Future Solid Waste Generation
Buildout Year 2025**

Land Use	Generation Factor (lbs/day/DU or KSF)	Max. Anticipated Development	Estimated Daily Generation (lbs/day)
Single Family Residential	10	60 DU	600
Multi-family Residential	7	165 DU	1,155
Non-residential	6	3,857 KSF	23,142
Total			24,897

Source: Modified by CBA from Orange County Sanitation Department and National Solid Waste Management Association.

DU= dwelling units, KSF= thousand square feet, lbs=pounds

**Table 5.15-2
Overlay Plan
Future Solid Waste Generation
Buildout Year 2025**

Land Use	Generation Factor (lbs/day/DU or KSF)	Max. Anticipated Development	Estimated Daily Generation (lbs/day)
Single Family Residential	10	1,960 DU	19,600
Multi-family Residential	7	1,665 DU	11,655
Non-residential	6	6,586 KSF	39,516
Total			70,771

Source: Modified by CBA from Orange County Sanitation Department and National Solid Waste Management Association.

DU= dwelling units, KSF= thousand square feet, lbs=pounds

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail will continue to be served by a private solid waste hauler at existing levels of service. It is possible that the jail will be exempt from the requirement of using an Irvine permitted hauler since it is a County facility. In the event that the jail is not exempt, the jail will be required to use an Irvine permitted hauler for the collection of solid waste. Solid waste collected from the jail will continue to be disposed of in an IWMD facility. Annexation of the jail facility will not result in the exceedance of IWMD's capacity for solid waste and no significant impact is anticipated.

Anticipated increases in solid waste generation resulting from County expansion plans are not anticipated to exceed the capacity of the private haulers and IWMD facilities. No significant impacts were identified in EIR No. 564 related to solid waste. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

Since no additional development is anticipated for the IRWD parcel, IRWD will continue to collect the small amount of solid waste generated on the IRWD parcel. This solid waste will continue to be disposed of at an IWMD facility. This small amount of solid waste generated at the IRWD parcel will not exceed the disposal capacity the IWMD. No impact related to exceeding the current landfill capacity will occur with the annexation of the IRWD parcel.

Threshold 2: Comply with federal, state, and local statutes and regulations related to solid waste?

Base Plan and Overlay Plan

Former MCAS El Toro (PAs 51 and 30)

Solid waste generated in PAs 51 and 30 by the Base or Overlay Plans will continue to be disposed of by permitted solid waste haulers to IWMD regulated sites that have adequate capacity and comply with federal, state and local statutes and regulations related to solid waste. In addition, the City of Irvine requires solid waste carriers to offer recycling disposal of solid waste generated in PAs 51 and 30 to help reduce the amount of solid waste disposed of in local landfills. The impact is potentially significant and mitigation is required.

James A. Musick Jail (Portion of PA 35)

Solid waste generated by the James A. Musick Jail will continue to be disposed of by a solid waste hauler to IWMD regulated sites that have adequate capacity and comply with federal, state and local statutes and regulations related to solid waste. As a result, no significant impact is anticipated.

IRWD Parcel (Portion of PA 35)

The small amount of solid waste generated by the IRWD parcel will continue to be disposed of at a IWMMD regulated site that has adequate capacity and comply with federal, state and local statutes and regulations related to solid waste. As a result, no significant impact is anticipated.

5.15.4.4 Significant Impacts

Base Plan and Overlay Plan

- SW1.** The project site may contain solid waste unsuitable for recycling or reuse. Also, the project will generate solid waste as result of demolition, operation of proposed land uses, and landscape maintenance.

5.15.4.5 Mitigation Measures

Base Plan and Overlay Plan

- SW1.** It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other deconstruction of the aged structures and property, including but not limited to buildings and runways, at the former MCAS El Toro is contaminated with lead based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the former MCAS El Toro site by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.

If it is determined by the technical evaluation that the material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as “waste-to-energy” (WTE) plants.

- SW2.** For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant must submit a written plan to the City and implement such plan to ensure that 75 percent of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.

- SW3.** For that solid waste which the technical study deems to be suitable for recycling the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75 percent of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180. ("Recycling" does not include transformation, as defined in Public Resources Code Section 40201.)
- SW4.** To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by "weight ticket" receipts from state-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.
- SW5.** For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by the landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50 percent of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.

To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.

5.15.4.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Implementation of the proposed project will not result in a significant impact related to solid waste.

5.15.5 ENERGY AND COMMUNICATIONS

5.15.5.1 Environmental Setting

Electrical Facilities and Service

Former MCAS El Toro (PAs 51 and 30)

A report, "The Orange County Great Park Program EIR Infrastructure Report" (Fuscoe Engineering, November, 21 2002) has been prepared for Orange County Great Park Plan

was prepared to design the backbone infrastructure system. This report is provided in Appendix J of this Final Program EIR.

Southern California Edison (SCE) presently serves the former MCAS El Toro property via two primary substation sites. Historically the former MCAS El Toro has received power through the California ISO-controlled 220/66 kV Santiago Substation which is interconnected to the Irvine and Limestone Substations. The Santiago Substation, is south of Irvine Center Drive on Sand Canyon Avenue. The Irvine Substation is located next to the entry gate of MCAS El Toro, at the east end of Trabuco Road. The Limestone Substation is located near Peachwood Avenue and Trabuco Road.

Since MCAS El Toro's closure in July, 1999, the majority of facilities have been closed and or idled. The DON continues to provide caretaker responsibilities for the existing buildings, structures, ancillary facilities, runways, etc. Some existing facilities are leased for various interim land uses, such as the golf course, equestrian facilities, California State University - Fullerton Extension Campus, agricultural operations, and recreational vehicle storage.

These interim land uses reflect only a limited and temporary use of the former MCAS El Toro site. As the leases for the interim activities end, the DON may renew or not renew the respective leases. With limited current usage, interim electricity consumption can be considered minimal.

The James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail facility is located within the service area of SCE, which provides service by utilizing existing 12kV underground facilities. These electrical facilities are located on the northerly and westerly boundaries of the jail facility¹.

IRWD Parcel (portion of PA 35)

The IRWD parcel is located within the SCE service area.

Natural Gas Facilities and Service

The Former MCAS El Toro Property (PAs 51 and 30)

A report, "The Orange County Great Park Program EIR Infrastructure Report" (Fuscoe Engineering, November, 21 2002) has been prepared for Orange County Great Park Plan was prepared to design the backbone infrastructure system. This report is provided in Appendix J of this Final Program EIR.

The Southern California Gas Company presently serves PAs 51 and 30. The former MCAS El Toro property is adjacent to a large diameter pipe. Along a portion of Irvine Boulevard, six-inch and eight-inch lines exist. The line in Irvine Boulevard and the adjacent parcel extends to the east of the former base and connects into existing two-inch, three-inch, and four-inch systems. The Gas Company has two-inch, four-inch, and six-inch lines located within the existing roads within the Irvine Spectrum area to the south.

The Southern California Gas Company has an option to utilize the existing 30-inch high pressure main that runs parallel to the railroad tracks between PA 51 and PA 30. This 30-inch line is rated at approximately 465 pounds per square inch (p.s.i.) and serves a portion of San Diego County.

James A. Musick Jail Facility (Portion of PA 35)

The James A. Musick Jail facility is located within The Southern California Gas Company service area.

IRWD Parcel (Portion of PA 35)

The IRWD parcel is within The Southern California Gas Company service area.

Communication Facilities and Services

Former MCAS El Toro (PAs 51 and 30)

A report, "The Orange County Great Park Program EIR Infrastructure Report" (Fusco Engineering, November, 21 2002) has been prepared for Orange County Great Park Plan was prepared to design the backbone infrastructure system. This report is provided in Appendix J of this Final Program EIR.

Pacific Bell is the present provider to PAs 51 and 30. Pacific Bell has service offices on Irvine Center Drive, south of Yale Avenue (Irvine office) and on Irvine Center Drive, west of Bake Parkway (Spectrum office). An exchange boundary runs the extent of the railroad tracks and separates the serving territory of these two offices. The Spectrum office would serve communications needs south of the tracks (the majority of PA 30), while the Irvine office would serve the majority of the former base (PA 51 and the remainder of PA 30). Fiber optic and copper lines are contained throughout the areas surrounding PAs 51 and 30.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail is located within the service area of Pacific Bell, which provides service to the facility³.

IRWD Parcel

The IRWD parcel is within the Pacific Bell service area, but does not require service since the parcel does not contain any residential or business uses.

5.15.5.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for energy.

Would the project:

1. *Result in substantial adverse physical impacts associated with the provision of new or physically altered energy and communications transmission facilities, need for new or physically altered energy and communications transmission facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service?*
2. *Result in the use of substantial amounts of fuel and/or energy?*

5.15.5.3 Environmental Impact

As defined by the thresholds for determining significance, impacts related to the provision of energy are described below:

Threshold 1: *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered energy and communication transmission facilities, need for new or physically altered energy and communications transmission facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service?*

Base Plan and Overlay Plan

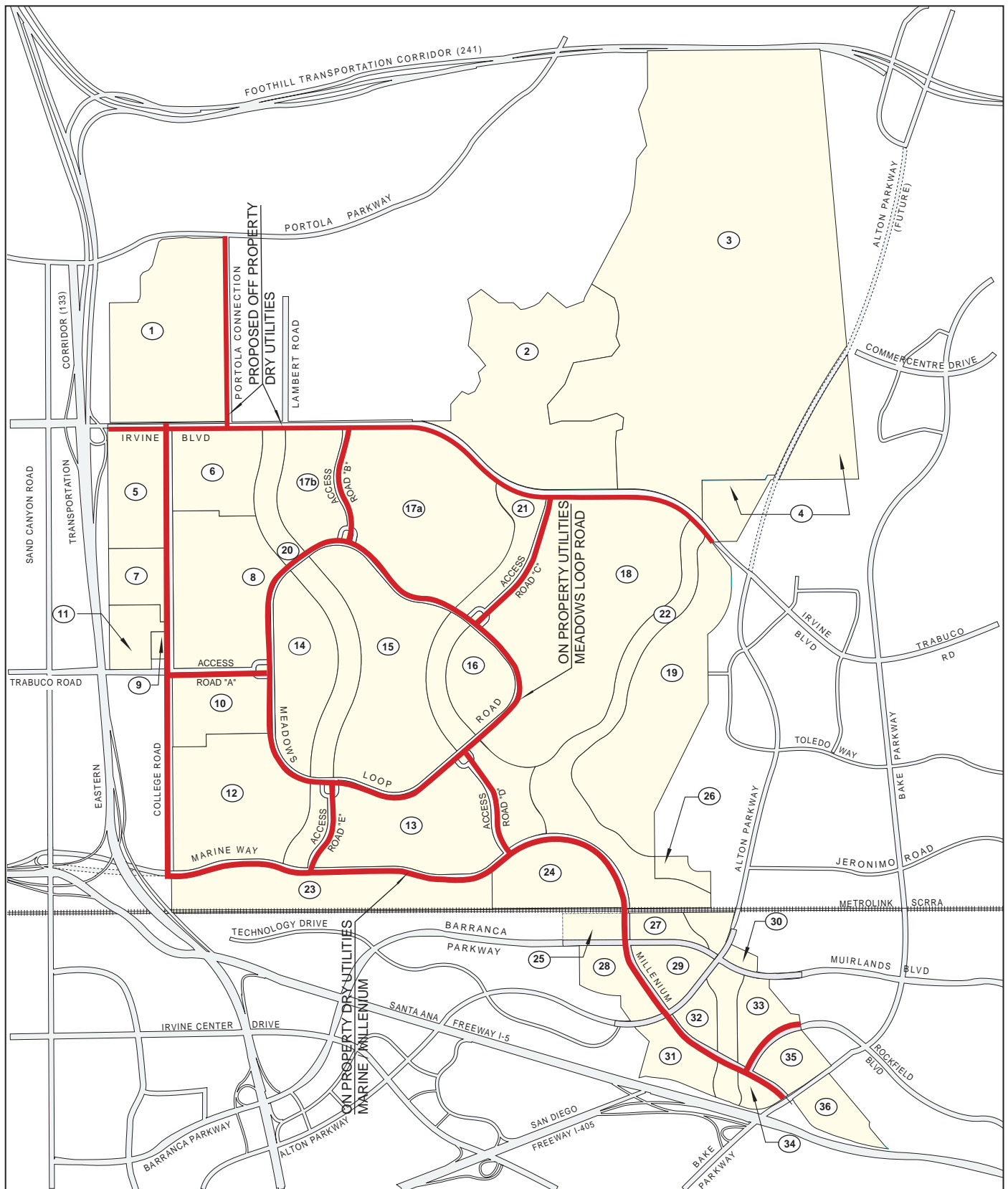
Former MCAS El Toro (PAs 51 and 30)

Proposed Electrical, Gas, and Communication System

The primary demand for electricity, gas, and communications within PAs 51 and 30 will be generated by the development of proposed land uses under the proposed project. Implementation of the proposed project will require the expansion of existing electrical, gas, and communications systems to serve the project. The proposed backbone electrical, gas, and communications system for PAs 51 and 30 is illustrated in Figure 5.15-4.

The Base Plan and Overlay Plan propose to replace the existing electrical, gas, and communication systems in their entirety. The new system will comply with modern design methods, performance standards and specifications that will make the Base Plan system compatible with its surroundings. The new system will be installed to generally coincide with the routing of new and existing roadways circulating throughout the project. Electrical lines will be required to be undergrounded pursuant to City standards.

The specific environmental impact of constructing new energy and communication transmission facilities that will be needed to serve the proposed project cannot be determined at this program level of analysis as site specific plans for the installation of the energy and communication transmission backbone system have not been prepared.



Source: Fuscoe Engineering, City of Irvine, 2002.

LEGEND

— Proposed Dry Utilities,
Power Gas and Communications

① Parcel Number (Typical)

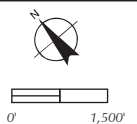


Figure 5.15-4
Dry Utilities

However, the general impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR, which would include the construction and operation of the transmission system. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR would apply to the future construction and operation of the energy and communication transmission system within the project area. Project-level environmental review, at the time that specific development plans have been prepared will also be required.

James A. Musick Jail Facility (Portion of PA 35)

After annexation, SCE, The Southern California Gas Company, and Pacific Bell will continue to serve the Musick Jail facility at existing levels of service. Annexation of the jail facility will not result in the need for the construction or expansion of additional energy or communication transmission facilities, and no impact is anticipated.

According to EIR No. 564, in the event that the jail facility is expanded to the proposed 7,584 inmates, SCE, The Southern California Gas Company, and Pacific Bell have the capacity to service the jail. No significant impacts were identified in EIR No. 564 related to energy or communication service. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

As there is no expansion plan for the IRWD parcel that would generate a demand for energy or communication service requiring the construction or expansion of energy or communication transmission facilities, annexation of the IRWD parcel will not result in a need to construct or expand energy or communication facilities. As a result, no impact related to the construction and expansion of energy and communication transmission facilities will result from the annexation of the IRWD parcel.

Threshold 2: Result in the use of substantial amounts of fuel and/or energy?

Base Plan

The Former MCAS El Toro (PAs 51 and 30)

Electrical Usage

Using the planned land uses, the Proposed Project would consume 59.1 million kWh per year (Table 5.15-3). Rather than subtract existing electricity consumption from the Base Plan's electricity consumption to determine incremental or net electricity consumption, it has been assumed that existing electricity consumption to be zero. As such, all of the proposed project's electricity consumption is considered to be incremental. Therefore, total incremental electricity consumption would be approximately 59.1 million kWh (Table 5.15-3).

The proposed project would have a peak load of 14,771 kW (Table 5.15-3). Sufficient available capacity exists at the Irvine and Limestone Substations to serve the proposed project's load estimates. However, the existing overhead 4 kV distribution system currently serving the former MCAS El Toro would be replaced with an underground 12 kV distribution system.

To place the Base Plan's electricity consumption and demand in perspective, the total net energy load in the SCE transmission service area in 2000 was 98,269 million kWh and SCE area peak demand was 18,724,000 kW (California Energy Commission (CEC), California Energy Demand 2002-2012 Forecast, Table B-3 and Table D-3). The CEC is

**Table 5.15-3
Proposed Project Electricity Demand and Consumption for Base Plan**

Land Use Type	Acres	Dwelling Units	Square Feet	Peak Load (kW)	Energy Consumption (Million kWh/Year)
Residential	15	225	-	422	1.4
Education	293	-	1,285,000	6,023	20.5
Cultural/Institutional ^(a)	578	-	1,994,500	6,141	28.7
Transportation Facilities	154	-	176,000	650	2.3
Research and Development	50	-	300,000	1,079	4.6
Retail and Office	-	-	-	-	-
Auto Center	34	-	50,000	244	0.7
Agriculture	438	-	-	-	-
Open & Recreational Space	2,946	-	51,000	212	0.9
Roadways	185	-	-	-	-
Total	4,693	225	3,856,500	14,771	59.1

(a) Cultural/Institutional residential included in Residential
Source: ASTRUM Utility Services, 2003.

also predicting that net energy for load will grow annually at 2 percent and that the area peak demand will grow at 2.4 percent (CEC, California Energy Demand 2002-2012 Forecast, Table B-3 and D-3). For the year 2012, the CEC forecasts net energy for load and area peak demand in SCE's service area to be 125,224 million kWh and 24,960,000 kW respectively (CEC, California Energy Demand 2002-2012 Forecast, Table B-3 and D-3). The proposed project's consumption of electricity is 0.05 percent and peak demand is 0.06 percent of CEC's forecast for SCE in 2012.

SCE has indicated its ability to serve the projected project, in accordance with all applicable tariff schedules which are the effective rates and rules of the Southern California Edison Company on file with and approved by the Public Utilities Commission, State of California, and subject to the receipt of such permits or authorization from public agencies may be

required for such installation. Project-related electricity demand will not significantly impact SCE's current level of service.

California Assembly Bill 1890 (AB 1890) fundamentally changed the structure of the electric industry to increase the reliance on competitive market forces. Initially, the transition appeared to be consistent with its intended purpose. However, partial deregulation of electric utilities ultimately led to what many would term as an "energy crisis" in 2000.

The "energy crisis" resulted in escalating electricity rates, limited rotating blackouts, active State participation in power purchases, severe financial distress for investor-owned utilities, and Federal Government intervention. The events leading up to the "energy crisis" were economic rather than increasing demand for electricity or the capacity to generate and deliver power.

The economic factors that helped precipitate the "energy crisis" were in part due to the requirements of AB 1890. This law required that California's three largest investor-owned utilities ("IOUs") to: (i) divest much of their generation facilities; (ii) sell the electric output from their remaining facilities to the California Power Exchange ("PX"); (iii) buy electricity exclusively from the PX; (iv) limited their ability to enter into long term power supply contracts; and (v) freeze electric rates to retail customers. During 2000, the PX's cost of wholesale electricity costs more than tripled from \$7.4 billion in 1999 to \$27.1 billion (CEC, 2002-2012 Electricity Outlook Report, page 2). Unable to increase the rates to customers, the IOUs experienced severe financial difficulties (PG&E declared bankruptcy on April 6, 2001) and energy suppliers were reluctant to provide additional power resources without payment guarantees.

Faced with the "energy crisis", the State initiated a number of steps including: (i) authorized the California Department of Water Resources to execute long term power purchase contracts; (ii) increased electric rates in 2001; (iii) offered customers financial incentives to lower consumption; (iv) initiated a public-awareness campaign advising customers to conserve electricity or shift usage to non-peak hours; (v) accelerated the permitting for new generation facilities; and (vi) participated in regulatory and legal proceedings to determine if the wholesale electricity market had been manipulated. The Federal Energy Regulatory Commission ("FERC") also imposed several changes intended to mitigate price and reliability problems, including establishing a ceiling price for wholesale electric power.

Conservation programs and new interruptible power programs created permanent peak load reductions and averted the predicted outages during the summer of 2001 (CEC, California Energy Demand 2002-2012 Electricity Outlook Report). In 2001, Californians used 8 percent less energy during peak hours than the year before. In 2002, the peak load drop was 5.4 percent through August 2002, compared to the same period in 2000. (San Diego Union-Tribune, December 15, 2002).

As of December 12, 2002, the CEC predicted that in a 1-in-2 year "normal weather" scenario for 2004, the peak hour demand for electricity in California, including a 7 percent reserve would be 58,059 MW, and in a 1-in-10 year hotter-than-normal scenario, 61,436 MW. Based on the CEC's most likely estimate for generation, it projected a range of the state-wide peak load surpluses from 584 MW (8.0 percent reserve margin) to 3,961 MW (14.3 percent reserve margin). Generation includes existing generation sources, net new

generation additions, net firm imports and demand responsive programs. (Draft Report dated December 12, 2002, Energy Analysis Office, California Energy Commission).

Since 1999, the CEC has approved 18 power plants greater than 300 MW, representing a total capacity of 11,497 MW. As of October 17, 2002, six of the 18 plants are online (totaling 3,587 MW), seven are currently under construction (totaling 4,724 MW) and five plants have put construction on hold (totaling 3,186 MW). An additional 14 power plant applications were under review by the CEC as of December 3, 2002, representing an additional 8,827 MW. Taking into account the larger Western Electricity Coordinating Council (WECC) region (formerly the Western Systems Coordinating Council), which is the regional market for electricity production that includes California, as of November 13, 2002, there was a total of 20,753 MW of new generation capacity under construction, and another 39,950 MW in various in states of the regulatory approval process. (CEC website, Electricity in California, Power Plants & Infrastructure section)

The short-term disruption of electrical energy supply of 2000 and 2001 has largely passed, though the financial effects will be felt for years to come. The State and Federal Government will continue to take a proactive role in ensuring that California has a reliable supply of electricity and the capacity to meet peak load demand in the future. Along with the above measures, the State has passed several bills intended to assist the investor-owned utilities, promote renewable and conventional generation, and encourage energy conservation. Forecasted energy supply is expected to be sufficient to meet the development requirements of the proposed project and no significant impact is anticipated.

The additional electrical load imposed by the proposed project is within the capacity of SCE. However, SCE has indicated that an additional substation and circuits will be necessary to support future growth in the vicinity (Planning Areas 1, 2, 40 and Northern Sphere). In the interim, SCE's existing facilities have sufficient circuit capacity to supply the project area once the infrastructure for the development is installed. Additional circuits will be built on an as needed basis taking into account the development schedule of proposed project. All projects in the development area would be required to incorporate energy conservation measures into their design and function. Although electrical consumption will increase as a result of cumulative developments, SCE is expanding its facilities to accommodate this growth. Since SCE can meet the increased demand for electricity, the growth in consumption is not considered significant.

Natural Gas Usage

As shown in Table 5.15-4, the development of PAs 51 and 30 under the proposed Base Plan would consume 8,345,738 cubic feet per month.

Rather than subtract existing natural gas consumption from the proposed project's anticipated consumption to determine incremental or net natural gas consumption, it has been assumed that existing natural gas consumption is zero. As such, all of the proposed project's natural gas consumption is considered to be incremental. Therefore, total incremental gas consumption would be 8,345,738 cubic feet per month (Table 5.15-4).

The new on-site gas distribution infrastructure can be connected to and served from the existing SoCal Gas infrastructure mentioned previously. The existing SoCal Gas facilities are located within and adjacent to the proposed project. The new gas distribution facilities will

typically be installed in the right-of-ways of existing and proposed streets and will be located to efficiently meet the needs of the project. The new gas distribution systems will utilize current design, construction, and operating standards to meet the energy distribution needs of the proposed project.

To place this natural gas consumption in perspective, the total natural gas consumption in the SoCal Gas service area (core and noncore customers) in 2001 was 81,608 million cubic feet per month (Southern California Gas Company, 2002 California Gas Report, page 65). The project's consumption of natural gas is 0.010 percent of SoCal Gas's 2001 consumption.

**Table 5.15-4
Future Natural Gas Usage for Base Plan
Buildout Year 2025**

Land Use Type	Acres	Dwelling Units	Square Feet	Natural Gas Consumption (cu./ft./mo)
Residential	15	225	-	902,588
Education	293	-	1,285,000	2,570,000
Cultural/Institutional ^(a)	578	-	1,994,500	3,726,000
Transportation Facilities	154	-	176,000	277,650
Research and Development	50	-	300,000	600,000
Retail and Office	-	-	-	-
Auto Center	34	-	50,000	145,000
Agriculture	438	-	-	-
Open & Recreational Space	2,946	-	51,000	124,500
Roadways	185	-	-	-
Total	4,693	225	3,856,500	8,345,738

Source: Astrum Utility Services, 2003.

(a) Cultural/Institutional residential included in Residential

Long-range planning and oversight of the numerous regulatory agencies will continue to address future energy supply needs. Gas transmission projects both planned for the future and currently under construction by the energy companies will continue to ensure adequate supplies to California and the Southern California Region. Should the CPUC or another agency take an action that may affect gas supply or delivery, then gas distribution will be provided in accordance with the revised conditions.

Natural gas supplies are sufficient to serve the project at build-out. Even with a forecasted 41 percent increase in a natural gas demand in California from 1997-2012, the California Energy Commission anticipates natural gas supplies will be adequate to meet the demand requirements for the state (California Energy Commission, Natural Gas Supply and Infrastructure Assessment, December 2002). According to the Energy Information Administration of the US Department of Energy, technically recoverable natural gas resources in the nation are estimated to be 1,614 trillion cubic feet. This is approximately 82 times the 2001 natural gas production level. (Energy Information Administration, US Crude Oil, Natural Gas, and Natural Gas Liquids Reserves 2001 Annual Report, November 2002, page 128).

The existing utility infrastructure transporting natural gas to the area and site is adequate to meet the needs of the proposed project. Since 2000, SoCal Gas has increased its natural gas receiving capacity. Its firm receiving capacity has increased 10.7 percent to 3,875 MMcf/day. SoCal Gas's firm receiving capacity in excess of demand or slack capacity is forecasted to be 22 percent in 2012. SoCal Gas has increased its ability to meet peak day requirements by using a greater portion of the Aliso Canyon and La Goleta storage facilities. (California Energy Commission, Natural Gas Supply and Infrastructure Assessment, December 2002, page 43.)

Based on the above, implementation of the proposed project will not result in a significant energy level.

James A. Musick Jail Facility (Portion of PA 35)

According to EIR No. 564, in the event that the jail facility is expanded to the proposed 7,584 inmates, SCE and The Southern California Gas Company have the capacity to service the jail. No significant impacts were identified in EIR No. 564 related to energy service. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

As there are no expansion plans for the IRWD parcel that would generate a demand for energy service, no substantial use of fuel and/or energy will occur on-site. As a result, no impact related to the substantial use of fuel and/or energy will result from the annexation of the IRWD parcel.

Overlay Plan

The Former MCAS El Toro (PAs 51 and 30)

Electrical Usage

Using the planned land uses, the Overlay Plan would consume 131.9 million kWh per year (Table 5.15-5). Rather than subtract existing electricity consumption from the Proposed Project's electricity consumption to determine incremental or net electricity consumption, it has been assumed that existing electricity consumption to be zero. As such, all of the proposed project's electricity consumption is considered to be incremental. Therefore, total incremental electricity consumption would be approximately 131.9 million kWh (Table 5.15-5).

The Overlay Plan would have a peak load of 34,978 kW (Table 5.15-5). Sufficient available capacity exists at the Irvine and Limestone Substations to serve the Proposed Project's load estimates. However, the existing overhead 4 kV distribution system currently serving the former MCAS El Toro would be replaced with an underground 12 kV distribution system.

**Table 5.15-5
Proposed Project Electricity Demand and Consumption for Overlay Plan**

Land Use Type	Acres	Dwelling Units	Square Feet	Peak Load (kW)	Energy Consumption (Million kWh/Year)
Residential	560	3,625	-	6,972	20.2
Education	273	-	1,492,594	7,096	23.9
Cultural/Institutional	256	-	1,031,000	2,900	13.2
Transportation Facilities	70	-	176,000	650	2.3
Research and Development	200	-	2,600,000	10,840	43.2
Retail and Office	48	-	375,000	2,811	14.3
Auto Center	34	-	102,000	498	1.4
Agriculture	303	-	-	-	-
Open & Recreational Space ^a	2,764	-	809,000	3,211	13.4
Roadways	185	-	-	-	-
Total	4,693	3,625	6,585,594	34,978	131.9

(a) Open & Recreational Space residential included in Residential
Source: Astrum Utility Services, 2003.

To place this electricity consumption and demand in perspective in 2000, the total net energy load in the SCE transmission service area was 98,269 million kWh and SCE area peak demand was 18,724,000 kW (California Energy Commission (CEC), California Energy Demand 2002-2012 Forecast, Table B-3 and Table D-3). The CEC is also predicting that net energy for load will grow annually at 2 percent and that the area peak demand will grow at 2.4 percent (CEC, California Energy Demand 2002-2012 Forecast, Table B-3 and D-3). For the year 2012, the CEC forecasts net energy for load and area peak demand in SCE's service area to be 125,224 million kWh and 24,960,000 kW respectively (CEC, California Energy Demand 2002-2012 Forecast, Table B-3 and D-3). The Overlay Plan consumption of electricity is 0.11 percent and peak demand is 0.14 percent of CEC's forecast for SCE in 2012.

SCE has indicated its ability to serve the projected project, in accordance with all applicable tariff schedules which are the effective rates and rules of the Southern California Edison Company on file with and approved by the Public Utilities Commission, State of California, and subject to the receipt of such permits or authorization from public agencies may be required for such installation. Project-related electricity demand will not significantly impact SCE's current level of service and no significant impact would occur.

The Base Plan provides a detailed discussion of the State's energy supply and is incorporated by reference.

The additional electrical load imposed by the Overlay Plan is within the capacity of SCE. However, SCE has indicated that an additional substation and circuits will be necessary to support future growth in the vicinity (Planning Areas 1, 2, 40 and Northern Sphere). In the interim, SCE's existing facilities have sufficient circuit capacity to supply the project area once the infrastructure for the development is installed. Additional circuits will be built on an as needed basis taking into account the development schedule of proposed project. All projects in the development area would be required to incorporate energy conservation

measures into their design and function. Although electrical consumption will increase as a result of cumulative developments, SCE is expanding its facilities to accommodate this growth. Since SCE can meet the increased demand for electricity, the growth in consumption is not considered significant.

Natural Gas Usage

Using the planned land uses, the Overlay Plan would consume 31,123,576 cubic feet per month (Table 5.15-6) of natural gas. Rather than subtract existing natural gas consumption from the Overlay Plan's anticipated consumption to determine incremental or net natural gas consumption, it has been assumed that existing natural gas consumption is zero. As such, all of the Overlay Plan's natural gas consumption is considered to be incremental. Therefore, total incremental natural gas consumption would be 31,123,576 cubic feet per month (Table 5.15-6).

**Table 5.15-6
Future Natural Gas Usage for Overlay Plan
Buildout Year 2025**

Land Use Type	Acres	Dwelling Units	Square Feet	Natural Gas Consumption (cu./ft./mo)
Residential	560	3,625	-	17,460,538
Education	273	-	1,492,594	2,985,188
Cultural/Institutional	256	-	1,031,000	2,220,200
Transportation Facilities	70	-	176,000	277,650
Research and Development	200	-	2,600,000	5,200,000
Retail and Office	48	-	375,000	1,020,000
Auto Center	34	-	102,000	295,800
Agriculture	303	-	-	-
Open & Recreational Space ^a	2,764	-	809,000	1,664,200
Roadways	185	-	-	-
Total	4,693	3,625	6,585,594	31,123,576

Source: Astrum Utility Services, 2003.

(a) Open & Recreational Space residential is included in Residential.

The new on-site gas distribution infrastructure can be connected to and served from the existing SoCal Gas infrastructure mentioned previously. The existing SoCal Gas facilities are located within and adjacent to the proposed project. The new gas distribution facilities will typically be installed in the right-of-ways of existing and proposed streets and will be located to efficiently meet the needs of the project. The new gas distribution systems will utilize current design, construction, and operating standards to meet the energy distribution needs of the proposed project. This would not create as significant impact on the environment.

To place this natural gas consumption in perspective, the total natural gas consumption in the SoCal Gas service area (core and noncore customers) in 2001 was 81,608 million cubic feet per month (Southern California Gas Company, 2002 California Gas Report, page 65).

The Overlay Plan's consumption of natural gas is 0.038 percent of Southern California Gas's 2001 total consumption.

James A. Musick Jail Facility (Portion of PA 35)

According to EIR No. 564, in the event that the jail facility is expanded to the proposed 7,584 inmates, SCE and The Southern California Gas Company have the capacity to service the jail. No significant impacts were identified in EIR No. 564 related to energy service. The future expansion of the jail is not a component of this project, and environmental review and mitigation for impacts from the expansion will be the responsibility of the County of Orange.

IRWD Parcel (Portion of PA 35)

As there are no expansion plans for the IRWD parcel that would generate a demand for energy service, no substantial use of fuel and/or energy will occur on-site. As a result, no impact related to the substantial use of fuel and/or energy will result from the annexation of the IRWD parcel.

5.15.5.4 Significant Impacts

Base Plan and Overlay Plan

The specific significant environmental impact of constructing new energy and communication facilities that will be needed to serve the proposed project cannot be determined at this General Plan level of analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the construction and operation of public facilities has been addressed within this Final Program EIR, which would include the construction and operation of new energy and communication facilities.

No significant impact is anticipated related to substantial use of fuel and/or energy sources by the project was identified.

5.15.5.5 Mitigation Measures

Base Plan and Overlay Plan

Mitigation Measures identified in other sections of this Final Program EIR address the environmental impacts associated with the construction and operation of public utilities. These measures are applicable to the construction and operation of new energy and communication transmission facilities identified in this section to serve new growth expected in the project area.

5.15.5.6 Significance of Impact After Mitigation

Base Plan and Overlay Plan

The general environmental impacts associated with the construction and operation of public utilities have been addressed within the Final Program EIR, which would include the construction and operation of new energy and communication transmission facilities identified in this section. Mitigation Measures required for any significant impacts identified in preceding sections of this Final Program EIR apply to the future construction and operation of the energy and communication transmission system within the project area. Project-level environmental review, at the time specific development plans for the energy and communication transmission backbone system have been prepared, will also be required and project specific mitigation measures identified and implemented.

Notes and References

1. City of Irvine. *GPA, ZC, and Annexation of MCAS El Toro and James A. Musick Branch Jail DEIR*. June 14, 1999.
2. Irvine Ranch Water District. *Irvine Ranch Water District Assessment of Water Supply for the Northern Sphere Area*. March 12, 2002.
3. County of Orange. *James A. Musick Jail Expansion and Operation, Relocation of Interim Care Facility, and Southeast Sheriff's Station DEIR, No. 564*. August 1996.

5.2 Traffic/Circulation

5.2.1 Environmental Setting

The following section is based on the following technical reports: Orange County Great Park Traffic Impact Analysis and the Orange County Great Park General Plan Amendment and Zone Change Traffic Impact Analysis, City of Irvine, California prepared by Urban Crossroads, Inc. (December 2002). These studies are contained in Volume II Appendix G and Volume III Appendices K, L, and M of this Final Program EIR.

Study Area

For analysis purposes, a traffic study area has been identified with respect to the potential traffic impacts of the proposed project. The study area and corresponding intersection analysis locations is the same for each of the time frames analyzed; however, the number of intersections studied varies. The analysis time frames include existing conditions, Year 2007, Year 2025, and Post 2025. Figure 5.2-1 depicts the 2007 study area and 145 intersection analysis locations. Figure 5.2-2 depicts the 2025 study area and 147 intersection analysis locations. Figure 5.2-3 depicts the Post 2025 study area and 156 intersection analysis locations. In addition to the City of Irvine, the analysis study area encompasses portions of several adjacent jurisdictions, including the City of Lake Forest, the City of Mission Viejo, the City of Laguna Hills, the City of Laguna Woods, the City of Aliso Viejo, the City of Laguna Beach, and areas located within the unincorporated County of Orange.

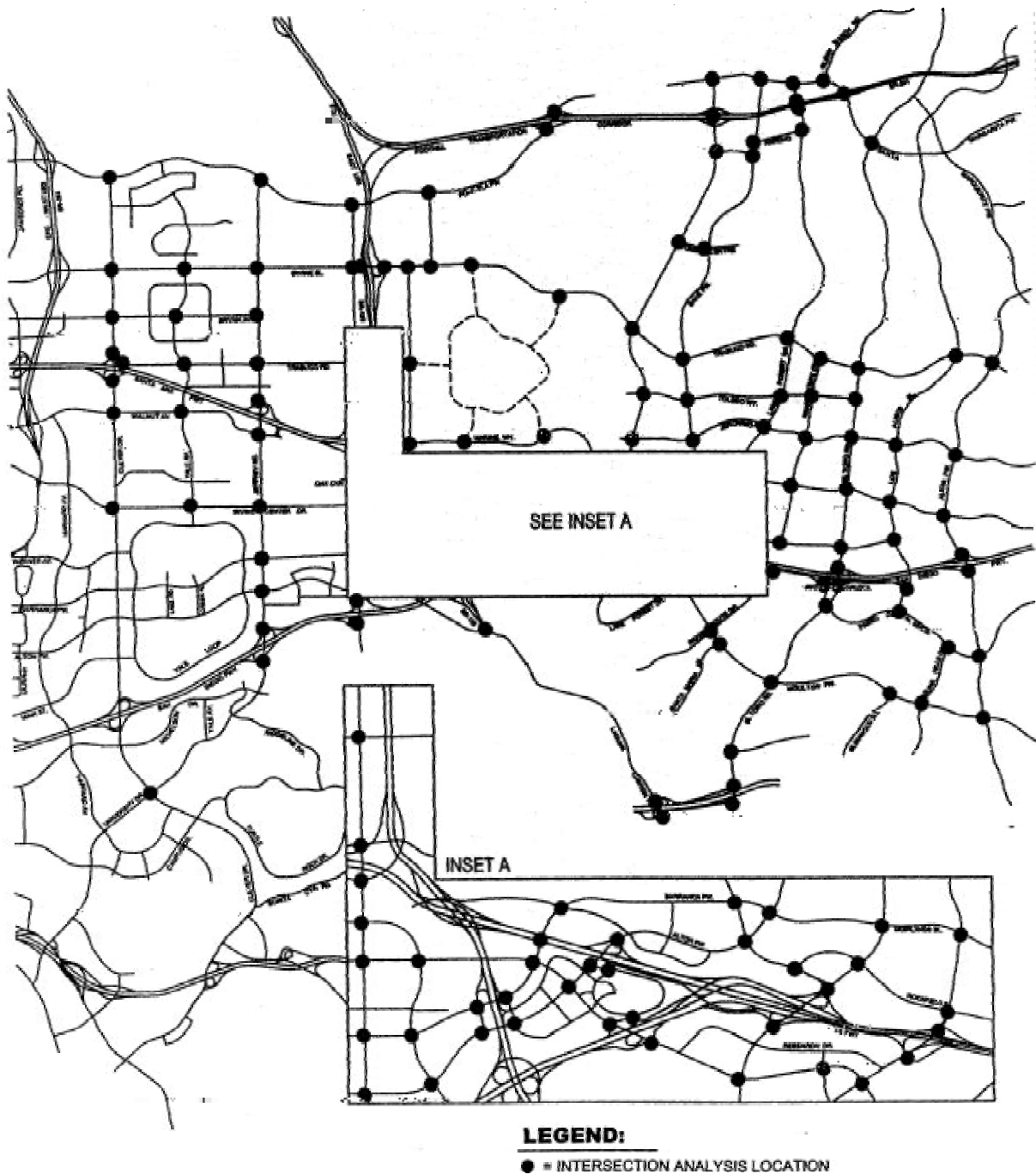
City of Irvine Traffic Performance Criteria

Roadway system performance is generally described in terms of level of service (LOS). LOS "A" represents the highest or best LOS, while LOS "F" represents the lowest or worst LOS. During peak hours, levels of service "A" to "D" are acceptable (at a minimum). Each LOS is briefly summarized in Table 5.2-1.

The performance criteria contained in the adopted City of Irvine General Plan state that roadway segments and intersections outside of the Irvine Business Complex (City of Irvine Planning Area 36) and the Irvine Center (City of Irvine Planning Area 33) should operate at LOS "D" or better for peak hour conditions except the intersection of Bake Parkway and the I-5 Northbound Ramps. However, as per current City criteria within PAs 33 and 36, roadway segments and intersections could operate at LOS "E" or better for peak hour conditions.¹ The City of Lake Forest has a similar rule that allows LOS E for roadways designated as Commercial Streets on the City of Lake Forest General Plan Arterial Highway Plan. The County of Orange Congestion Management Program (CMP) also allows LOS E on the CMP roadway system.

Figure 5.2-1

¹ Exhibit 2-1 of the traffic study, which is contained in Appendix K of this EIR, depicts the areas where LOS E is acceptable. Additionally, as part of the proposed General Plan Amendment, City of Irvine General Plan Amendment Policy B-1(C) will be amended to add that LOS "E" would be considered acceptable for application to intersections impacted in PAs 13, 31, 32, 34, 35, and 39.

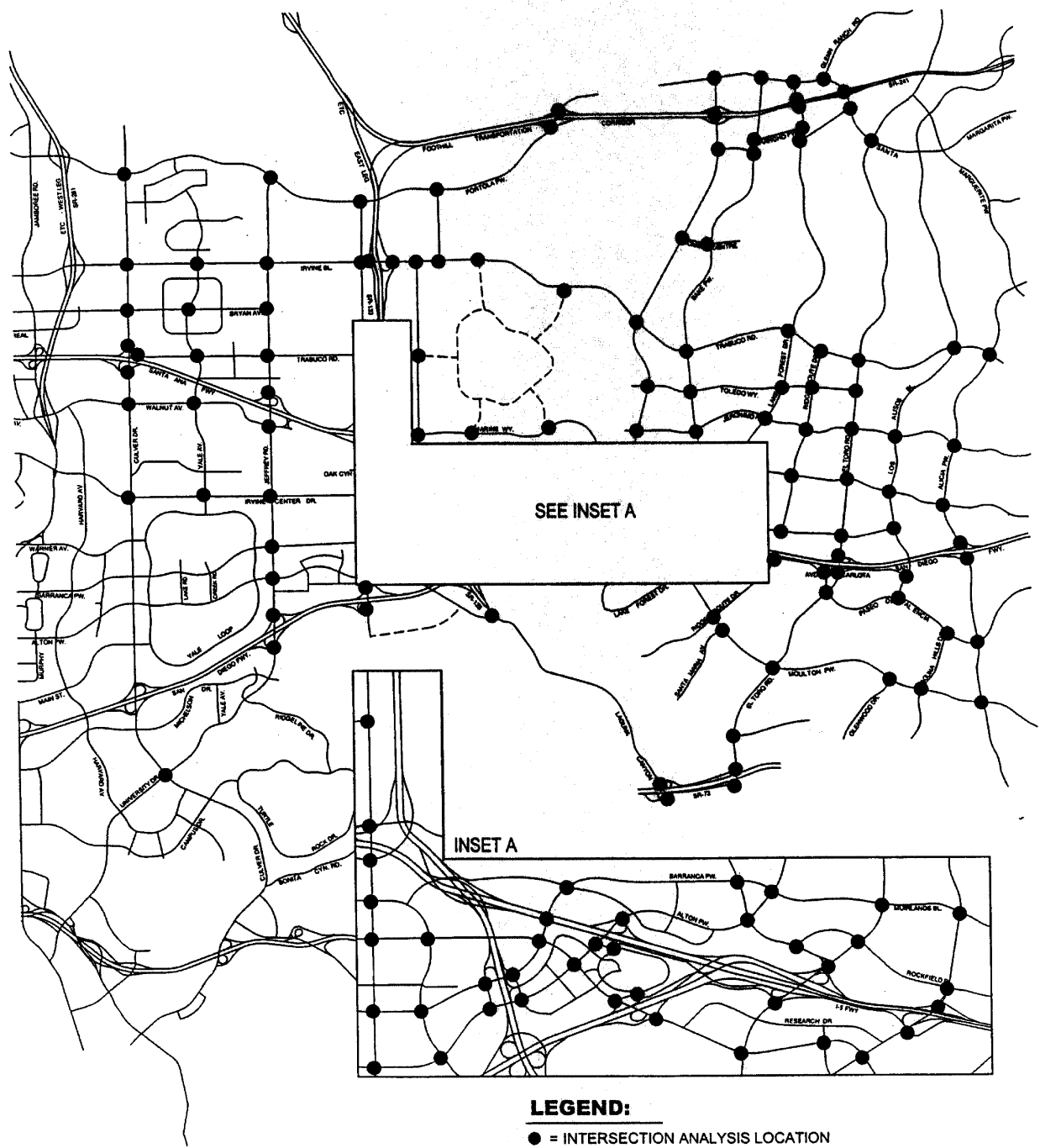


Source: Urban Crossroads, 2002.

Not to Scale

Orange County Great Park
Final EIR

Figure 5.2-1
2007 Intersection Analysis Locations
City of Irvine



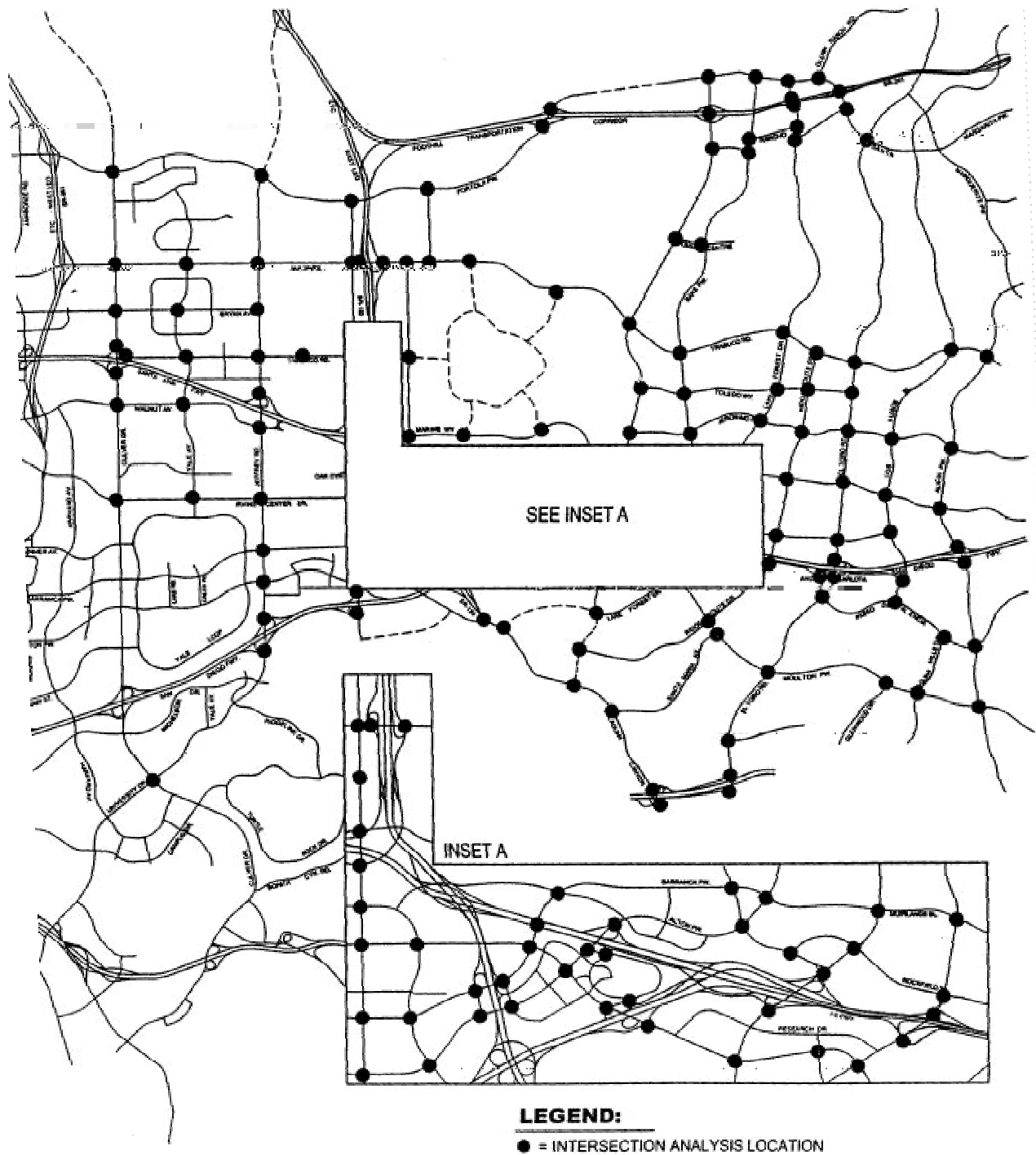
Source: Urban Crossroads, 2002.

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Final EIR

Figure 5.2-2
2025 Intersection Analysis Locations

City of Irvine



Source: Urban Crossroads, 2002.

Not to Scale

Orange County Great Park
Final EIR

Figure 5.2-3
Year Post 2025 Intersection Analysis Locations
City of Irvine

**TABLE 5.2-1
ROADWAY AND INTERSECTION LOS CRITERIA**

LOS	Description	V/C or ICU
LOS A	LOS "A" conditions are characterized by free flow operations. Vehicles are unimpeded in their ability to maneuver within the traffic stream, and stopped delay at intersections is minimal.	0-0.6
LOS B	LOS "B" conditions are characterized by travel speeds which are within 70% of free flow operational speeds. Vehicles are slightly restricted in their ability to maneuver within the traffic stream, and stopped delay at intersections is not bothersome to most drivers.	0.61-0.7
LOS C	LOS "C" conditions are characterized as stable operations. The ability to maneuver and change lanes may be somewhat restricted, and travel speeds may drop to 50% of free flow speeds. Some queuing typically occurs at signalized intersections, however all vehicles clear the intersection on all or nearly all cycles.	0.71-0.8
LOS D	LOS "D" conditions are characterized by high density traffic flows. Travel speeds may range as low as 40% of free flow operational speeds. Vehicles are restricted in their ability to maneuver within the traffic stream, and one or more vehicles may not clear the intersection within a single signal cycle on a regular basis.	0.81-0.9
LOS E	LOS "E" conditions are characterized as operations at or near capacity. There is little or no freedom to maneuver within the traffic stream. Comfort and convenience levels are low, and driver frustration is generally high. Operations at this level are generally unstable, with even minor disturbances or disruptions resulting in the breakdown of operations and substantially increased delays. The failure of vehicles to clear an intersection in a single cycle is a regular occurrence.	0.91-1.00
LOS F	LOS "F" conditions represent forced or breakdown flow. The traffic volume approaching location exceeds the capacity of the system at that location. Intersections often become the focal point for roadway system failure. Operations are characterized by extensive queues and long delays. Some or all vehicles fail to clear the intersection during every signal cycle.	> 1.00

Source: Urban Crossroads, December 2002.

The CMP criteria for deficiency (LOS F or worse) has also been accepted by Caltrans District 12 for freeway mainlines and ramps.

The City of Irvine traffic analysis performance criteria specify the same standards for daily roadway segments described previously for peak hour conditions. However, if a roadway does not meet the performance standard on a daily basis, a number of steps may be required to demonstrate acceptable conditions on such a roadway. These steps include the analysis of peak hour roadway segment operations and peak hour intersection operations as necessary to demonstrate acceptable traffic conditions during peak traffic conditions.

The City of Irvine performance criteria also include standards related to determining the significance of project impacts on the roadway system. For both roadways and intersections, improvements addressing deficiencies are required if the project causes an increase of 0.02 in either the roadway volume to capacity (V/C) ratio or the intersection capacity utilization (ICU). This criteria is consistent with the standards of the adjacent cities of Lake Forest, Mission Viejo, Laguna Hills, and Laguna Woods.

The City of Aliso Viejo does not have an adopted standard; therefore, this traffic analysis uses the 0.02 standard. Freeways/tollways (mainline segments) and CMP roadways and intersections (i.e., the adopted CMP roadway system) have been evaluated using the greater than 0.03 criteria specified in the CMP.

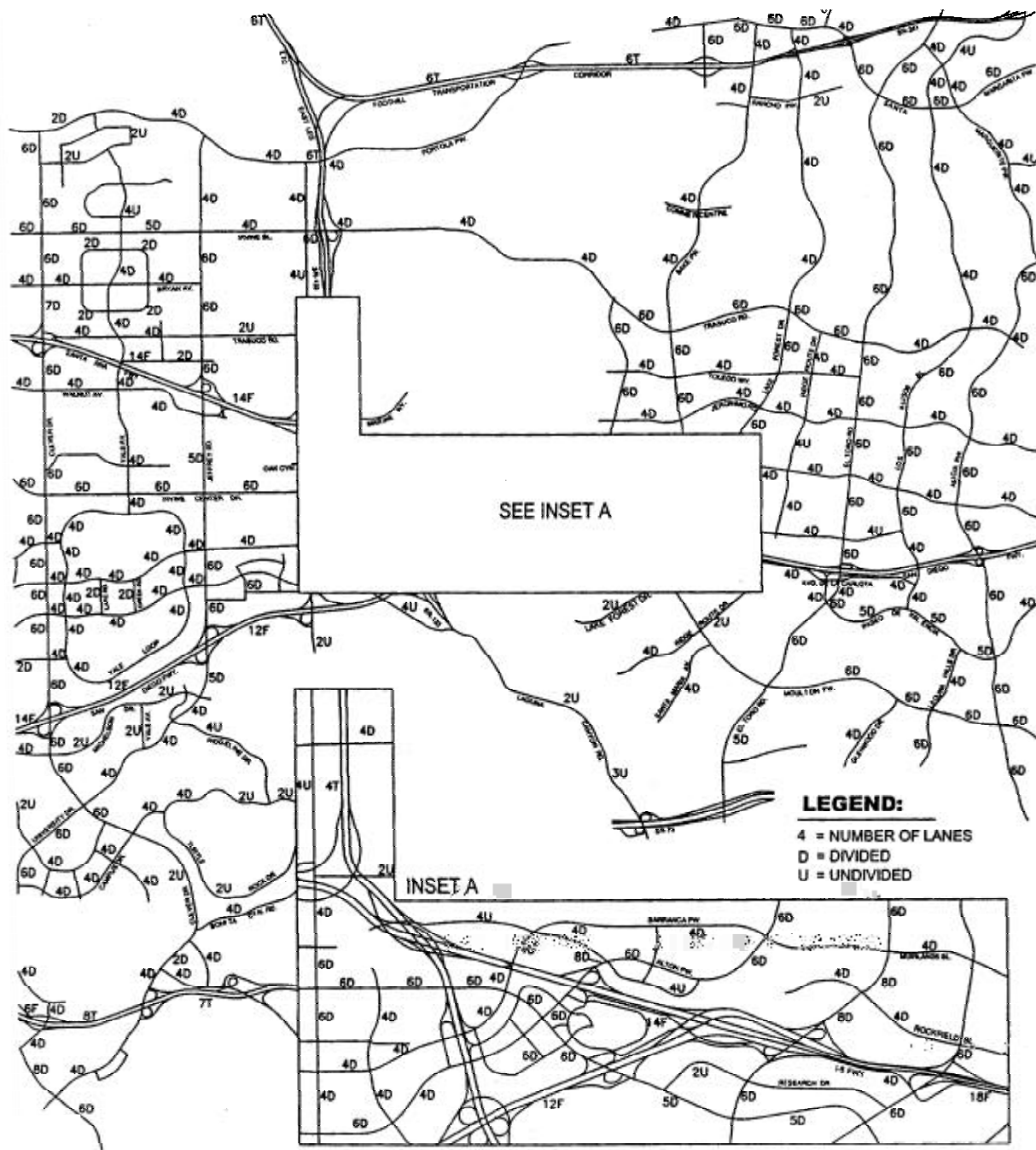
Analysis Methodologies

The overall approach to the traffic impact analysis is based on the evaluation of traffic conditions for existing conditions, 2007 conditions, 2025 conditions, and Post 2025 conditions. The specific roadway segment and intersection traffic operations analysis methodologies are discussed in further detail in Section 2.0 of Volume II Appendix G. The future traffic volume analysis for 2007, 2025 and Post 2025 is based on the Irvine Transportation Analysis Model (ITAM).

Existing and Planned Circulation System

Figure 5.2-4 depicts the existing number of through lanes for the traffic study area. As depicted, roadway cross-sections range from two lane undivided roadways up to eight lane divided arterials (such as Bake Parkway north of the I-5 Freeway).

The planned circulation system includes the planned system in accordance with both City of Irvine and Countywide planning efforts. The adopted City of Irvine Arterial Highway Designations are presented on Figure 5.2-5. Figure 5.2-6 depicts the overall study area planned system per the Orange County Master Plan of Arterial Highways (MPAH). The countywide MPAH is the responsibility of the Orange County Transportation Authority (OCTA). All local jurisdictions are required to maintain consistency with the MPAH. Several other cities are included within the overall study area. Their roadway infrastructure plans are generally consistent with the Orange County MPAH. The City of Aliso Viejo is newly incorporated and does not yet have an independent circulation plan. The City of Lake Forest Arterial Highway Plan is presented on Figure 5.2-7. The City of Laguna Hills General Plan Circulation Map is depicted on Figure 5.2-8.

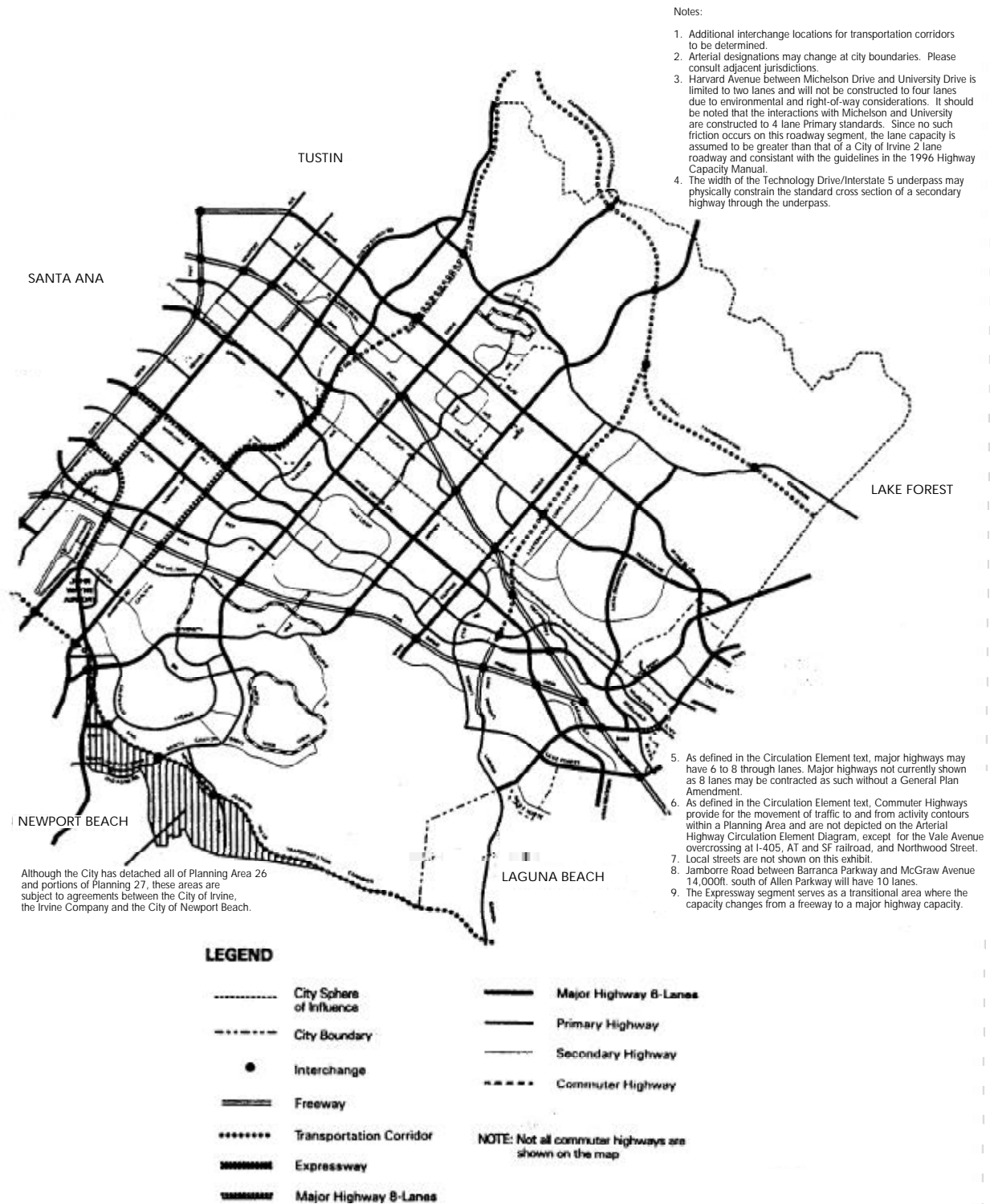


Source: Urban Crossroads, 2002.

Not to Scale

Orange County Great Park
Final EIR

Figure 5.2-4
Existing Number of Through Lanes
City of Irvine

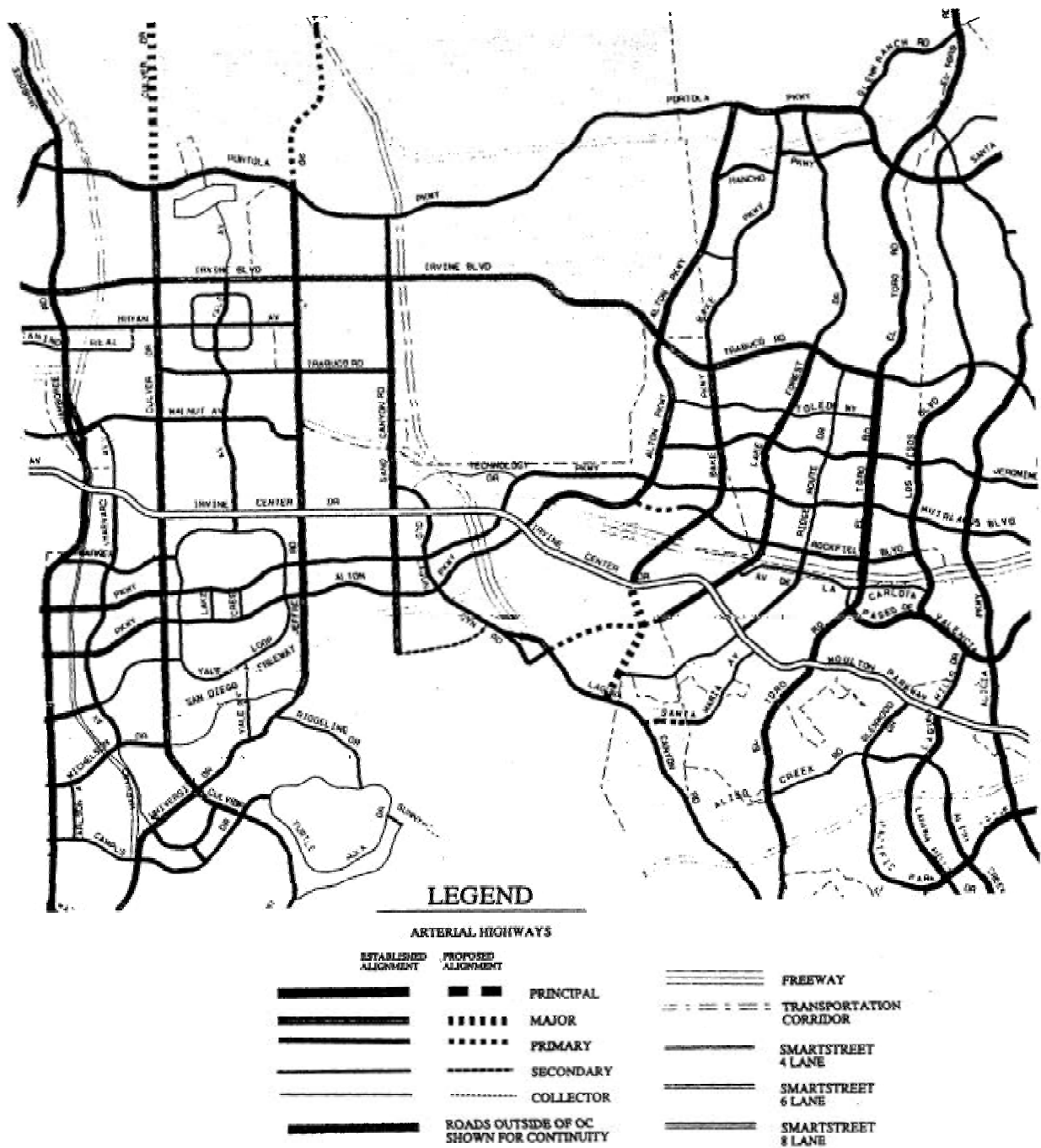


Source: City of Irvine

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Orange County Great Park
Final EIR

Figure 5.2-5
City of Irvine Arterial Highway Designations
City of Irvine



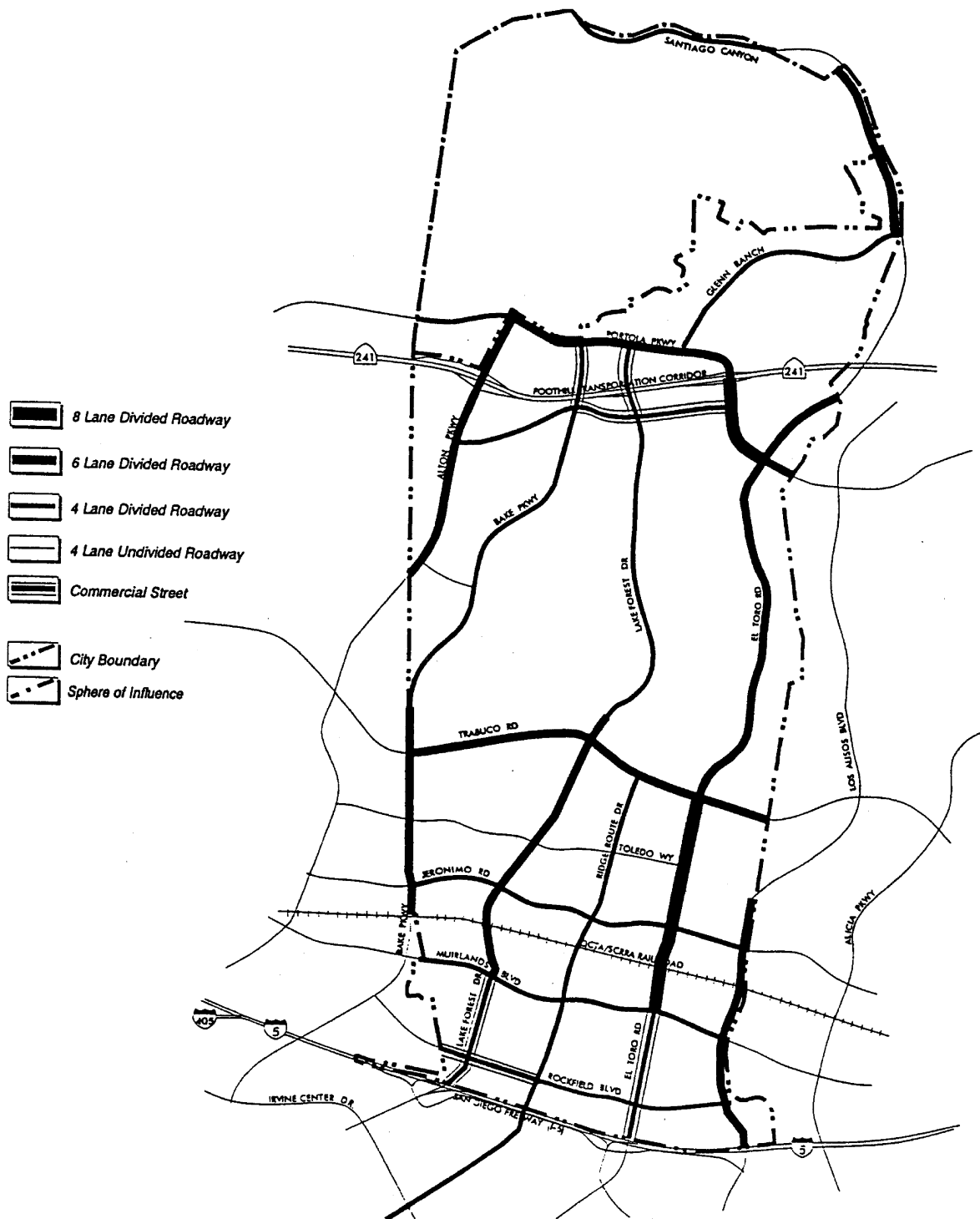
Source: Urban Crossroads, 2002.

Not to Scale

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Final EIR

Figure 5.2-6
Orange County Master Plan of Arterial Highways

City of Irvine



Source: City of Lake Forest.



Not to Scale

Orange County Great Park
Final EIR

Figure 5.2-7
Lake Forest Arterial Highway Plan

City of Irvine

Existing Roadway Segment Traffic

The existing average daily traffic (ADT) volumes are summarized on Figure 5.2-9. Existing ADT volumes range from less than 10,000 vehicles per day on some roadways to upwards of 65,000 vehicles per day (VPD) on some major arterials. The highest volume roadways under existing conditions include:

1. Bake Parkway (73,000 VPD north of I-5)
2. Alicia Parkway (65,000 VPD north of I-5)
3. Lake Forest Drive (57,000 VPD north of I-5)
4. El Toro Road (53,000 VPD north of I-5)
5. Culver Drive (45,000 VPD south of I-5)

Bake Parkway, in addition to carrying the highest overall daily traffic volume of any arterial in the study area, also carries volumes in excess of 46,000 VPD from the I-5 Freeway north of Trabuco Road.

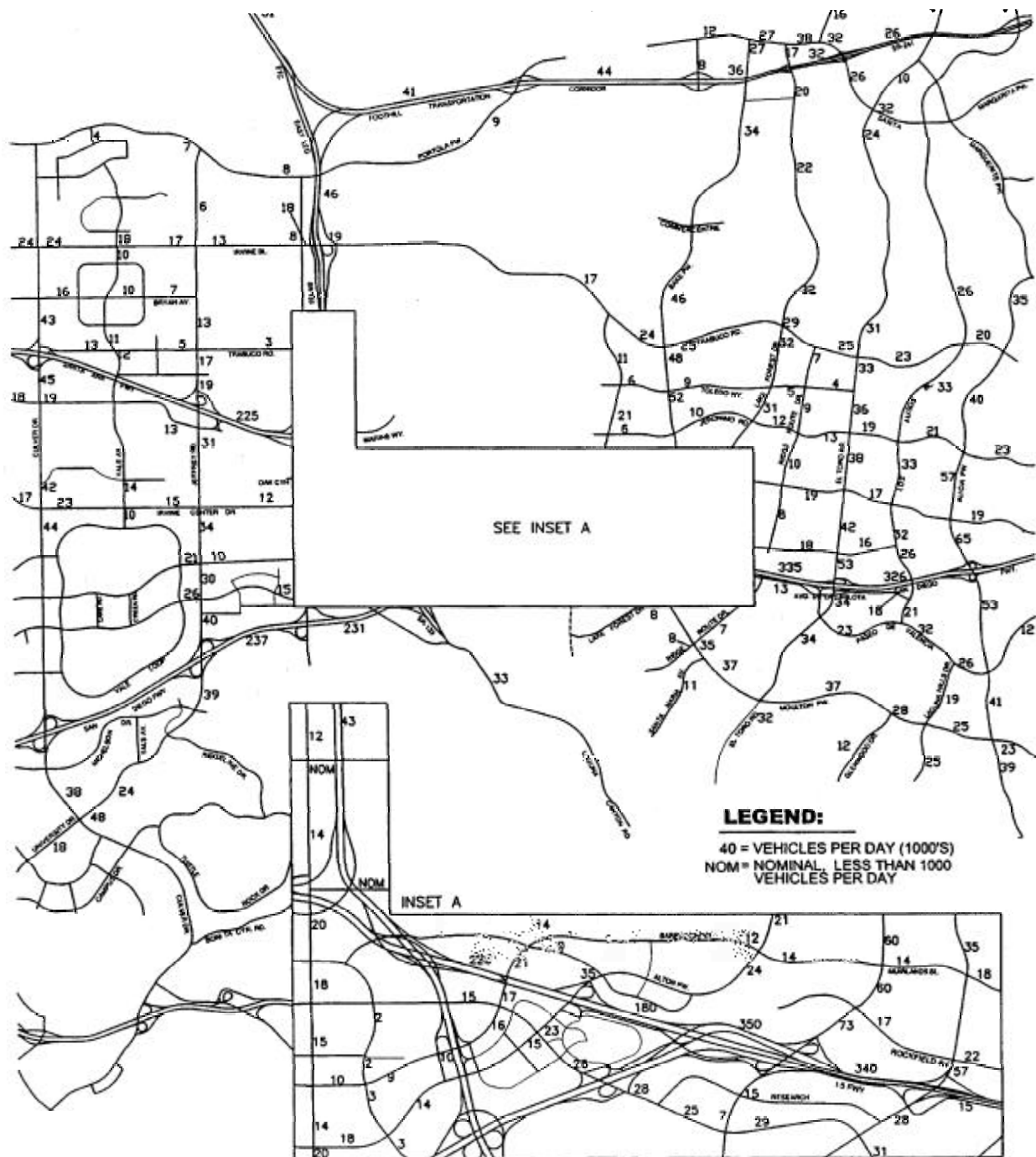
Existing Daily Roadway/Freeway Segment Volume/Capacity Ratios

The existing roadway and freeway/tollway geometrics and the daily traffic volumes have been used to calculate existing daily roadway segment and freeway/tollway volume/capacity (V/C) ratios. Fifteen roadway segments and six freeway segments carry daily traffic volumes resulting in daily V/C ratios that indicate the need for further analysis of peak hour conditions.

Existing Peak Hour Roadway Segment Volume/Capacity Ratios

The peak hour roadway segment V/C ratio analysis indicates that no roadway segment within the study area experiences peak hour roadway segment deficiencies under existing conditions, except for freeway segments.

Existing conditions peak hour analysis has also been completed for the freeway ramps within the study area. Table 3-2 of the traffic report (Volume II Appendix G) summarizes the results of the freeway ramp peak hour analysis. The only freeway/tollway ramp experiencing deficient peak hour operations under existing conditions is the northbound direct on ramp at the I-5 Freeway/Bake Parkway interchange. At this location, the ramp currently experiences a V/C ratio in excess of 1.0.



Source: Urban Crossroads, 2002.

Not to Scale

Orange County Great Park
 Final EIR

Figure 5.2-9
 Existing Average Daily Traffic (ADT)

City of Irvine

Existing Peak Hour Intersection Operations Analysis

Existing peak hour intersection traffic conditions have been analyzed for all of the analysis locations (intersections) that currently exist in the study area. The vast majority of the intersections analyzed operate at acceptable levels of service. However, there are a number of intersections currently operating at LOS "E" or LOS "F". The following ten intersections currently experience deficient peak hour traffic operations:

1. Culver Drive and Walnut Avenue
2. Culver Drive and University Drive
3. Jeffrey Road and Alton Parkway
4. Jeffrey Road and I-405 Northbound Ramps
5. Bake Parkway and Irvine Boulevard
6. Bake Parkway and Jeronimo Road
7. El Toro Road and Aliso Creek Road
8. Los Alisos Boulevard and Jeronimo Road
9. Muirlands Boulevard and Los Alisos Boulevard
10. Trabuco Road and Alicia Parkway

Future Traffic Conditions without the Proposed Project

The following subsections identify the baseline traffic conditions expected in the future scenarios (Years 2007, 2025, and Post 2025) without the proposed project. These conditions are identified in order to illustrate the anticipated circulation system upon which traffic will be assigned and to provide a baseline for comparing the effects of the proposed project.

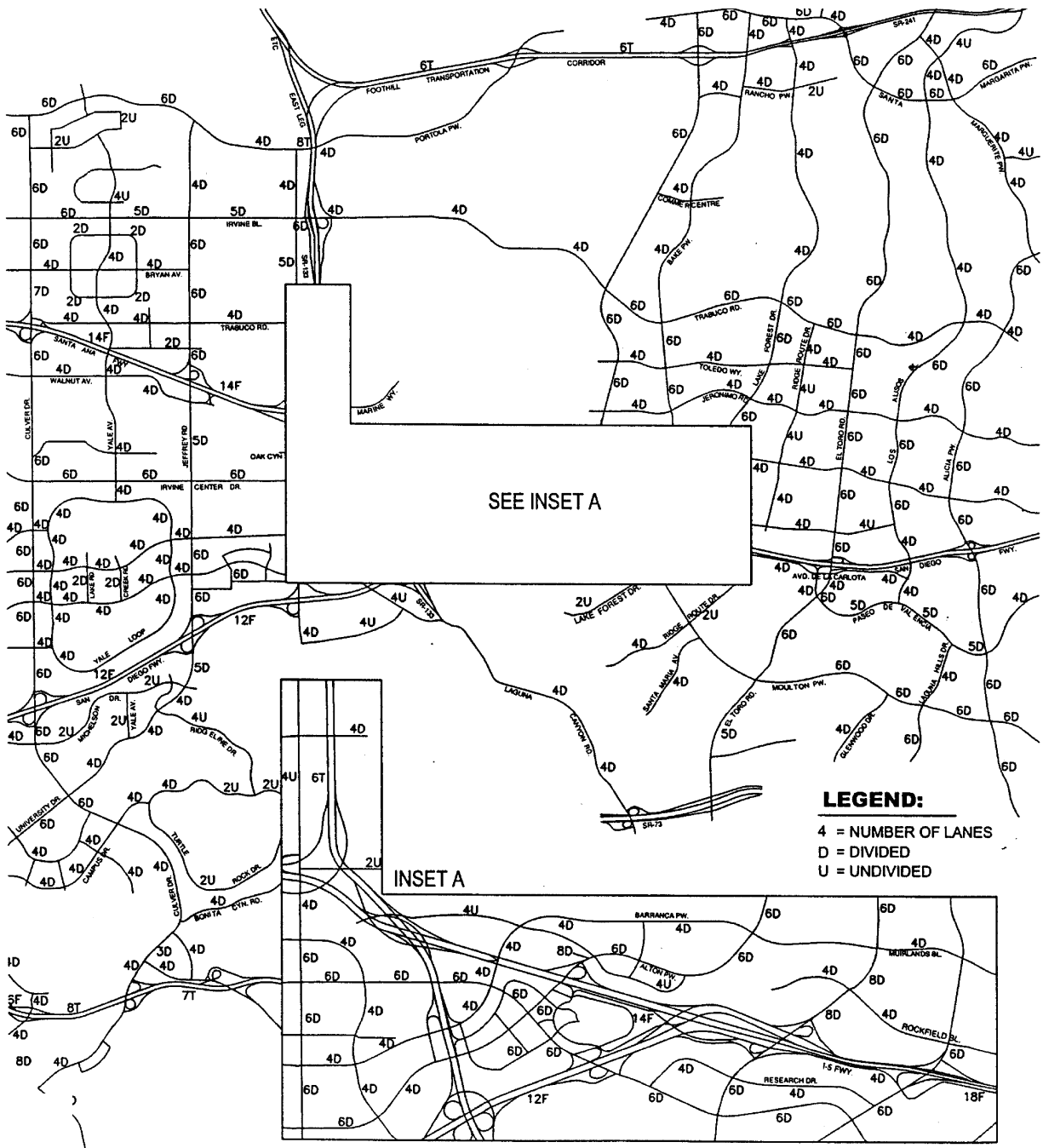
Year 2007

2007 Without Project Anticipated Roadway Improvements

Figure 5.2-10 depicts the number of lanes and median treatment for all of the roadways within the 2007 study area. Table 5.2-2 summarizes the anticipated roadway improvements that are already funded and are expected to be constructed by 2007.

2007 Without Project Traffic Volumes

The ITAM 2007 daily traffic volume conditions, including all of the updated input data, are summarized on Figure 5.2-11. Daily traffic volumes are generally expected to increase throughout the study area by 2007. Alton Parkway and Irvine Center Drive are the arterial roadways expected to experience the largest daily traffic increases in the study area under no project conditions. Peak hour (AM and PM) traffic volumes have also been estimated using the ITAM output. Volume II Appendix G of this Final Program EIR contains the peak hour intersection turning movement forecasts for 2007 without project conditions.



Source: Urban Crossroads, 2002.



Not to Scale

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 Final EIR

Figure 5.2-10
 Year 2007 Number of Through Lanes

City of Irvine

**Table 5.2-2
Funded 2007 Roadway Improvements**

ROADWAY	SEGMENT LIMITS	LANES		SOURCE
		2000	2007	
Alton Pkwy.	Irvine Bl. to SR-241	0	6D	FCPP
Alton Pkwy.	Jeffrey Rd. to Royal Oak	4D	4D-A	PA 12 ¹
Bake Pkwy.	Irvine Center Dr. to Research Dr.	5D	6D	PA-34
Bonita Canyon Dr.	Culver Dr. to Newport Coast Dr.	2D	3D	PA 27
Carlson Av.	Campus Dr. to Michelson Dr.	2U	4U	Complete by 2002
Chapman Av.	Canyon View Av. To Crawford Canyon Rd.	4D	6D	City of Orange
Chapman Av.	Jamboree Rd. to SR-241/SR-261	4U	6D	Santiago Hills II
Culver Dr.	Campus Dr. to Bonita Canyon Dr.	2U	4D	PA 27/UCI
Edinger Av.	e/o Red Hill Av. To w/o Jamboree Av.	4U	6D	Complete by 2002
Edinger Av.	SR-55 Fwy. to e/o Red Hill Av.	5D	6D	City of Tustin
El Toro Rd.	Marguerite Pkwy. to Glenn Ranch Rd.	2U	5D	City of Mission Viejo/Shea Homes
I-5 Fwy.	SR-22 Fwy. To SR-91	6F+2H	10F+2H	OCTA
I-5 Off Ramp at Culver Dr.	SB I-5 off ramp to Culver Dr.	1R	2R	OCTA
Irvine Av.	Bristol St. to Del Mar Av.	4D	6D	Orange Co./Newport Beach
Irvine Bl.	Jeffrey Rd. to Sand Canyon Av.	4D	5D	South Side of Road(EB) PA 9a(North Sphere)
Irvine Center Dr.	I-405 Fwy. To Lake Forest Dr.	5D	6D	PA 34
Irvine Center Dr.	Jeffrey Rd. to Orange Tree	5D	6D	PA 12
Jeffrey Rd.	Alton Pkwy. to Irvine Center Dr.	5D	6D	Complete by 2002
Jeffrey Rd.	I-405 SB Ramps to I-405 NB Ramps	4D	6D	Irvine 2002 CIP
Jeffrey Rd.	Irvine Center Drive to Walnut Av.	5D	6D	PA 12 / City of Irvine
Laguna Canyon Rd.	s/o I-405 Fwy. to SR-133 Fwy.	2U	4D	PA 17 ²
Laguna Canyon Rd.	Sand Canyon Av. to Irvine Center Dr.	0	4D	PA 31/PA 12
Laguna Canyon Rd.	SR-133 Fwy. to SR-73 Fwy.	3D	4D	County
Laguna Canyon Rd.	SR-73 Fwy. to El Toro Rd.	2U	4D	County
Laguna Hills Rd.	Aliso Creek Rd. to Pacific Park Dr.	0	6D	County
Newport Av.	Sycamore Av. to Edinger Av.	0	4U	City of Tustin
Newport Coast Dr.	SR-73 Fwy. to San Joaquin Hills Rd.	4D	6D	Newport Coast A.D.
On-Site MCAST Roads	Contract to 2007 conditions			MCAS Tustin(Refer to exhibits for specific roads)
PA 4 Roads	Planned PA 4 improvements			PA 4
Portola Pkwy.	Culver Dr. to Yale Av.	2D	6D	PA 5
Portola Pkwy.	SR-261 to Culver Dr.	2U	6D	PA 5 / LPC
Portola Pkwy.	Yale Av. to Jeffrey Rd.	4D	6D	PA 5
Quail Hill Pkwy.	Shady Canyon Av. To Laguna Canyon Rd.	0	4U	PA 17
Rancho Pkwy.	Alton Pkwy. to Lake Forest Dr.	0	4D	Baker Ranch
Red Hill Av.	Walnut Av. to Edinger Av.	4D	6D	City of Tustin
Research Dr.	Bake Pkwy. to Muller	0	4D	PA 34
Research Dr.	Irvine Center Dr. to Bake Pkwy.	2U	4D	PA 34
Sand Canyon Av.	Trabuco Rd. to Irvine Bl.	4U	5D	West Side of Road(SB) PA 9a(North Sphere)
Sand Canyon Av.	Barranca to Oak Cyn	4D	6D	Complete by 2002
Sand Canyon Av.	I-405 NB Ramps to Alton Pkwy	4D	6D	Kaiser
Santiago Canyon Rd.	Extend from Jamboree Rd. to w/o SR-241	0	2U	Santiago Hills II(Access)
Scientific Wy.	Irvine Center Dr. to Lake Forest Dr.	2U	4U	PA 34
Scientific Wy.	Irvine Center Dr. to Research Dr.	0	4U	PA 34

Table 5.2-2
Funded 2007 Roadway Improvement
(Continued)

ROADWAY	SEGMENT LIMITS	LANES		SOURCE
		2000	2007	
Serrano Av.	Cannon St. to Nohl Ranch Rd.	0	4U	City of Orange
Shady Canyon Dr.	I-405 Fwy. to Quail Hill	2U	4D	PA 17
SR-133	Irvine Bl. to I-5 Fwy.	4T	6T	TCA CIP
SR-133	Irvine Bl. to SR-241	6T	8T	TCA CIP
SR-241	Lake Forest Dr. to Oso Pkwy.	4T	6T	TCA CIP
SR-241	SR-133 to SR-261	5T	6T	TCA CIP
SR-55 Fwy.	17th St. to SR-91	6F+2H	8F+2H	OCTA
SR-55/I-405 Fwy.	HOV lchg. (NB 405-NB 55, SB 55-SB 405, SB 55-NB 405, SB 405-NB 55)			OCTA
SR-73 Ramps	Construct Glenwood Dr. interchanges, NB On, and SB Off Ramps			TCA CIP
Tesla	Irvine Center Dr. to n/o Research Dr.	0	2U	PA 34
Trabuco Rd.	Jeffrey Rd. to Sand Canyon Av.	2U	4D	PA 9a Northern Sphere
Turtle Ridge	Newport Coast Dr. to Bonita Canyon Dr.	0	4D	PA 27
University Dr.	MacArthur Bl. to Jamboree Rd.	5D	6D	Newport Beach
Valencia Av.	Newport Av. to Red Hill Av.	0	4U	City of Tustin
Valley Oak	Oak Canyon to s/o Barranca Pkwy.	0	4U	PA 12

¹ = Lanes assumed to be the same as existing street

² = Overcrossing at I-405 to remain 2 lanes

-A = Augmented

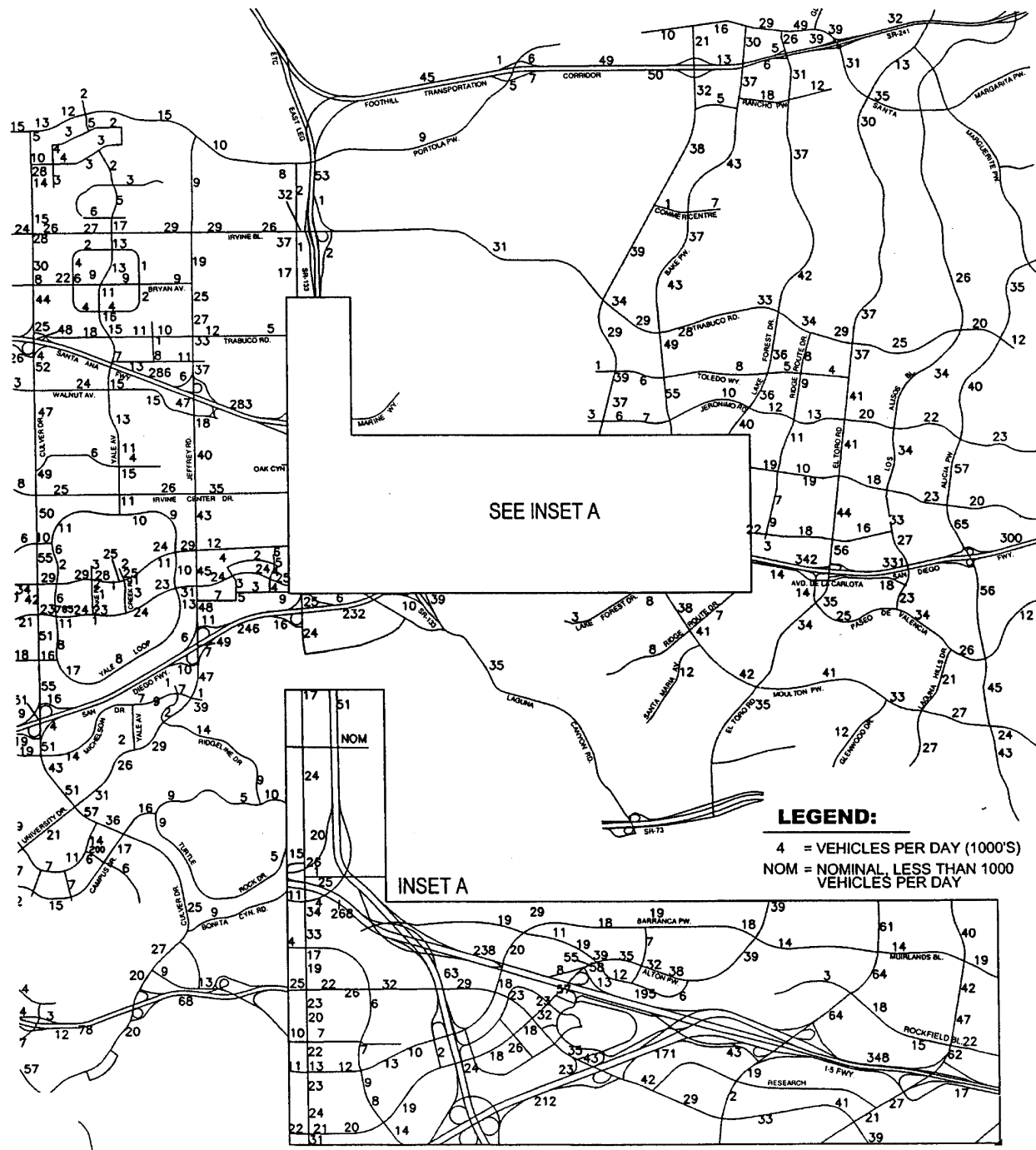
D = Divided

U = Undivided

F = Freeway

T = Toll Road

R = Ramp



Source: Urban Crossroads, 2002.



Not to Scale

Orange County Great Park
 Final EIR

Figure 5.2-11
 2007 Without Project
 Average Daily Traffic Volumes

City of Irvine

Year 2025

2025 Without Project Anticipated Roadway Improvements

Figure 5.2-12 depicts the number of through lanes for all the roadways within the 2025 study area. The funding cycle for roadway improvements generally encompasses a much shorter time frame than the 2025 horizon year studied. Most programmed/funded roadway improvements were identified as part of the 2007 improvements. The funded improvements anticipated to be completed by 2025 are identified in Table 5.2-3.

2025 Without Project Traffic Volumes

The ITAM 2025 daily traffic volume conditions, including all of the updated input data, are summarized on Figure 5.2-13. Daily traffic volumes are generally expected to increase throughout the study area from 2007 to 2025. Daily traffic volumes on I-5 north of the "Y" increase substantially. Irvine Center Drive, El Toro Road, Bake Parkway, Lake Forest Drive, and Culver Drive are expected to carry traffic volumes in excess of 50,000 vehicles per day (VPD). Peak hour (AM and PM) traffic volumes have also been estimated. Volume III of this EIR contains the peak hour intersection turning movement forecasts for 2025 without project conditions.

Buildout (Post 2025)

In accordance with City of Irvine General Plan policy, a General Plan buildout analysis has been completed as part of the traffic analysis contained in Volume III of this Final Program EIR. The City of Irvine General Plan Buildout study area and off-site analysis locations are similar to the 2007 analysis.

Post 2025 Without Project Anticipated Roadway Improvements

Figure 5.2-14 depicts the Year Post 2025 number of through lanes. This condition assumes planned roadways per the City of Irvine or MPAH. As discussed previously, the funding cycle for roadway improvements resulted in most funded improvements occurring within the first phase of development (by 2007). However, some additional improvements were identified for 2025 conditions. These unfunded buildout roadway segment improvements are summarized in Table 4-3 of Volume II Appendix G.

Post 2025 Without Project Traffic Volumes

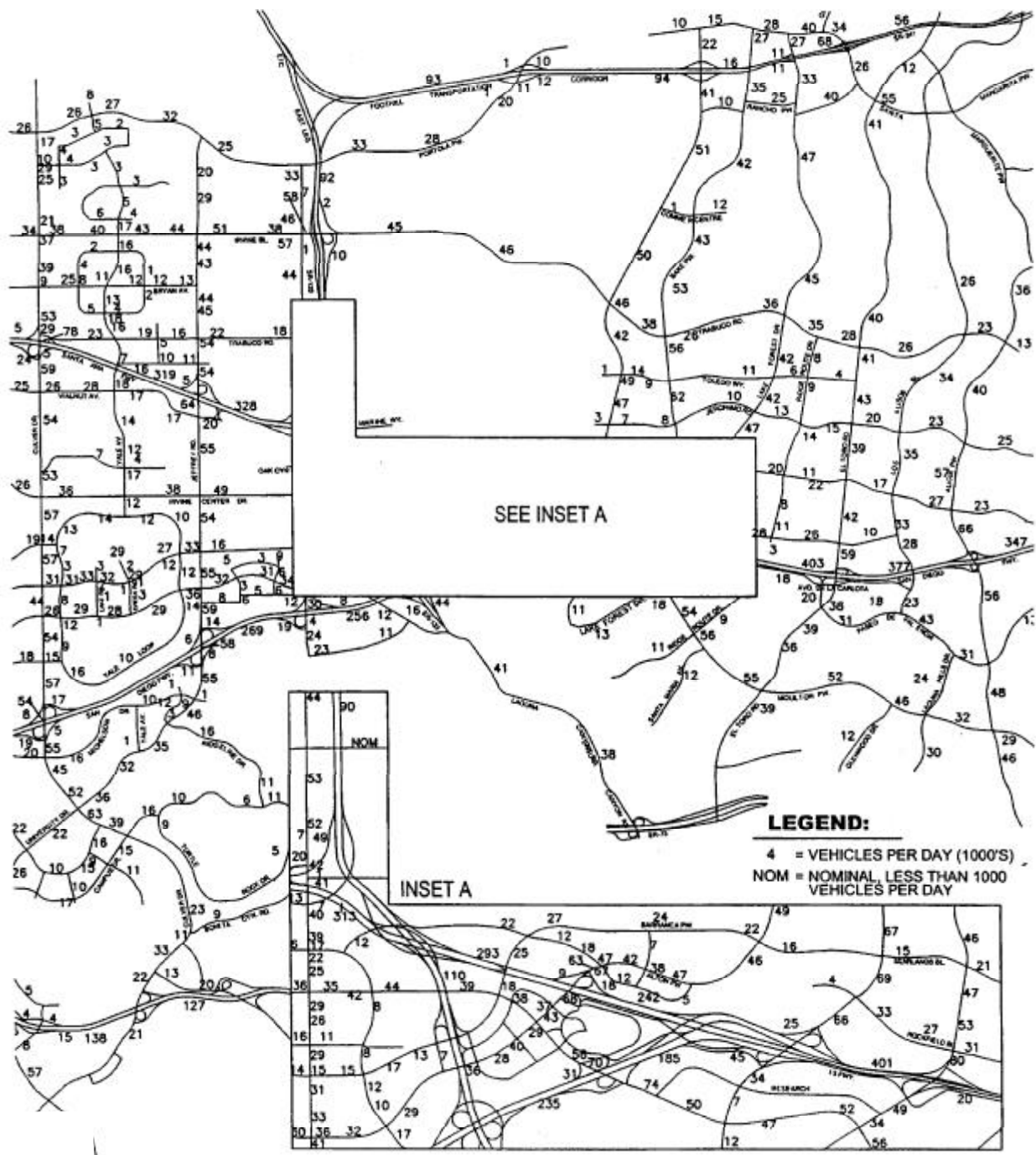
Figure 5.2-15 depicts the Year Post 2025 daily traffic volume conditions. The ITAM General Plan buildout conditions daily traffic volumes including all of the updated input data are summarized in Volume III Appendix K. Daily traffic volumes generally increase only slightly beyond 2025. General Plan buildout peak hour (AM and PM) traffic volumes have also been estimated by the ITAM. Volume III of this EIR contains the peak hour intersection turning movement forecasts for City of Irvine General Plan buildout without project conditions.

**Table 5.2-3
Funded 2007-2025 Roadway Improvements**

ROADWAY	SEGMENT LIMITS	LANES		SOURCE
		2007	2025	
"C" St.	Santiago Canyon Rd to North Lake	0	4U	E. Orange G.P.
Bake Pkwy.	Lake Forest Dr. to Irvine Center Dr.	0	6D	PA-34
Barranca Pkwy.	Jamboree Rd. to SR-55 Fwy.	6D	8D	IBC
California Av.	Bison Av. to Academy Dr.	2U	4D	PA 25/UCI
Culver Dr.	SR-241 to Santiago Canyon Rd.	0	6D	E. Orange G.P.
Culver Drive	Portola Pkwy. to PA1/PA2 Collector Loop	0	4U	PA 1/2
East Peltason Dr.	Bison Av. to Pereira Dr.	2U	4D	UCI
Southern Radial	California Av. to Bonita Canyon Dr.	0	4D	UCI
Handy Creek Rd.	Jamboree Rd. to SR-241	0	4U	E. Orange G.P.
Irvine Bl.	SR-133 to Research Pkwy.	5D	6D	MP II ¹
Irvine Bl.	Research Pkwy. to Alton Pkwy.	4D	6D	MP II ¹
Irvine Bl.	Holt Av. to Browning Av.	4D	6D	Tustin/County
Irvine Blvd.	Jeffrey Rd. to Sand Canyon Ave.	5D	6D	Northern Sphere
Irvine Blvd.	Yale Ave. to Jeffrey Rd.	5D	6D	Northern Sphere
Jeffrey Rd.	SR-241 to Santiago Canyon Rd.	0	4D	E. Orange G.P.
Jeffrey Rd.	Santiago Canyon Rd. to North Lake Rd.	0	4U	E. Orange G.P.
Lake Forest Dr.	Irvine Center Dr. to Tesla	2U	6D	PA-34
Lake Forest Dr.	Tesla to Bake Pkwy.	0	6D	PA-34
On-site MCAST Roads	Construct to 2025 conditions			MCAST
On-Site MP II Roads	Construct to 2025 conditions			MP II ¹
PA1/PA2 Collector Loop	n/o Portola Parkway	0	2U	PA 1/2
Rancho Pkwy.	Lake Forest Dr. to Portola Pkwy.	0	4D	BAKER RANCH
Red Hill Av.	MacArthur Bl. to Main St.	4D	6D	IBC
Sand Canyon Av.	Oak Cyn to I-5 Fwy.	4D	6D	Irvine CIP
Sand Canyon Ave.	Trabuco Rd. to Irvine Blvd.	5D	6D	Northern Sphere
Santiago Canyon Rd.	"B" St. to Jeffrey Rd. Ext.	2U	6D	E. Orange G.P.
Santiago Canyon Rd.	Jamboree Rd. to w/o SR-241	2U	6D	Santiago Hills II
Santiago Canyon Rd.	w/o SR-241 to Old Santiago Canyon Rd.	0	6D	East Orange G.P.
SR-133	I-5 Fwy. to Irvine Bl.	6T	6T+2H	TCA CIP
SR-133	Irvine Bl. to SR-241	8T	8T+2H	TCA CIP
SR-133	Construct Trabuco Rd. Interchange			MP II ¹
SR-241	SR-261 to SR-91	7T	7T+2H	TCA CIP
SR-241	Portola Pkwy. (West) to Oso Pkwy.	6T	8T+2H	TCA CIP
SR-241	Portola Pkwy. to SR-133	8T	8T+2H	TCA CIP
SR-241	Oso Pkwy. To Ortega Hwy.	0	6T+2H	TCA CIP
SR-241	Ortega Hwy. to I-5 Fwy.	0	4T+2H	TCA CIP
SR-241	SR-133 TO SR-261	6T	6T+2H	TCA CIP
SR-261	Walnut Av. to Irvine Bl.	4T	6T+2H	TCA CIP
SR-261	Irvine Bl. to Portola Pkwy.	6T	6T+2H	TCA CIP
SR-261	Portola Pkwy. to SR-241	5T	7T+2H	TCA CIP
SR-73	Bison Av. to Laguna Canyon Rd.	7T	9T+2H	TCA CIP
SR-73 Fwy.	Bison Av. to I-405 Fwy.	6F	8F+2H	OCTA/TCP CIP
SR-73	Bison Av. to Newport Coast Dr.	8T	10T+2H	TCA CIP
SR-73	Laguna Canyon Rd. to I-5 Fwy.	7T	8T+2H	TCA CIP
SR-73 Ramps	Aliso Creek Rd. realign and construct NB Off and SB On Ramps			TCA CIP
Technology Dr.	Ext. to Laguna Canyon Rd.	0	4U	PA 31
Von Karman Av.	Barranca Pkwy. to Michelson Dr.	4D	6D	IBC
Wanda Rd.	Katella Av. to 1/4 mile s/o Katella	2U	4U	City of Orange

¹ = Will apply to PA 40 study only for scenarios with MP II

D = Divided
U = Undivided
F = Freeway
T = Toll Road
H = HOV Lanes



Source: Urban Crossroads, 2002.

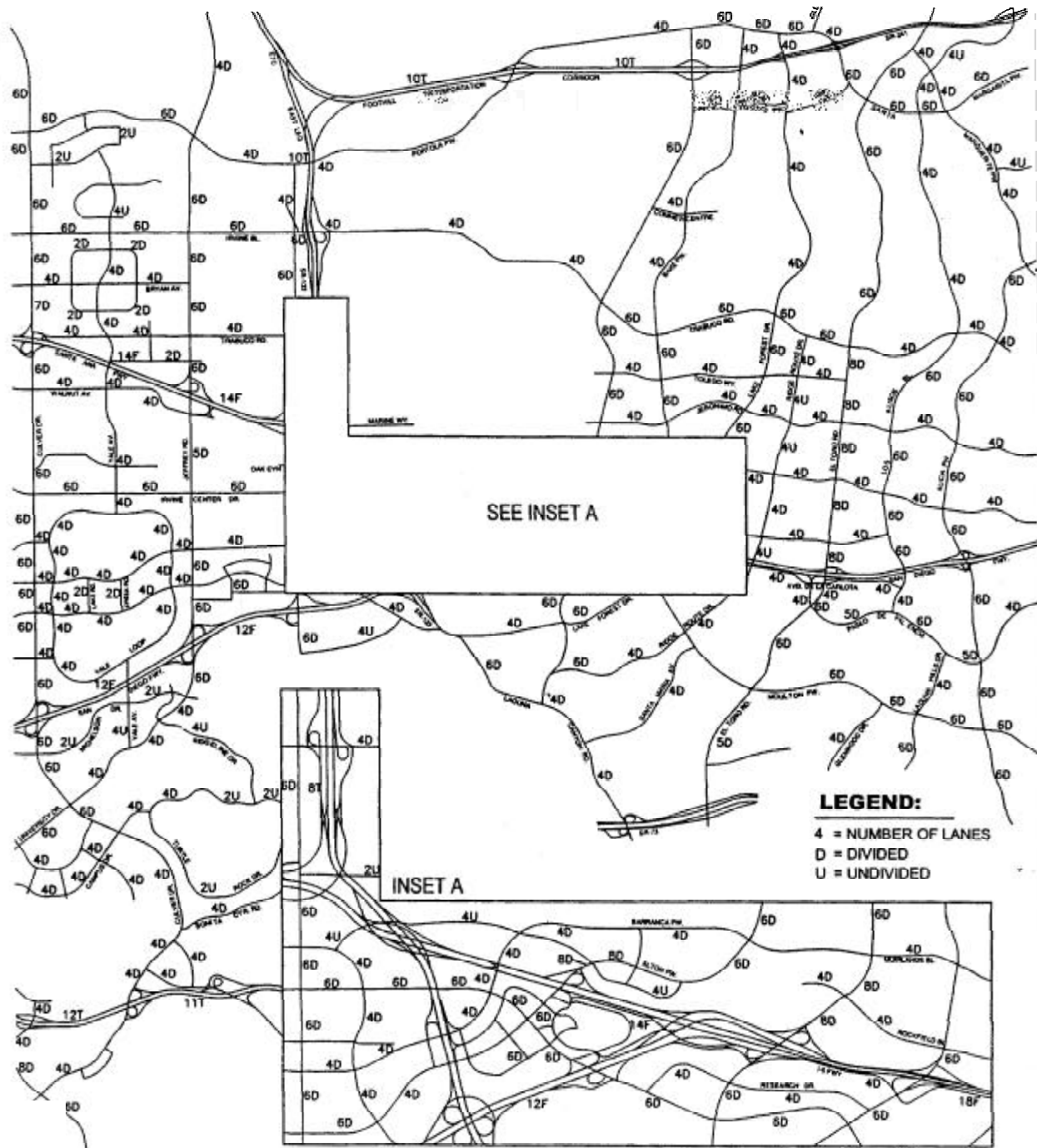


Not to Scale

Orange County Great Park
 Final EIR

Figure 5.2-13
 2025 Without Project
 Average Daily Traffic (ADT)

City of Irvine



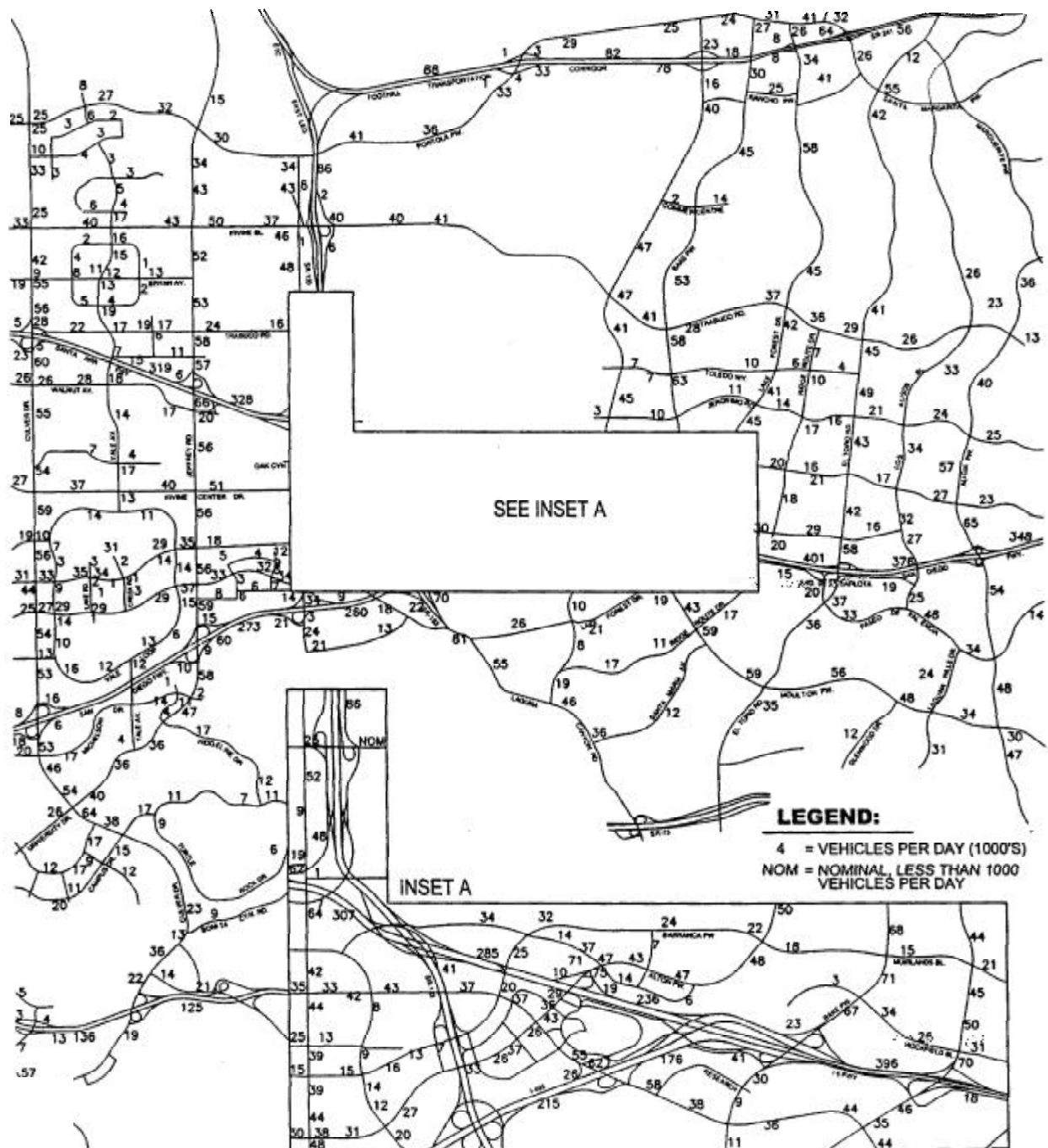
Source: Urban Crossroads, 2002.

Not to Scale

Orange County Great Park
 Final EIR

Figure 5.2-14
 Year Post 2025 Number of Through Lanes

City of Irvine



Source: Urban Crossroads, 2002.



Not to Scale

Orange County Great Park
Final EIR

Figure 5.2-15
Year Post 2025
Without Project
Average Daily Trips

City of Irvine

5.2.2 Threshold For Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for traffic.

1. *Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestion at intersections)?*
2. *Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?*
3. *Result in a change in air traffic patterns, including either an increase in traffic level or a change in location that results in substantial safety risks?*
4. *Substantially increase hazards due to design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*
5. *Result in inadequate emergency access?*
6. *Result in inadequate parking capacity?*

The specific criteria for evaluation of project impacts to traffic circulation are discussed under "City of Irvine Traffic Performance Criteria" at the beginning of this section.

5.2.3 Environmental Impact

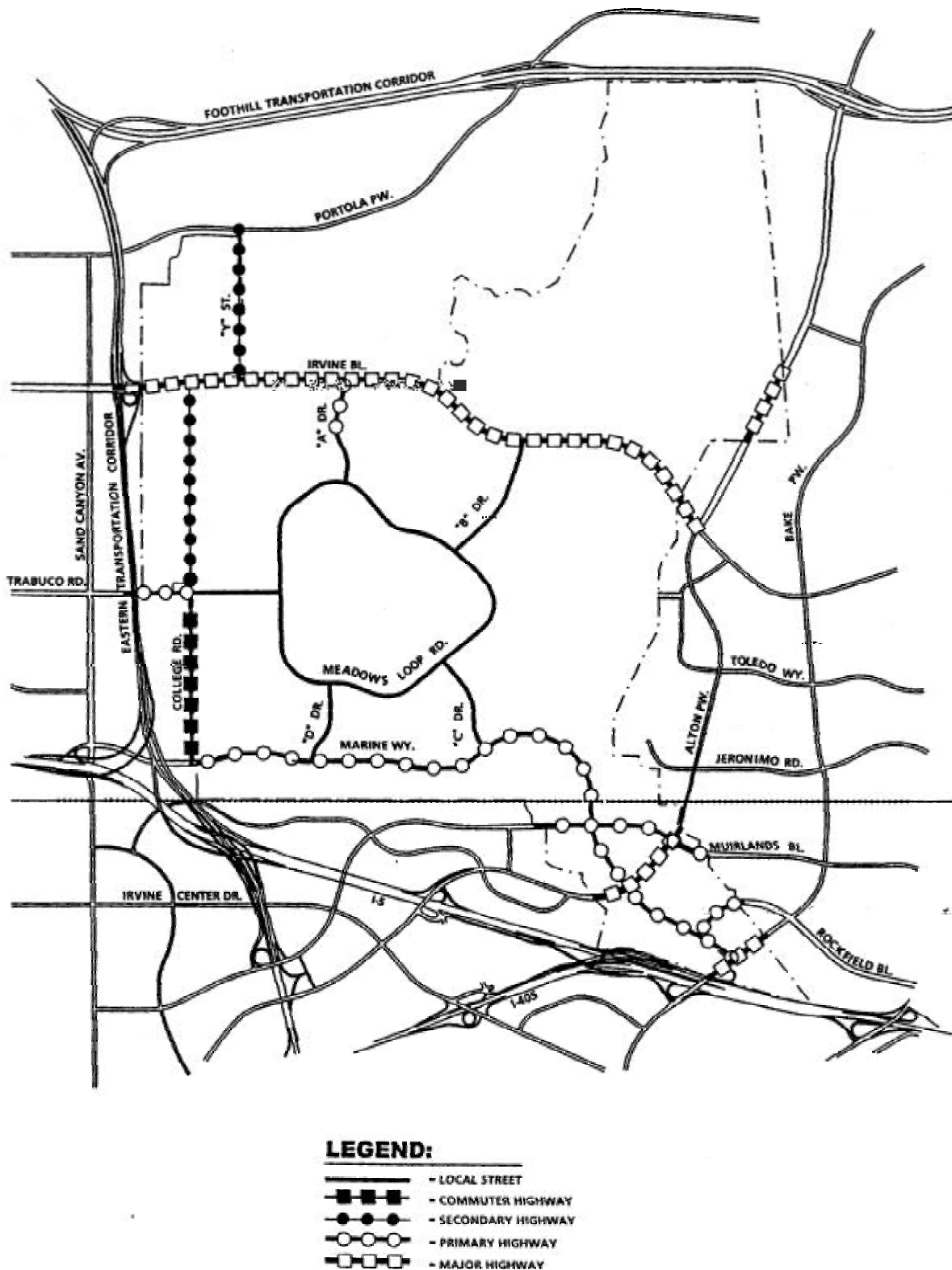
The following analysis focuses on the potential traffic and circulation impacts associated with implementation of the Base Plan and the Overlay Plan for the Former MCAS El Toro (PAs 51 and 30). The Musick Branch Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. As a result, implementation of the proposed project will not result in a significant traffic and circulation impact associated with the annexation of the James A. Musick Jail Facility and the IRWD Parcel.

Threshold 1. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestion at intersections)?

Base Plan

Project Roadway System

The proposed circulation system for the project will be constructed in conjunction with short range (2007) development. The 2007 project roadway system will include all of the proposed on-site roadway infrastructure. Figure 5.2-16 depicts the proposed 2007 on-site circulation system. A number of new roadways will be constructed in conjunction with project development. Marine Way will be constructed and realigned from the Bake Parkway/I-5.



Source: Urban Crossroads, 2002.

Not to Scale

Orange County Great Park
Final EIR

Figure 5.2-16
Year 2007 Project Circulation System
City of Irvine

Northbound Ramp through the project site until it joins with Sand Canyon Avenue at the I-5 Northbound Ramps. Trabuco Road will be extended from its current terminus east of the Eastern Transportation Corridor (ETC) across to Meadows Loop Road. "A" Drive and "B" Drive will be connected with Irvine Boulevard on-site to provide access to the central park loop road. "C" and "D" Drives will provide access between the central park area and Marine Way.

Interim Year 2007

2007 Base Project Land Use

The 2007 project land use associated with the Base Plan is summarized on Table 3-5 of the Project Description. Approximately 410 project dwelling units are anticipated for 2007 conditions under the Base Plan project. The most prevalent type of on-site development for 2007 conditions is open space/park. Other uses include warehousing, golf courses, community facilities and auto center uses, along with some research and development, transportation, sports park, and cultural/institutional uses.

2007 Base Project Trip Generation

Project trip generation estimates have been developed for 2007, 2025, and Post-2025 conditions based on currently adopted ITAM procedures. Land use is converted into socio-economic data (SED); the SED is used to generate trips using trip generation rates. The 2007 project trip generation by planning analysis zone (PAZ) and traffic analysis zone (TAZ) is summarized on Table 5.2-4. As shown on Table 5.2-4, the Base Plan project is expected to generate more than 45,000 daily vehicle trips in 2007. Table 5-11 of Volume II Appendix G depicts trip generation by land use type.

2007 Base Project Trip Distribution and Daily Traffic

The 2007 Base project trip distribution is presented in Volume II Appendix G. The roadways carrying the highest proportion of project traffic include Marine Way (20 percent) and Irvine Boulevard (20 percent). These percentages occur on-site. Off-site, Sand Canyon Avenue, Bake Parkway, and I-5 carry approximately ten percent or more of project traffic.

2007 With Base Project Traffic Projections

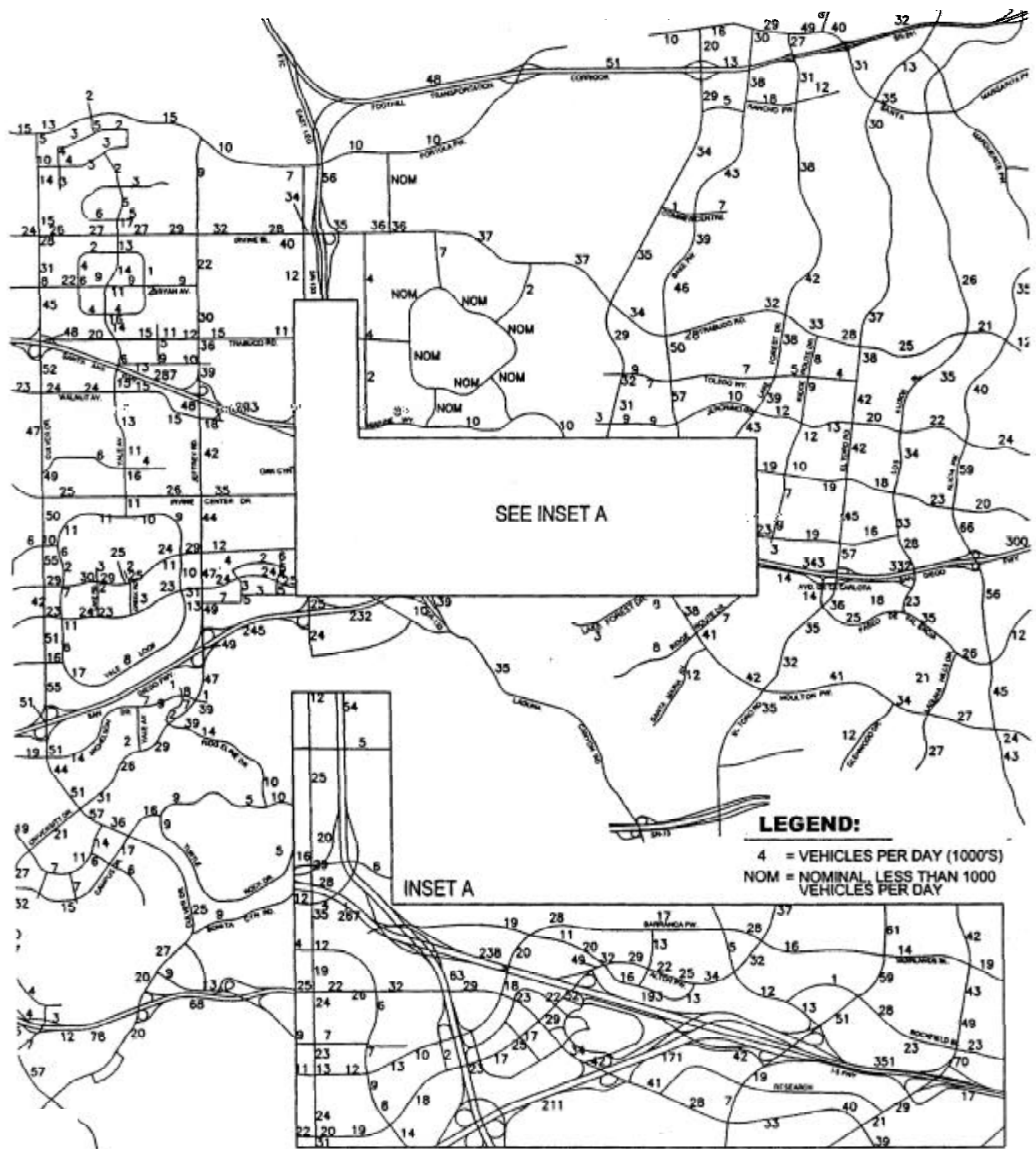
The ITAM 2007 with Base project conditions daily traffic volumes are summarized on Figure 5.2-17. Daily traffic volumes are generally similar to the 2007 no project scenario. There are minor daily volume increases in the area of the project, but no significant increases.

2007 with project peak hour (AM and PM) traffic volumes have also been estimated using the ITAM output. Volume III of this Final Program EIR contains the peak hour roadway segment and intersection turning movement forecasts.

**TABLE 5.2-4
2007 BASE PROJECT
DAILY TRIP GENERATION SUMMARY**

PAZ	TAZ	SED Daily Trip Generation	Land Use Daily Trip Generation
1.	586	402	402
2.	594	1,950	3,350
3.	591	164	164
4.	614	181	181
5.	588	157	641
6.	589	161	161
7.	587	0	0
8.	597	7,930	4,620
9.	596	0	0
10.	600	429	1,531
11.	593	0	0
12.	603	7,919	7,235
13.	610	2,509	7,909
14.	602	208	208
15.	598	419	419
16.	599	114	114
17.	590	7,071	7,071
18.	611	2,257	695
19.	613	1,273	643
20.	601	20	20
21.	612	20	20
22.	616	30	30
23.	609	3,961	2,115
24.	615	164	164
25.	917	0	0
26.	322	27	27
27.	918	37	37
28.	919	77	77
29.	321	67	67
30.	921	13	13
31.	323	77	77
32.	920	2,046	1,694
33.	922	1,458	1,462
34.	923	464	459
35.	924	1,298	1,295
36.	324	2,134	1,875
TOTAL		45,037	45,046

Source: Urban Crossroads, December 2002.



Source: Urban Crossroads, 2002.



Not to Scale

Orange County Great Park
 Final EIR

Figure 5.2-17
 2007 With Base Project
 Average Daily Trips

City of Irvine

Year 2025

2025 Base Project Land Use

The 2025 Base project land uses are summarized in Table 3-3 of the Project Description. Under the Base Plan, 225 project dwelling units are anticipated for 2025 conditions. Land use is predominately open space. Developed uses include commercial, golf courses, community facilities, and auto center uses, along with office park and educational uses. The proposed development also includes active Sports Park uses.

2025 Base Project Trip Generation

The proposed 2025 Base project includes a number of unique land uses, including a proposed sports park, educational uses, etc. Table 5.2-5 summarizes the 2025 Base project vehicle trip generation per PAZ and TAZ. As shown on Table 5.2-5, the project is expected to generate about 91,000 daily vehicle trips.

2025 Base Project Trip Distribution and Daily Traffic

The 2025 Base project trip distribution is presented in Volume II Appendix G. The roadways carrying the highest proportion of project traffic are Irvine Boulevard (22 percent) and Marine Way (19 percent). Other roadways expected to carry 10% or more of project traffic include Trabuco Road, College Drive, and Barranca Parkway.

2025 With Base Project Traffic Projections

The 2025 with Base project conditions daily traffic volumes are illustrated on Figure 5.2-18. Daily traffic volumes exhibit increases primarily on roadways near the project site, notably on Irvine Boulevard, the I-5 Freeway, and the SR-133 Tollway. Marine Way is projected to carry daily traffic volumes ranging from 8,000 vehicles per day (VPD) north of Alton Parkway to 21,000 VPD north of Barranca Parkway. Peak hour (AM and PM) traffic volumes have also been estimated by the ITAM. Volume III contains the 2025 peak hour intersection turning movement forecasts for 2025 with Base Plan conditions.

**TABLE 5.2-5
2025/(BUILDOUT) POST 2025 BASE PROJECT
DAILY TRIP GENERATION SUMMARY**

PAZ	TAZ	SED Daily Trip Generation	Land Use Daily Trip Generation
1.	586	416	416
2.	594	1,004	1,004
3.	591	170	170
4.	614	187	187
5.	588	292	292
6.	589	298	3,341
7.	587	3,000	1,697
8.	597	12,799	7,233
9.	596	391	223
10.	600	2,446	1,531
11.	593	2,608	1,474
12.	603	8,200	7,235
13.	610	11,196	25,272
14.	602	384	384
15.	598	776	776
16.	599	211	221
17.	590	24,159	24,159
18.	611	2,337	1,287
19.	613	1,343	643
20.	601	21	21
21.	612	21	21
22.	616	31	31
23.	609	9,732	4,730
24.	615	971	971
25.	917	0	0
26.	322	28	28
27.	918	38	38
28.	919	80	80
29.	321	69	69
30.	921	13	13
31.	323	80	80
32.	920	2,118	1,694
33.	922	1,510	1,462
34.	923	480	459
35.	924	1,344	1,295
36.	324	2,210	1,875
TOTAL		90,963	90,412

Source: Urban Crossroads, 2002.

(Buildout) Post 2025

Post 2025 Base Project Land Use

The Post 2025 Base project land uses are summarized in Table 3-3 of the Project Description. Under the Base Plan, 225 project dwelling units are anticipated for Post 2025 conditions. Land use is predominately open space. Developed uses include commercial, golf courses, community facilities, and auto center uses, along with office park and educational uses. The proposed development also includes active Sports Park uses.

Post 2025 Base Project Trip Generation

Because buildout of the Base project is expected by 2025, the Post 2025 project trip generation is the same as the 2025 condition. Table 5.2-5 above summarizes the Post 2025 Base project vehicle trip generation by PAZ and TAZ. As shown on Table 5.2-5, the project is anticipated to generate approximately 91,000 daily vehicle trips by 2025.

Post 2025 Base Project Trip Distribution and Daily Traffic

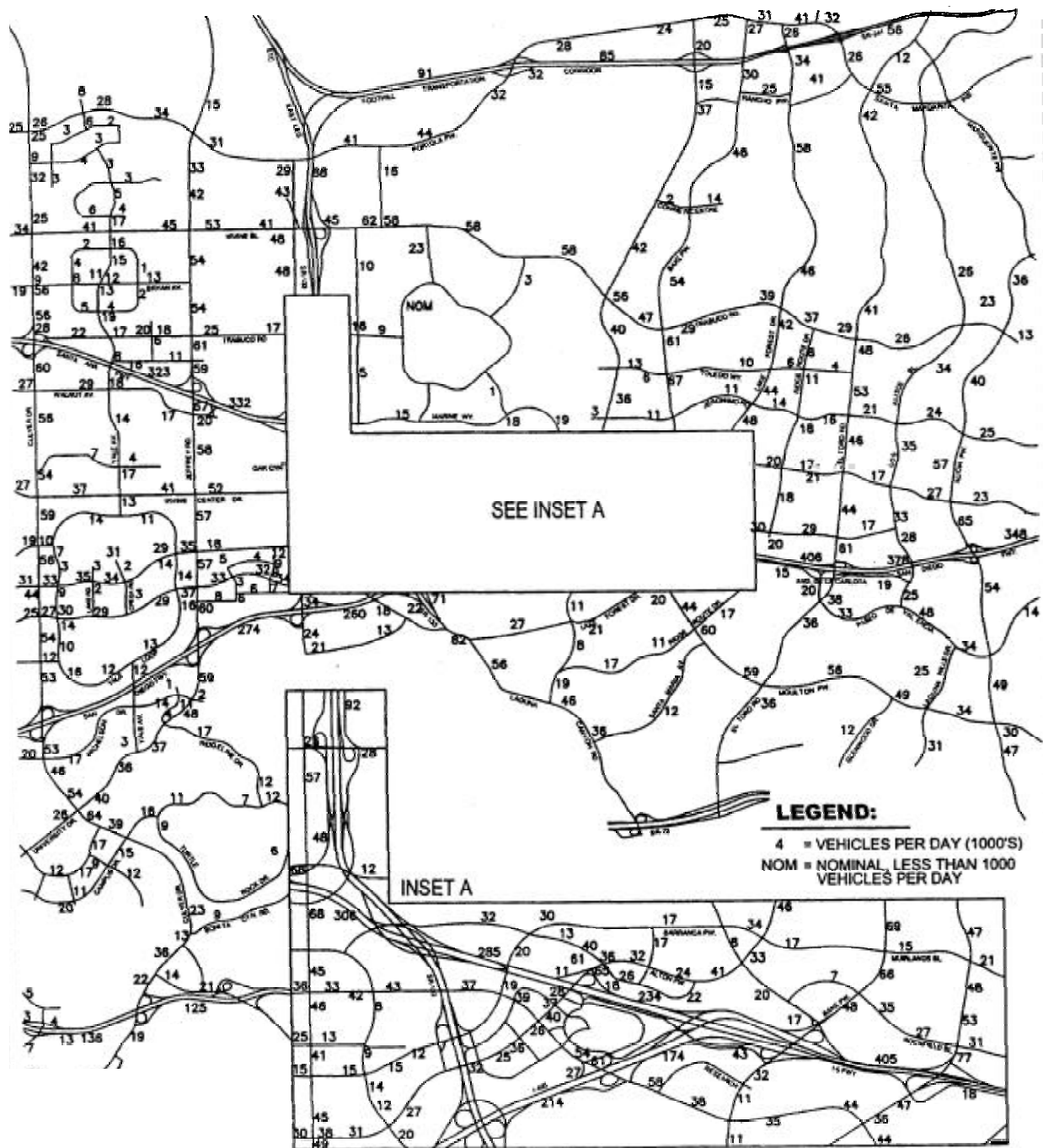
The Post 2025 Base project trip distribution is presented in Volume II Appendix G. The primary trip distribution pattern changes are attributed to the addition of the ETC East Leg interchange with Trabuco Road. Roadways projected to carry more than ten percent of the project traffic include Trabuco Road, Marine Way, ETC East Leg, and Irvine Boulevard.

Post 2025 With Base Project Traffic Projections

The Post 2025 with Base project conditions daily traffic volumes are summarized in Figure 5.2-19. Daily traffic volumes generally differ from the no project scenario near the project site. Differences from the 2025 volume with the Base project reflect network changes as well as additional growth. Peak hour (AM and PM) traffic volumes have also been estimated by the ITAM. Volume III Appendix L contains the Post 2025 peak hour intersection turning movement forecasts for Post 2025 with project conditions.

Base Plan Daily Roadway Segment Analysis

Table 7-1 contained in Volume II Appendix G presents the 2007 without project daily roadway segment analysis. Table 7-2 of Volume II Appendix G depicts the results of the 2007 with Base Plan daily roadway segment analysis. Table 7-4 of Volume II Appendix G presents the 2025 without project daily roadway segment analysis. The 2025 with Base Plan daily roadway segment analysis results are presented on Table 7-5 of Volume II Appendix G. The Post 2025 without project daily roadway segment analysis results are presented on Table 7-7 of Volume II Appendix G. The Post 2025 with Base Plan daily roadway segment analysis results are presented on Table 7-8 of Volume II Appendix G. The daily roadway segment volume/capacity ratio calculations have been used to determine where peak hour roadway segment analysis is required.



Source: Urban Crossroads, 2002.



Not to Scale

Orange County Great Park
Final EIR

Figure 5.2-19
Post Year 2025
With Base Project
Average Daily Traffic (ADT)

City of Irvine

Year 2007 - Based on these calculations, six roadway segments experience daily deficiencies and meet the project impact significance threshold of exceeding 0.02 for all roadways except CMP roadways where the CMP criteria of an increase exceeding 0.03 has been applied in the 2007 with Base Plan condition. The roadway segments that require further peak hour analysis are:

1. Sand Canyon Avenue between the I-5 Freeway and Oak Canyon
2. Bake Parkway between Commercentre and Muirlands Boulevard
3. Lake Forest Drive between Trabuco Road and SR-241 Tollway
4. Lake Forest Drive between I-5 Freeway and Rockfield Boulevard
5. Alicia Parkway between I-5 Freeway and Jeronimo Road
6. Avenida de la Carlota between El Toro Road and Paseo de Valencia

Year 2025 – Based on the calculation presented in Table 7-5 of Volume II Appendix G, 60 roadway segments require the need for further analysis of peak hour conditions in the 2025 with Base Plan condition. Please refer to Table 7-5 for a complete list of these roadway segments.

Post 2025 - Based on the calculation presented in Table 7-8 of Volume II Appendix G, 57 roadway segments require the need for further analysis of peak hour conditions in the Post 2025 with Base Plan condition. Please refer to Table 7-8 for a complete list of these roadway segments.

Base Plan Peak Hour Roadway Segment Analysis

Peak hour roadway segment analysis has been performed wherever a daily roadway segment V/C ratio identified the need for such analysis with project conditions. Only if a peak hour deficiency is identified has further analysis been performed and possible mitigation required. For these cases (peak hour deficiency has been identified with project conditions), “no project” conditions peak hour analysis has also been performed. If a significant impact is identified (project contributes .02 or greater to the V/C ratios), then necessary improvements to provide acceptable peak hour operations have been determined.

Year 2007 – Table 7-10 of Volume II Appendix G summarizes the peak hour roadway segment analysis for the Year 2007 with Base Plan condition. No roadway segment deficiency has been identified for the Year 2007 with Base Plan conditions.

Table 7-13 of Volume II Appendix G summarizes the peak hour freeway/tollway mainline segment analysis for the Year 2007 with Base Plan condition. Although five freeway/tollway mainline segments are projected to experience deficient operations under these conditions, the Base Plan will not have a significant impact (increase in V/C ratio of greater than 0.03) on the mainline freeway/tollway system.

Table 7-16 summarizes the peak hour freeway/tollway ramp segment analysis for the Year 2007 with Base Plan conditions. Of the three ramps that experience deficient operations under these conditions, the Base Plan will have a significant impact (increase in V/C ratio of greater than 0.03) at the I-5 Freeway Southbound off ramp at Alton Parkway.

Year 2025 – Table 7-18 of Volume II Appendix G summarizes the 2025 with Base Plan peak hour roadway segment analysis. No 2025 peak hour roadway segment deficiencies have been identified.

Table 7-21 of Volume II Appendix G summarizes the peak hour freeway/tollway mainline segment analysis for the Year 2025 with Base Plan condition. Of the 11 freeway/tollway mainline segments anticipated to experience deficient operations under these conditions, the Base project will not have a significant impact at any location.

Table 7-24 of Volume II Appendix G summarizes the peak hour freeway/tollway ramp segment analysis for the Year 2025 with Base Plan conditions. Of the 16 ramp segments anticipated to experience deficient operations under these conditions, the project will have a significant impact at the following locations:

1. I-5 Freeway at Jeffrey Road – southbound on ramp (AM/PM)
2. I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM)
3. I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM)
4. I-5 Freeway at Bake Parkway – southbound off ramp (AM)
5. I-405 Freeway at Jeffrey Road – northbound off ramp (PM)
6. I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM)
7. I-405 Freeway at Sand Canyon Avenue – southbound off ramp (AM)
8. SR-241 Tollway at Lake Forest Drive – southbound off ramp (AM)

Post 2025 – Table 7-26 of Volume II Appendix G summarizes the peak hour roadway segment analysis for the Post 2025 with Base Plan condition. Based on the analysis, no peak hour roadway segment deficiency has been identified.

Table 7-29 of Volume II Appendix G summarizes the peak hour freeway/tollway mainline segment analysis for the Post 2025 with Base Plan condition. Of the eleven segments anticipated to experience deficient operations under these conditions, the project will have a significant impact at the following locations:

1. I-5 Freeway from Jeffrey Road to Sand Canyon Avenue- southbound (AM)
2. I-405 Freeway from Jeffrey Road to Sand Canyon Avenue- southbound (AM)

Table 7-32 of Volume II Appendix G summarizes the Post 2025 with Base Plan conditions peak hour freeway/tollway ramp segment analysis. Based upon the review of the increase in freeway/tollway ramp volume to capacity ratios, the Base Plan will have a significant impact under Post 2025 conditions at the following locations:

1. I-5 Freeway at Jeffrey Road – south bound on ramp (AM/ PM)
2. I-5 Freeway at Sand Canyon Avenue - north bound on ramp (PM)
3. I-5 Freeway at Sand Canyon Avenue - south bound off ramp (AM)
4. I-5 Freeway at Bake Parkway - south bound off ramp (AM)
5. I-405 Freeway at Sand Canyon Avenue - north bound direct on ramp (PM)
6. I-405 Freeway at Sand Canyon Avenue - south bound off ramp (AM)

Base Plan Peak Hour Intersection Operation Analysis

All of the peak hour intersection analysis which has been conducted as part of this analysis is based on the intersection geometric summarized in Volume III Appendix K of this EIR. Appendix K provides a summary of the geometric configuration for each analysis time frame at every intersection where analysis was performed for the time frame in question. This makes it possible for the reader to fully understand the phasing and nature of all baseline improvements prior to mitigation. At a minimum, mitigation analysis has been conducted wherever the project causes a 0.02 increase in intersection capacity utilization (ICU), and the "with project" ICU is deficient.

Year 2007 – Tables 7-34, 7-35, and 7-36 of Volume II Appendix G summarize the 2007 with project (both the Base Plan and Overlay Plan) intersection operation analysis. Of the 17 deficient intersections in 2007, the proposed Base Plan will impact the four intersections identified in Table 5.2-6. Table 5.2-6 summarizes the improvements needed to mitigate project impacts for 2007 conditions.

Year 2025 - Tables 7-37, 7-38, and 7-39 of Volume II Appendix G summarize the 2025 with project (both the Base Plan and Overlay Plan) intersection operation analysis. Of the 47 deficient intersections in 2025, the proposed Base Plan will impact the 16 intersections identified in Table 5.2-7. Table 5.2-7 summarizes the improvements needed to mitigate project impacts for 2025 conditions.

Post 2025 - Tables 7-40, 7-41, and 7-42 of Volume II Appendix G summarize the Post 2025 with project (both the Base Plan and Overlay Plan) intersection operation analysis. Of the 45 deficient intersections in Post-2025, the proposed Base Plan will impact the 18 intersections identified in Table 5.2-8. Table 5.2-8 summarizes the improvements needed to mitigate project impacts for Post-2025 conditions.

**TABLE 5.2-6
YEAR 2007 BASE PLAN INTERSECTION IMPACTS AND SUMMARY OF MITIGATION REQUIRED**

Intersection	2007 No Project				2007 with Base Plan						Mitigation
	ICU		Deficient		ICU		Change		Impact		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
Irvine											
Alton Pkwy./Irvine Blvd.	0.79	0.87			0.74	0.94	-0.05	0.07		****	Convert SB right turn lane to a SB free right turn lane
Irvine/Laguna Hills											
Lake Forest Dr./Avenida de la Carlota	0.810	0.881			0.799	0.934	-0.011	0.053		****	Construct second WB left turn lane and provide WB right turn overlap phase and NB right turn lane
El Toro Road/Avenida de la Carlota	0.834	1.150		****	0.837	1.170	0.003	0.020		****	Restripe WB to one shared left through land and two right turn lanes
Lake Forest											
El Toro Rd./Jeronimo Rd.	0.72	0.93		****	0.73	0.96	0.01	0.03		****	Construct second SB left turn lane
Mission Viejo											
Alicia Pkwy./Muirlands Blvd.	0.89	0.95		****	0.91	0.97	0.02	0.02	****	****	Construct second SB left turn lane and convert EB right turn lane to EB free right turn lane

**TABLE 5.2-7
YEAR 2025 BASE PLAN INTERSECTION IMPACTS AND SUMMARY OF MITIGATION REQUIRED**

Intersection	2025 No Project				2025 with Base Plan						Mitigation
	ICU		Deficient		ICU		Change		Impact		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
Irvine											
Jeffrey Rd./Irvine Center Dr.	0.89	0.93		****	0.89	0.95	0.00	0.02		****	Construct fourth WB through lane
Laguna Canyon Road/Old Laguna Canyon Road	0.89	0.82	****		0.91	0.82	0.02	0.00	****		Construct third NB through lane (approach improvements only)
Alton Pkwy./Irvine Blvd.	1.09	1.20	****	****	0.98	1.32	-0.11	0.12		****	Convert SB right turn lane into SB free right turn lane
Irvine/Lake Forest											
Bake Pkwy./Irvine Blvd.	0.94	0.87	****		1.17	0.85	0.23	-0.02	****		Construct third NB left turn lane or construct a fourth WB through lane
Bake Pkwy./Jeronimo Road	1.06	0.88	****		1.17	0.90	0.11	0.02	****		Construct second NB left turn lane
Lake Forest Dr./Irvine Center Dr.	0.878	0.902		****	0.888	0.927	0.001	0.025		****	Restripe EB defacto right turn lane into shared right through lane
Irvine/Laguna Hills											
Lake Forest Dr./Irvine Center Dr.	0.878	0.902		*****	0.888	0.927	0.010	0.025		*****	Restripe EB defacto right turn lane into shared right through lane
Lake Forest											
Lake Forest Dr./Trabuco Rd.	0.84	0.86			0.87	0.91	0.03	0.05		****	Construct SB right turn lane
Lake Forest Dr./Jeronimo Rd.	0.92	0.91	****	****	0.97	0.94	0.05	0.03	****	****	Construct EB and WB right turn lanes
Lake Forest Dr./Muirlands Blvd.	0.78	0.88			0.80	0.91	0.02	0.03		****	Reconstruct second NB and SB left turn lanes to NB and SB through lanes, respectively
Lake Forest Dr./Rockfield Blvd.	0.90	1.06		****	0.94	1.08	0.04	0.02		****	Construct third WB left turn lane or convert a SB left turn lane into a SB through lane or ATMS
El Toro Rd. /Jeronimo Rd.	0.80	0.98		****	0.81	1.02	0.01	0.04		****	Construct second SB left turn lane
Lake Forest/Mission Viejo											
Muirlands Blvd./Los Alisos Blvd.	0.97	1.20	****	****	0.99	1.21	0.02	0.01	****		Construct second WB left turn lane
Laguna Hills											
El Toro Rd./Avenida de la Carlota	1.005	1.402	****	****	1.052	1.421	0.047	0.019	****	****	Restripe WB approach to provide one shared left turn/through lane and two right turn lanes
Laguna Hills/Laguna Woods											
Pas. de Valencia/Ave. de la Carlota	0.801	0.992		****	0.801	1.012	0.000	0.020		****	Construct third SB left turn lane, including receiving lane
Laguna Hills Dr./Pas. De Valencia	0.816	1.066		****	0.838	1.079	0.02	0.02		****	Provide EB right turn overlap phase
Santa Maria Ave./Moulton Pkwy.	0.884	0.922		****	0.897	0.936	0.013	0.014		****	Construct EB right turn lane
Mission Viejo											
Los Alisos Blvd./Trabuco Rd.	0.93	0.80	****		0.95	0.80	0.02	0.00	****		Construct second NB left turn lane
Alicia Pkwy./Muirlands Blvd.	0.92	1.00	****	****	0.94	1.00	0.02	0.00	****		Restripe SB right turn lane to shared (fourth) through/right turn lane

**TABLE 5.2-8
POST 2025 BASE PLAN INTERSECTION IMPACTS AND SUMMARY OF MITIGATION REQUIRED**

Intersection	Post 2025 No Project				Post 2025 with Base Plan						Mitigation
	ICU		Deficient		ICU		Change		Impact		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
Aliso Viejo/Laguna Hills											
Moulton Pkwy./Laguna Hills Dr.	0.893	0.951		****	0.908	0.957	0.015	0.006	****	****	Construct third WB through lane and provide WB right turn overlap phase
Moulton Pkwy./Glenwood Dr.	0.981	0.814	****		0.989	0.824	0.008	0.010	****		Construct fourth NB through lane
Irvine											
Jeffrey Rd./Irvine Ctr. Dr.	0.90	0.93		****	0.92	0.96	0.02	0.03	****	****	Construct fourth SB through lane and fourth WB through lane
Sand Cyn. Ave./Alton Pkwy.	1.07	0.71	****		1.10	0.71	0.03	0.00	****		Provide NB right turn overlap
Alton Pkwy./Irvine Blvd.	1.10	0.89	****		0.89	0.94	-0.21	0.05		****	Provide fourth WB through lane (in addition to SB free right turn lane)
Laguna Cyn. Rd./Bake Pkwy.	1.44	1.11	****	****	1.45	1.13	0.01	0.02		****	Construct second SB left turn lane
Sand Cyn. Ave./Collector St.	1.09	1.20	****	****	1.19	1.28	0.10	0.08	****	****	Construct second EB through lane
Irvine/Laguna Hills											
Lake Forest Dr./Ave. de la Carlota	1.135	1.123	****	****	1.134	1.130	0.001	0.007	****	****	Convert EB right turn lane into free right turn lane
Irvine/Lake Forest											
Bake Pkwy./Irvine Blvd.	1.03	0.81	****		1.00	0.99	-0.03	0.18		****	Construct third NB left turn lane and second EB right turn lane or convert EB right turn lane to free right turn lane
Bake Pkwy./Jeronimo Rd.	1.13	0.93	****	****	1.20	0.94	0.07	0.01	****		Construct second NB left turn lane
Lake Forest											
Lake Forest Drive/SR 241 SB Ramps	0.93	0.73	****		0.95	0.74	0.02	0.01	****		Construct second EB right turn lane
Lake Forest Dr./Jeronimo Rd.	0.90	0.88			0.95	0.90	0.05	0.02	****		Construct EB and WB right turn lanes
Lake Forest Dr./Rockfield Blvd.	0.84	0.94		****	0.88	1.01	0.04	0.07		****	Construct third WB left turn lane or construct a SB through lane
Ridge Route Dr./Rockfield Blvd.	0.79	0.93		****	0.82	0.95	0.03	0.02		****	Construct second WB left turn lane
El Toro Rd. /Jeronimo Rd.	0.83	1.00		****	0.87	1.03	0.04	0.03		****	Construct second SB left turn lane
Lake Forest Dr./Rancho Pkwy. N	1.10	1.01	****	****	1.12	0.99	0.02	0.02	****	****	Construct second NB left lane and second EB right turn lane
Lake Forest/Mission Viejo											
Los Alisos Blvd./Jeronimo Rd.	0.88	0.95		****	0.91	0.96	0.03	0.01	****		Construct second WB left turn lane
Muirlands Blvd./Los Alisos Blvd.	0.98	1.16	****	****	1.01	1.19	0.03	0.03	****	****	Construct second WB left turn lane
Laguna Hills/Laguna Woods											
Pas. de Valencia/Ave. de la Carlota	0.774	0.915		****	0.782	0.938	0.008	0.023		****	Construct third SB left turn lane, including receiving lane or construct third EB and third NB through lane
Santa Maria Ave./Moulton Pkwy.	0.97	0.96	****	****	0.97	0.98	0.00	0.02		****	Construct second NB left turn lane
Laguna Hills Dr./Pas. de Valencia	0.845	1.130		****	0.850	1.137	0.005	0.007		****	Provide EB right turn overlap phase
Laguna Hills											
El Toro Rd./Ave. de al Carlota	0.666	0.985	****	****	0.690	1.010	0.024	0.025	****	****	Construct fourth NB through lane

Master Plan of Arterial Highways Amendment

The MPAH establishes a countywide roadway network intended to ensure coordinated transportation system development among local jurisdictions in Orange County. The main purpose of the MPAH is to describe an arterial system that effectively serves existing and adopted future land uses in both incorporated and unincorporated areas of Orange County. Extensive coordination with the transportation and land use planning and implementation process carried on by the cities of Orange County, the County of Orange, and adjacent jurisdictions is essential for the MPAH to provide its intended service to County motorists.

Marine Way should be included on the MPAH. This is consistent with the character and role of Marine Way in the regional roadway system. Marine Way will be designated as a primary or secondary arterial per the City of Irvine and Orange County Transportation Authority (OCTA) adopted standards. It will also provide a logical terminus for the realigned Rockfield Boulevard. The preference of OCTA is for arterial roadways to end only at other arterial roadways (e.g., no “stub” links). This is another reason to recommend including Marine Way on the MPAH. Marine Way may also be impacted by regional through traffic, particularly if an accident should occur that affects operations on parallel segments of the I-5 Freeway.

“Y” Street should be designated as a Secondary Highway from Portola Parkway to Irvine Boulevard and Trabuco Road should be designated as a Primary Highway from the SR-133 Tollway to College Road.

Rockfield Boulevard is currently shown on the MPAH as extending from its current terminus west to connect to Alton Parkway between the I-5 Freeway and Barranca Parkway. The proposed amendment will extend Rockfield Boulevard from its current terminus to the southwest to connect to the proposed alignment of Marine Way. Rockfield Boulevard will be designated as a primary arterial per the City of Irvine and Orange County Transportation Authority (OCTA) adopted standards.

As part of the General Plan Amendment for the Orange County Great Park, the City of Irvine will amend both the Land Use Element and the Circulation Element contained in its General Plan. This is a necessary part of the development process. However, following City of Irvine annexation of the Orange County Great Park has been approved, the City will submit a request to the OCTA to initiate a cooperative study, involving the OCTA and other affected agencies, for the purpose of bringing the City’s Master Plan of Arterial Highways into conformity with the Orange County Master Plan of Arterial Highways.

The City understands that the cooperative study would typically occur prior to the City amending its General Plan circulation element. However, because OCTA cannot recognize the City jurisdiction within portions of the Orange County Great Park until the annexation occurs, and the annexation cannot occur without the City first adopting a General Plan Amendment that demonstrates consistency between the Land Use and Circulation Elements, the City intends to enter into the cooperative agreement with the OCTA as soon as possible once the annexation is complete.

Threshold 2. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

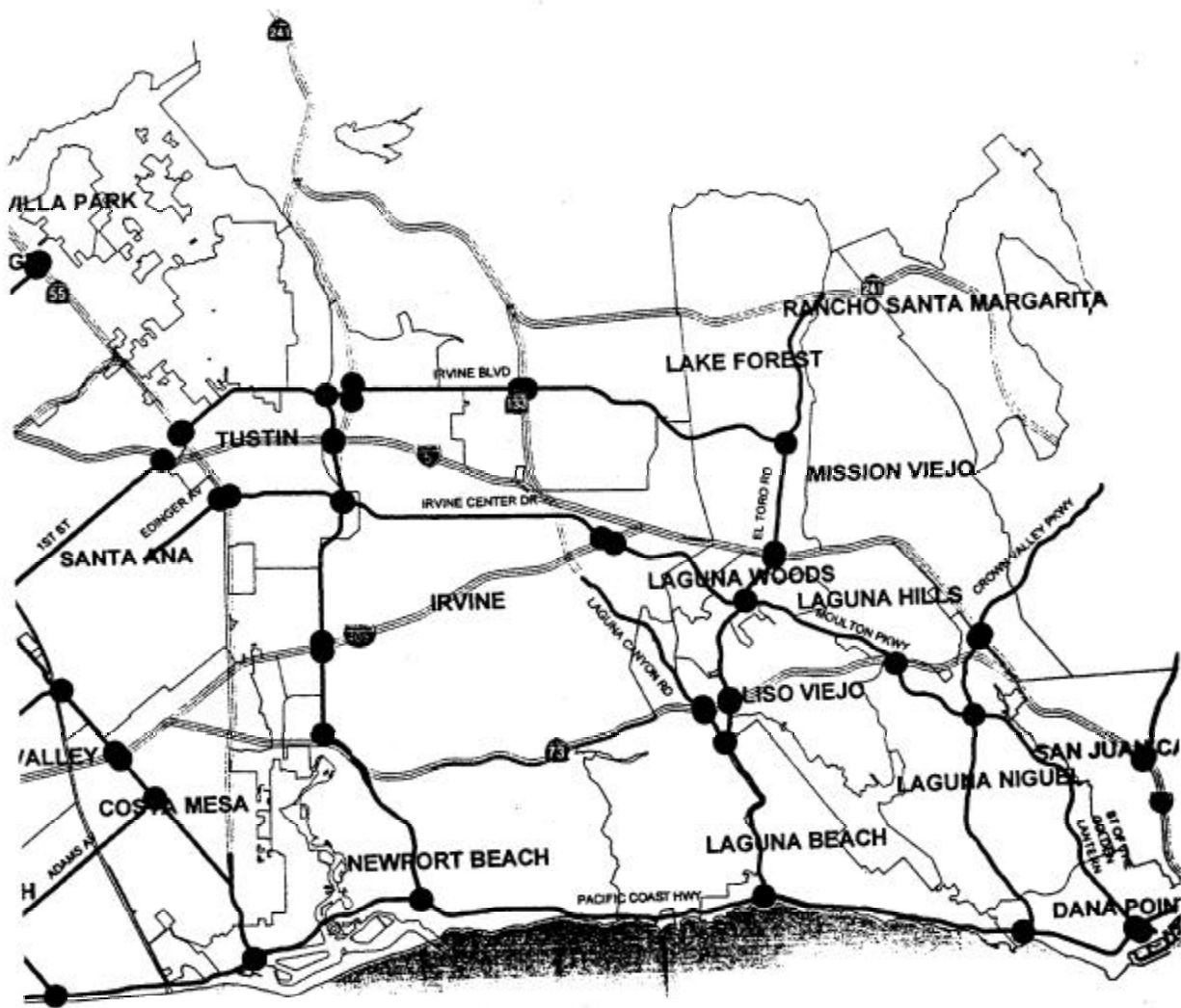
Congestion Management Program (CMP) Consistency/Requirements

The Congestion Management Program (CMP) requires that potential impacts of project traffic on roadway facilities included in the CMP network be identified. Roadway facilities within the study area that are included in the CMP network are listed below. Figure 5.2-20 illustrates the CMP network components. Table 5.2-9 summarizes the roadway facilities included in the CMP network.

**TABLE 5.2-9
CMP FACILITIES**

Roadway Facility	Limits
Freeways and Transportation Corridors	
Interstate 5 (I-5)	Culver Drive to Alicia Parkway
Interstate 405 (I-405)	Culver Drive to I-5
State Route 133	I-5 to I-405
Foothill Transportation Corridor (FTC)	ETC to Los Alisos Boulevard
Eastern Transportation Corridor (ETC)	Northern study area boundary to I-5
Freeway Interchanges	
I-5 at El Toro Road	
I-405 at Irvine Center Drive	
Arterials	
Irvine Center Drive/Moulton Parkway	Culver Drive to Alicia Parkway
Irvine Boulevard/Trabuco Road	ETC West Leg to El Toro Road
Laguna Canyon Road	I-405 to south study area boundary
El Toro Road	FTC to Laguna Canyon Road
Intersections	
SR-133 Southbound Ramps at Irvine Boulevard	
SR-133 Northbound Ramps at Irvine Boulevard	
Enterprise (I-405 Northbound Ramps) at Irvine Center Drive	
I-405 Southbound Ramps at Irvine Center Drive	
SR-73 Southbound Ramps at Laguna Canyon Road	
SR-73 Northbound Ramps at Laguna Canyon Road	
Trabuco Road (Irvine Boulevard) at EL Toro Road	
I-5 Northbound Ramps/Bridger Road at EL Toro Road	
Avenida de la Carlota 9I-5 Southbound Ramps) at El Toro Road	
Moulton Parkway at El Toro Road	
SR-73 Southbound Ramps at El Toro Road	
SR-73 Northbound Ramps at El Toro Road	

Source: Urban Crossroads, December 2002.



LEGEND:

- = CMP INTERSECTIONS
- = CMP HIGHWAY SYSTEM
- = FREEWAYS

Source: OCTA rev. 10/30/2001.



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Figure 5.2-20
Study Area Congestion
Management Program Roadway System

City of Irvine

Using both daily and peak hour traffic volumes forecasts developed with the ITAM, conditions along CMP roadways within the study area were evaluated for 2007 and 2025 conditions with and without the proposed project. Chapters 7 and 9 of Appendix G show the results of the peak hour capacity review for arterial roadways, freeway segments, and freeway interchanges.

The following summarizes the detailed CMP analysis contained in Volume II Appendix G of the EIR:

Year 2007 – No freeway/tollway segment or ramp location is significantly impacted by the Base Plan project in 2007. No deficient CMP intersection is significantly impacted by the Base Plan in 2007.

Year 2025 - For 2025 conditions, the Base Plan will not have a significant impact on the deficient freeway/tollway locations.

The Base Plan will have a significant impact at the intersection of El Toro Road and Avenida de la Carlota.

In accordance with CMP requirements, it is necessary to determine the improvements needed to provide LOS E or better traffic operations. The needed improvements are identified on Tables 5.2-6 through 5.2-8.

Threshold 1. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestion at intersections)?

Overlay Plan

Project Roadway System

The proposed circulation system for the project will be constructed in conjunction with short range (2007) development. The 2007 project roadway system will include all of the proposed on-site roadway infrastructure. Figure 5.2-16 provided earlier in this section depicts the proposed 2007 on-site circulation system. A number of new roadways will be constructed in conjunction with project development. Marine Way will be constructed and realigned from the Bake Parkway/I-5 Northbound Ramp through the project site until it joins with Sand Canyon Avenue at the I-5 Northbound Ramps. Trabuco Road will be extended from its current terminus east of the Eastern Transportation Corridor (ETC) across to Meadows Loop Road. "A" Drive and "B" Drive will be connected with Irvine Boulevard on-site to provide access to the central park loop road. "C" and "D" Drives will provide access between the central park area and Marine Way.

Interim Year 2007

2007 Overlay Project Land Use

The 2007 Overlay project land use is summarized on Table 3-5 of the Project Description. Approximately 2,260 project dwelling units are anticipated for 2007 conditions under the Overlay Plan project. The most prevalent type of on-site development for 2007 conditions is open space/park. Other uses include an elementary school, cemetery, and transit oriented development (TOD) retail uses. There will also be a substantial amount of research and development.

2007 Overlay Project Trip Generation

The 2007 Overlay project trip generation by planning analysis zone (PAZ) and traffic analysis zone (TAZ) is summarized on Table 5.2-10. As shown on Table 5.2-10, the Overlay Plan project is expected to generate almost 68,000 daily vehicle trips in 2007. Table 5-11 of Volume II Appendix G depicts trip generation by land use type.

2007 Overlay Project Trip Distribution and Daily Traffic

The 2007 Overlay project trip distribution is presented in Volume II Appendix G. The roadways carrying the highest proportion of project traffic include Irvine Boulevard (24 percent) and Marine Way (19 percent). Other roadways expected to carry ten percent or more of project traffic include Trabuco Road, College Drive, and Barranca Parkway.

2007 With Overlay Project Traffic Projections

The ITAM 2007 with project conditions daily traffic volumes are summarized on Figure 5.2-21. Daily traffic volumes are generally similar to the 2007 no project scenario. Additional traffic is projected, primarily on Irvine Boulevard and Marine Way.

2007 with Overlay project peak hour (AM and PM) traffic volumes have also been estimated using the ITAM output. Volume III of this EIR contains the peak hour roadway segment and intersection turning movement forecasts.

Year 2025

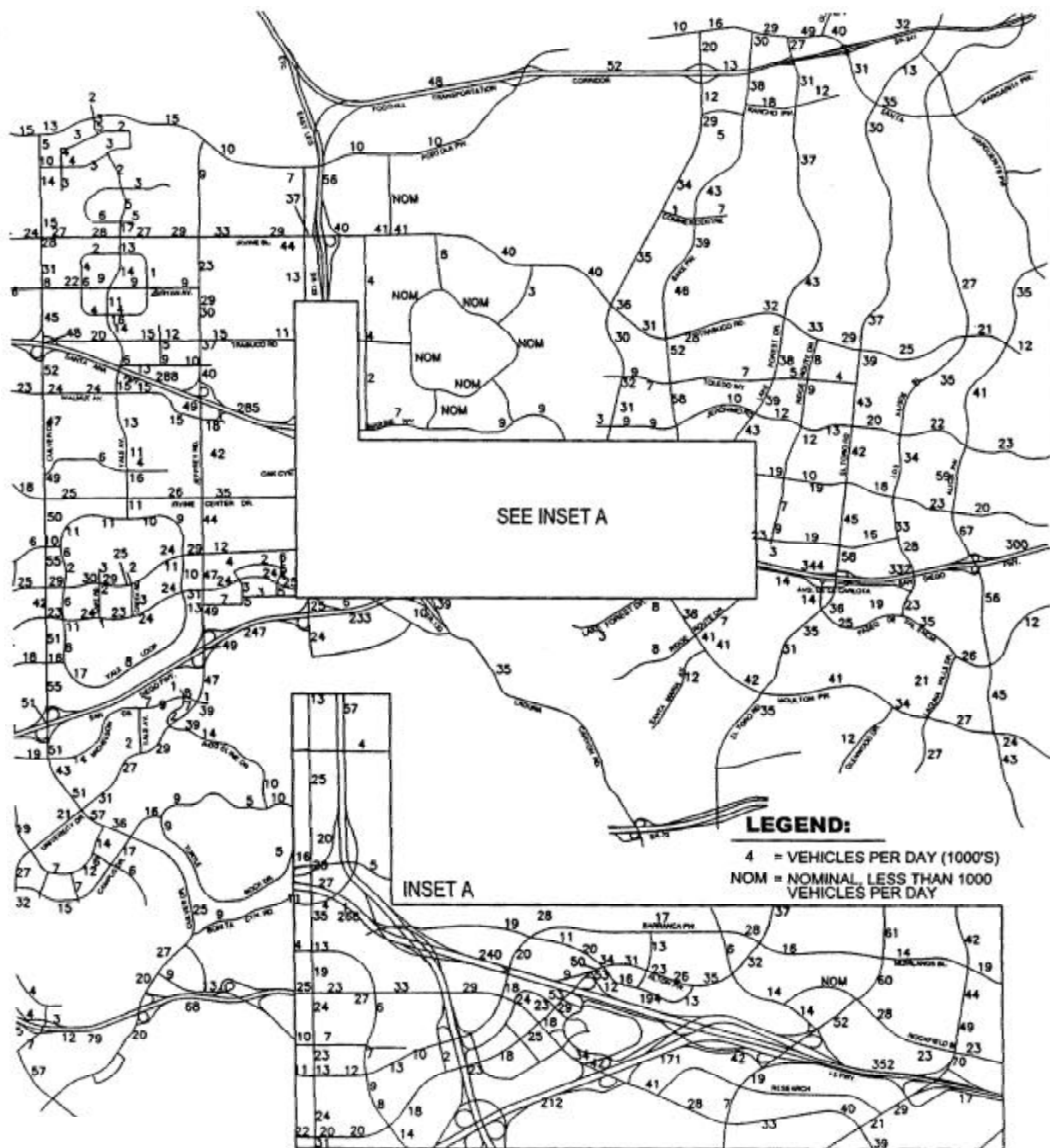
2025 Overlay Project Land Use

The 2025 Overlay project land uses are summarized in Table 3-4 of the Project Description. Land use is predominately open space. Other uses include: 3,625 project dwelling units; 2.6 million square feet of research and development; a 7,800 student college/university campus; and 375,000 square feet of retail and office uses. Other uses include natural and institutional, transportation facilities, and auto center.

**TABLE 5.2-10
2007 OVERLAY PROJECT
DAILY TRIP GENERATION SUMMARY**

PAZ	TAZ	SED Daily Trip Generation	Land Use Daily Trip Generation
1.	586	402	402
2.	594	6,590	7,178
3.	591	164	164
4.	614	181	181
5.	588	5,208	4,055
6.	589	3,064	3,064
7.	587	0	0
8.	597	7,930	4,620
9.	596	0	0
10.	600	429	398
11.	593	0	0
12.	603	4,895	4,802
13.	610	2,509	7,909
14.	602	208	208
15.	598	419	419
16.	599	114	114
17.	590	8,158	8,158
18.	611	2,828	1,922
19.	613	1,273	643
20.	601	20	20
21.	612	20	20
22.	616	30	30
23.	609	3,961	2,115
24.	615	164	164
25.	917	0	0
26.	322	27	27
27.	918	37	37
28.	919	3,671	2,652
29.	321	3,333	2,321
30.	921	13	13
31.	323	1,979	1,541
32.	920	2,046	1,694
33.	922	70	70
34.	923	1,562	1,217
35.	924	4,271	3,325
36.	324	2,134	1,875
TOTAL		67,710	61,358

Source: Urban Crossroads, December 2002.



Source: Urban Crossroads, 2002.



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Figure 5.2-21
2007 With Overlay Plan
Daily Traffic Volumes

City of Irvine

2025 Overlay Project Trip Generation

Since the Overlay project is proposed to be built out by 2025, trip generation for 2025 and Post 2025 are the same. Table 5.2-11 shows that by 2025 the Overlay Plan is anticipated to generate about 149,000 daily vehicle trips.

2025 Overlay Project Trip Distribution and Daily Traffic

The 2025 Overlay project trip distribution is presented in Appendix G. The roadways carrying the highest proportion of project traffic are Irvine Boulevard (22 percent) and Marine Way (19%). Other roadways expected to carry ten percent or more of project traffic include Trabuco Road and Barranca Parkway.

2025 With Overlay Project Traffic Projections

The 2025 with Overlay project conditions daily traffic volumes are illustrated on Figure 5.2-22. Additional traffic is present on Irvine Boulevard, with other minor increases in traffic on roadways near the project site.

(Buildout) Post 2025

Post 2025 Overlay Project Land Use

Because the project is anticipated to be fully developed by 2025, the Post 2025 land uses are the same as the 2025 land uses summarized above.

Post 2025 Overlay Project Trip Generation

Because buildout of the project is expected by 2025, the Post 2025 Overlay project trip generation is the same as the 2025 condition. Table 5.2-11 above summarizes the Post 2025 Overlay project vehicle trip generation by PAZ and TAZ. As shown on Table 5.2-11, the Overlay project is anticipated to generate approximately 149,000 daily vehicle trips by 2025.

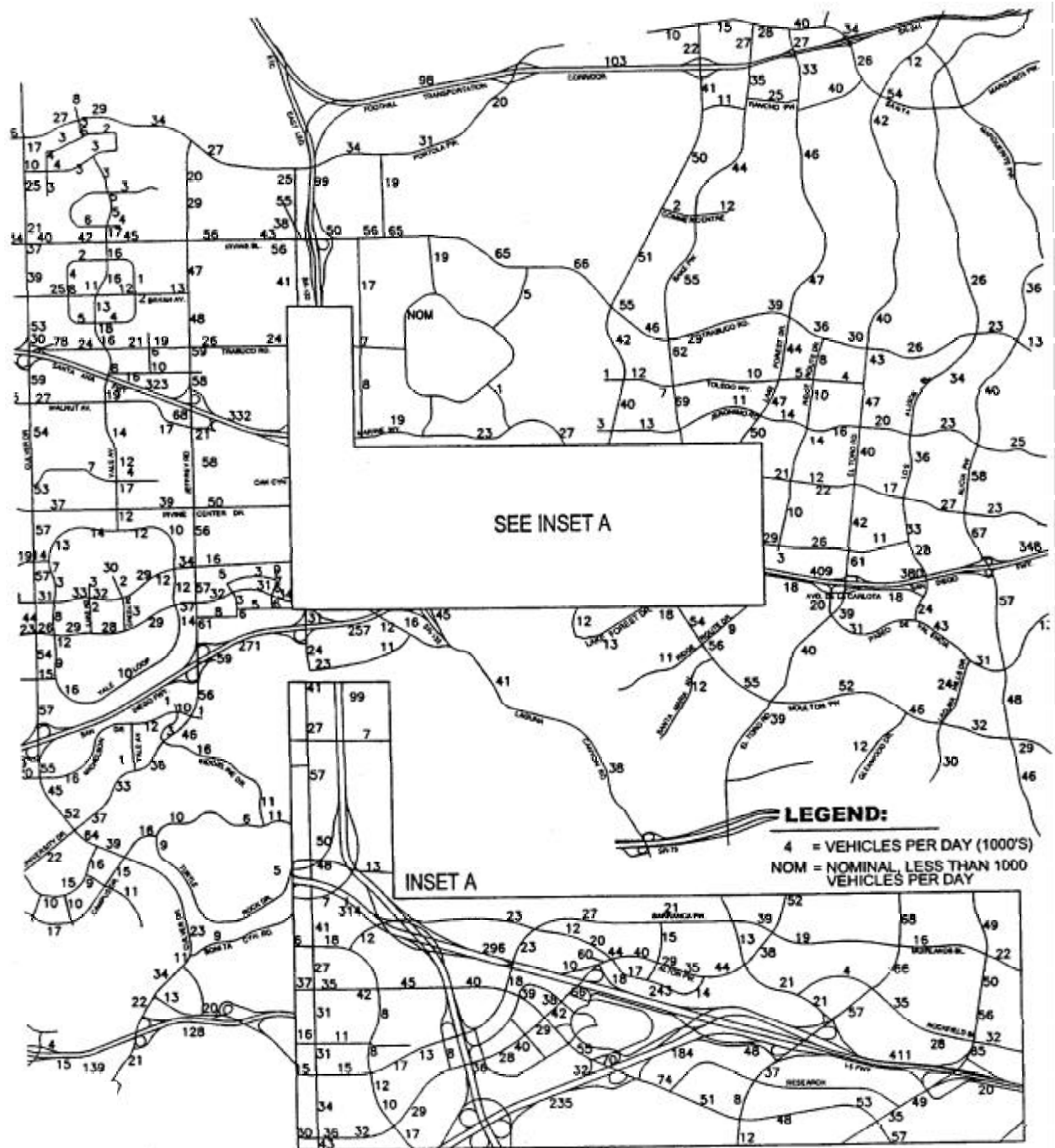
Post 2025 Overlay Project Trip Distribution and Daily Traffic

The Post 2025 Overlay project trip distribution is presented in Volume II Appendix G. The primary trip distribution pattern changes are attributed to the addition of the ETC East Leg interchange with Trabuco Road. Roadways project to carry more than ten percent of the project traffic include Trabuco Road, Marine Way, ETC East Leg, and Irvine Boulevard.

**TABLE 5.2-11
2025/(BUILDOUT) POST 2025 OVERLAY PLAN
TRIP GENERATION SUMMARY**

PAZ	TAZ	SED Daily Trip Generation	Land Use Daily Trip Generation
1.	586	402	402
2.	594	7,469	8,135
3.	591	164	164
4.	614	181	181
5.	588	10,416	8,110
6.	589	4,086	4,086
7.	587	3,438	2,011
8.	597	14,650	8,578
9.	596	456	265
10.	600	2,405	1,556
11.	593	12,326	11,482
12.	603	6,883	6,890
13.	610	10,812	25,272
14.	602	371	371
15.	598	743	743
16.	599	204	204
17.	590	19,154	19,154
18.	611	4,146	3,358
19.	613	1,297	643
20.	601	20	20
21.	612	20	20
22.	616	30	30
23.	609	9,732	4,730
24.	615	7,950	13,440
25.	917	1,314	2,857
26.	322	27	27
27.	918	1,214	2,341
28.	919	3,272	7,572
29.	321	2,976	4,002
30.	921	833	649
31.	323	5,208	4,055
32.	920	2,045	1,694
33.	922	4,791	3,731
34.	923	1,562	1,217
35.	924	4,271	3,325
36.	324	4,350	3,825
TOTAL		148,884	155,140

Source: Urban Crossroads, December 2002.



Source: Urban Crossroads, 2002.

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Figure 5.2-22
2025 With Overlay Plan
Average Daily Traffic (ADT)

City of Irvine

Post 2025 With Overlay Project Traffic Projections

The Post 2025 with Overlay project conditions daily traffic volumes are summarized in Figure 5.2-23. Additional traffic is present primarily on Irvine Boulevard and Marine Way. Volume III contains the Post 2025 peak hour intersection turning movement forecasts for Post 2025 with Overlay project conditions.

Overlay Plan Daily Roadway Segment Analysis

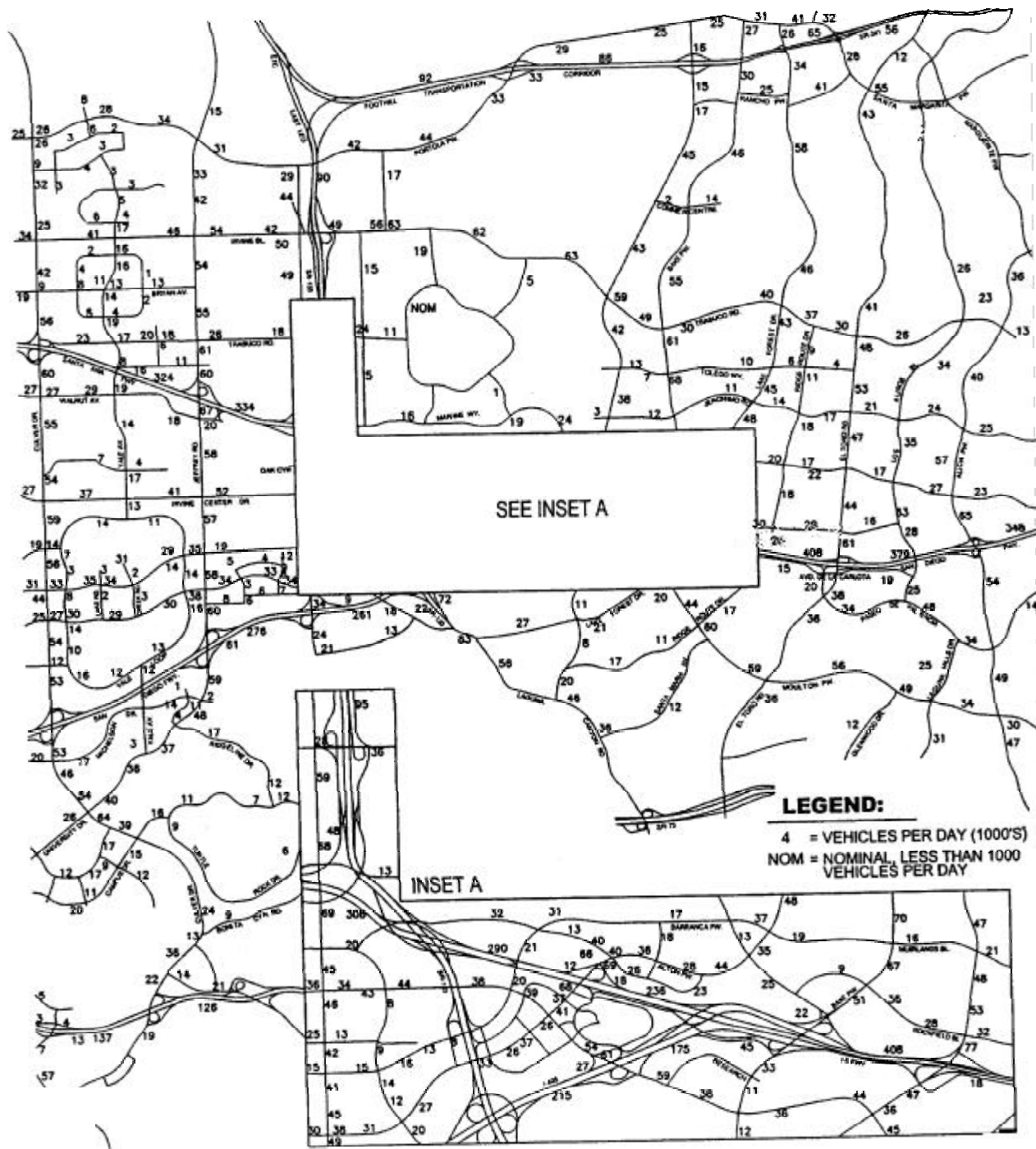
Table 7-1 contained in Volume II Appendix G presents the 2007 without project daily roadway segment analysis. Table 7-3 of Volume II Appendix G depicts the results of the 2007 with Overlay Plan daily roadway segment analysis. Table 7-4 of Volume II Appendix G presents the 2025 without project daily roadway segment analysis. The 2025 with Overlay Plan daily roadway segment analysis results are presented on Table 7-6 of Volume II Appendix G. The Post 2025 without project daily roadway segment analysis results are presented on Table 7-7 of Volume II Appendix G. The Post 2025 with Overlay Plan daily roadway segment analysis results are presented on Table 7-9 of Volume II Appendix G. The daily roadway segment volume/capacity ratio calculations have been used to determine where peak hour roadway segment analysis is required.

Year 2007 - Based on these calculations, six roadway segments experience daily deficiencies and meet the project impact significance threshold of exceeding 0.02 for all City of Irvine roadways except CMP roadways, where the CMP criteria of an impact exceeding 0.03 has been applied in the 2007 with Overlay Plan condition. The roadway segments that require further peak hour analysis are:

1. Sand Canyon Avenue between the I-5 and Oak Canyon
2. Bake Parkway between Commercentre and Muirlands Boulevard
3. Lake Forest Drive between Trabuco Road and SR-241 Tollway
4. Lake Forest Drive between I-5 and Rockfield Boulevard
5. Alicia Parkway between I-5 and Jeronimo Road
6. Avenida de la Carlota between El Toro Road and Paseo de Valencia

Year 2025 – Based on the calculation presented in Table 7-6 of Volume II Appendix G, 63 roadway segments require the need for further analysis of peak hour conditions in the 2025 with Base Plan condition. Please refer to Table 7-6 of Volume II Appendix G for a complete list of these roadway segments.

Post 2025 - Based on the calculation presented in Table 7-9 of Volume II Appendix G, 60 roadway segments require the need for further analysis of peak hour conditions in the Post 2025 with Base Plan condition. Please refer to Table 7-9 of Volume II Appendix G for a complete list of these roadway segments.



Source: Urban Crossroads, 2002.



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Orange County Great Park
 Final EIR

Figure 5.2-23
 Post Year 2025
 With Overlay Plan
 Average Daily Traffic (ADT)

City of Irvine

Overlay Plan Peak Hour Roadway Segment Analysis

Peak hour roadway segment analysis has been performed wherever a daily roadway segment V/C ratio identified the need for such analysis with project conditions. Only if a peak hour deficiency is identified has further analysis been performed and possible mitigation required. For these cases (peak hour deficiency has been identified with project conditions), "no project" conditions peak hour analysis has also been performed. If a significant impact is identified (project contributes .02 or greater to the V/C ratios), then necessary improvements to provide acceptable peak hour operations have been determined.

Year 2007 – Table 7-11 of Volume II Appendix G summarizes the peak hour roadway segment analysis for the Year 2007 with Overlay Plan condition. No roadway segment deficiency has been identified for the Year 2007 with Overlay Plan conditions.

Table 7-14 of Volume II Appendix G summarizes the peak hour freeway/tollway mainline segment analysis for the Year 2007 with Overlay Plan condition. Although four freeway/tollway mainline segments are projected to experience deficient operations under these conditions, the Overlay Plan will not have a significant impact (increase in V/C ratio of greater than 0.03) on the mainline freeway/tollway system.

Table 7-17 summarizes the peak hour freeway/tollway ramp segment analysis for the Year 2007 with Overlay Plan conditions. The Overlay Plan will have a significant impact at two of the three ramps that experience deficient operations, I-5 at Alton Parkway – southbound offramp (AM) and I-405 at Irvine Center Drive – southbound offramp (AM).

Year 2025 – Table 7-19 of Volume II Appendix G summarizes the 2025 with Overlay Plan peak hour roadway segment analysis. One 2025 peak hour roadway segment deficiency has been identified at University Drive from the I-405 Freeway to Michelson Drive. Improvements at this location would include widening of University Drive southbound from 2 to 3 lanes between I-405 southbound ramps and Michelson Drive.

Table 7-22 of Volume II Appendix G summarizes the peak hour freeway/tollway mainline segment analysis for the Year 2025 with Overlay Plan condition. Of the 12 freeway/tollway mainline segments anticipated to experience deficient operations under these conditions, the project will have a significant impact at the following locations:

1. I-5 Freeway from Sand Canyon Avenue to Jeffrey Road – northbound (PM)
2. I-5 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)
3. I-405 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)

Table 7-25 of Volume II Appendix G summarizes the peak hour freeway/tollway ramp segment analysis for the Year 2025 with Overlay Plan condition. Of the 13 ramp segments anticipated to experience deficient operations under these conditions, the project will have a significant impact at the following locations:

1. I-5 Freeway at Jeffrey Road – southbound on ramp (AM/PM)
2. I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM)
3. I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM)
4. I-5 Freeway at Alton Parkway - southbound off ramp (AM)
5. I-5 Freeway at Bake Parkway – southbound off ramp (AM)

6. I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM)
7. I-405 Freeway at Sand Canyon Avenue - southbound off ramp (AM)
8. I-405 Freeway at Irvine Center Drive - southbound off ramp (AM)
9. SR-241 Tollway at Lake Forest Drive – southbound off ramp (AM)

Post 2025 – Table 7-27 of Volume II Appendix G summarizes the peak hour roadway segment analysis for the Post 2025 with Overlay Plan condition. Based on the analysis, no peak hour roadway segment deficiency has been identified.

Table 7-30 of Volume II Appendix G summarizes the peak hour freeway/tollway mainline segment analysis for the Post 2025 with Overlay Plan condition. Of the 11 segments anticipated to experience deficient operations under these conditions, the project will have a significant impact at the following locations:

1. I-5 Freeway from Sand Canyon Avenue to Jeffrey Road – northbound (PM)
2. I-5 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)
3. I-405 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)

Table 7-33 of Volume II Appendix G summarizes the Post 2025 with Overlay Plan conditions peak hour freeway/tollway ramp segment analysis. Based upon the review of the increase in freeway/tollway ramp volume to capacity ratios, the Overlay Plan will have a significant impact under Post 2025 conditions at the following locations:

1. I-5 Freeway at Jeffrey Road – southbound on ramp (AM)
2. I-5 Freeway at Sand Canyon Avenue - northbound on ramp (PM)
3. I-5 Freeway at Sand Canyon Avenue - southbound off ramp (AM)
4. I-5 Freeway at Alton Parkway - southbound off ramp (AM)
5. I-5 Freeway at Bake Parkway - southbound off ramp (AM)
6. I-5 Freeway at El Toro Road – southbound off ramp (PM)
7. I-405 Freeway at Jeffrey Road – northbound off ramp (PM)
8. I-405 Freeway at Sand Canyon Avenue - northbound direct on ramp (AM/PM)
9. I-405 Freeway at Sand Canyon Avenue - southbound off ramp (AM)
10. I-405 Freeway at Irvine Center Drive – southbound off ramp (AM)

Overlay Plan Peak Hour Intersection Operation Analysis

All of the peak hour intersection analysis which has been conducted as part of this analysis is based on the intersection geometries summarized in the traffic report located in Volume II Appendix G and Volume III Appendix K of this Final Program EIR. Volume II Appendix G provides a summary of the geometric configuration for each analysis time frame at every intersection where analysis was performed for the time frame in question. This makes it possible for the reader to fully understand the phasing and nature of all baseline improvements prior to mitigation. At a minimum, mitigation analysis has been conducted wherever the project causes a 0.02 increase in intersection capacity utilization (ICU), and the “with project” ICU is deficient.

Year 2007 – Tables 7-34, 7-35, and 7-36 of Volume II Appendix G summarize the 2007 with project (both the Base Plan and Overlay Plan) intersection operation analysis. Of the 17 deficient intersections in 2007, the proposed Overlay Plan will impact the seven intersections

identified in Table 5.2-12. Table 5.2-12 summarizes the improvements needed to mitigate project impacts for 2007 conditions.

Year 2025 - Tables 7-37, 7-38, and 7-39 of Volume II Appendix G summarize the 2025 with project (both the Base Plan and Overlay Plan) intersection operation analysis. Of the 52 deficient intersections in 2025, the proposed Overlay Plan will impact the 25 intersections identified in Table 5.2-13. Table 5.2-13 summarizes the improvements needed to mitigate project impacts for 2025 conditions.

Post 2025 - Tables 7-40, 7-41, and 7-42 of Volume II Appendix G summarize the Post 2025 with project (both the Base Plan and Overlay Plan) intersection operation analysis. Of the 45 deficient intersections in 2025, the proposed Overlay Plan will impact the 22 intersections identified in Table 5.2-14. Table 5.2-14 summarizes the improvements needed to mitigate project impacts for 2025 conditions.

Master Plan of Arterial Highways Amendment

Refer to discussion under Base Plan.

Spectrum LOS "E" Level of Service Policy Analysis

An LOS "E" policy change would only result through participation in the City's Advanced Transportation Management System/Traffic Operations Systems. The effects of a change in acceptable Level of Service (LOS) from "D" to "E" have been evaluated in the Irvine Spectrum. Intersections in Planning Areas 13, 31, 32, 34, 35, 39, and the I-5 Freeway at Sand Canyon Avenue have been included in this analysis. Table 5.2-14 summarizes the results of this analysis for intersections identified as impacted in Volume II Appendix G that would be affected by the changed policy. All impacted intersections not included in the table below already experience LOS "F" for without project conditions and would therefore have no change in impact or mitigation with the policy change.

Intersections identified as affected by the potential policy change fall into 2 categories. Locations experiencing LOS "E" operations or "With Project" (whichever plan) conditions would no longer be considered deficient and no impact would be identified. Intersections that are no longer deficient if the LOS "E" policy is applied are:

- Laguna Canyon Road at Old Laguna Canyon Road
- Alton Parkway at Irvine Boulevard
- Lake Forest Drive at Avenida De La Carlota

**TABLE 5.2-12
YEAR 2007 OVERLAY PLAN INTERSECTION IMPACTS AND SUMMARY OF MITIGATION REQUIRED**

Intersection	2007 No Project				2007 with Overlay Plan						Mitigation
	ICU		Deficient		ICU		Change		Impact		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
<i>Irvine</i>											
Alton Pkwy./Irvine Blvd.	0.79	0.87			0.75	0.98	-0.04	0.11		*****	Convert SB right turn lane to SB free right turn lane
<i>Irvine/Laguna Hills</i>											
Lake Forest Dr./Ave. de la Carlota	0.810	0.881			0.799	0.936	0.011	0.055		*****	Construct second WB left turn lane and provide WB right turn overlap phase and NB right turn lane
<i>Lake Forest</i>											
El Toro Rd./Jeronimo Rd.	0.72	0.93		*****	0.73	0.95	0.01	0.02		*****	Construct second SB left turn lane
Los Alisos Blvd./Rockfield Blvd./Fordview St.	0.88	0.97		*****	0.91	0.98	0.03	0.01	*****	****	Construct SB right turn lane
<i>Lake Forest/Mission Viejo</i>											
Los Alisos Blvd../Jeronimo Rd.	0.82	0.90			0.81	0.92	-0.01	0.02		*****	Construct second EB left turn lane
<i>Laguna Hills</i>											
El Toro Rd./Ave. de la Carlota	0.834	1.150		*****	0.838	1.185	0.004	0.035		*****	Restripe WB approach to provide one shared left turn/through lane and two right turn lanes
<i>Mission Viejo</i>											
Alicia Pkwy./Muirlands Blvd.	0.89	0.95		*****	0.91	0.97	0.02	0.02	*****	*****	Construct second SB left turn lane and convert EB right turn lane to EB free right turn lane

**TABLE 5.2-13
YEAR 2025 OVERLAY PLAN INTERSECTION IMPACTS AND SUMMARY OF MITIGATION REQUIRED**

Intersection	2025 No Project				2025 with Overlay Plan						Mitigation
	ICU		Deficient		ICU		Change		Impact		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
Irvine											
Jeffrey Rd./Irvine Ctr. Dr.	0.89	0.93		****	0.90	0.96	0.01	0.03		****	Construct fourth WB through lane
Sand Canyon Ave./Alton Pkwy.	1.09	0.66	****		1.11	0.68	0.02	0.02	****		Provide NB right turn overlap
SR-133 SB Ramps/Irvine Blvd.	0.83	0.69			0.91	0.63	0.08	-0.06	****		Construct 2 nd WB left turn lane
Laguna Cyn. Rd./Old Laguna Cyn. Rd	0.89	0.82			0.91	0.82	0.02	0.00	****		Construct third NB through lane (approach improvements only)
Alton Pkwy./Irvine Blvd.	1.09	1.20	****	****	1.02	1.45	-0.07	0.25	****	****	Convert SB right turn lane to SB free right turn lane
Alton Pkwy./Muirlands Blvd.	0.81	0.88			0.89	0.91	0.08	0.03		****	Construct WB right turn lane
Alton Pkwy./I-5 NB Ramps	1.02	0.62	****		1.05	0.59	0.03	-0.03	****		Restripe WB approach to provide 2.5 left turn lanes and 0.5 right turn lane
SR 133 SB Ramps/Irvine Blvd.	0.83	0.69	****		0.91	0.63	0.08	0.06	****		Construct second WB left turn lane
Irvine/Laguna Hills											
Lake Forest Dr./Irvine Center Dr.	0.878	0.902		****	0.891	0.931	0.013	0.029		****	Construct second WB left turn lane
Lake Forest Dr./Ave. de la Carlota	1.207	1.232	****	****	1.212	1.181	0.005	0.051	****	****	Convert EB right turn lane into free right turn lane
Irvine/Lake Forest											
Bake Pkwy./Irvine Blvd.	0.94	0.87	****		1.17	0.85	0.23	-0.02	****		Construct fourth WB through lane
Bake Pkwy./Jeronimo Rd.	1.06	0.88	****		1.19	0.89	0.13	0.01	****		Convert SB defacto right turn lane into fourth SB through lane and construct second NB left turn lane
Lake Forest											
Lake Forest Dr./Trabuco Rd.	0.84	0.86			0.88	0.93	0.04	0.07		****	Construct SB right turn lane
Lake Forest Dr./Jeronimo Rd.	0.92	0.91	****	****	0.97	0.96	0.05	0.05	****	****	Construct EB and WB right turn lanes and SB left turn lane
Lake Forest Dr./Muirlands Blvd.	0.78	0.88			0.81	0.93	0.03	0.05		****	Construct fourth NB through lane
El Toro Rd./Rockfield Blvd.	0.79	0.89			0.81	0.91	0.02	0.02		****	Construct EB right turn lane with overlap phase
El Toro Rd. /Jeronimo Rd.	0.80	0.98		****	0.83	1.03	0.03	0.05		****	Construct second SB left turn lane
Los Alisos Blvd./Rockfield Blvd./Fordview St.	0.95	0.96	****	****	0.95	0.98	0.00	0.02		****	Construct second NB left turn lane
Lake Forest/Mission Viejo											
Muirlands Blvd./Los Alisos Blvd.	0.97	1.20	****	****	0.99	1.21	0.02	0.01	****	****	Construct second WB left turn lane
Laguna Hills											
El Toro Rd./Ave. de la Carlota	1.005	1.402	****	****	1.055	1.432	0.050	0.030	****	****	Restripe WB approach to provide one shared left turn/through lane and two right turn lanes
Laguna Hills/Laguna Woods											
Pas. de Valencia/Ave. de la Carlota	0.801	0.992		****	0.808	1.020	0.007	0.028		****	Construct third SB left turn lane, including receiving lane
Santa Maria Ave./Moulton Pkwy.	0.887	0.922		****	0.897	0.941	0.013	0.019		****	Construct EB right turn lane
Mission Viejo											
Los Alisos Blvd./Trabuco Rd.	0.93	0.80	****		0.95	0.80	0.02	0.00	****		Construct second NB left turn lane

Table 5.2-14
Intersections Affected By Potential Level of Service “E” Policy Change

#	Intersection (NS) & (EW)	2007 with Base Plan	2007 with Overlay Plan	2025 with Base Plan	2025 with Overlay Plan	Post- 2025 with Base Plan	Post-2025 with Overlay Plan
321	Laguna Cyn. Rd. & Old Laguna Cyn. Rd.			X	X		
338	Alton Pkwy. & Irvine Bl.	X	X			X	X
341	Alton Pkwy. & Muirlands Bl. ¹				X		
362	Bake Pkwy. & Irvine Bl.			E	E		
366	Bake Pkwy. & Rockfield Bl.	E	E				
383	Lake Forest Dr. & Avenida de la Carlota	X	X				

Notes:

X = Impacted intersection would not be deficient/impacted with LOS “E” policy change.

E = Impacted intersection could be evaluated for less mitigation with LOS “E” policy change.

1 = If the LOS “E” policy includes PA30, then this intersection would no longer require mitigation.

In addition, if the LOS “E” Policy was extended to include PA30 (the southern portion of the project), then the intersection of Alton Parkway at Muirlands Boulevard would also be considered to operate at an acceptable level of service (LOS “E”) and would no longer require mitigation.

Two intersections (Bake Parkway at Irvine Boulevard and Bake Parkway at Rockfield Boulevard) are at LOS “E” for No Project conditions and LOS “F” for (certain) With Project Condition Conditions. Reduced mitigation may be possible at these two locations, however a review of the mitigation analysis indicates that no reduced physical mitigation is available. The Base Plan impacts at Bake Parkway and Rockfield Boulevard could be mitigated on the basis of ATMS credits. If the LOS “E” policy includes PA30, then this intersection would no longer require mitigation.

Threshold 2. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Congestion Management Program (CMP) Consistency/Requirements

The Congestion Management Program (CMP) requires that potential impacts of project traffic on roadway facilities included in the CMP network be identified. Roadway facilities within the study area that are included in the CMP network are listed below. Figure 5.2-21 illustrates the CMP network components. Table 5.2-9 summarizes the roadway facilities included in the CMP network.

Using both daily and peak hour traffic volumes forecasts developed with the ITAM, conditions along CMP roadways within the study area were evaluated for 2007 and 2025 conditions with

and without the proposed project. Volume II Appendix G show the results of the peak hour capacity review for arterial roadways, freeway segments, and freeway interchanges.

The following summarizes the detailed CMP analysis contained in Appendix K of the EIR:

Year 2007 – No freeway/tollway segment or ramp location is significantly impacted by the Overlay Plan project in 2007. Of the six deficient CMP intersections in 2007, the Overlay Plan will significantly impact El Toro Road/Avenida de Carlota. The mitigation identified in Table 5.2-15 for this intersection will reduce the impact to this intersection to a level less than significant.

Year 2025 - For 2025 conditions, the Overlay Plan will have a significant impact at the following freeway/tollway locations:

1. I-5 from Sand Canyon Avenue to Jeffrey Road – northbound (PM)
2. I-5 from Jeffrey Road to Sand Canyon Avenue – southbound (AM)
3. I-405 from Sand Canyon Avenue to Jeffrey Road - southbound (AM)

The Overlay Plan will also have a significant impact at the intersection of El Toro Road and Avenida de la Carlota. In accordance with CMP requirements, it is necessary to determine the improvements needed to provide LOS “E” or better traffic operations. The needed improvements are identified on Tables 5.2-12, 5.2-13 and 5.2-15.

Threshold 3. Result in a change in air traffic patterns, including either an increase in traffic level or a change in location that results in substantial safety risks?

Base Plan and Overlay Plan

The proposed project will not result in an impact to air traffic patterns associated with increased air traffic or the location of development. No impact associated with air traffic will occur.

Threshold 4. Substantially increase hazards due to design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Base Plan and Overlay Plan

The proposed project is intended to reduce incompatible uses and improve the street system in the area in accordance with local, regional, and State agency engineering requirements. No impact associated with increased hazards due to design features will occur.

Threshold 5. Result in inadequate emergency access?

Base Plan and Overlay Plan

The existing and proposed roadway system will provide adequate emergency access to all uses on-site during all phases of the project, and will not affect off-site emergency access.

Threshold 6. Result in inadequate parking capacity?

**TABLE 5.2-15
POST 2025 OVERLAY PLAN INTERSECTION IMPACTS AND SUMMARY OF MITIGATION REQUIRED**

Intersection	Post 2025 No Project				Post 2025 with Overlay Plan						Mitigation
	ICU		Deficient		ICU		Change		Impact		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
Aliso Viejo/Laguna Hills											
Moulton Pkwy./Glenwood Dr./Indian Creek Ln.	0.981	0.814	****		0.991	0.826	0.010	0.012	****		Construct fourth NB through lane
Moulton Pkwy./Laguna Hills Dr.	0.893	0.951		****	0.911	0.961	0.018	0.010	****	****	Construct third EB left turn lane
Irvine											
Culver Dr./Walnut Ave.	0.91	0.88	****		0.93	0.89	0.02	0.01	****		Construct third WB left turn lane
Jeffrey Rd./Irvine Center Dr.	0.90	0.93		****	0.92	0.96	0.02	0.03	****	****	Construct fourth SB through lane and fourth WB through lane
Jeffrey Rd./Alton Pkwy.	0.94	0.81	****		0.96	0.84	0.02	0.03	****		Convert EB default right turn lane to dedicated right turn lane with overlap
Sand Cyn. Ave./Alton Pkwy.	1.07	0.71	****		1.10	0.71	0.03	0.00	****		Provide NB right turn overlap phase
Alton Pkwy./Irvine Blvd.	1.10	0.89	****		0.91	0.97	-0.19	0.08		****	Provide fourth WB through lane (in addition to SB free right turn lane)
Bake Pkwy./Rockfield Blvd.	0.71	0.91		****	0.59	0.97	-0.12	0.06		****	Restripe WB approach to provide 2.5 left turn lanes, 1.5 through lanes (retain WB free right turn lane)
Laguna Cyn. Rd./Bake Pkwy.	1.44	1.11	****	****	1.45	1.15	0.01	0.04		****	Construct second SB left turn lane
Sand Cyn. Ave./Collector St.	1.09	1.20	****	****	1.22	1.34	0.13	0.14	****	****	Construct second EB through lane
Irvine/Laguna Hills											
Lake Forest Dr./Ave. de la Carlota	1.135	1.123	****	****	1.138	1.125	0.003	0.002	****		Convert EB right turn lane into free right turn lane
Irvine/Lake Forest											
Bake Pkwy./Irvine Blvd.	1.03	0.81	****		1.01	1.01	-0.02	0.20		****	Construct third NB left turn lane and second EB right turn lane or convert EB right turn lane into free right turn lane
Bake Pkwy./Jeronimo Rd.	1.13	0.93	****	****	1.20	0.94	0.07	0.01	****		Convert SB defacto right turn lane into fourth SB through lane
Lake Forest											
Lake Forest Dr./Trabuco Rd.	0.84	0.88			0.86	0.91	0.02	0.03		****	Construct SB right turn lane
Lake Forest Dr./Jeronimo Rd.	0.90	0.88			0.95	0.91	0.05	0.03	****	****	Construct EB and WB right turn lanes
Ridge Route Dr./Rockfield Blvd.	0.79	0.93		****	0.82	0.95	0.03	0.02		****	Construct second WB left turn lane
El Toro Rd. /Jeronimo Rd.	0.83	1.00		****	0.86	1.03	0.03	0.03		****	Construct second SB left turn lane
Lake Forest Dr./Rockfield Blvd.	0.84	0.94			0.89	1.00	0.05	0.06		****	Construct third WB left turn lane
Lake Forest/Mission Viejo											
Los Alisos Blvd./Jeronimo Rd.	0.88	0.95		****	0.91	0.97	0.03	0.02	****	****	Construct second WB left turn lane
Muirlands Blvd./Los Alisos Blvd.	0.98	1.16	****	****	1.01	1.20	0.03	0.04	****	****	Construct second WB left turn lane

**TABLE 5.2-15
POST 2025 OVERLAY PLAN INTERSECTION IMPACTS AND SUMMARY OF MITIGATION REQUIRED**

	Post 2025 No Project				Post 2025 with Overlay Plan						
Laguna Hills											
Ridge Route Dr./Moulton Pkwy.	0.566	1.000		****	0.568	1.012	0.002	0.012		****	Convert one NB through lane into a NB right turn lane
El Toro Rd./Ave. de la Carlota	0.666	0.985		****	0.695	1.024	0.029	0.039		****	Construct fourth NB through lane
Laguna Hills/Laguna Woods											
Pas. de Valencia/Ave. de la Carlota	0.774	0.915		****	0.784	0.949	0.010	0.034		****	Construct third SB left turn lane, including receiving lane or construct third EB and third NB through lanes
Santa Maria Ave./Moulton Pkwy.	0.964	0.965	****	****	0.973	0.983	0.009	0.018	****	****	Construct second NB left turn lane and fourth EB through lane
Laguna Hills Dr./Pas. de Valencia	0.845	1.130		****	0.847	1.140	0.002	0.010		****	Provide EB right turn overlap phase

Base Plan and Overlay Plan

The Great Park Plan will not result in inadequate parking capacity as all new development will be required to provide parking in accordance with the City's parking requirements and standards.

Other special project issues have been analyzed in the traffic report provided in Volume II Appendix G of this EIR. These issues include analysis of probable future projects, year 2025 with SR-133 Freeway/Trabuco interchange, project site access and internal circulation analysis, pedestrian and bicycle circulation, and circulation phasing hot spots discussions.

The traffic analysis summarized in this EIR includes consideration of probable future projects. The probable future projects analysis provided in Section 8.0 of the traffic report (Volume II Appendix G) depicts the contribution of the probable future projects to impacted roadways. The results of the probable future projects analysis is summarized on Tables 8-2 through 8-10 of the traffic analysis provided in Volume II Appendix G of this EIR.

Additional analysis has also been performed for 2025 with the Overlay Plan conditions to evaluate the effects of a new interchange of Trabuco Road and the SR-133 Freeway being in place earlier than Buildout (Post 2025). Based on the analysis, project mitigation can be reduced if the interchange is completed by 2025.

Project site access and internal circulation analysis has also been performed and are included in preceding sections. Traffic signal warrants have been prepared for project intersections under the Base Plan and Overlay Plan for the 2007 and 2025 conditions. Under 2007 conditions traffic signals are warranted for the following:

1. Barranca Parkway at Marine Way
2. Alton Parkway at Marine Way
3. Irvine Boulevard at College Road
4. Irvine Boulevard at "A" Drive
5. Irvine Boulevard at "B" Drive

Under 2025 conditions traffic signals are warranted for the following:

1. Marine Way at Rockfield Boulevard
2. Marine Way at College Road
3. Trabuco Road at College Road
4. Portola Parkway at "Y" Street
5. Irvine Boulevard at "Y" Street

The project design has been developed in a manner that discourages through traffic through residential neighborhoods, pursuant to the city of Irvine General Plan Circulation Element Objective B-2, Policy (e). In some cases this is accomplished by the simple fact that there is no logical through connection from one arterial to another through the neighborhood. An example is the neighborhood located north of Irvine Boulevard. All access to the neighborhood is provided via Irvine Boulevard, resulting in no potential for through traffic. The residential uses located along the golf courses will also fall into this category.

The thruways, parkways, and community collectors are all being designed in accordance with City of Irvine standards and will therefore prohibit parking, consistent with General Plan Circulation Element Objective B-2, Policy (e). Similarly, the project roadway is being designed in accordance with City standards and will therefore serve to appropriately limit the routes, speeds, and operation types of buses and trucks.

The project should also comply with Objective B-2, Policy (h). This policy states that traffic signals should be properly spaced and interconnected to minimize the number of traffic signals, and the acceleration/deceleration that produces significantly higher levels of vehicular emissions and noise levels. The spacing of the project intersections with the arterial system have been designed with appropriate traffic signal spacing in mind. Specific examples include relocating Marine Way at Sand Canyon Avenue to reduce the number of signalized intersections as well as connecting Marine Way to Bake Parkway at the existing intersection of the I-5 Freeway Northbound Ramps.

Trails and Bikeways

Transit, bicycles, and pedestrian modes of transportation are important alternatives to the automobile. The design of the project, with a mix of complementary uses, lends itself to supporting Policies (a), (b), and (c) of Objective B-3 of the General Plan Circulation Element.

The public transit system is designed to serve regional and local travel needs. The Irvine Transportation Center is located adjacent to the project site and provides an excellent opportunity to encourage transit usage. The project accomplishes this by providing land designated for use in expanding the Irvine Transportation Center.

The project also encourages transit usage through the designation of transit oriented development areas nearby the Irvine Transportation Center. These areas consist of mixed use development opportunities located in close proximity to the primary transit center in the vicinity of the project.

Another on-site destination that is likely to attract high densities of transit users includes the educational area in the northwest part of the project. This area will include a high density of college students, a traditionally transit friendly group.

Pedestrian access will be provided as part of the project circulation system. Sidewalks and/or walking trails will be provided along all project roadways. Pedestrian access will be particularly important within and between areas designated as transit oriented development and the Irvine Transportation Center.

Policy B-4 of the General Plan Circulation Element deals with bicycle trails. The Great Park Plan (both alternatives) incorporates a trails system directly into the plan. The project will include internal Class II bicycle trails on the (non-local) roadway elements of the project. The project will also include Class I bicycle trails along the SCRRA right of way and within other areas of the Great Park. The trail system will be designed to accommodate cyclists of all levels of experience and provide for both recreation and transportation.

The trail system will provide opportunities for trail connections to the City of Irvine Trails Network. Connections should be considered to Portola Parkway and along Irvine Boulevard. These are all trails designated on the City of Irvine Trail Network.

Another policy that is particularly relevant to this project is Policy (f) of Objective B-4. This policy requires that all bicycle trip destinations should be equipped with bicycle facilities that include the provision of bike racks and showers. This policy should be considered in particular during design of the educational facilities (showers and racks) and the transit facilities (additional bike racks).

Additional trail opportunities for trails in areas identified as permanent open space, scenic highway corridors, agricultural edges, public utility rights of way and easement, flood control channels, and areas designated for rural and estate density residential development will also be encouraged, consistent with Objectives B-5, Policy (b). At the same time, such trails will be designed to minimize impacts on existing or planned development and wildlife preservation areas.

The phasing of the system will be consistent with the project's growth and development.

The traffic analysis specifically addresses project impacts to intersections identified in the Circulation Phasing Report (1998). Table 8-18 provided in the traffic report (Final Program EIR Appendix G) lists low, medium, and high priority intersections and shows project impacts. No impacts to Circulation Phasing "Hot Spot" locations are identified for 2007 conditions. Some locations are impacted for 2025 and/or Build (Post-2025) conditions. All impacts are fully mitigated.

5.2.4 Significant Impacts

Base Plan

Tran B1. Implementation of the Base Plan will cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestion at intersections) in the 2007, 2025, and Post 2025 scenarios as follows:

ROADWAY/FREEWAY/TOLLWAY/RAMP SEGMENTS

Year 2007

I-5 Freeway Southbound off ramp at Alton Parkway

Year 2025

I-5 Freeway at Jeffrey Road – southbound on ramp (AM/PM)
 I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM)
 I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM)
 I-5 Freeway at Bake Parkway – southbound off ramp (AM)
 I-405 Freeway at Jeffrey Road – northbound off ramp (PM)
 I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM)
 I-405 Freeway at Sand Canyon Avenue – southbound off ramp (AM)

Post 2025

I-5 Freeway from Jeffrey Road to Sand Canyon Avenue- southbound (AM)
 I-405 Freeway from Jeffrey Road to Sand Canyon Avenue- southbound (AM)

I-5 Freeway at Jeffrey Road – southbound on ramp (AM/PM)
 I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM)
 I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM)
 I-5 Freeway at Bake Parkway – southbound off ramp (AM)
 I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM)
 I-405 Freeway at Sand Canyon Avenue – southbound off ramp (AM)

INTERSECTIONS**Year 2007**

Please refer to Table 5.2-6.

Year 2025

Please refer to Table 5.2-7.

Post 2025

Please refer to Table 5.2-8.

- Tran B2.** Implementation of the Base Plan will result in inconsistencies with the adopted Orange County Master Plan of Arterial Highways (MPAH). These inconsistencies are associated with Marine Way and Rockfield Boulevard.
- Tran B3.** Implementation of the Base Plan will exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways in the 2025 scenario. The Base Plan will impact the following:

INTERSECTION**Year 2025**

El Toro Road/Avenida de la Carlota

Overlay Plan

- Tran O1.** Implementation of the Overlay Plan will cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestion at intersections) in the 2007, 2025, and Post 2025 scenarios as follows:

ROADWAY/FREEWAY/TOLLWAY/RAMP SEGMENTS

Year 2007

I-5 at Alton Parkway – southbound offramp (AM)
I-405 at Irvine Center Drive – southbound offramp (AM)

Year 2025

University Drive from the I-405 Freeway to Michelson Drive (AM)

I-5 Freeway from Sand Canyon Avenue to Jeffrey Road – northbound (PM)
I-5 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)
I-405 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)

I-5 Freeway at Jeffrey Road – southbound on ramp (AM)
I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM)
I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM)
I-5 Freeway at Alton Parkway – southbound off ramp (AM)
I-5 Freeway at Bake Parkway – southbound off ramp (AM)
I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM)
I-405 Freeway at Sand Canyon Avenue – southbound off ramp (AM)
I-405 Freeway at Irvine Center Drive – southbound off ramp (AM)
SR-241 Tollway at Lake Forest Drive – southbound off ramp (AM)
SR-133 Freeway at Barranca Parkway – northbound direct on ramp (PM)

Post 2025

I-5 Freeway from Sand Canyon Avenue to Jeffrey Road – northbound (PM)
I-5 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)
I-405 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)

I-5 Freeway at Jeffrey Road – southbound on ramp (AM)
I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM)
I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM)
I-5 Freeway at Alton Parkway – southbound off ramp (AM)
I-5 Freeway at Bake Parkway – southbound off ramp (AM)
I-5 Freeway at El Toro Road – southbound off ramp (PM)
I-405 Freeway at Jeffrey Road – northbound off ramp (PM)
I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (AM/PM)
I-405 Freeway at Sand Canyon Avenue – southbound off ramp (AM)
I-405 Freeway at Irvine Center Drive – southbound off ramp (AM)

INTERSECTIONS

Year 2007

Please refer to Table 5.2-12.

Year 2025

Please refer to Table 5.2-13.

Post 2025

Please refer to Table 5.2-15.

Tran O2. Implementation of the Overlay Plan will result in inconsistencies with the adopted Orange County Master Plan of Arterial Highways (MPAH). These inconsistencies are associated with Marine Way and Rockfield Boulevard.

Tran O3. Implementation of the Overlay Plan will exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways in the 2007 and 2025 scenarios. The Overlay Plan will impact the following:

FREEWAY/TOLLWAY LOCATIONS**Year 2025**

I-5 from Sand Canyon Avenue to Jeffrey Road – northbound (PM)
 I-5 from Jeffrey Road to Sand Canyon Avenue – southbound (AM)
 I-405 from Jeffrey Road to Sand Canyon Avenue – southbound (AM)

INTERSECTIONS**Year 2007**

El Toro Road/Avenida de la Carlota

Year 2025

El Toro Road/Avenida de la Carlota

5.2.5 Mitigation Measures

Locations experiencing peak hour deficiencies and significantly impacted by the project have been evaluated to determine what improvements are necessary to provide acceptable levels of service in accordance with City of Irvine and adjacent jurisdiction standards. Project mitigation in the form of (1) constructing new on-site arterial highways, (2) constructing new off-site roadway improvements, and (3) participating on a fair share basis to needed off-site freeway/tollway ramp improvements, have all been determined as part of the traffic analysis.

The traffic impact study has presented a multi-phase analysis of the potential traffic related impacts that would be anticipated to occur under the Orange County Great Park proposed network and land use concepts. The following identifies the measures needed to mitigate the impacts that have been identified. As the planning process for the project proceeds, and the land use plan becomes more defined and refined, additional analyses will be required to determine the cost, assign responsibility and refine the phasing of mitigation measures.

Base Plan and Overlay Plan

Tran 1. Prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs. The primary purpose of this mitigation measure is to reduce traffic, air quality and noise impacts. Should annexation into Spectrumotion not be approved, the landowner or subsequent project applicant shall develop and implement a similar transportation management plan containing the elements and meeting the criteria described below:

Transportation Management Plan (TMP)

The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for the Great Park Project. This document summarizes the key elements of the TMP.

1.0 Introduction

The purpose of this document is to provide an outline for a comprehensive TMP for the Great Park. This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.

It is the intent to annex Planning Area 51 and a portion of Planning Area 35 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.

In the event that annexation of PAs 51 and 35 into Spectrumotion is not approved, a TMP similar to that provided by Spectrumotion will be implemented. This document sets forth the components of the TMP should it be necessary.

2.0 Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

New Hire Orientation: Inform newly hired employees of commuting services available to them.

Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services ((i.e., OCTA buses, Metrolink, Amtrak, etc.).

Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.

On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.

Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.

Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.

Website: Maintain a website with all of their program information available.

Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.

Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.

Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.

3.0 Transportation Management Plan Implementation

As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Great Park. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.

Tran 2. Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of this Final Program EIR.

Tran 3. Prior to issuance of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the project traffic study (Urban Crossroads, December 2002) to maintain satisfactory levels of service as defined by the City's General Plan, based on thresholds of significance, performance standards, and methodologies used in this Final Program EIR, Orange County Congestion Management Program, and

Table 5.2-16
Base Plan Mitigation Summary
ICU Summary

INTERSECTION	YEAR	EXISTING		NO PROJECT		BASE PLAN		MITIGATED		MITIGATION DESCRIPTION
		AM	PM	AM	PM	AM	PM	AM	PM	
289 Jeffrey Rd. & Irvine Center Dr.	2002	0.50	0.65							
	2025			0.89	0.93	0.89	0.95	0.89	0.86	Construct 4th WB Through Lane
	BO			0.90	0.93	0.92	0.96	0.84	0.86	Construct 4th SB Through Lane and 4th WB Through Lane
310 Sand Cyn. Av. & Alton Pkwy.	2002	0.43	0.49							
	BO			1.07	0.71	1.10	0.71	1.07	0.71	Provide NB Right Turn Overlap
321 Laguna Cyn. Rd. & Old Laguna Cyn. Rd.	2002									
	2025			0.89	0.82	0.91	0.82	0.66	0.82	Construct 3rd NB Through Lane (Approach Improvements Only)
338 Alton Pkwy. & Irvine Bl.	2002	0.43	0.41							
	2007			0.79	0.87	0.74	0.94	0.74	0.73	Convert SB Right Turn Lane to a SB Free Right Turn Lane
	2025			1.09	1.20	0.98	1.32	0.98	0.96	Convert SB Right Turn Lane to a SB Free Right Turn Lane
	BO			1.10	0.89	0.89	0.94	0.89	0.86	Provide 4th WB Through Lane (in addition to SB Free RT Lane)
362 Bake Pkwy. & Irvine Bl.	2002	0.98	0.90							
	2025			0.94	0.87	1.17	0.85	0.94	0.89	Construct 3rd NB Left Turn Lane
	2025			0.94	0.87	1.17	0.85	0.94	0.89	Alternative Mitigation: Construct a 4th WB Through Lane
	BO			1.03	0.81	1.00	0.99	0.94	0.87	Construct a 3rd NB Left Turn Lane and a 2nd EB Right Turn Lane
	BO			1.03	0.81	1.00	0.99	1.00	0.79	Alternative Mitigation: Convert EB Right Turn Lane to Free Right Turn Lane
364 Bake Pkwy. & Jeronimo Rd.	2002	1.03	0.86							
	2025			1.06	0.88	1.17	0.90	1.02	0.89	Construct 2nd NB Left Turn Lane
	BO			1.13	0.93	1.20	0.94	1.03	0.93	Construct 2nd NB Left Turn Lane
375 Lake Forest Dr. & SR-241 SB Ramps	2002	0.43	0.43							
	BO			0.93	0.73	0.95	0.74	0.69	0.74	Construct a 2nd EB Right Turn Lane
376 Lake Forest Dr. & Trabuco Rd.	2002	0.64	0.62							
	2025			0.84	0.86	0.87	0.91	0.80	0.86	Construct SB Right Turn Lane
378 Lake Forest Dr. & Jeronimo Rd.	2002	0.66	0.69							
	2025			0.92	0.91	0.97	0.94	0.87	0.91	Construct EB and WB Right Turn Lanes
	BO			0.90	0.88	0.95	0.90	0.86	0.87	Construct EB and WB Right Turn Lanes
379 Lake Forest Dr. & Muirlands Bl.	2002	0.62	0.74							
	2025			0.78	0.88	0.80	0.91	0.72	0.88	Reconstruct 2nd NB and SB Left Turn Lanes to NB and SB Through Lanes, respectively
380 Lake Forest Dr. & Rockfield Bl.	2002	0.69	0.89							
	2025			0.90	1.06	0.94	1.08	0.87	1.01	Construct 3rd WB Left Turn Lane
	2025			0.90	1.06	0.94	1.08	0.89	1.03	Alternative Mitigation: ATMS
	2025			0.90	1.06	0.94	1.08	0.79	0.96	Alternative Mitigation: Convert a SB Left Turn Lane into a SB Through Lane
	BO			0.84	0.94	0.88	1.01	0.85	0.94	Construct 3rd WB Left Turn Lane
	BO			0.84	0.94	0.88	1.01	0.80	0.94	Alternative Mitigation: Construct a SB Through Lane
383 Lake Forest Dr. & Avenida de la Carlota	2002	0.55	0.70							
	2007			0.80	0.88	0.80	0.94	0.75	0.90	Construct 2nd WB Left Turn Lane and Provide WB Right Turn Lane Overlap
387 Ridge Route Dr. & Rockfield Bl.	2002	0.49	0.62							
	BO			0.79	0.93	0.82	0.95	0.82	0.87	Construct 2nd WB Left Turn Lane

Table 5.2-16
Base Plan Mitigation Summary
ICU Summary (Continued)

INTERSECTION	YEAR	EXISTING		NO PROJECT		BASE PLAN		MITIGATED		MITIGATION DESCRIPTION
		AM	PM	AM	PM	AM	PM	AM	PM	
390 Paseo de Valencia & Avenida de la Carlota	2002	0.55	0.62							
	2025			0.79	0.98	0.81	1.00	0.81	0.80	Construct 3rd SB Left Turn Lane, including receiving lane
	BO			0.79	0.98	0.81	1.00	0.81	0.80	Alternative Mitigation: Construct a 3rd EB Through Lane
	BO			0.78	0.91	0.79	0.93	0.79	0.74	Construct 3rd SB Left Turn Lane, including receiving lane
	BO			0.78	0.91	0.79	0.93	0.79	0.88	Alternative Mitigation: Construct a 3rd EB and 3rd NB Through Lane
391 Santa Maria Av. & Moulton Pkwy.	2002	0.54	0.82							
	BO			0.97	0.96	0.97	0.98	0.97	0.92	Construct 2nd WB Left Turn Lane
396 El Toro Rd. & Avenida de la Carlota	2002	0.76	1.41							
	2025			1.00	1.39	1.05	1.42	0.92	1.31	Restripe WB approach to provide 1 Shared Left Turn/Through Lane and 2 Right Turn Lanes
407 Laguna Cyn. Rd & Bake Pkwy.	2002	-	-							
	BO			1.44	1.11	1.45	1.13	1.29	0.95	Construct 2nd SB Left Turn Lane
420 El Toro Rd. & Jeronimo Rd.	2002	0.65	0.88							
	2007			0.72	0.93	0.73	0.96	0.73	0.86	Construct 2nd SB Left Turn Lane
	2025			0.80	0.98	0.81	1.02	0.81	0.89	Construct 2nd SB Left Turn Lane
	BO			0.83	1.00	0.87	1.03	0.82	0.90	Construct 2nd SB Left Turn Lane
421 Los Allisos Bl. & Trabuco Rd.	2002	0.83	0.78							
	2025			0.93	0.80	0.95	0.80	0.85	0.78	Construct 2nd NB Left Turn Lane
422 Los Allisos Bl. & Jeronimo Rd.	2002	0.83	0.93							
	BO			0.88	0.95	0.91	0.96	0.88	0.93	Construct 2nd WB Left Turn Lane
423 Muirlands Bl. & Los Allisos Bl.	2002	0.69	1.22							
	2025			0.97	1.20	0.99	1.21	0.97	1.13	Construct 2nd WB Left Turn Lane
	BO			0.98	1.16	1.00	1.19	0.90	1.11	Construct 2nd WB Left Turn Lane
428 Laguna Hills Dr. & Paseo de Valencia	2002	0.67	0.65							
	2025			0.82	1.06	0.84	1.08	0.72	1.06	Construct 2nd NB Left Turn Lane
429 Moulton Pkwy. & Laguna Hills Dr.	2002	0.66	0.85							
	BO			0.89	0.95	0.91	0.95	0.89	0.95	Provide WB Right Turn Overlap
432 Alicia Pkwy. & Muirlands Bl.	2002	0.65	0.88							
	2007			0.89	0.95	0.91	0.97	0.83	0.84	Construct 2nd SB Left Turn Lane & Convert EB Right Turn Lane to EB Free Right Turn Lane
	2025			0.92	1.00	0.94	1.00	0.85	1.00	Restripe SB Right Turn Lane to Shared (4th) Through/Right Turn Lane
485 Sand Cyn. Av. & Collector St.	2002									
	BO			1.09	1.20	1.19	1.28	1.00	1.11	Construct 2nd EB Through Lane
516 Lake Forest Dr. & Rancho Pkwy. North	2002	-	-							
	BO			1.10	1.01	1.12	0.99	1.11	0.98	Construct 2nd North Bound Left Lane and 2nd EB Right Turn Lane

**Table 5.2-17
Base Plan Mitigation Summary
ICU Summary**

INTERSECTION	YEAR	EXISTING		NO PROJECT		OVERLAY PLAN		MITIGATED		MITIGATION DESCRIPTION
		AM	PM	AM	PM	AM	PM	AM	PM	
224 Culver Dr. & Walnut Av.	2002	0.68	0.96							
	BO			0.91	0.88	0.93	0.89	0.88	0.85	Construct 3rd WB Left Turn Lane
	BO			0.91	0.88	0.93	0.89	0.86	0.89	Alternative Mitigation: Construct 4th SB Through Lane
288 Jeffrey Rd. & Walnut Ave.	2002	0.64	0.68							
	2025			0.86	0.81	0.97	0.90	0.94	0.85	Convert WB Through to Shared WB Left Turn/Through Lane
289 Jeffrey Rd. & Irvine Center Dr.	2002	0.50	0.65							
	2025			0.89	0.93	0.90	0.96	0.90	0.87	Construct 4th WB Through Lane
	BO			0.90	0.93	0.92	0.96	0.84	0.86	Construct 4th SB Through Lane and 4th WB Through Lane
291 Jeffrey Rd. & Alton Pkwy.	2002	0.84	0.91							
	BO			0.94	0.81	0.96	0.84	0.93	0.84	Construct EB Right Turn Lane w/ Overlap
310 Sand Cyn. Av. & Alton Pkwy.	2002	0.43	0.49							
	2025			1.09	0.66	1.11	0.68	1.08	0.68	Provide NB Right Turn Overlap
316 ETC E. Leg SB Ramps & Irvine Bl.	2002	0.36	0.31							
	2025			0.83	0.69	0.91	0.63	0.84	0.68	Provide NB Right Turn Overlap
321 Laguna Cyn. Rd. & Old Laguna Cyn. Rd.	2002									
	2025			0.89	0.82	0.91	0.82	0.66	0.82	Construct 3rd NB Through Lane (Approach improvements Only)
338 Alton Pkwy. & Irvine Bl.	2002	0.43	0.41							
	2007			0.79	0.87	0.75	0.98	0.75	0.74	Convert SB Right Turn Lane to SB Free Right Turn Lane
	2025			1.09	1.20	1.02	1.45	1.02	1.01	Convert SB Right Turn Lane to SB Free Right Turn Lane
	BO			1.10	0.89	0.91	0.97	0.91	0.89	Provide 4th WB Through Lane (in addition to SB Free RT Lane)
341 Alton Pkwy. & Muirlands Bl.	2002	0.43	0.47							
	2025			0.81	0.88	0.89	0.91	0.87	0.89	Construct WB Right Turn Lane
345 Alton Pkwy. & I-5 NB Ramps	2002	0.61	0.42							
	2025			1.02	0.62	1.05	0.59	0.99	0.58	Restripe WB approach to provide 2.5 Left Turn Lanes and 0.5 Right Turn Lanes
362 Bake Pkwy. & Irvine Bl.	2002	0.98	0.90							
	2025			0.94	0.87	1.17	0.85	0.94	0.89	Construct a 4th WB Through Lane
	BO			1.03	0.81	1.01	1.01	0.94	0.81	Construct 3rd NB Left Turn Lane & 2nd EB Right Turn Lane
	BO			1.03	0.81	1.01	1.01	1.01	0.81	Alternative Mitigation: Convert EB Right Turn Lane into Free Right Turn Lane
364 Bake Pkwy. & Jeronimo Rd.	2002	1.03	0.86							
	2025			1.06	0.88	1.10	0.89	0.94	0.83	Convert SB Defacto Right Turn Lane into 4th SB Through Lane and Construct 2nd NB Left Turn Lane
	BO			1.13	0.93	1.20	0.94	1.07	0.83	Convert SB Defacto Right Turn Lane into 4th SB Through Lane
368 Bake Pkwy. & Rockfield Bl.	2002	0.67	0.94							
	BO			0.71	0.91	0.59	0.97	0.59	0.88	Restripe WB approach to provide 2.5 Left Turn Lanes and 1.5 Through Lanes (Retain WB Free Right Turn Lane).
376 Lake Forest Dr. & Trabuco Rd.	2002	0.64	0.62							
	2025			0.84	0.86	0.88	0.93	0.81	0.88	Construct SB Right Turn Lane
	BO			0.84	0.88	0.86	0.91	0.79	0.85	Construct SB Right Turn Lane
378 Lake Forest Dr. & Jeronimo Rd.	2002	0.66	0.69							
	2025			0.92	0.91	0.97	0.96	0.87	0.89	Construct EB and WB Right Turn Lanes and SB Left Turn Lane
	BO			0.90	0.88	0.95	0.91	0.86	0.88	Construct EB and WB Right Turn Lanes
379 Lake Forest Dr. & Muirlands Bl.	2002	0.62	0.74							
	2025			0.78	0.88	0.81	0.93	0.81	0.82	Construct 4th NB Through Lane
380 Lake Forest Dr. & Rockfield Bl.	2002	0.69	0.89							
	BO			0.84	0.94	0.89	1.00	0.86	0.94	Construct 3rd WB Left Turn Lane
	BO			0.84	0.94	0.89	1.00	0.81	0.93	Alternative Mitigation: Construct 5th SB Through Lane
383 Lake Forest Dr. & Avenida de la Carlota	2002	0.55	0.70							
	2007			0.80	0.88	0.79	0.93	0.74	0.90	Construct 2nd WB Left Turn Lane and Provide WB Right Turn Lane Overlap

Table 5.2-17
Base Plan Mitigation Summary
ICU Summary (Continued)

INTERSECTION	YEAR	EXISTING		NO PROJECT		OVERLAY PLAN		MITIGATED		MITIGATION DESCRIPTION
		AM	PM	AM	PM	AM	PM	AM	PM	
387 Ridge Route Dr. & Rockfield Bl.	2002	0.49	0.62							
	BO			0.79	0.93	0.82	0.95	0.82	0.87	Construct 2nd WB Left Turn Lane
389 Ridge Route & Moulton Pkwy.	2002	0.62	0.89							
				0.56	0.99	0.56	1.02	0.59	0.89	Restripe 1 NB Through Lane to NB Right Turn Lane
390 Paseo de Valencia & Avenida de la Carlota	2002	0.55	0.62							
	2025			0.79	0.98	0.82	1.03	0.82	0.83	Construct 3rd SB Left Turn Lane, including receiving lane
				0.79	0.98	0.82	1.03	0.82	0.95	Alternative Mitigation: Construct a 3rd EB Through Lane
	BO			0.78	0.91	0.78	0.95	0.78	0.75	Construct 3rd SB Left Turn Lane, including receiving lane
	BO			0.78	0.91	0.78	0.95	0.78	0.89	Alternative Mitigation: Construct a 3rd EB and 3rd NB Through Lane
391 Santa Maria Av. & Moulton Pkwy.	2002	0.54	0.82							
	2025			0.88	0.92	0.90	0.94	0.90	0.91	Construct EB Right Turn Lane
	BO			0.97	0.96	0.97	0.98	0.97	0.92	Construct 2nd WB Left Turn Lane
393 El Toro Rd. & Rockfield Bl.	2002	0.68	0.86							
	2025			0.79	0.89	0.81	0.91	0.78	0.78	Construct EB Right Turn Lane w/ Overlap Phase
396 El Toro Rd. & Avenida de la Carlota	2002	0.76	1.41							
	2007			0.84	1.15	0.85	1.19	0.71	1.04	Restripe WB approach to provide 1 Shared Left Turn/Through Lane and 2 Right Turn Lanes
	2025			1.00	1.39	1.05	1.43	0.92	1.32	Restripe WB approach to provide 1 Shared Left Turn/Through Lane and 2 Right Turn Lanes
	BO			0.66	0.98	0.70	1.02	0.64	0.94	Construct 4th NB Through Lane
407 Laguna Cyn. Rd & Bake Pkwy.	2002	-	-							
	BO			1.44	1.11	1.45	1.15	1.29	0.95	Construct 2nd SB Left Turn Lane
420 El Toro Rd. & Jeronimo Rd.	2002	0.65	0.88							
	2007			0.72	0.93	0.73	0.95	0.73	0.85	Construct 2nd SB Left Turn Lane
	2025			0.80	0.98	0.83	1.03	0.81	0.91	Construct 2nd SB Left Turn Lane
	BO			0.83	1.00	0.86	1.03	0.82	0.91	Construct 2nd SB Left Turn Lane
421 Los Alisos Bl. & Trabuco Rd.	2002	0.83	0.78							
	2025			0.93	0.80	0.95	0.80	0.85	0.76	Construct 2nd NB Left Turn Lane
422 Los Alisos Bl. & Jeronimo Rd.	2002	0.83	0.93							
	2007			0.82	0.90	0.81	0.92	0.81	0.90	Construct 2nd EB Left Turn Lane
	BO			0.88	0.95	0.91	0.97	0.88	0.93	Construct 2nd WB Left Turn Lane
423 Muirlands Bl. & Los Alisos Bl.	2002	0.69	1.22							
	2025			0.97	1.20	0.99	1.21	0.97	1.13	Construct 2nd WB Left Turn Lane
	BO			0.98	1.16	1.01	1.20	0.98	1.12	Construct 2nd WB Left Turn Lane
424 Los Alisos Bl. & Rockfield Bl.	2002	0.77	0.73							
	2007			0.88	0.97	0.91	0.98	0.75	0.83	Construct SB Right Turn Lane
	2025			0.95	0.96	0.95	0.98	0.86	0.94	Construct 2nd NB Left Turn Lane
427 Moulton Pkwy. & Glenwood	2002	0.73	0.55							
	BO			0.98	0.82	1.00	0.83	0.84	0.83	Add 4th NB Through Lane
429 Moulton Pkwy. & Laguna Hills Dr.	2002	0.66	0.65							
	BO			0.89	0.95	0.92	0.95	0.84	0.89	Construct 3rd EB Left Turn Lane
	BO			0.89	0.95	0.92	0.95	0.84	0.95	Alternate Mitigation: Convert SB Defacto Right Turn Lane into SB Through Lane
432 Alicia Pkwy. & Muirlands Bl.	2002	0.65	0.88							
	2007			0.89	0.95	0.91	0.97	0.83	0.94	Construct 2nd SB Left Turn Lane & Convert EB Right Turn Lane to EB Free Right Turn Lane
485 Sand Cyn. Av. & Collector St.	2002									
	BO			1.09	1.20	1.22	1.34	1.03	1.15	Construct 2nd EB Through Lane

established in the transportation system/infrastructure fee program described in Mitigation Measure Tran 2 above.

Tran 4. Prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated traffic forecasts. The updated traffic study will evaluate the cumulative impact of the subject map and all previously approved or concurrently submitted maps. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City approved traffic study scope of work. The landowner or subsequent project applicant shall construct, bond for, or enter into a funding agreement for necessary improvements identified in the updated traffic study and/or participate in the City fee program (Tran 2 above) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of this Final Program EIR.

Traffic signals that are on-site or directly related to the Great Park development will be installed as warranted through the mitigation implementation plan process.

Tran 5. In conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the following actions:

1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-tollway ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in this EIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines.
2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency.
3. The landowner or subsequent project applicant shall enter into an agreement with the City prior to recordation of the first final map for each Master Tentative Map or equivalent to establish the method and timing of payment of the identified percentage responsibility.
4. The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic

flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or funding participation in a regional transportation improvement fee program, if adopted.

- Tran 6.** The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.
- Tran 7.** Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-compete clause or any similar agreement restricting a public agency's authority to construct improvement.
- Tran 8.** Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of any building permits within the base property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdiction to amend the Orange County Master Plan of Arterial Highways. Marine Way, Trabuco Road from the SR-133 tollway to College Road, and Y Street should be included on the MPAH.

5.2.6 Significance of Impacts After Mitigation

While potential impacts to the freeway/tollway mainline segments and ramps have been evaluated, this analysis and mitigation assumes that implementation of freeway and ramp improvements, except for ramp intersections with arterial streets, will be the responsibility of the existing regional transportation agencies. A number of programs are in place in Orange County to improve and upgrade the regional transportation system. These include the Transportation Corridor Agencies (TCA) Corridor program, the State Transportation Improvement Program (STIP), Caltrans Traffic Operations Strategies (TOPS), and the Orange County Transportation Authority (OCTA) Measure M program.

The TCA has adopted a Major Thoroughfare and Bridge Fee Program in which new development is required to pay a corridor fee at issuance of building permits. The purpose of the fee program is to assure that new development pays its fair share cost toward construction of the ultimate Corridor improvements. The corridor fee revenue can be used to construct additional improvements to the existing transportation corridor system. Both the Base project and Overlay project would contribute Corridor fees. In addition, project traffic would increase the amount of toll revenue that the TCA obtains from operation of the Corridors.

The STIP is a four-year expenditure plan that defines how state transportation funds will be allocated. The source of these funds is primarily from state and federal gas taxes. The STIP funds are used for different projects ranging from road maintenance to new freeway construction. Each county is guaranteed a minimum amount of STIP funds.

Traffic Operations Strategies (TOPS) is a program recently implemented by Caltrans to maximize utilization of the existing freeway and tollway system through performance-based investment strategies. The Caltrans' April 2002 TOPS report defines different implementation strategies within the TOPS program including implementation of "intelligent infrastructure" improvements such as system-wide adaptive ramp metering, advanced traveler information systems and real-time performance measurement systems, and implementation of physical operational improvements such as the construction of freeway auxiliary lanes (merge lanes provided before and after on ramps), the modification of ramp/city street access and the addition of short passing lanes and truck climbing lanes.

Orange County has supplemented their transportation programs by implementing a county sales tax for transportation improvements through the Measure M program. Funds from this program are available for improvements to regional interchanges and arterial highways. The ramps on the I-5 and I-405 identified as impacted would be eligible for improvement and funding through the Measure M program.

To the extent that the non-compete clause interferes with implementation of mitigation measures proposed in this Final Program EIR, cumulative impacts would not be mitigated and thus remain significant and unavoidable. The conclusions below assume that the impact of project traffic along with other regional growth at the identified ramp locations will be mitigated through a combination of the above programs. However, if these programs are not implemented by the agencies with the responsibility to do so, the cumulative impacts would remain significant and unavoidable.

Base Plan

Tran B1. Less than significant.

Tran B2. Less than significant.

Tran B3. Less than significant.

Overlay Plan

Tran O1. Less than significant.

Tran O2. Less than significant.

Tran O3. Less than significant.

Notes and References

None.

5.3 Air Quality

An air quality analysis to determine the potential air quality impacts of the proposed project, is incorporated into the following discussion. The Air Quality technical report prepared by Black & Veatch is provided in the Volume II Appendix I of this Final Program EIR. Guidance for this section is provided by the South Coast Air Quality Management District's *CEQA Air Quality Handbook and Update*.

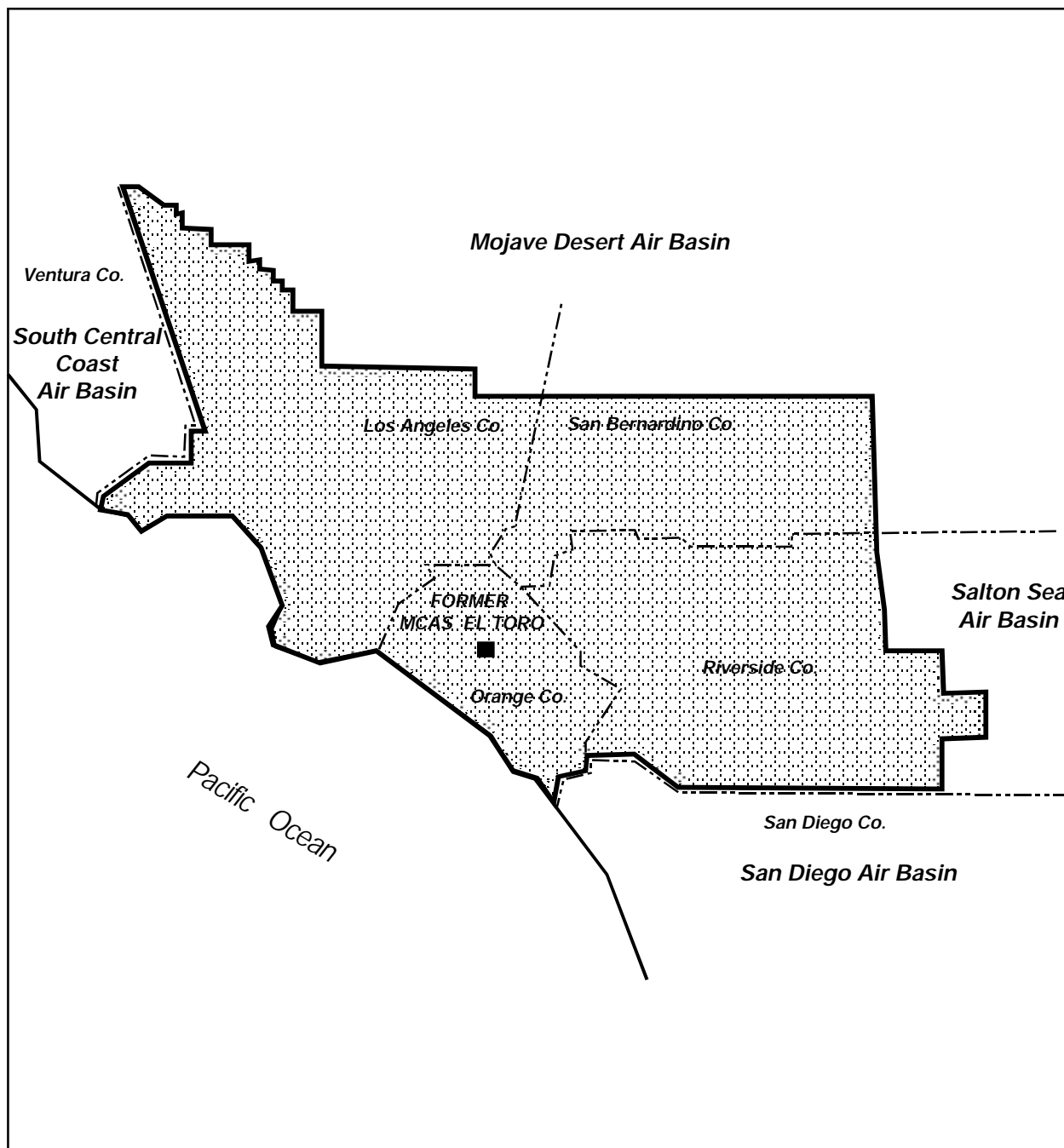
5.3.1 Environmental Setting

The proposed project site is located in the South Coast Air Basin (SCAB). The boundaries of the SCAB are shown in Figure 5.3-1. Air quality within the SCAB is monitored by the South Coast Air Quality Management District (SCAQMD). In general terms, air quality in the SCAB is considered one of the poorest in the United States.

Climate and Meteorological Conditions

The climate in Southern California is generally dominated by high-pressure systems over the Pacific Ocean. Moderate temperatures and comfortably low humidity are the predominant weather patterns in the region. Mild temperatures persist, except during summer months, when temperatures sometimes exceed 100 °F. The average summer and winter temperatures are approximately 75 °F and 50 °F, respectively. Heavy precipitation is limited to a few storms occurring normally from late November to April. The climate in Southern California is also frequented by temperature inversions that result in either ground based or elevated inversions that ultimately inhibit the dispersion of pollutants. Elevated inversions generally occur during the summer months where vertical mixing of pollutants is restricted, thereby resulting in accumulation of pollutants.

The climate in the SCAB is controlled largely by high-pressure systems over the Pacific Ocean, and is arid, with little rainfall and plentiful sunshine. During the summer months, light winds, high temperatures, and limited vertical mixing result in poor pollutant dispersion and in conjunction with abundant sunshine favor the formation of photochemical smog or ozone. Dominant wind patterns within the SCAB include the land/sea circulation system. On-shore breeze dominates daytime regional winds and the direction is usually reversed during nighttime. As such, calm winds (less than two miles per hour) usually occur less than ten percent of the time during the year. Based on the data available from the AQMD website [<http://www.aqmd.gov/metdata/>], the average wind speed measured at the MCAS El Toro meteorological station in 1981 is 1.57 meters per second (m/sec). However, the frequency of calm winds for 1981 measured at the site is 19.58 percent.



Source: SCAQMD CEQA Manual, 1993

— South Coast Air Basin Boundary

- - - County Boundaries



Not to Scale

Figure 5.3-1
South Coast Air Basin

Effects of Pollutants on Health

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in the prevalent air quality.

The following pollutants are regulated by the EPA and therefore are subject to emission reduction measures adopted by federal, state and other regulatory agencies.

Ozone (O₃)

Ozone is a secondary pollutant formed by the chemical reaction of volatile organic compounds and nitrogen oxides (NO_x) under favorable meteorological conditions such as high temperature and stagnation episodes. An elevated level of ozone irritates the lungs and breathing passages, causing coughing, and pain in the chest and throat thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower the lung efficiency.

Carbon Monoxide (CO)

Carbon monoxide is primarily emitted from combustion processes and motor vehicles because of incomplete combustion of fuel. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of moderate levels of carbon monoxide can cause nausea, dizziness, and headaches, and can be fatal at high concentrations.

Particulate Matter (PM₁₀)

The human body naturally prevents the entry of larger particles into the body. However, small particles, with an aerodynamic diameter equal to or less than ten microns (PM₁₀), are trapped in the nose, throat, and upper respiratory tract. These small particulates enter the body and could potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM₁₀. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulate could become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids.

Nitrogen Oxides (NO_x)

Major sources of NO_x include power plants, large industrial facilities, and motor vehicles. Nitrogen oxides are emitted from combustion processes and irritate the nose and throat. It increases susceptibility to respiratory infections, especially in people with asthma. The principal concern of NO_x is as a precursor to the formation of ozone.

Sulfur Dioxide (SO₂)

Major sources of SO₂ include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of sulfur dioxide aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. Sulfur dioxide potentially causes wheezing, shortness of breath, and coughing. High levels of particulate appear to worsen the effect of sulfur dioxide, and long-term exposures to both pollutants leads to higher rates of respiratory illness.

Lead (Pb)

Lead is emitted from industrial facilities and from the sanding or removal of old lead-based paint. Smelting or processing the metal is the primary source of lead emissions, which is primarily a regional pollutant. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

Volatile Organic Compounds (VOC)

Though VOCs are not directly a health hazard and are not considered a criteria pollutant, they react with NO_x in the presence of sunlight to produce ozone. Hence, VOC emissions are regulated as a precursor of ozone. However, some state and local agencies regulate VOCs as Reactive Organic Gases (ROGs) which possess similar characteristics as VOCs.

Air Quality Management

The project area is located in the SCAB and air emissions emanating from the project area are under the authority of the SCAQMD and the California Air Resources Board (CARB). The SCAQMD is primarily responsible for enforcing regulations for new and existing stationary sources within the SCAB and implementing appropriate transportation control measures. The CARB regulates and monitors mobile source emissions in conjunction with the SCAQMD. Other responsible agencies include the EPA and the Southern California Association of Governments (SCAG). The EPA is responsible for implementing the provisions of the federal Clean Air Act (CAA), the corresponding National Ambient Air Quality Standards (NAAQS), and ensuring the development of plans that are designed to meet the appropriate air quality standards. The SCAQMD and the SCAG are responsible for the development and implementation of the Air Quality Management Plan (AQMP) for the SCAB. The California Clean Air Act (CCAA) mandates implementation of a program that will achieve the California Ambient Air Quality Standards (CAAQS) and any new air quality performance standards. A listing of NAAQS and CAAQS is presented in Table 5.3-1. The most recent AQMP for the SCAB was developed in 1997. Preparation of a 2003 AQMP is underway and a draft is scheduled for release in early 2003.

Table 5.3-1
Applicable Federal and State Ambient Air Quality Standards

Air Pollutant	State Standard	Federal Primary Standard	Most Relevant Effects
	Concentration/ Averaging Time	Concentration/ Averaging Time	
Ozone	0.09 ppm, 1-hr. avg. >	0.12 ppm, 1-hr avg.> 0.08 ppm, 8-hr avg>	(a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema in humans and animals. (2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (c) Vegetation damage; (d) Property damage
Carbon Monoxide	9.0 ppm, 8-hr avg. > 20 ppm, 1-hr avg. >	9 ppm, 8-hr avg.> 35 ppm, 1-hr avg.>	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses
Nitrogen Dioxide	0.25 ppm, 1-hr avg. >	0.053 ppm, ann. avg.>	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration
Sulfur Dioxide	0.04 ppm, 24-hr avg.> 0.25 ppm, 1-hr. avg. >	0.03 ppm, ann. avg.> 0.14 ppm, 24-hr avg.>	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma
Suspended Particulate Matter (PM ₁₀)	30 µg/m ³ , ann. geometric mean > 50 µg/m ³ , 24-hr average>	50 µg/m ³ , annual arithmetic mean > 150 µg/m ³ , 24-hr avg.>	(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; (b) Excess seasonal declines in pulmonary function, especially in children
Sulfates	25 µg/m ³ , 24-hr avg. >=		(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage
Lead	1.5 µg/m ³ , 30-day avg. >=	1.5 µg/m ³ , calendar quarter>	(a) Increased body burden; (b) Impairment of blood formation and nerve conduction
Visibility-Reducing Particles	In sufficient amount to reduce the visual range to less than 10 miles at relative humidity less than 70%, 8-hour average (10am - 6pm)		Visibility impairment on days when relative humidity is less than 70 percent

Source: AQMP 1997 available at <http://www.aqmd.gov/aqmp/97aqmp/chapters/m-chap2.html>.

On January 12, 1999, the EPA proposed partial approval/disapproval of the 1997 AQMP revisions to the 1994 California Ozone State Implementation Plan (SIP) (64 FR 1770). To address the issues raised by the EPA, the SCAQMD Governing Board adopted the 1999 amendment to the 1997 ozone SIP revision for the SCAB. The 1999 amendment provides additional short-term stationary source control measures that implement portions of the 1997 Ozone SIP's long-term stationary source control measures. In addition, the amendment revises the adoption and implementation schedule for the remaining 1997 ozone SIP short-term stationary source control measures that AQMD is responsible for implementing.

Federal Clean Air Act (CAA) Requirements

In November 1990, Congress enacted a series of amendments to the CAA intended to intensify air pollution control efforts across the nation. One of the primary goals of the 1990 CAA amendments was an overhaul of the planning provisions for those areas not currently meeting NAAQS. The CAA identifies specific emission reduction goals, requires both a demonstration of reasonable further progress and an attainment demonstration, and incorporates more stringent sanctions for failure to attain, or to meet interim milestones.

National Ambient Air Quality Standards (NAAQS)

The CAA established the NAAQS for six criteria pollutants. The NAAQS are divided into primary and secondary standards. These are risk-based, national ambient standards established to regulate, protect, and improve the overall quality of air. Primary NAAQS are intended to protect human health, while the secondary NAAQS protect against other adverse effects to the environment. Compliance with the NAAQS is measured at certain locations within each designated air basin. The NAAQS are not directly enforceable against an emitting source. Rather, the source's emission limitations (which are directly enforceable) are set at levels calculated to support attainment of the NAAQS either statewide or basinwide.

The EPA does not necessarily consider economic feasibility of meeting the NAAQS in setting these standards. The NAAQS are technology forcing standards, since the regulated industries are required to implement pollution control technologies to attain emission limitations based upon the NAAQS, or limit or cease operations. NAAQS are implemented by the states, through enforceable source-specific emission standards developed and adopted through the SIP. The SIPs are revised periodically to comply with federal regulatory changes and local air quality conditions.

The CAA identifies two types of sources; namely, stationary sources and mobile sources. Stationary sources are regulated for all of the criteria and non-criteria pollutants, including hazardous air pollutants. Pollutants that are directly emitted into the atmosphere are known as primary pollutants, while secondary pollutants are those that are formed by the reaction of other precursor pollutants.

In general, the CAA does not necessitate significant changes in attainment planning for the SCAB in 1997, except requiring an attainment plan for PM₁₀. The CAA requires plans to provide for the implementation of all reasonably available control measures, as expeditiously as practicable, including the adoption of reasonably available control technologies for

reducing emissions from existing sources. Emission control innovations in the form of market-based approaches are explicitly encouraged by the CAA. The SCAQMD is the first local agency in the country to adopt a market-based approach for controlling stationary source emissions of oxides of nitrogen and sulfur. The CAA also requires plans to include demonstrations for reasonable further progress, which is defined as annual incremental reductions in emissions of relevant air pollutants needed to ensure attainment of the NAAQS by the applicable date. A similar demonstration of progress was instituted in California with the passage of the CCAA in 1988.

On July 17, 1997, the EPA announced new national ambient air quality standards for ground-level ozone and particulate matter. Specifically, the EPA plans to phase out and replace the existing 1-hour ozone standard with a new eight-hour standard, specifically the fourth highest eight hour average concentration not to exceed 0.08 parts per million (ppm) more than three times in three years. Additionally, the EPA had also revised the particulate matter standard by the promulgating a new standard for fine particulate matter, which is defined as particulate matter less than 2.5 microns in diameter.

In the year 2000, the EPA planned to designate areas that do not meet the eight-hour ozone standard based on the most recent three years of ozone data available at that time (e.g., 1997-1999). In order to implement the PM_{2.5} standards, the EPA established a comprehensive monitoring network to determine ambient PM_{2.5} concentrations. The CAA requires that the EPA make designation determinations (i.e., attainment, nonattainment, or unclassifiable) within two to three years of revising a standard. However, due to litigation, the EPA has delayed designation determinations and the implementation of PM_{2.5} standards until further notice. The EPA is scheduled to promulgate air quality designations for the new eight-hour ozone standard by April 15, 2004. Currently, it is unknown when the EPA plans to begin implementation of the new PM_{2.5} standards.

California Clean Air Act (CCAA)

The CCAA established a legal mandate to achieve health-based state air quality standards at the earliest practicable date. The Lewis Presley Act provides that the plan must also contain deadlines for compliance with all state ambient air quality standards and the federally mandated primary ambient air quality standards [Health and Safety Code (H&SC) 40462(a)]. Through its many requirements, the CCAA serves as an important consideration in the SCAB's attainment planning efforts. Essential CCAA requirements include the application of best available retrofit control technology; and reduction of nonattainment pollutants and their precursors at a rate of five percent per year. If these measures cannot be implemented, each basin is required to include other feasible measures of emission reduction with an expeditious implementation schedule; reduction in population exposure to severe nonattainment pollutants (i.e., ozone, CO, and NO_x for the SCAB) according to the prescribed schedule; and ranking control measures by cost-effectiveness and implementation priority. Finally, state law requires the plan to provide for attainment of the federal and state ambient air quality standards at the earliest practicable date.

The CCAA serves as the centerpiece of the SCAB's attainment planning efforts, since it is generally more stringent than the CAA. Based on pollutant levels, the CCAA divides nonattainment areas into categories with progressively more stringent requirements. The state nonattainment designations are on a county basis. The entire SCAB is an extreme nonattainment area for ozone. Although PM₁₀ is not explicitly addressed in the CCAA, it is

governed by the Lewis Presley Act. The plan therefore provides achieving all federal ambient air quality standards by their applicable date and state ambient air quality standards as early as possible.

1997 Air Quality Management Plan (AQMP)

The 1997 AQMP focuses on PM_{10} , since this is the first plan required by federal law to demonstrate attainment of the federal PM_{10} ambient air quality standards. The AQMP also updates the demonstration of attainment for ozone and CO, and includes a maintenance plan for nitrogen dioxide (NO_2).

The 1997 AQMP proposes policies and measures to achieve federal and state standards for healthful air quality in the SCAB and those portions of the Mojave Desert and Salton Sea Air Basins (formerly named the Southeast Desert Air Basin) that are under SCAQMD jurisdiction (namely, Antelope Valley and Coachella Valley). The expected compliance deadlines with state and federal standards for four criteria pollutants within SCAB are presented in Table 5.3-2. The Plan also addresses several state and federal planning requirements and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, and new models. The 1997 AQMP is consistent with the approaches taken in the 1994 AQMP for the attainment of the federal ozone air quality standard, and shows that with refinements to the 1994 AQMP control strategy, sufficient emission reductions are achieved to meet all federal criteria pollutant standards within the time frames allowed under the CAA. The new or amended rules which have been adopted since the release of the 1994 AQMP include the implementation of Phase II reformulated fuels (California Cleaner Burning Gasoline) in 1996; the replacement of the Regulation XV rideshare program with an equivalent emission reduction program under Rule 2202; and new incentive programs for generating emission credits.

Various measures are incorporated as overall control strategies within the AQMP to meet applicable state and federal standards. These measures include short and intermediate term measures, and long term measures. Short and intermediate measures include application of known, essential and available technologies and good management practices between 1995 and 2005. Long-term measures rely on future development of low to zero-emission control technology for all sources, and development of alternative technological solutions.

Sensitive Receptors

SCAQMD identifies sensitive receptors as populations that are more susceptible to the effects for air pollution than is the general population. Sensitive receptors located in or near the vicinity of known air emissions sources, including freeways and intersections, are of particular concern. Sensitive receptors include the following:

- health care facilities
- rehabilitation centers
- convalescent centers
- residences
- schools
- playgrounds
- child care centers
- athletic facilities

Table 5.3-2
Expected Year of Compliance with State and Federal Standards for Four
Criteria Pollutants (SCAB)

Pollutant	Standard	Threshold Concentration Level	Expected Compliance Year
Ozone	NAAQS 1-hour	12 pphm	2010
	CAAQS 1-hour	9 pphm	beyond 2010
PM ₁₀	NAAQS Annual	50 ug/m ³	2006
	NAAQS 24-hour	150 ug/m ³	2000 ¹
	CAAQS Annual	30 ug/m ³	beyond 2010
	CAAQS 24-hour	50 ug/m ³	beyond 2010
CO	NAAQS 8-hour	9 ppm	2000 ²
	NAAQS 1-hour	35 ppm	Achieved
	CAAQS 8-hour	9 ppm	2000 ²
	CAAQS 1-hour	20 ppm	Achieved
NO ₂	NAAQS Annual	5.34 pphm	Achieved
	CAAQS 1-hour	25 pphm	Achieved

pphm = Parts per hundred million parts of air, by volume

ug/m³ = micrograms per cubic meter

ppm = parts per million parts of air, by volume

¹Exceedances of the PM₁₀ 24-hour NAAQS were recorded in 2001

²No exceedances of the CO 8-hour NAAQS or CAAQS were recorded in 2001

Source: AQMP 1997 available at: [<http://www.aqmd.gov/aqmp/97aqmp/m-exec.html>]

Existing Environmental Conditions

In 2001, the annual maximum concentrations of ozone, and PM₁₀ exceeded both federal and state standards in some or all areas in the SCAB. However, standards for CO, NO₂, SO₂, lead and sulfate were not exceeded. Monitored data for the year 2001 is available for the monitoring locations in Orange County, but no official version of the trends incorporating the 2002 data is currently available. Therefore, air quality trends including 2001 are presented in the following section.

Maximum Pollutant Concentrations

Maximum recorded one-hour average and eight-hour average ozone concentrations in the SCAB for 2001 were 0.19 parts per million (ppm) and 0.144 ppm, which were 158 percent and 180 percent of the federal one-hour and eight-hour standards. Maximum recorded averages of 24-hour and annual PM₁₀ concentrations were 219 micrograms per cubic meter (ug/m³) and 63.1 ug/m³ and these values were 146 percent and 126 percent of the federal

24-hour and annual standards. A summary of measured pollutant concentrations within Orange County for the year 2001 is presented in Tables 5.3-3 to 5.3-8. The Saddleback Valley Site is the nearest to the project area.

In 2001, the federal NO₂ standard was not exceeded, with a maximum concentration of 0.0419 ppm, which was 79 percent of the standard. However, the one-hour average nitrogen dioxide concentration of 0.25 ppm was equal to the more stringent state standard. The highest eight-hour average CO concentration of the year was 7.71 ppm, which was less than both the federal and state standards. The maximum 24-hour concentration of sulfate was 20.6 µg/m³ and did not exceed the state standard. Sulfur dioxide and lead concentrations continued to remain well below the federal and state standards.

Air Quality Trends Through 2000

Historically, the SCAB has the highest number of exceedances of the federal air quality standards in the US. In 2001 alone, there were 36 days on which one or more federal standards were exceeded somewhere in the SCAB. However, air quality trends through 2001 reveal a continuation of a downward trend in concentrations and the number of exceedances in relation to preceding years. In the past few years, ozone levels in the SCAB have been markedly improving in terms of maximum concentration, the number of days exceeding the standards, and the severity of episode levels. In a continuing trend of improving air quality, the SCAB made it through a summer without experiencing a stage one episode for the third year in a row. While 1999 and 2000 were the first years in the history of ambient air monitoring that the SCAB was not the location of the highest recorded ozone concentration in the nation, once again in 2001 the highest one-hour ozone concentration in the nation was reported in the SCAB (SCAQMD website: [<http://www.aqmd.gov/smog/o3trend.html>]).

The SCAB's exceedances of the maximum three-year mean of the eight-hour average O₃ concentration decreased 48 percent between 1976-1978 and 1999-2001. The number of exceedances of the maximum one-hour O₃ concentration decreased 81 percent between 1976 and 2001. The SCAB is currently designated by the EPA as a non-attainment area for O₃, CO, and PM₁₀. Once an area has been designated as nonattainment, then the EPA requires the regulating authority to put in place a plan for planning and implementing a control strategy to achieve attainment. Some of the control strategies could include addressing emissions from existing sources and requiring more prescriptive control technology requirements and emission offsets for any new sources. According to the 1997 AQMP, attainment of all federal PM₁₀ standards is to occur no later than December 31, 2006, and O₃ standards are to be achieved by November 15, 2010. The eight-hour federal CO standard was to be attained no later than December 31, 2000; however, two exceedances were measured in the SCAB during 2000. There were no exceedances of the eight-hour federal CO standard in 2001 (AQMD website: [<http://ozone.aqmd.gov/smog/#aqdata>]).

**Table 5.3-3
Measured Ozone Concentrations in Orange County in 2001**

Monitoring Location	Station No.	Days of Data	1-hour Max (ppm)	8-hour Max (ppm)	Number of Days Standard Exceeded		
					Federal		State
					1-hr	8-hr	1-hr
N. Orange Co.	3177	360	0.11	0.09	0	2	4
Central Orange Co.	3176	274	0.11	0.07	0	0	2
N. Coast Orange	3195	365	0.07	0.07	0	0	1
Saddleback Valley*	3812	365	0.10	0.10	1	2	10

ppm - Parts per million parts of air, by volume

*Monitoring location nearest to the project area

Source: South Coast Air Quality Management District Air Data at:

[<http://www.aqmd.gov/smog/docs/aq01card.pdf>]

**Table 5.3-4
Measured CO Concentrations in Orange County in 2001**

Monitoring Location	Station No.	Days of Data	1-hour Max (ppm)	8-hour Max (ppm)	Number of Days Standard Exceeded ¹		
					Federal	State	
					8-hr.	8-hr.	1-hr.
N. Orange Co.	3177	363	11	4.7	0	0	0
Central Orange Co.	3176	274	8	4.7	0	0	0
N. Coast Orange	3195	363	6	4.6	0	0	0
Saddleback Valley*	3812	365	3	2.4	0	0	0

ppm - Parts per million parts of air, by volume

¹ The federal 1-hour standard (1-hour average CO > 35 ppm) was not exceeded

*Monitoring location nearest to the project area

Source: South Coast Air Quality Management District Air Data at:

[<http://www.aqmd.gov/smog/docs/aq01card.pdf>]

**Table 5.3-5
Measured NO₂ Concentrations in Orange County in 2001**

Monitoring Location	Station No.	Days of Data	1-hour Max (ppm)	AAM ¹ (ppm)	Number of Days State Standard Exceeded
					1-hour
N. Orange Co.	3177	363	0.13	0.0275	0
Central Orange Co.	3176	274	0.12	0.0293	0
N. Coast Orange	3195	365	0.08	0.0182	0
Saddleback Valley*	3812	--	--	--	--

ppm = Parts per million parts of air, by volume.

AAM = Annual Arithmetic Mean

¹ The federal standard is AAM NO₂ greater than 0.0534 ppm. No exceedance recorded.

*Monitoring location nearest to the project area.

-- = Pollutant not monitored.

Source: South Coast Air Quality Management District Air Data at

<http://www.aqmd.gov/smog/docs/aq01card.pdf>.

**Table 5.3-6
Measured PM₁₀ Concentrations in Orange County in 2001**

Monitoring Location	Station No.	Days of Data	24-hour Max (µg/m ³)	Number of Samples Exceeding Standard		AAM (µg/m ³)	AGM (µg/m ³)
				Federal 24-hour	State 24-hour		
N. Orange Co.	3177	--	--	--	--	--	--
Central Orange Co.	3176	46	93	0	9	36.0	33.7
N. Coast Orange	3195	--	--	--	--	--	--
Saddleback Valley*	3812	57	60	0	3	26.4	24.0

µg/m³ = microgram per cubic meter

AAM = Annual Arithmetic Mean

AGM = Annual Geometric Mean

Federal PM₁₀ standard is AAM > 50 µg/m³; state standard is AGM > 30 µg/m³

-- = Pollutant not monitored

* Monitoring location nearest to the project area

Source: South Coast Air Quality Management District Air Data at:

<http://www.aqmd.gov/smog/docs/aq01card.pdf>

Table 5.3-7
Measured Sulfate Concentrations in Orange County in 2001

Monitoring Location	Station No.	24-hour Max ($\mu\text{g}/\text{m}^3$)	No. (%) Samples Exceeding Standard
			State 24-hour
N. Orange Co.	3177	--	--
Central Orange Co.	3176	--	--
N. Coast Orange	3195	--	--
Saddleback Valley*	3812	--	--

¹Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media. Federal TSP standard superseded by PM_{10} standard, July 1, 1987

-- = Pollutant not monitored

* Monitoring location nearest to the project area

Source: South Coast Air Quality Management District Air Data at:

<http://www.aqmd.gov/smog/docs/aq01card.pdf>.

Table 5.3-8
Measured SO_2 Concentrations in Orange County in 2001

Monitoring Location	Station No.	Days of Data	1-hour Max (ppm) ¹	24-hour Max (ppm) ¹
N Orange Co	3177	--	--	--
Central Orange Co.	3176	--	--	--
N. Coast Orange	3195	363	0.02	0.008
Saddleback Valley*	3812	--	--	--

ppm= Parts per million parts of air, by volume

¹ The state standards are 1-hour average > 0.25 ppm and 24-hour average > 0.045 ppm. No exceedances of the state standards were recorded

The federal standards are annual arithmetic mean SO_2 > 0.03 ppm, 3-hour average > 0.50 ppm, and 24-hour average > 0.14 ppm. No exceedances of these standards were recorded

-- = Pollutant not measured

* Monitoring location nearest to the project area

Source: Air Quality South Coast Air Quality Management District. 2001

The SCAB's exceedances of the maximum three-year mean of the eight-hour average ozone concentration decreased 48 percent between 1976-1978 and 1999-2001. The number of exceedances of the maximum one-hour ozone concentration decreased 81 percent between 1976 and 2001. The SCAB is currently designated by the EPA as a non-attainment area for ozone, CO, and PM_{10} . In 2000, the annual maximum concentrations of ozone (O_3), carbon monoxide (CO), particulate matter (PM_{10}), and sulfates (SO_x) exceeded both federal and state standards in some or all areas in the SCAB. However, standards for nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (Pb) were not exceeded. A summary of measured criteria pollutant concentrations at the Saddleback air quality monitoring station (located at the former MCAS El Toro) for selected years between 1995 and 2000 are shown

in Table 5.3-9. NO₂ concentrations are not measured at this station; however, no station in Orange County has recorded an exceedance of NO₂ standards since at least 1990. Although air quality tends to vary year to year due primarily to meteorological conditions, air quality at the Saddleback monitoring station appears to be improving (which generally has been the case throughout the SCAB).

**Table 5.3-9
Measured Criteria Pollutant Concentrations at Saddleback Monitoring Station
for 1995, 1997, 1998, and 2000**

Year	Carbon Monoxide (CO) ¹		Ozone (O ₃) ²		Suspended Particulate Matter (PM ₁₀) ³	
	Maximum 8-hour Concentration (ppm)	Days State Standard Exceeded	Maximum 1-hour Concentration (ppm)	Days State Standard Exceeded	Maximum 24-hour Concentration (ug/m ³)	Days (% of Samples) State Standard Exceeded
2000	2.3	0	0.13	3	60	1(3)
1998	3.1	0	0.16	15	70	6(10.2)
1997	3.6	0	0.13	8	86	4(7.1)
1995	4.0	0	0.15	18	122	11 (18.3)

Abbreviations: ppm = parts per million; ug/m³ = micrograms per cubic meter

1. State standard for carbon monoxide: 20 ppm 1-Hour; 9.0 ppm 8-Hour. Less than 12 months of data for some years.
 2. State standard for ozone: 0.09 ppm 1-Hour.
 3. State standard for PM₁₀: 50 ug/m³, 24 hour. Collected approximately every 6 days.
- * Less than twelve full months of data.

Note: Levels of nitrogen dioxide (NO₂) are not measured at the Saddleback station. For other nearby stations in Orange County, NO₂ levels have not exceeded the State standard since at least 1990.

Source: South Coast Air Quality Management District. *Air Quality Data*. 1995-2000.

According to the 1997 AQMP, attainment of all federal PM₁₀ standards is to occur no later than December 31, 2006, and ozone standards are to be achieved by November 15, 2010. The eight-hour federal CO standard was to be attained no later than December 31, 2000; however, two exceedances were measured in the SCAB during 2000. There were no exceedances of the eight-hour federal CO standard in 2001. A summary of the attainment/nonattainment status of the SCAB and attainment deadlines is presented in Table 5.3-2.

5.3.2 Threshold For Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for air quality.

Would the project:

1. *Conflict with or obstruct implementation of any applicable air quality plan?*
2. *Violate any air quality standard or contributes substantially to an existing or projected air quality violation?*
3. *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*
4. *Expose sensitive receptors to substantial pollutant concentrations?*
5. *Create objectionable odors affecting a substantial number of people?*

The significance of the air quality impacts is determined by the criteria set forth in the SCAQMD's 1993 *CEQA Handbook and Update*. Air quality impacts are considered significant if operational emissions exceed the threshold criteria shown in Table 5.3-10.

Table 5.3-10
SCAQMD Thresholds for Significant Contribution to Regional Air Pollution

Pollutant	Threshold of Significant Effect	
	Operation Emissions	Construction Emissions
Reactive Organic Gases (ROG)	55 lbs/day, 0.03 tons/day	75 lbs/day, 0.03 tons/day, 2.5 tons/quarter
Oxides of Nitrogen (NO _x)	55 lbs/day, 0.03 tons/day	100 lbs/day, 0.03 tons/day, 2.5 tons/quarter
Carbon Monoxide (CO)	550 lbs/day, 0.28 tons/day	550 lbs/day, 0.28 tons/day 24.75 tons/quarter
Fine Particulate Matter (PM ₁₀)	150 lbs/day, 0.08 tons/day	150 lbs/day, 0.08 tons/day, 6.75 tons/quarter

Source: *CEQA Air Quality Handbook*. South Coast Air Quality Management District.

5.3.3 Environmental Impact

Musick Jail and IRWD Parcels

No land use change is proposed for these parcels as part of the proposed project. As such, the air quality impact is less than significant. The following analysis addresses Thresholds 2, 3 and 4, as identified below. Thresholds 1 and 5 are addressed later in this section.

Threshold 2: *Violate any air quality standard or contributes substantially to an existing or projected air quality violation?*

Threshold 3: *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*

Threshold 4: Expose sensitive receptors to substantial pollutant concentrations?**Base Plan and Overlay Plan**

The implementation of either the Base Plan or Overlay Plan for the development of the project area will result in additional amounts of air emissions. The overall air quality impacts due to the emissions generated by the project are classified into construction and post-construction impacts based on duration. In addition, based on the area of influence, they are divided into local and regional impacts. Construction-related impacts include impacts due to air emissions generated from activities such as grading and excavation. Post-construction impacts are predicted based on general operational emissions for the life of the project. The operational emissions include emissions due to energy consumption and motor vehicle trips.

The significance of the air quality impacts is determined by the criteria set forth in the SCAQMD's 1993 CEQA Handbook. Impacts are considered significant if net project emissions exceed the following threshold criteria:

<u>Pollutant</u>	<u>Emission Threshold</u>
ROG	55 lbs/day (0.0275 tons/day)
CO	550 lbs/day (0.275 tons/day)
PM ₁₀	150 lbs/day (0.075 tons/day)
NO _x	55 lbs/day (0.0275 tons/day)
SO _x	150 lbs/day (0.075 tons/day)

Other indicators that the project could be considered significant include interference with attainment of a national or state ambient air quality standard, or the generation of vehicle trips that create a CO hotspot.

Emission Estimation Procedure

Emissions from the Base Plan and Overlay Plan are estimated using the Urban Emissions (URBEMIS) 2001 Model developed and tested by CARB and approved for use by SCAQMD. The URBEMIS 2001 model is an emissions estimation tool for land use development projects, such as the reuse of the project area. The model has been modified and enhanced to estimate construction and area source emissions for various air districts in California. Specific emission factors for each air basin, including the SCAB, have been incorporated into the model that account for compliance with air basin specific requirements. Various default parameters specific to each region have been verified and approved by local regulatory agencies and are also included in the model. Additionally, the model includes the ability to selectively identify and account for various mitigation measures.

The URBEMIS 2001 model has been modified to estimate motor vehicle emissions using EMFAC7G, a motor vehicle emission factor model. Another significant feature of the model includes the ability to selectively identify and account for various mitigation measures.

Construction Emissions

Base Plan and Overlay Plan

Both the Base Plan and Overlay Plan propose the development of the entire 4,693-acre base within a 19-year (2007-2025) time frame. For estimation of air emissions, it was assumed that either plan is subdivided into two phases based on utility and extent of the development. For each of the two plans, the first phase is expected to last ten years (2007-2016) and the second phase will last the remaining nine years (2017-2025). For the estimation of air quality emissions from construction of the various facilities, construction activity is assumed to last for a period of three years during each phase. This assumption conservatively accounts for both demolition and grading/excavation activities as major sources of construction related emissions. The URBEMIS 2001 model is used for estimating construction emissions for all stages of development. Estimates of land use and acreage absorbed are obtained from the plan proposal and modification for the development.

According to the URBEMIS 2001 User's Guide, site grading emissions consist of two components: site grading equipment exhaust and grading-related fugitive PM₁₀ emissions. The procedure used to estimate site grading equipment exhaust emissions is based on emission factors developed by the EPA. The mobile construction equipment equations proposed for URBEMIS 2001 are based on the following equation:

$$\text{Emissions (pound per day)} = (\text{pounds of pollutant emitted per hour}) \times (\text{hours each equipment type operated})$$

URBEMIS 2001 estimates default acreage graded per day based on land use size specified by the user. The basis for site grading PM₁₀ fugitive emissions is the emission factor prepared by the CARB for construction activities:

$$\text{PM}_{10} \text{ (pounds per day)} = (220 \text{ pounds of PM}_{10} / \text{acre month}) \times (\text{month}/22 \text{ days}) \times \text{Acres graded per day}$$

The PM₁₀ emission factor of 220 pounds per acre-month is based on a report prepared for the SCAQMD (Midwest Research Institute 1996). A review of the report, entitled Improvement of Specific Emission Factors (BASCM Project No.1), indicates that this emission factor is an average emission factor for construction activities and was recommended by the Midwest Research Institute as a substitute for the EPA's AP-42 emission factor for construction activities. This average emission factor was based on construction activities (at four construction sites) for the following elements: limited-to-heavy trenching activities; limited-to-heavy earth moving activities by scrapers; road preparing activities; paving activities; road grading; scraper excavations; general construction (pads, framing, landscaping, etc.); drilling; blasting; compaction; and trucking of excavated and fill material.

Previous air quality analysis performed for the public release (draft) EIR for the Great Park Plan did not specifically estimate demolition emissions in the URBEMIS 2001 construction model. However, the air quality analysis did assume that fugitive particulate emissions would occur from land disturbance (i.e., site grading). Runway demolition will only occur in the first phase of construction; approximately 31.2 million cubic feet of concrete from

existing runways will be demolished. Table 5.3-11 provides emission estimates for the unmitigated phase one Base Plan scenario both with and without runway demolition. As shown in the table, the difference between the unmitigated PM₁₀ emissions for both scenarios is less than 6.6 tons per year; this figure is statistically insignificant.

Table 5.3-11
Initial URBEMIS 2001 Model Run (Without Runway Demolition)

Emission Source	Unmitigated PM₁₀ Emissions (Tons per Year)	Total Construction Emissions (Percent)
Demolition	0.00	0.00
Site Grading	445.69	98.76
Construction Worker Trips	3.47	0.77
Stationary Equipment	0.01	<0.01
Mobile Equipment (Diesel)	2.12	0.47
Total	451.29	100

Secondary URBEMIS 2001 Model Run (With Runway Demolition)

Emission Source	Unmitigated PM₁₀ Emissions (Tons per Year)	Total Construction Emissions (Percent)
Demolition	6.55	1.43
Site Grading	445.69	97.35
Construction Worker Trips	3.47	0.76
Stationary Equipment	0.01	<0.01
Mobile Equipment (Diesel)	2.12	0.46
Total	457.84	100

Source: Black and Veatch 2003

Other sources of construction related emissions include construction worker travel and asphaltting operations. A commonly accepted practice for reducing and suppressing dust emissions from construction activity is watering prior to and during the activity. Water application accounts for one of the mitigation measures assumed for estimating mitigated construction emissions. Probable mitigation measures and reduced impacts from their implementation are discussed in later in this report.

Unmitigated Construction Emission Estimates

Base Plan and Overlay Plan

Emissions from construction related activities for each phase are presented in Table 5.3-12 for both the Base Plan and Overlay Plan. These emissions are a result of unmitigated construction activity for the development in the project site. Emissions are presented in tons per day. It should be emphasized the emissions presented in the Table 5.3-12 are unmitigated emissions only. Once mitigation measures are implemented, a reduction in construction related emissions is anticipated. The estimates are based on URBEMIS 2001

defaults, as exact construction schedule and equipment specifications are currently not available.

Table 5.3-12
Unmitigated Construction Emissions for the Development of the Project Area

Construction Emission Estimates (tons/day)					
	ROG	NO_x	CO	PM₁₀	SO_x
Phase 1 (Base)	2.35	0.36	0.14	1.81	0.03
Phase 2 (Base)	0.23	0.31	0.01	0.18	0.03
Phase 1 (Overlay)	2.09	0.35	0.12	1.71	0.03
Phase 2 (Overlay)	0.32	0.34	0.01	0.28	0.03
CEQA Significance Thresholds	0.03	0.03	0.28	0.08	0.08
Base Case Exceeded Significant Thresholds	Yes	Yes	No	Yes	No
Overlay Case Exceeded Significant Thresholds	Yes	Yes	No	Yes	No

Source: Black and Veatch 2002

Mitigated Construction Emission Estimates

Base Plan and Overlay Plan

Mitigation measures are implemented to minimize emissions and thereby reduce impacts of construction activity associated with the project. Various levels of mitigation measures can be adopted. The most common form of mitigation method applied to minimize fugitive dust emissions from construction activity is the application of water. This form of mitigation is effective, resulting in a reduction of fugitive dust emissions. The following are some of the mitigation measures assumed for estimating mitigated emissions due to construction activity.

- ◆ Replace ground cover in disturbed areas quickly.
- ◆ Maintain construction and mobile equipment properly.
- ◆ Apply water to haul roads and unpaved areas twice a day.
- ◆ Reduce speeds on unpaved roads.
- ◆ Use low emission fuel.
- ◆ Use low VOC asphalt for paving.
- ◆ Reduce equipment idling time.
- ◆ Use non-diesel equipment, wherever possible.
- ◆ Stagger use of equipment near sensitive receptors.

All the above measures result in a substantial reduction of total PM₁₀ emissions from construction related activities, but NO_x emissions are increased. Specific mitigation measures that will be implemented is varied; certain measures may not be feasible once actual development gets underway and selection of certain measures may not be desirable

due to NO_x emission increases. The probable implementation of these measures may be further modified based on future demand. The mitigated construction emissions for the Base Plan and the Overlay Plan are presented in Table 5.3-13. All construction related emissions from the project are considered temporary and therefore not expected to significantly contribute to post-construction air quality impacts. As shown in the Tables 5.3-12 and 5.3-13, the project is expected to exceed the SCAB significant emission thresholds for ROG, NO_x and PM₁₀. The project impact is, therefore, considered significant since the estimated potential construction emissions are expected to exceed the emission thresholds.

**Table 5.3-13
Mitigated Construction Emissions for the Development of the Project Area**

Construction Emission Estimates (tons/day)					
	ROG	NO_x	CO	PM₁₀	SO_x
Phase 1 (Base)	2.23	0.42	0.14	0.72	0.02
Phase 2 (Base)	0.21	0.43	0.01	0.08	0.02
Phase 1 (Overlay)	1.98	0.41	0.12	0.69	0.03
Phase 2 (Overlay)	0.29	0.46	0.01	0.12	0.02
CEQA Significance Thresholds	0.03	0.03	0.28	0.08	0.08
Base Case Exceeded Significant Thresholds	Yes	Yes	No	Yes	No
Overlay Case Exceeded Significant Thresholds	Yes	Yes	No	Yes	No

Source: Black and Veatch 2002

Operational Emissions

Base Plan and Overlay Plan

Operational emissions resulting from the implementation of either the Base Plan or Overlay Plan are divided into (i) area source emissions that include emissions from natural gas combustion, residential fireplaces, landscaping, consumer products, and (ii) motor vehicle operation emissions. The number of motor vehicles that will result from the either plan were estimated using the land use type and trip generation rates presented in the transportation study performed by Urban Crossroads, Inc. Area source emissions resulting from natural gas combustion for heating/cooling purposes, fireplaces and consumer products are estimated based on the area and size of various proposed land uses in the project area. Operational emissions estimates are based on the assumption that operational emissions begin in the third year of each phase, that emissions are 50 percent of full phase operational emissions in years three and four, and that full operational emissions begin by the 5th year of each phase. Table 5.3-14 summarizes this approach.

Area source and motor vehicular emissions are estimated using the URBEMIS 2001 model. The description of the model is presented in earlier in this section.

Table 5.3-14
Operational Levels by Year for the Development of the Project Area

Year	Operational Level (Phase 1)	Operational Level (Phase 2)
Initiation of Phase 1		
2007	0%	0%
2008	0%	0%
2009	50%	0%
2010	50%	0%
2011-2016	100%	0%
Initiation of Phase 2		
2017	100%	0%
2018	100%	0%
2019	100%	50%
2020	100%	50%
2021	100%	100%
2022	100%	100%
2023	100%	100%
2024	100%	100%
2025	100%	100%
Post-2025	100%	100%

Source: Black and Veatch 2002

Unmitigated Area Source Emissions Estimation

Base Plan and Overlay Plan

The emissions from area sources are estimated depending on the land uses presented in the Air Quality technical report (Appendix I of this Final Program EIR). The significant area sources of air emissions result from combustion of natural gas (space and water heating) and electrical usage, residential fireplaces, and consumer products. Emissions from water and space heating are measured using default emission factors built into the URBEMIS 2001 model for the SCAB. These emission factors estimate the amount of emissions based on the square footage and/or acreage of various land uses in the plan. Similarly, air emissions from residential fireplaces and consumer products are also measured using emission factors built into the model based on number and type of residential units within the plan. Air emissions from each of the sources are estimated for the two stages of development of the project area for the Base Plan and Overlay Plan. Area source emissions are estimated for the median year for each stage of development. For example, the Phase 1 development will occur between the years 2007 and 2016. Therefore, emissions for this stage are estimated for the median year of 2010. These estimates conservatively account for potential emissions resulting from the project area. Potential unmitigated air emissions from area sources for the development of the project area for the Base Plan and the Overlay Plan are presented in Table 5.3-15.

Table 5.3-15
Unmitigated Area Source Emissions for the Development of the Project Area

Area Source Emission Estimates (tons/day)					
	ROG	NO_x	CO	PM₁₀	SO_x
Phase 1 (Base)	0.08	0.02	0.16	0.02	0.00
Phase 2 (Base)	0.03	0.01	0.07	0.01	0.00
Phase 1 (Overlay)	0.41	0.04	0.86	0.13	0.00
Phase 2 (Overlay)	0.25	0.02	0.52	0.08	0.00
CEQA Significance Thresholds	0.03	0.03	0.28	0.08	0.08
Base Case Exceeded Significant Thresholds	Yes	No	No	No	No
Overlay Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No

Source: Black and Veatch 2002

Mitigated Area Source Emissions Estimation

Base Plan and Overlay Plan

The mitigation of area source emissions cannot be completely quantified, as some of the applicable measures cannot be imposed on the proposed development at this time; but may be suggested for implementation later. The actual implementation of the mitigation measures depends on the type and degree of development activity, and the appropriate mitigation measures may not be proposed until the detailed planning of the various stages of development. However, for emission estimation, certain measures (defined below) have been assumed as mitigation measures that may be implemented during the planning and execution stages of the project. The implementation of the emission mitigation measures cannot be guaranteed at this stage of the project, because they may not be technically or economically feasible once actual development begins.

The mitigation measures that could be implemented for residential and commercial development include the siting of structures such that they orient either north or south to reduce the amount of energy consumed for heating and cooling purposes. Other assumed measures for residential and commercial development include the use of solar energy, and central heating and cooling systems. The mitigated emission estimates for the project area are presented in Table 5.3-16. As shown in Tables 5.3-15 and 5.3-16, the potential emissions resulting from the project are, whether unmitigated or mitigated, expected to be at or above the SCAB significant emission thresholds for all the pollutants for the Overlay Plan, except for SO_x. Only emissions of ROG are over the CEQA significant emission threshold for the Base Plan. The project area is, therefore, considered significant since the estimated potential emissions are expected to exceed the CEQA significant emission thresholds.

Table 5.3-16
Mitigated Area Source Emissions for the Development of the Project Area

Area Source Emission Estimates (tons/day)					
	ROG	NOx	CO	PM10	SOx
Phase 1 (Base)	0.07	0.02	0.14	0.02	0.00
Phase 2 (Base)	0.03	0.01	0.06	0.01	0.00
Phase 1 (Overlay)	0.39	0.03	0.77	0.12	0.00
Phase 2 (Overlay)	0.24	0.02	0.46	0.07	0.00
CEQA Significance Thresholds	0.03	0.03	0.28	0.08	0.08
Base Case Exceeded Significant Thresholds	Yes	No	No	No	No
Overlay Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No

Source: Black and Veatch 2002

Unmitigated Motor Vehicle Emission Estimation

Base Plan and Overlay Plan

Motor vehicle emissions or mobile source emissions constitute a significant portion of the total emissions from the development of the Base Plan or Overlay Plan. According to the data provided by Urban Crossroads, Inc, the total estimated number of average daily trips (ADT) generated by the Base Plan and the Overlay Plan are 90,965 and 148,455, respectively. Motor vehicle emissions are estimated for each phase based on the type of development activity and projected number of ADTs for that phase. It should be noted however that the actual number of ADTs during each phase might be less than projected since the increase depends upon the gradual progress of the development. The unmitigated emission estimates based on the projected number of ADTs for the Base Plan and Overlay Plan in the project area are presented in Table 5.3-17.

Table 5.3-17
Unmitigated Mobile Source Emissions for the Development of the Project Area

Mobile Source Emission Estimates (tons/day)				
	ROG	NO_x	CO	PM₁₀
Phase 1 (Base)	0.22	0.22	2.07	0.14
Phase 2 (Base)	0.14	0.15	1.66	0.16
Phase 1 (Overlay)	0.35	0.37	3.49	0.24
Phase 2 (Overlay)	0.24	0.27	2.97	0.28
CEQA Significance Thresholds	0.03	0.03	0.28	0.08
Base Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes
Overlay Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes

Source: Black and Veatch 2002

Mitigated Motor Vehicle Emission Estimation

Base Plan and Overlay Plan

The most common suggested mitigation measures for mobile source emissions include proper design of roadway systems that include sidewalks, street lighting, traffic shelters, synchronization of traffic lights and providing bicycle trails. Certain measures specific to the commercial development include parking preference for carpools and vanpools, using low emission vehicle fleets, and programs such as satellite offices, home based telecommuting programs, and providing onsite facilities such as banks and cafeterias. However, these measures are not guaranteed for implementation, as they are specific to the businesses and residences that will be developed in the project area. The mitigated emission estimates for motor vehicle emissions are presented in Table 5.3-18.

Table 5.3-18
Mitigated Mobile Source Emissions for the Development
of the Project Area Standards

Mobile Source Emission Estimates (tons/day)				
	ROG	NO_x	CO	PM₁₀
Phase 1 (Base)	0.19	0.19	1.77	0.12
Phase 2 (Base)	0.13	0.13	1.43	0.13
Phase 1 (Overlay)	0.31	0.32	3.05	0.21
Phase 2 (Overlay)	0.21	0.23	2.57	0.24
CEQA Significance Thresholds	0.03	0.03	0.28	0.08
Base Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes
Overlay Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes

Source: Black and Veatch 2002

Summary of Operational Emissions

Base Plan and Overlay Plan

Operational emissions last for the life of the project and consist of emissions from area sources and the operation of motor vehicles. As seen in Tables 5.3-15 through 5.3-19, the project area is expected to exceed the significance thresholds for one or more pollutants. The project is, therefore, considered significant since the estimated potential emissions are expected to exceed the significant emission thresholds for ROG, NO_x, CO and PM₁₀. Thus, a detailed assessment will be required to quantify the significance of the impacts from each of the pollutants. In the year 2025, after the project is completely implemented, only operational emissions (post-construction) will exist and the estimated average operational emissions resulting from the plan development are presented in Table 5.3-19. These estimates include all developed area sources and motor vehicle operations that occur during the two phases of the project area. A comparison of these estimates with the 1997 AQMP total projected SCAB emissions is presented later in this section.

Table 5.3-19
Average Operational Emissions (Area plus Mobile) in the Year 2025 for
the Project Area

Unmitigated Emissions (tons/day)					
	ROG	NO_x	CO	PM₁₀	SO_x
Tons/day (Base)	0.47	0.40	3.96	0.33	0.01
Tons/day (Overlay)	1.25	0.70	7.84	0.73	0.01
CEQA Significance Thresholds	0.03	0.03	0.28	0.08	0.08
Base Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No
Overlay Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No
Mitigated Emissions(tons/day)					
Tons/day (Base)	0.42	0.35	3.40	0.28	0.00
Tons/day (Overlay)	1.15	0.60	6.85	0.64	0.01
CEQA Significance Thresholds	0.03	0.03	0.28	0.08	0.08
Base Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No
Overlay Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No

Source: Black and Veatch 2002

Summary of Construction and Operation Emission Estimates

Base Plan and Overlay Plan

The total emission estimates from both construction and post-construction of the project are presented in Tables 5.3-20 and 5.3-21. The estimates are presented in tons per day. (These emissions are compared to projected total emissions in the SCAB later in this section). The projected SCAB emissions were extrapolated from the 1997 AQMP emission estimates for the years 2007 and 2025. As compared to the total projected emissions for the SCAB, the mitigated emissions after the Base Plan is completed constitutes from only 0.05 percent (for ROG) to 0.20 percent (for CO) of the total SCAB emissions. Similarly, the mitigated emissions after the Overlay Plan is completed constitutes from only 0.09 percent (for NO_x) to 0.39 percent (for CO) of the total SCAB emissions.

Table 5.3-20
Summary of Unmitigated Construction and Operation Emission Totals
for the Development of the Project

Average Emission Estimates (tons/ day)					
	ROG	NO_x	CO	PM₁₀	SO_x
Phase 1 (Base)	2.65	0.60	2.37	1.97	0.03
Phase 2 (Base)	0.40	0.48	1.74	0.34	0.03
Phase 1 (Overlay)	2.85	0.76	4.47	2.08	0.03
Phase 2 (Overlay)	0.81	0.63	3.50	0.64	0.03
CEQA Significance Thresholds	0.03	0.03	0.28	0.08	0.08
Base Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No
Overlay Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No

Source: Black and Veatch 2002

Table 5.3-21
Summary of Mitigated Construction and Operation Emission Totals for
the Development of the Project

Average Emission Estimates (tons/ day)					
	ROG	NO_x	CO	PM₁₀	SO_x
Phase 1 (Base)	2.50	0.63	2.05	0.86	0.03
Phase 2 (Base)	0.36	0.57	1.50	0.22	0.03
Phase 1 (Overlay)	2.69	0.76	3.93	1.02	0.03
Phase 2 (Overlay)	0.74	0.71	3.05	0.44	0.03
CEQA Significance Thresholds	0.03	0.03	0.28	0.08	0.08
Base Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No
Overlay Case Exceeded Significant Thresholds	Yes	Yes	Yes	Yes	No

Source: Black and Veatch 2002

Extent of Change in Regional Emissions

The primary post-construction air quality impacts from the development of the project result from operational emissions from area sources and motor vehicles. A comparison of the projected emission estimates for the SCAB in the 1997 AQMP and the emission estimates from the development of the project help determine the extent of the air quality impacts that the project will have on the surrounding environment and existing air quality. Projected SCAB emission estimates for the year 2007 and 2025 are currently unavailable, but have been determined based on the 1997 AQMP estimates for years 2000, 2006, and 2010. Projected emissions for each pollutant in year 2007 were extrapolated from the 1997 AQMP based on the trend of each pollutant from 2000 to 2006. Projected emissions for each pollutant in year 2025 were extrapolated from the 1997 AQMP based on the trend of each pollutant from 2000 to 2010. The projected SCAB emission estimates for the years 2007 and 2025 and the estimated average unmitigated and mitigated operation emissions for the project for the same years are presented in Table 5.3-22. This information is also presented graphically in Figure 5.3-2. Tables 5.3-23 and 5.3-24 list the percent comparison of the project estimates with the projected SCAB estimates. From the estimates presented, it is evident that emissions from the project are less than one-half (0.5) percent of the total projected SCAB emissions. Therefore, though the development of the project will have a negligible impact on the overall air quality within the SCAB.

Table 5.3-22
Projected Emission Estimates for SCAB from the 1997 AQMP Compared to
Emission Estimates for the Project Area

Emission Estimates (tons/day)						
Pollutant	Projected 1997 AQMP Emissions		Base Plan (2025)		Overlay Plan (2025)	
	Year 2007*	Year 2025**	Unmitigated Emissions	Mitigated Emissions	Unmitigated Emissions	Mitigated Emissions
ROG	786	591	0.47	0.42	1.25	1.15
NO_x	714	419.5	0.40	0.35	0.70	0.60
CO	3,530	1,745	3.96	3.40	7.84	6.85
PM₁₀	456	496	0.33	0.28	0.73	0.64

* 2007 Emission estimates are linearly extrapolated based on 2000 to 2006 emission trends in 1997 AQMP

**2025 Emission estimates are linearly extrapolated based on 2000 to 2010 emission trends in 1997 AQMP

Source: [<http://www.aqmd.gov/aqmp/97aqmp/chapters/m-chap3>]

Table 5.3-23
Percent Comparison of Projected SCAB Emissions to
Project Area Unmitigated Emission Estimates

Pollutant	Base Plan		Overlay Plan	
	Year 2007* (percent)	Year 2025** (percent)	Year 2007* (percent)	Year 2025** (percent)
ROG	0.06	0.08	0.16	0.21
NO_x	0.06	0.10	0.10	0.17
CO	0.11	0.23	0.22	0.45
PM₁₀	0.07	0.07	0.16	0.15

* 2007 Emission estimates are linearly extrapolated based on 2000 to 2006 emission trends in 1997 AQMP

**2025 Emission estimates are linearly extrapolated based on 2000 to 2010 emission trends in 1997 AQMP

Source: [<http://www.aqmd.gov/aqmp/97aqmp/chapters/m-chap3>]

Table 5.3-24
Percent Comparison of Projected SCAB Emissions to
Project Area Mitigated Emission Estimates

Pollutant	Base Plan		Overlay Plan	
	Year 2007* (percent)	Year 2025** (percent)	Year 2007* (percent)	Year 2025** (percent)
ROG	0.05	0.07	0.15	0.19
NO_x	0.05	0.08	0.08	0.14
CO	0.10	0.20	0.19	0.39
PM₁₀	0.06	0.06	0.14	0.13

* 2007 Emission estimates are linearly extrapolated based on 2000 to 2006 emission trends in 1997 AQMP

**2025 Emission estimates are linearly extrapolated based on 2000 to 2010 emission trends in 1997 AQMP

Source: [<http://www.aqmd.gov/aqmp/97aqmp/chapters/m-chap3>]

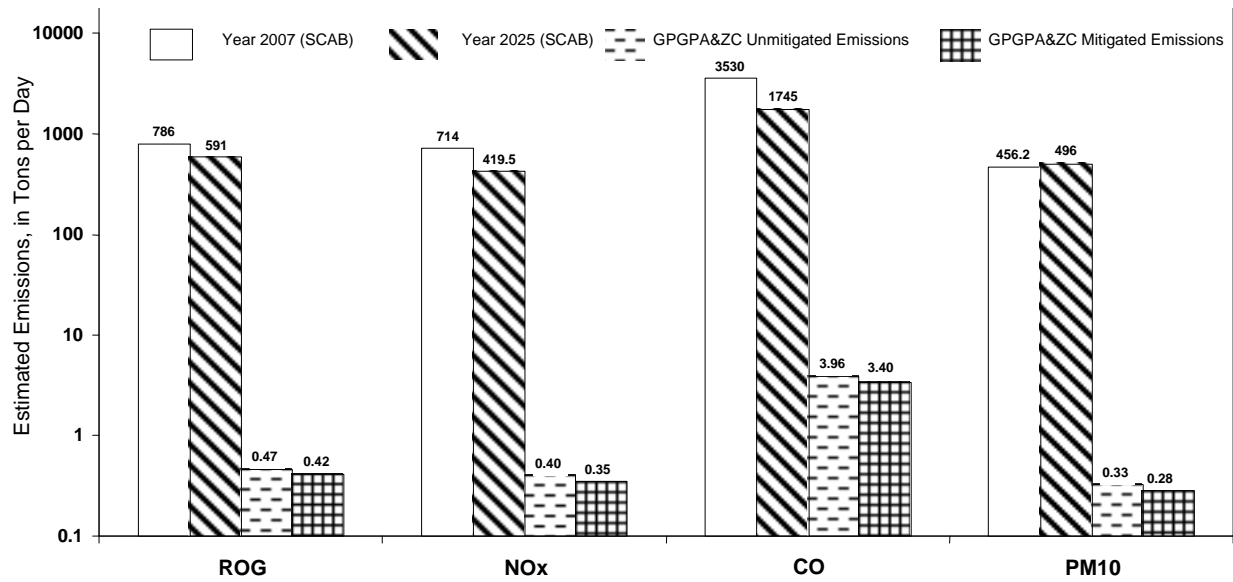


Figure 2-1: Comparison of SCAB Emissions to GPGPA&ZC Average Operational Emission Estimates (Base Plan)

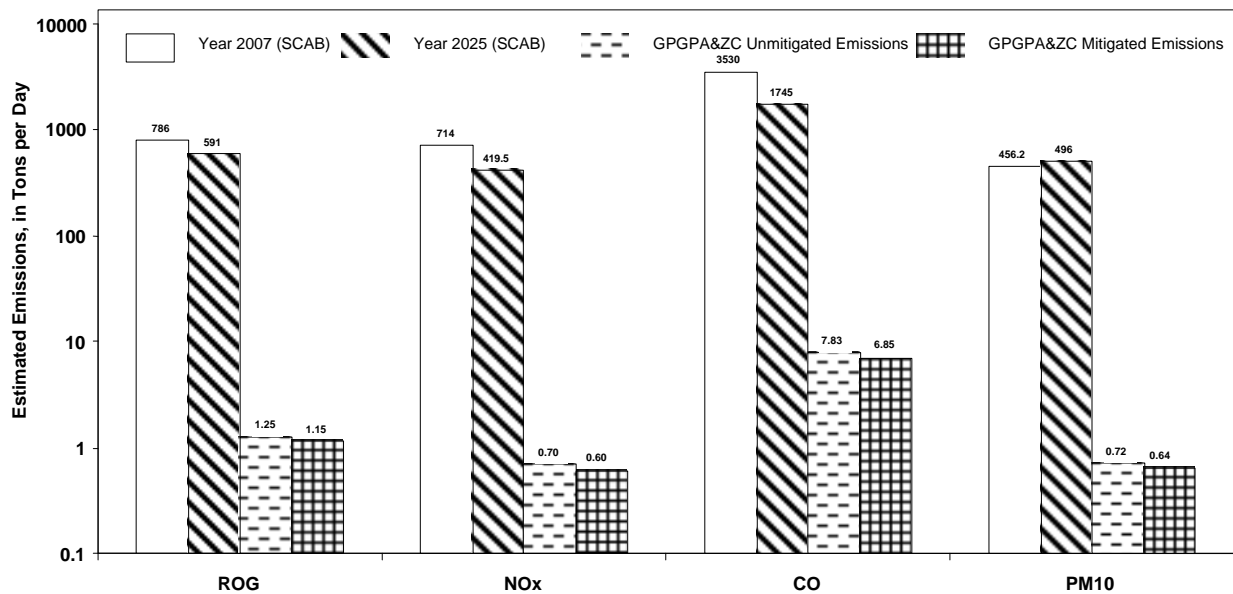


Figure 2-2: Comparison of SCAB Emissions to GPGPA&ZC Average Operational Emission Estimates (Overlay Plan)

*Figure 5.3-2
Comparison of SCAB Emmissions to Project*

Local Air Quality Impacts

The air quality impacts of the development of the project area and the immediate vicinity are addressed in this section. Significant sources of air emissions quantified in the previous section will cause air quality impacts on the nearby area. The following sections examine the effect of such air emissions on the vicinity of the project qualitatively and/or quantitatively where sufficient data is available.

Local Air Quality Impacts Due to Construction

Construction activity associated with the project area will not cause long-term impacts on the surrounding environment or the air quality within the region. However, due to the extent and schedule of construction activities, short-term impacts will occur. The major emissions associated with construction activity are particulates and fugitive dust emissions. These emissions can be considerably reduced through the implementation of appropriate mitigation measures and proper planning of construction activity as discussed previously.

Local Air Quality Impacts Due to Motor Vehicles

The major impact of motor vehicle emissions is the potential increase in CO concentrations. The CO concentrations were predicted using the CALINE 4.0 model. The model is a line source air quality model developed by the CALTRANS and it is used to predict air quality impacts due to motor vehicles. The region identified for estimating emissions encompasses major intersections around the proposed project area. With representative site geometry, receptor location, and source characteristics, the model can reliably and conservatively predict pollutant concentrations.

Default options for the model are specified in the Air Quality technical report, Appendix I of this EIR of the CO protocol that is acceptable for project-level conformity analysis in the SCAB. The protocol was approved by the EPA in December 1998. The CALINE 4.0 model requires input of motor vehicle emission factors obtained from the EMFAC7F model. Emission factors for each scenario were generated using the EMFAC7F model. According to CALTRANS, the later version of the model EMFAC7G is not used for micro-scale analysis such as intersections. Default motor vehicle distribution values for the SCAB were obtained from the default assumptions in the URBEMIS 2001 model. Cold start percentages of 20 percent were assumed against a suggested default of 15 percent for the model. The emission factors thus obtained were input into the CALINE 4.0 model. The input assumptions and model outputs for the EMFAC7F modeling are presented in the Air Quality technical report, located in Appendix I of this Final Program EIR.

Worst-case meteorology with a wind speed of 1 mile per hour and a stability class G was used in the CALINE 4.0 modeling, as recommended in the CALTRANS air quality technical analysis notes (AQTAN) protocol. Default worst-case wind direction option was used. The fluctuation in wind direction is measured in terms of standard deviation (σ theta), and it was assigned a default value of ten degrees. A mixing height of 1,000 meters and surface roughness of 100 centimeters were used based on the AQTAN.

Existing and projected hourly peak traffic volumes were extracted from the Traffic Impact Analysis provided by Urban Crossroads. Default vehicle type distributions specific to the

SCAB specified in the URBEMIS 2001 model were used in the CALINE 4.0 modeling. The input assumptions and model outputs for the CALINE 4.0 modeling are presented in the Air Quality technical report, located in Appendix I of this Final Program EIR.

The link option was used within the CALINE 4.0 model as specific data regarding delay times at intersections and other required intersection-specific input data are not currently available. Link coordinates in terms of directional splits (separate links for opposite directions on each route) were used for each intersection. Receptors were placed at a distance of three meters (m) from the edge of each roadway and at a height of 1.8 m to reflect the concentration in the mixing zone as recommended by the CALINE 4.0 manual. Four years were analyzed: 2002 (existing), 2007, 2025 and post-2025. Because CO impacts are higher when traffic congestion exists, intersections with a Level of Service (LOS) "D" or higher at AM or PM peak hours, with available data and representative of traffic patterns, were identified for analysis. Average vehicular speeds of 40 mph, 30 mph and 20 mph were used for intersections with LOS designations D, E, and F, respectively.

One-hour concentrations of CO at each intersection with projected traffic volumes were assessed using the CALINE 4.0 model. Eight-hour concentrations were estimated using the procedure described in the AQTAN. A persistence factor of 0.83 was used which was calculated as the highest ratio of the highest eight hour maximum (2.38 ppm) to the highest one hour maximum (3.0 ppm) CO concentration measured during at the Saddleback Valley monitoring site in the SCAB in each of the past three years (1999, 2000, 2001). The monitored maximums at the monitoring location nearest to the MCAS El Toro (Saddleback Valley) for 2001 were used as the one-hour and the 8-hour background levels. These concentrations were added to the predicted concentrations obtained from the CALINE 4.0 modeling to determine projected total CO impacts. The model output and results are summarized in Table 5.3-25 through Table 5.3-30.

The 1993 CEQA Handbook defines a measurable increase as one ppm for one-hour concentration and 0.45 ppm for eight-hour concentration. For the Base Plan or Overlay Plan, impacts predicted by the model indicate a range of one-hour CO concentrations between 0.4 ppm and 2.9 ppm and an approximate maximum increase of 0.8 ppm. For either plan, predicted eight-hour concentrations ranged between 0.33 ppm and 2.41 ppm with an estimated maximum increase of 0.7 ppm. As shown in Table 5.3-25 through Table 5.3-30, the predicted air quality impacts from the CALINE 4.0 modeling demonstrate that no intersections in the traffic study area result in one-hour and eight-hour CO concentrations above the applicable state air quality standards of 20 ppm for one-hour concentrations and nine ppm for eight-hour concentrations. This is believed to be due to the interconnection of roadways through the project area and other traffic improvement programs planned for the area.

Local Air Quality Impacts Due to Area Sources (Operation)

The air quality impacts due to area sources such as commercial establishments and residential neighborhoods are not individually significant but cumulatively contribute to increased emissions within the region. Given the predominant use of natural gas as the primary fuel source for most combustion-related local sources, emission concentrations of pollutants should be very low. The development of new emerging technologies and the refinement of existing technologies may help mitigate a significant portion of these and

other emissions resulting from local sources. Considering this, local source emissions should have a negligible impact on local air quality

Threshold 5: Create objectionable odors affecting a substantial number of people.

Base Plan and Overlay Plan

No land used that handles large amounts of solid waste, chemicals associated with heavy industry, or other uses that may generate objectionable odors are known under the proposed project. Thus, no significant adverse impacts associated with odors are expected.

Consistency with Air Quality Planning Measures

The CEQA guidelines provide direction to determine consistency of any proposed development projects with the AQMP and other applicable regional plans. Any inconsistency of the development projects with the AQMP results from the increase in the severity or frequency of air quality standard exceedances and/or changing the assumptions in the AQMP.

Consistency with AQMP

Threshold 1: Conflicts with or obstructs implementation of any applicable air quality plan.

Base Plan and Overlay Plan

The most recent AQMP for the SCAB was developed by the SCAQMD in 1997 with the 1999 Ozone amendment and incorporates most of the provisions included in the 1994 AQMP. The overall control strategy for this plan, designed to meet applicable state and federal requirements, including attainment of ambient air quality standards, proposes two tiers of emission reduction measures. Short-term and intermediate-term measures propose the application of available technologies and management practices until the year 2005. Long-term additional emission reductions rely on the advancement of technologies and control methods that can reasonably be expected to occur between 2000 and 2010. These long-term measures rely on further development and refinement of currently available low- and zero-emission control technologies in addition to technological breakthroughs. The primary goal of these measures is to bring the area into attainment of the federal and state air quality standards, and the reduction in total vehicle miles traveled consistent with the AQMP. Another goal includes the mitigation of all possible emissions for overall reduction in potential emissions without prohibiting future growth within the region. The important criteria for determining consistency with the AQMP are jobs and housing balance, reduction in motor vehicle trips and improvement in overall air quality in the region.

Table 5.3-25
CALINE 4.0 1-hour Carbon Monoxide Modeling Results 2007

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3.0 ppm) (ppm)			
	2002 Existing Conditions	2007 No Project	2007 Base Plan	2007 Overlay Plan	2002 Existing Conditions	2007 No Project	2007 Base Plan	2007 Overlay Plan
Alicia Pkwy. & Muirlands Bl.	1.70	1.70	1.70	1.70	4.70	4.70	4.70	4.70
Alton Pkwy. & Enterprise Dr.	N/A	1.00	1.00	1.00	3.00	4.00	4.00	4.00
Alton Pkwy. & I-5 NB Ramps	N/A	1.50	1.10	1.10	3.00	4.50	4.10	4.10
Alton Pkwy. & Irvine Bl.	N/A	0.90	1.30	1.30	3.00	3.90	4.30	4.30
Alton Pkwy. & Irvine Center Dr.	N/A	1.30	1.20	1.20	3.00	4.30	4.20	4.20
Bake Pkwy. & I-5 NB Ramps	N/A	1.20	N/A	N/A	3.00	4.20	3.00	3.00
Bake Pkwy. & Irvine Bl.	2.30	2.20	2.30	2.30	5.30	5.20	5.30	5.30
Bake Pkwy. & Jeronimo Rd.	2.80	2.00	2.10	2.10	5.80	5.00	5.10	5.10
Bake Pkwy. & Rockfield Bl.	1.90	1.40	2.10	2.10	4.90	4.40	5.10	5.10
Bake Pkwy. At Commercentre Dr.	1.30	N/A	N/A	N/A	4.30	3.00	3.00	3.00
Bake Pkwy. At I-5 SB Ramps	2.00	N/A	N/A	N/A	5.00	3.00	3.00	3.00
Bake Pkwy. at Toledo Wy.	1.30	N/A	N/A	N/A	4.30	3.00	3.00	3.00
Barranca Pkwy. & Technology Dr.	N/A	0.90	0.80	0.90	3.00	3.90	3.80	3.90
Culver Dr. & I-5 SB Ramps	1.80	2.00	2.00	2.00	4.80	5.00	5.00	5.00
Culver Dr. & Trabuco Rd.	1.60	2.90	2.90	2.90	4.60	5.90	5.90	5.90
Culver Dr. & University Dr.	1.90	2.20	2.20	2.20	4.90	5.20	5.20	5.20
Culver Dr. at Walnut Av.	2.20	N/A	N/A	N/A	5.20	3.00	3.00	3.00
El Toro Rd. & Aliso Creek Rd.	1.40	1.20	1.20	1.20	4.40	4.20	4.20	4.20
El Toro Rd. & Avenida de la Carlota	4.00	2.30	2.30	2.30	7.00	5.30	5.30	5.30
El Toro Rd. & I-5 NB Ramps	N/A	1.20	1.20	1.20	3.00	4.20	4.20	4.20
El Toro Rd. & Jeronimo Rd.	1.30	1.30	1.30	1.30	4.30	4.30	4.30	4.30
El Toro Rd. & Moulton Pkwy.	1.90	1.40	1.40	1.40	4.90	4.40	4.40	4.40
El Toro Rd. & Rockfield Bl.	1.50	1.00	1.00	1.00	4.50	4.00	4.00	4.00
El Toro Rd. & Trabuco Rd.	N/A	1.10	1.10	1.10	3.00	4.10	4.10	4.10
El Toro Rd. at Muirlands Bl.	1.50	N/A	N/A	N/A	4.50	3.00	3.00	3.00
I-5 SB Ramps & Alicia Pkwy.	1.80	1.30	1.30	1.20	4.80	4.30	4.30	4.20
Irvine Center Dr. & Enterprise Dr.	N/A	1.30	1.20	1.20	3.00	4.30	4.20	4.20
Irvine Center Dr. & I-405 SB Ramps	N/A	1.10	1.10	1.10	3.00	4.10	4.10	4.10
Jeffrey Rd. & Alton Pkwy.	2.20	1.00	1.00	1.00	5.20	4.00	4.00	4.00

**Table 5.3-25
CALINE 4.0 1-hour Carbon Monoxide Modeling Results 2007**

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3.0 ppm) (ppm)			
	2002 Existing Conditions	2007 No Project	2007 Base Plan	2007 Overlay Plan	2002 Existing Conditions	2007 No Project	2007 Base Plan	2007 Overlay Plan
Jeffrey Rd. & Irvine Center Dr.	N/A	1.10	1.10	1.10	3.00	4.10	4.10	4.10
Jeffrey Rd. at I-405 NB Ramps	3.10	N/A	N/A	N/A	6.10	3.00	3.00	3.00
Laguna Cyn. Rd. & SR-73 NB Ramps	N/A	0.90	0.90	0.90	3.00	3.90	3.90	3.90
Laguna Hills Dr. & Paseo de Valencia	N/A	0.90	0.90	0.90	3.00	3.90	3.90	3.90
Lake Forest Dr. & Avenida de la Carlota	N/A	1.30	1.70	1.70	3.00	4.30	4.70	4.70
Lake Forest Dr. & I-5 NB Ramps	N/A	1.10	1.20	1.20	3.00	4.10	4.20	4.20
Lake Forest Dr. & Jeronimo Rd.	N/A	0.90	1.00	1.00	3.00	3.90	4.00	4.00
Lake Forest Dr. & Muirlands Bl.	N/A	1.00	1.00	1.00	3.00	4.00	4.00	4.00
Lake Forest Dr. & Portola Pkwy.	N/A	2.00	2.00	2.00	3.00	5.00	5.00	5.00
Lake Forest Dr. & Rockfield Bl.	1.70	1.30	1.40	1.40	4.70	4.30	4.40	4.40
Los Alisos Bl. & Jeromino Rd.	2.00	1.00	1.30	1.30	5.00	4.00	4.30	4.30
Los Alisos Bl. & Rockfield Bl./Fordview St.	N/A	1.30	1.20	1.30	3.00	4.30	4.20	4.30
Los Alisos Bl. & Trabuco Rd.	1.20	1.10	0.90	0.90	4.20	4.10	3.90	3.90
Muirlands Bl. & Los Alisos Bl.	3.10	1.90	1.90	1.90	6.10	4.90	4.90	4.90
Portola Pkwy .East & SR-241 Ramps	1.40	2.20	2.20	2.20	4.40	5.20	5.20	5.20
Ridge Route at Moulton Pkwy.	1.30	N/A	N/A	N/A	4.30	3.00	3.00	3.00
Santa Maria Av. & Moulton Pkwy.	1.20	N/A	0.90	N/A	4.20	3.00	3.90	3.00
Trabuco Rd. & Alicia Pkwy.	1.80	1.00	1.00	1.00	4.80	4.00	4.00	4.00
University Dr. at I-405 SB Ramps	1.40	N/A	N/A	N/A	4.40	3.00	3.00	3.00
University Dr. at Michelson Dr.	1.30	N/A	N/A	N/A	4.30	3.00	3.00	3.00
Number of Intersections above 1-hr state standard of 20 ppm					0	0	0	0

Table 5.3-26
CALINE 4.0 8-hour Carbon Monoxide Modeling Results 2007

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	2007 No Project	2007 Base Plan	2007 Overlay Plan	2002 Existing Conditions	2007 No Project	2007 Base Plan	2007 Overlay Plan
Alicia Pkwy. & Muirlands Bl.	1.41	1.41	1.41	1.41	3.79	3.79	3.79	3.79
Alton Pkwy. & Enterprise Dr.	N/A	0.83	0.83	0.83	2.38	3.21	3.21	3.21
Alton Pkwy. & I-5 NB Ramps	N/A	1.25	0.91	0.91	2.38	3.63	3.29	3.29
Alton Pkwy. & Irvine Bl.	N/A	0.75	1.08	1.08	2.38	3.13	3.46	3.46
Alton Pkwy. & Irvine Center Dr.	N/A	1.08	1.00	1.00	2.38	3.46	3.38	3.38
Bake Pkwy. & I-5 NB Ramps	N/A	1.00	N/A	N/A	2.38	3.38	2.38	2.38
Bake Pkwy. & Irvine Bl.	1.91	1.83	1.91	1.91	4.29	4.21	4.29	4.29
Bake Pkwy. & Jeronimo Rd.	2.32	1.66	1.74	1.74	4.70	4.04	4.12	4.12
Bake Pkwy. & Rockfield Bl.	1.58	1.16	1.74	1.74	3.96	3.54	4.12	4.12
Bake Pkwy. At Commercentre Dr.	1.08	N/A	N/A	N/A	3.46	2.38	2.38	2.38
Bake Pkwy. At I-5 SB Ramps	1.66	N/A	N/A	N/A	4.04	2.38	2.38	2.38
Bake Pkwy. at Toledo Wy.	1.08	N/A	N/A	N/A	3.46	2.38	2.38	2.38
Barranca Pkwy. & Technology Dr.	N/A	0.75	0.66	0.75	2.38	3.13	3.04	3.13
Culver Dr. & I-5 SB Ramps	1.49	1.66	1.66	1.66	3.87	4.04	4.04	4.04
Culver Dr. & Trabuco Rd.	1.33	2.41	2.41	2.41	3.71	4.79	4.79	4.79
Culver Dr. & University Dr.	1.58	1.83	1.83	1.83	3.96	4.21	4.21	4.21
Culver Dr. at Walnut Av.	1.83	N/A	N/A	N/A	4.21	2.38	2.38	2.38
El Toro Rd. & Aliso Creek Rd.	1.16	1.00	1.00	1.00	3.54	3.38	3.38	3.38
El Toro Rd. & Avenida de la Carlota	3.32	1.91	1.91	1.91	5.70	4.29	4.29	4.29
El Toro Rd. & I-5 NB Ramps	N/A	1.00	1.00	1.00	2.38	3.38	3.38	3.38
El Toro Rd. & Jeronimo Rd.	1.08	1.08	1.08	1.08	3.46	3.46	3.46	3.46
El Toro Rd. & Moulton Pkwy.	1.58	1.16	1.16	1.16	3.96	3.54	3.54	3.54
El Toro Rd. & Rockfield Bl.	1.25	0.83	0.83	0.83	3.63	3.21	3.21	3.21
El Toro Rd. & Trabuco Rd.	N/A	0.91	0.91	0.91	2.38	3.29	3.29	3.29
El Toro Rd. at Muirlands Bl.	1.25	N/A	N/A	N/A	3.63	2.38	2.38	2.38
I-5 SB Ramps & Alicia Pkwy.	1.49	1.08	1.08	1.00	3.87	3.46	3.46	3.38
Irvine Center Dr. & Enterprise Dr.	N/A	1.08	1.00	1.00	2.38	3.46	3.38	3.38
Irvine Center Dr. & I-405 SB Ramps	N/A	0.91	0.91	0.91	2.38	3.29	3.29	3.29
Jeffrey Rd. & Alton Pkwy.	1.83	0.83	0.83	0.83	4.21	3.21	3.21	3.21

**Table 5.3-26
CALINE 4.0 8-hour Carbon Monoxide Modeling Results 2007**

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	2007 No Project	2007 Base Plan	2007 Overlay Plan	2002 Existing Conditions	2007 No Project	2007 Base Plan	2007 Overlay Plan
Jeffrey Rd. & Irvine Center Dr.	N/A	0.91	0.91	0.91	2.38	3.29	3.29	3.29
Jeffrey Rd. at I-405 NB Ramps	2.57	N/A	N/A	N/A	4.95	2.38	2.38	2.38
Laguna Cyn. Rd. & SR-73 NB Ramps	N/A	0.75	0.75	0.75	2.38	3.13	3.13	3.13
Laguna Hills Dr. & Paseo de Valencia	N/A	0.75	0.75	0.75	2.38	3.13	3.13	3.13
Lake Forest Dr. & Avenida de la Carlota	N/A	1.08	1.41	1.41	2.38	3.46	3.79	3.79
Lake Forest Dr. & I-5 NB Ramps	N/A	0.91	1.00	1.00	2.38	3.29	3.38	3.38
Lake Forest Dr. & Jeronimo Rd.	N/A	0.75	0.83	0.83	2.38	3.13	3.21	3.21
Lake Forest Dr. & Muirlands Bl.	N/A	0.83	0.83	0.83	2.38	3.21	3.21	3.21
Lake Forest Dr. & Portola Pkwy.	N/A	1.66	1.66	1.66	2.38	4.04	4.04	4.04
Lake Forest Dr. & Rockfield Bl.	1.41	1.08	1.16	1.16	3.79	3.46	3.54	3.54
Los Alisos Bl. & Jeromino Rd.	1.66	0.83	1.08	1.08	4.04	3.21	3.46	3.46
Los Alisos Bl. & Rockfield Bl./Fordview St.	N/A	1.08	1.00	1.08	2.38	3.46	3.38	3.46
Los Alisos Bl. & Trabuco Rd.	1.00	0.91	0.75	0.75	3.38	3.29	3.13	3.13
Muirlands Bl. & Los Alisos Bl.	2.57	1.58	1.58	1.58	4.95	3.96	3.96	3.96
Portola Pkwy .East & SR-241 Ramps	1.16	1.83	1.83	1.83	3.54	4.21	4.21	4.21
Ridge Route at Moulton Pkwy.	1.08	N/A	N/A	N/A	3.46	2.38	2.38	2.38
Santa Maria Av. & Moulton Pkwy.	1.00	N/A	0.75	N/A	3.38	2.38	3.13	2.38
Trabuco Rd. & Alicia Pkwy.	1.49	0.83	0.83	0.83	3.87	3.21	3.21	3.21
University Dr. at I-405 SB Ramps	1.16	N/A	N/A	N/A	3.54	2.38	2.38	2.38
University Dr. at Michelson Dr.	1.08	N/A	N/A	N/A	3.46	2.38	2.38	2.38
Number of Intersections above 8-hr state standard of 9 ppm					0	0	0	0

Table 5.3-27
CALINE 4.0 1-hour Carbon Monoxide Modeling Results 2025

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3 ppm) (ppm)			
	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan
"A" Dr. & Irvine Bl.	N/A	N/A	0.90	0.90	3.00	3.00	3.90	3.90
"B" Dr. & Irvine Bl.	N/A	N/A	N/A	0.80	3.00	3.00	3.00	3.80
"Y" St. & Irvine Bl.	N/A	N/A	0.80	0.80	3.00	3.00	3.80	3.80
Alicia Pkwy. & Muirlands Bl.	1.70	1.20	1.20	1.80	4.70	4.20	4.20	4.80
Alton Pkwy. & Enterprise Dr.	N/A	0.70	0.80	0.80	3.00	3.70	3.80	3.80
Alton Pkwy. & I-5 NB Ramps	N/A	1.70	1.60	1.70	3.00	4.70	4.60	4.70
Alton Pkwy. & Irvine Bl.	N/A	1.70	1.80	1.80	3.00	4.70	4.80	4.80
Alton Pkwy. & Irvine Center Dr.	N/A	2.00	1.90	2.00	3.00	5.00	4.90	5.00
Alton Pkwy. & Muirlands Bl.	N/A	0.80	0.80	1.10	3.00	3.80	3.80	4.10
Alton Pkwy. & Toledo Wy.	N/A	N/A	N/A	0.60	3.00	3.00	3.00	3.60
Bake Pkwy. & Commercentre Dr.	1.30	0.70	0.70	0.70	4.30	3.70	3.70	3.70
Bake Pkwy. & I-5 NB Ramps	N/A	1.70	0.80	1.20	3.00	4.70	3.80	4.20
Bake Pkwy. & I-5 SB Ramps	2.00	N/A	1.10	1.20	5.00	3.00	4.10	4.20
Bake Pkwy. & Irvine Bl.	2.30	1.10	1.80	1.80	5.30	4.10	4.80	4.80
Bake Pkwy. & Jeronimo Rd.	2.80	1.50	1.60	1.60	5.80	4.50	4.60	4.60
Bake Pkwy. & Muirlands Bl.	N/A	N/A	0.80	0.80	3.00	3.00	3.80	3.80
Bake Pkwy. & Rancho Pkwy. S	N/A	0.60	0.70	0.60	3.00	3.60	3.70	3.60
Bake Pkwy. & Rockfield Bl.	1.90	1.60	1.50	1.60	4.90	4.60	4.50	4.60
Bake Pkwy. & Toledo Wy.	1.30	0.70	0.70	0.80	4.30	3.70	3.70	3.80
Barranca Pkwy. & Irvine Center Dr.	N/A	1.30	1.30	1.30	3.00	4.30	4.30	4.30
Barranca Pkwy. & Technology Dr.	N/A	0.70	0.60	0.70	3.00	3.70	3.60	3.70
Culver Dr. & I-5 SB Ramps	1.80	1.00	1.00	1.00	4.80	4.00	4.00	4.00
Culver Dr. & Irvine Center Dr.	N/A	0.90	0.90	0.90	3.00	3.90	3.90	3.90
Culver Dr. & Trabuco Rd.	1.60	2.20	2.20	2.20	4.60	5.20	5.20	5.20
Culver Dr. & University Dr.	1.90	1.90	1.90	1.90	4.90	4.90	4.90	4.90
Culver Dr. & Walnut Av.	2.20	0.80	0.80	0.80	5.20	3.80	3.80	3.80
El Toro Rd. & Aliso Creek Rd.	1.40	N/A	0.70	0.70	4.40	3.00	3.70	3.70
El Toro Rd. & Avenida de la Carlota	4.00	N/A	N/A	N/A	7.00	3.00	3.00	3.00

Table 5.3-27
CALINE 4.0 1-hour Carbon Monoxide Modeling Results 2025

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3 ppm) (ppm)			
	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan
El Toro Rd. & Avenida de la Carlota	N/A	2.10	2.20	2.20	3.00	5.10	5.20	5.20
El Toro Rd. & I-5 NB Ramps	N/A	1.10	1.10	1.20	3.00	4.10	4.10	4.20
El Toro Rd. & Jeronimo Rd.	1.30	0.90	1.40	1.40	4.30	3.90	4.40	4.40
El Toro Rd. & Moulton Pkwy.	1.90	1.90	2.00	2.00	4.90	4.90	5.00	5.00
El Toro Rd. & Portola Pkwy./Santa Margarita Pkwy.	N/A	1.00	1.00	1.00	3.00	4.00	4.00	4.00
El Toro Rd. & Rockfield Bl.	N/A	0.70	0.70	0.90	3.00	3.70	3.70	3.90
El Toro Rd. & SR-73 NB Ramps	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
El Toro Rd. & SR-73 SB Ramps	N/A	N/A	N/A	0.60	3.00	3.00	3.00	3.60
El Toro Rd. & Trabuco Rd.	N/A	1.10	1.10	1.60	3.00	4.10	4.10	4.60
El Toro Rd. at Muirlands Bl.	1.50	N/A	N/A	N/A	4.50	3.00	3.00	3.00
El Toro Rd. at Rockfield Bl.	1.50	N/A	N/A	N/A	4.50	3.00	3.00	3.00
I-5 NB Ramps & Trabuco Rd.	N/A	N/A	0.60	0.60	3.00	3.00	3.60	3.60
I-5 SB Ramps & Alicia Pkwy.	1.80	N/A	N/A	N/A	4.80	3.00	3.00	3.00
I-5 SB Ramps & Enterprise Dr.	N/A	0.50	0.50	0.50	3.00	3.50	3.50	3.50
Irvine Center Dr. & Enterprise Dr.	N/A	2.20	2.20	2.20	3.00	5.20	5.20	5.20
Irvine Center Dr. & I-405 SB Ramps	N/A	2.00	2.00	2.10	3.00	5.00	5.00	5.10
Jeffrey Rd. & Alton Pkwy.	2.20	N/A	N/A	N/A	5.20	3.00	3.00	3.00
Jeffrey Rd. & Alton Pkwy.	N/A	1.10	1.10	1.10	3.00	4.10	4.10	4.10
Jeffrey Rd. & Barranca Pkwy.	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
Jeffrey Rd. & I-405 NB Ramps	N/A	1.10	1.10	1.10	3.00	4.10	4.10	4.10
Jeffrey Rd. & Irvine Center Dr.	N/A	1.30	1.30	1.30	3.00	4.30	4.30	4.30
Jeffrey Rd. & Walnut Av.	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
Jeffrey Rd. at I-405 NB Ramps	3.10	N/A	N/A	N/A	6.10	3.00	3.00	3.00
Jeronimo Rd. & Alicia Pkwy.	N/A	N/A	0.80	0.80	3.00	3.00	3.80	3.80
Laguna Cyn. Rd. & Old Laguna Cyn. Rd.	N/A	0.80	1.10	1.10	3.00	3.80	4.10	4.10
Laguna Cyn. Rd. & SR-73 NB Ramps	N/A	0.90	0.90	0.90	3.00	3.90	3.90	3.90

Table 5.3-27
CALINE 4.0 1-hour Carbon Monoxide Modeling Results 2025

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3 ppm) (ppm)			
	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan
Laguna Hills Dr. & Paseo de Valencia	N/A	1.30	1.30	1.30	3.00	4.30	4.30	4.30
Lake Forest Dr. & Avenida de la Carlota	N/A	2.20	1.90	1.90	3.00	5.20	4.90	4.90
Lake Forest Dr. & I-5 NB Ramps	N/A	1.20	1.30	1.30	3.00	4.20	4.30	4.30
Lake Forest Dr. & Irvine Center Dr.	N/A	1.00	1.10	1.10	3.00	4.00	4.10	4.10
Lake Forest Dr. & Jeronimo Rd.	N/A	0.90	1.00	1.00	3.00	3.90	4.00	4.00
Lake Forest Dr. & Muirlands Bl.	N/A	0.80	1.00	1.00	3.00	3.80	4.00	4.00
Lake Forest Dr. & Portola Pkwy.	N/A	1.30	1.30	1.30	3.00	4.30	4.30	4.30
Lake Forest Dr. & Rancho Pkwy. N	N/A	1.40	1.40	1.40	3.00	4.40	4.40	4.40
Lake Forest Dr. & Rancho Pkwy. S	N/A	1.50	1.50	1.50	3.00	4.50	4.50	4.50
Lake Forest Dr. & Rockfield Bl.	1.70	2.10	2.20	2.20	4.70	5.10	5.20	5.20
Lake Forest Dr. & SR-241 SB Ramps	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
Lake Forest Dr. & Trabuco Rd.	N/A	0.90	1.10	1.20	3.00	3.90	4.10	4.20
Los Alisos Bl. & Jeromino Rd.	2.00	1.00	1.00	1.00	5.00	4.00	4.00	4.00
Los Alisos Bl. & Rockfield Bl./Fordview St.	N/A	0.90	1.00	1.00	3.00	3.90	4.00	4.00
Los Alisos Bl. & Trabuco Rd.	1.20	N/A	0.80	0.80	4.20	3.00	3.80	3.80
Marine Wy. & Barranca Pkwy.	N/A	N/A	N/A	0.70	3.00	3.00	3.00	3.70
Moulton Pkwy. & Alicia Pkwy.	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
Moulton Pkwy. & Glenwood Dr./Indian Creek Ln.	N/A	1.00	0.80	0.80	3.00	4.00	3.80	3.80
Moulton Pkwy. & Laguna Hills Dr.	N/A	1.10	1.10	1.10	3.00	4.10	4.10	4.10
Muirlands Bl. & Los Alisos Bl.	3.10	1.50	1.50	1.50	6.10	4.50	4.50	4.50
Paseo de Valencia & Avenida de la Carlota	N/A	1.10	1.10	1.70	3.00	4.10	4.10	4.70
Portola Pkwy .East & SR-241 Ramps	1.40	1.50	1.50	1.50	4.40	4.50	4.50	4.50
Ridge Route at Moulton Pkwy.	1.30	N/A	N/A	N/A	4.30	3.00	3.00	3.00

Table 5.3-27
CALINE 4.0 1-hour Carbon Monoxide Modeling Results 2025

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3 ppm) (ppm)			
	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan
Sand Cyn. Av. & Alton Pkwy.	N/A	1.50	1.50	1.50	3.00	4.50	4.50	4.50
Sand Cyn. Av. & I-405 NB Ramps	N/A	0.70	0.70	0.70	3.00	3.70	3.70	3.70
Sand Cyn. Av. & I-405 SB Ramps	N/A	0.60	0.60	0.60	3.00	3.60	3.60	3.60
Sand Cyn. Av. & Irvine Bl.	N/A	1.00	0.80	0.80	3.00	4.00	3.80	3.80
Sand Cyn. Av. & Irvine Center Dr.	N/A	N/A	N/A	0.60	3.00	3.00	3.00	3.60
Sand Cyn. Av. & Trabuco Rd.	N/A	N/A	N/A	0.80	3.00	3.00	3.00	3.80
Santa Maria Av. & Moulton Pkwy.	N/A	0.90	1.00	1.00	3.00	3.90	4.00	4.00
Santa Maria Av. At Moulton Pkwy.	1.20	N/A	N/A	N/A	4.20	3.00	3.00	3.00
SR-133 SB Ramps & Irvine Bl.	N/A	0.70	0.70	1.00	3.00	3.70	3.70	4.00
Trabuco Rd. & Alicia Pkwy.	1.80	0.90	0.90	0.90	4.80	3.90	3.90	3.90
University Dr. at I-405 SB Ramps	1.40	N/A	N/A	N/A	4.40	3.00	3.00	3.00
University Dr. at Michelson Dr.	1.30	N/A	N/A	N/A	4.30	3.00	3.00	3.00
Yale Av. & Irvine Bl.	N/A	0.70	0.70	0.70	3.00	3.70	3.70	3.70
Yale Av. & Irvine Center Dr.	N/A	N/A	0.60	0.60	3.00	3.00	3.60	3.60
Number of Intersections above 1-hr state standard of 20 ppm					0	0	0	0

Table 5.3-28
CALINE 4.0 8-hour Carbon Monoxide Modeling Results 2025

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan
"A" Dr. & Irvine Bl.	N/A	N/A	0.75	0.75	2.38	2.38	3.13	3.13
"B" Dr. & Irvine Bl.	N/A	N/A	N/A	0.66	2.38	2.38	2.38	3.04
"Y" St. & Irvine Bl.	N/A	N/A	0.66	0.66	2.38	2.38	3.04	3.04
Alicia Pkwy. & Muirlands Bl.	1.41	1.00	1.00	1.49	3.79	3.38	3.38	3.87
Alton Pkwy. & Enterprise Dr.	N/A	0.58	0.66	0.66	2.38	2.96	3.04	3.04
Alton Pkwy. & I-5 NB Ramps	N/A	1.41	1.33	1.41	2.38	3.79	3.71	3.79
Alton Pkwy. & Irvine Bl.	N/A	1.41	1.49	1.49	2.38	3.79	3.87	3.87
Alton Pkwy. & Irvine Center Dr.	N/A	1.66	1.58	1.66	2.38	4.04	3.96	4.04
Alton Pkwy. & Muirlands Bl.	N/A	0.66	0.66	0.91	2.38	3.04	3.04	3.29
Alton Pkwy. & Toledo Wy.	N/A	N/A	N/A	0.50	2.38	2.38	2.38	2.88
Bake Pkwy. & Commercentre Dr.	1.08	0.58	0.58	0.58	3.46	2.96	2.96	2.96
Bake Pkwy. & I-5 NB Ramps	N/A	1.41	0.66	1.00	2.38	3.79	3.04	3.38
Bake Pkwy. & I-5 SB Ramps	1.66	N/A	0.91	1.00	4.04	2.38	3.29	3.38
Bake Pkwy. & Irvine Bl.	1.91	0.91	1.49	1.49	4.29	3.29	3.87	3.87
Bake Pkwy. & Jeronimo Rd.	2.32	1.25	1.33	1.33	4.70	3.63	3.71	3.71
Bake Pkwy. & Muirlands Bl.	N/A	N/A	0.66	0.66	2.38	2.38	3.04	3.04
Bake Pkwy. & Rancho Pkwy. S	N/A	0.50	0.58	0.50	2.38	2.88	2.96	2.88
Bake Pkwy. & Rockfield Bl.	1.58	1.33	1.25	1.33	3.96	3.71	3.63	3.71
Bake Pkwy. & Toledo Wy.	1.08	0.58	0.58	0.66	3.46	2.96	2.96	3.04
Barranca Pkwy. & Irvine Center Dr.	N/A	1.08	1.08	1.08	2.38	3.46	3.46	3.46
Barranca Pkwy. & Technology Dr.	N/A	0.58	0.50	0.58	2.38	2.96	2.88	2.96
Culver Dr. & I-5 SB Ramps	1.49	0.83	0.83	0.83	3.87	3.21	3.21	3.21
Culver Dr. & Irvine Center Dr.	N/A	0.75	0.75	0.75	2.38	3.13	3.13	3.13
Culver Dr. & Trabuco Rd.	1.33	1.83	1.83	1.83	3.71	4.21	4.21	4.21
Culver Dr. & University Dr.	1.58	1.58	1.58	1.58	3.96	3.96	3.96	3.96
Culver Dr. & Walnut Av.	1.83	0.66	0.66	0.66	4.21	3.04	3.04	3.04
El Toro Rd. & Aliso Creek Rd.	1.16	N/A	0.58	0.58	3.54	2.38	2.96	2.96
El Toro Rd. & Avenida de la Carlota	3.32	N/A	N/A	N/A	5.70	2.38	2.38	2.38

Table 5.3-28
CALINE 4.0 8-hour Carbon Monoxide Modeling Results 2025

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan
El Toro Rd. & Avenida de la Carlota	N/A	1.74	1.83	1.83	2.38	4.12	4.21	4.21
El Toro Rd. & I-5 NB Ramps	N/A	0.91	0.91	1.00	2.38	3.29	3.29	3.38
El Toro Rd. & Jeronimo Rd.	1.08	0.75	1.16	1.16	3.46	3.13	3.54	3.54
El Toro Rd. & Moulton Pkwy.	1.58	1.58	1.66	1.66	3.96	3.96	4.04	4.04
El Toro Rd. & Portola Pkwy./Santa Margarita Pkwy.	N/A	0.83	0.83	0.83	2.38	3.21	3.21	3.21
El Toro Rd. & Rockfield Bl.	N/A	0.58	0.58	0.75	2.38	2.96	2.96	3.13
El Toro Rd. & SR-73 NB Ramps	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
El Toro Rd. & SR-73 SB Ramps	N/A	N/A	N/A	0.50	2.38	2.38	2.38	2.88
El Toro Rd. & Trabuco Rd.	N/A	0.91	0.91	1.33	2.38	3.29	3.29	3.71
El Toro Rd. at Muirlands Bl.	1.25	N/A	N/A	N/A	3.63	2.38	2.38	2.38
El Toro Rd. at Rockfield Bl.	1.25	N/A	N/A	N/A	3.63	2.38	2.38	2.38
I-5 NB Ramps & Trabuco Rd.	N/A	N/A	0.50	0.50	2.38	2.38	2.88	2.88
I-5 SB Ramps & Alicia Pkwy.	1.49	N/A	N/A	N/A	3.87	2.38	2.38	2.38
I-5 SB Ramps & Enterprise Dr.	N/A	0.42	0.42	0.42	2.38	2.80	2.80	2.80
Irvine Center Dr. & Enterprise Dr.	N/A	1.83	1.83	1.83	2.38	4.21	4.21	4.21
Irvine Center Dr. & I-405 SB Ramps	N/A	1.66	1.66	1.74	2.38	4.04	4.04	4.12
Jeffrey Rd. & Alton Pkwy.	1.83	N/A	N/A	N/A	4.21	2.38	2.38	2.38
Jeffrey Rd. & Alton Pkwy.	N/A	0.91	0.91	0.91	2.38	3.29	3.29	3.29
Jeffrey Rd. & Barranca Pkwy.	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
Jeffrey Rd. & I-405 NB Ramps	N/A	0.91	0.91	0.91	2.38	3.29	3.29	3.29
Jeffrey Rd. & Irvine Center Dr.	N/A	1.08	1.08	1.08	2.38	3.46	3.46	3.46
Jeffrey Rd. & Walnut Av.	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
Jeffrey Rd. at I-405 NB Ramps	2.57	N/A	N/A	N/A	4.95	2.38	2.38	2.38
Jeronimo Rd. & Alicia Pkwy.	N/A	N/A	0.66	0.66	2.38	2.38	3.04	3.04
Laguna Cyn. Rd. & Old Laguna Cyn. Rd.	N/A	0.66	0.91	0.91	2.38	3.04	3.29	3.29
Laguna Cyn. Rd. & SR-73 NB Ramps	N/A	0.75	0.75	0.75	2.38	3.13	3.13	3.13

Table 5.3-28
CALINE 4.0 8-hour Carbon Monoxide Modeling Results 2025

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan
Laguna Hills Dr. & Paseo de Valencia	N/A	1.08	1.08	1.08	2.38	3.46	3.46	3.46
Lake Forest Dr. & Avenida de la Carlota	N/A	1.83	1.58	1.58	2.38	4.21	3.96	3.96
Lake Forest Dr. & I-5 NB Ramps	N/A	1.00	1.08	1.08	2.38	3.38	3.46	3.46
Lake Forest Dr. & Irvine Center Dr.	N/A	0.83	0.91	0.91	2.38	3.21	3.29	3.29
Lake Forest Dr. & Jeronimo Rd.	N/A	0.75	0.83	0.83	2.38	3.13	3.21	3.21
Lake Forest Dr. & Muirlands Bl.	N/A	0.66	0.83	0.83	2.38	3.04	3.21	3.21
Lake Forest Dr. & Portola Pkwy.	N/A	1.08	1.08	1.08	2.38	3.46	3.46	3.46
Lake Forest Dr. & Rancho Pkwy. N	N/A	1.16	1.16	1.16	2.38	3.54	3.54	3.54
Lake Forest Dr. & Rancho Pkwy. S	N/A	1.25	1.25	1.25	2.38	3.63	3.63	3.63
Lake Forest Dr. & Rockfield Bl.	1.41	1.74	1.83	1.83	3.79	4.12	4.21	4.21
Lake Forest Dr. & SR-241 SB Ramps	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
Lake Forest Dr. & Trabuco Rd.	N/A	0.75	0.91	1.00	2.38	3.13	3.29	3.38
Los Alisos Bl. & Jeromino Rd.	1.66	0.83	0.83	0.83	4.04	3.21	3.21	3.21
Los Alisos Bl. & Rockfield Bl./Fordview St.	N/A	0.75	0.83	0.83	2.38	3.13	3.21	3.21
Los Alisos Bl. & Trabuco Rd.	1.00	N/A	0.66	0.66	3.38	2.38	3.04	3.04
Marine Wy. & Barranca Pkwy.	N/A	N/A	N/A	0.58	2.38	2.38	2.38	2.96
Moulton Pkwy. & Alicia Pkwy.	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
Moulton Pkwy. & Glenwood Dr./Indian Creek Ln.	N/A	0.83	0.66	0.66	2.38	3.21	3.04	3.04
Moulton Pkwy. & Laguna Hills Dr.	N/A	0.91	0.91	0.91	2.38	3.29	3.29	3.29
Muirlands Bl. & Los Alisos Bl.	2.57	1.25	1.25	1.25	4.95	3.63	3.63	3.63
Paseo de Valencia & Avenida de la Carlota	N/A	0.91	0.91	1.41	2.38	3.29	3.29	3.79
Portola Pkwy .East & SR-241 Ramps	1.16	1.25	1.25	1.25	3.54	3.63	3.63	3.63
Ridge Route at Moulton Pkwy.	1.08	N/A	N/A	N/A	3.46	2.38	2.38	2.38

Table 5.3-28
CALINE 4.0 8-hour Carbon Monoxide Modeling Results 2025

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan	2002 Existing Conditions	2025 No Project	2025 Base Plan	2025 Overlay Plan
Sand Cyn. Av. & Alton Pkwy.	N/A	1.25	1.25	1.25	2.38	3.63	3.63	3.63
Sand Cyn. Av. & I-405 NB Ramps	N/A	0.58	0.58	0.58	2.38	2.96	2.96	2.96
Sand Cyn. Av. & I-405 SB Ramps	N/A	0.50	0.50	0.50	2.38	2.88	2.88	2.88
Sand Cyn. Av. & Irvine Bl.	N/A	0.83	0.66	0.66	2.38	3.21	3.04	3.04
Sand Cyn. Av. & Irvine Center Dr.	N/A	N/A	N/A	0.50	2.38	2.38	2.38	2.88
Sand Cyn. Av. & Trabuco Rd.	N/A	N/A	N/A	0.66	2.38	2.38	2.38	3.04
Santa Maria Av. & Moulton Pkwy.	N/A	0.75	0.83	0.83	2.38	3.13	3.21	3.21
Santa Maria Av. At Moulton Pkwy.	1.00	N/A	N/A	N/A	3.38	2.38	2.38	2.38
SR-133 SB Ramps & Irvine Bl.	N/A	0.58	0.58	0.83	2.38	2.96	2.96	3.21
Trabuco Rd. & Alicia Pkwy.	1.49	0.75	0.75	0.75	3.87	3.13	3.13	3.13
University Dr. at I-405 SB Ramps	1.16	N/A	N/A	N/A	3.54	2.38	2.38	2.38
University Dr. at Michelson Dr.	1.08	N/A	N/A	N/A	3.46	2.38	2.38	2.38
Yale Av. & Irvine Bl.	N/A	0.58	0.58	0.58	2.38	2.96	2.96	2.96
Yale Av. & Irvine Center Dr.	N/A	N/A	0.50	0.50	2.38	2.38	2.88	2.88
Number of Intersections above 8-hr state standard of 9 ppm					0	0	0	0

Table 5.3-29
CALINE 4.0 1-hour Carbon Monoxide Modeling Results Post-2025

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3 ppm) (ppm)			
	2002 Existing Conditions	Post -2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan	2002 Existing Conditions	Post-2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan
"A" Dr. & Irvine Bl.	N/A	N/A	0.70	0.70	3.00	3.00	3.70	3.70
"B" Dr. & Irvine Bl.	N/A	N/A	N/A	0.70	3.00	3.00	3.00	3.70
"Y" St. & Irvine Bl.	N/A	N/A	0.70	0.80	3.00	3.00	3.70	3.80
"Y" St. & Portola Pkwy.	N/A	N/A	0.70	0.70	3.00	3.00	3.70	3.70
Alicia Pkwy. & Muirlands Bl.	1.70	1.20	1.20	1.20	4.70	4.20	4.20	4.20
Alton Pkwy. & Enterprise Dr.	N/A	0.90	0.80	0.70	3.00	3.90	3.80	3.70
Alton Pkwy. & I-5 NB Ramps	N/A	1.70	1.60	1.60	3.00	4.70	4.60	4.60
Alton Pkwy. & Irvine Bl.	N/A	1.60	1.10	1.20	3.00	4.60	4.10	4.20
Alton Pkwy. & Irvine Center Dr.	N/A	1.90	1.80	1.80	3.00	4.90	4.80	4.80
Alton Pkwy. & Muirlands Bl.	N/A	0.70	0.70	0.80	3.00	3.70	3.70	3.80
Bake Pkwy. & Commercentre Dr.	1.30	0.70	0.70	0.70	4.30	3.70	3.70	3.70
Bake Pkwy. & I-5 NB Ramps	N/A	0.80	0.90	1.20	3.00	3.80	3.90	4.20
Bake Pkwy. & I-5 SB Ramps	2.00	N/A	N/A	0.90	5.00	3.00	3.00	3.90
Bake Pkwy. & Irvine Bl.	2.30	1.70	1.10	1.60	5.30	4.70	4.10	4.60
Bake Pkwy. & Jeronimo Rd.	2.80	1.60	1.60	1.60	5.80	4.60	4.60	4.60
Bake Pkwy. & Muirlands Bl.	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
Bake Pkwy. & Ridge Route Dr.	N/A	N/A	N/A	0.40	3.00	3.00	3.00	3.40
Bake Pkwy. & Rockfield Bl.	1.90	1.60	1.60	1.70	4.90	4.60	4.60	4.70
Bake Pkwy. & Toledo Wy.	1.30	N/A	N/A	0.80	4.30	3.00	3.00	3.80
Barranca Pkwy. & I-5 HOV Ramp	N/A	0.60	N/A	0.50	3.00	3.60	3.00	3.50
Barranca Pkwy. & Technology Dr.	N/A	1.00	0.90	0.90	3.00	4.00	3.90	3.90
Culver Dr. & Bryan Av.	N/A	0.60	0.60	0.60	3.00	3.60	3.60	3.60
Culver Dr. & I-5 SB Ramps	1.80	0.90	0.90	0.90	4.80	3.90	3.90	3.90
Culver Dr. & Irvine Bl.	N/A	0.70	0.70	0.70	3.00	3.70	3.70	3.70
Culver Dr. & Irvine Center Dr.	N/A	0.90	0.90	0.90	3.00	3.90	3.90	3.90
Culver Dr. & Trabuco Rd.	1.60	1.30	1.30	1.30	4.60	4.30	4.30	4.30
Culver Dr. & University Dr.	1.90	2.00	2.00	2.00	4.90	5.00	5.00	5.00
Culver Dr. & Walnut Av.	2.20	1.00	1.00	1.00	5.20	4.00	4.00	4.00
El Toro Rd. & Avenida de la	4.00	1.10	1.60	1.60	7.00	4.10	4.60	4.60

Table 5.3-29
CALINE 4.0 1-hour Carbon Monoxide Modeling Results Post-2025

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3 ppm) (ppm)			
	2002 Existing Conditions	Post -2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan	2002 Existing Conditions	Post-2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan
Carlota								
El Toro Rd. & I-5 NB Ramps	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
El Toro Rd. & Jeronimo Rd.	1.30	0.90	1.40	1.40	4.30	3.90	4.40	4.40
El Toro Rd. & Moulton Pkwy.	1.90	1.90	1.90	1.90	4.90	4.90	4.90	4.90
El Toro Rd. & Portola Pkwy./Santa Margarita Pkwy.	N/A	0.90	0.90	0.90	3.00	3.90	3.90	3.90
El Toro Rd. & Rockfield Bl.	1.50	0.70	0.70	0.70	4.50	3.70	3.70	3.70
El Toro Rd. & Trabuco Rd. (CMP)	N/A	1.00	1.00	1.00	3.00	4.00	4.00	4.00
El Toro Rd. at Aliso Creek Rd.	1.40	N/A	N/A	N/A	4.40	3.00	3.00	3.00
El Toro Rd. at Muirlands Bl.	1.50	N/A	N/A	N/A	4.50	3.00	3.00	3.00
I-5 SB Ramps & Alicia Pkwy.	1.80	N/A	N/A	N/A	4.80	3.00	3.00	3.00
I-5 SB Ramps & Enterprise Dr.	N/A	0.60	0.40	0.60	3.00	3.60	3.40	3.60
Irvine Center Dr. & I-405 SB Ramps	N/A	1.00	1.00	1.00	3.00	4.00	4.00	4.00
Jeffrey Rd. & Alton Pkwy.	2.20	1.10	1.10	1.10	5.20	4.10	4.10	4.10
Jeffrey Rd. & Barranca Pkwy.	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
Jeffrey Rd. & Bryan Av.	N/A	0.90	0.90	0.90	3.00	3.90	3.90	3.90
Jeffrey Rd. & I-405 NB Ramps	3.10	1.10	1.10	1.10	6.10	4.10	4.10	4.10
Jeffrey Rd. & Irvine Bl.	N/A	0.90	0.90	0.90	3.00	3.90	3.90	3.90
Jeffrey Rd. & Irvine Center Dr.	N/A	1.30	1.30	1.30	3.00	4.30	4.30	4.30
Jeffrey Rd. & Trabuco Rd.	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
Jeffrey Rd. & Walnut Av.	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
Laguna Cyn. Rd & Bake Pkwy.	N/A	1.80	1.80	1.80	3.00	4.80	4.80	4.80
Laguna Cyn. Rd. & Lake Forest Dr.	N/A	0.90	0.90	0.90	3.00	3.90	3.90	3.90
Laguna Cyn. Rd. & Old Laguna Cyn. Rd.	N/A	1.40	1.40	1.40	3.00	4.40	4.40	4.40
Laguna Cyn. Rd. & Santa Maria Av.	N/A	1.50	1.50	1.50	3.00	4.50	4.50	4.50
Laguna Cyn. Rd. & SR-73 NB Ramps	N/A	0.70	0.70	0.70	3.00	3.70	3.70	3.70
Laguna Hills Dr. & Paseo de Valencia	N/A	1.30	1.30	1.40	3.00	4.30	4.30	4.40

Table 5.3-29
CALINE 4.0 1-hour Carbon Monoxide Modeling Results Post-2025

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3 ppm) (ppm)			
	2002 Existing Conditions	Post -2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan	2002 Existing Conditions	Post-2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan
Lake Forest Dr. & Avenida de la Carlota	N/A	1.80	1.60	1.60	3.00	4.80	4.60	4.60
Lake Forest Dr. & I-5 NB Ramps	N/A	0.80	0.90	0.90	3.00	3.80	3.90	3.90
Lake Forest Dr. & Irvine Center Dr.	N/A	N/A	0.70	0.70	3.00	3.00	3.70	3.70
Lake Forest Dr. & Jeronimo Rd.	N/A	0.70	0.90	0.90	3.00	3.70	3.90	3.90
Lake Forest Dr. & Muirlands Bl.	N/A	0.70	0.80	0.80	3.00	3.70	3.80	3.80
Lake Forest Dr. & Portola Pkwy.	N/A	1.30	1.30	1.30	3.00	4.30	4.30	4.30
Lake Forest Dr. & Rancho Pkwy. N	N/A	1.40	1.40	1.40	3.00	4.40	4.40	4.40
Lake Forest Dr. & Rancho Pkwy. S	N/A	1.50	1.50	1.50	3.00	4.50	4.50	4.50
Lake Forest Dr. & Rockfield Bl.	1.70	1.20	1.90	1.30	4.70	4.20	4.90	4.30
Lake Forest Dr. & SR-241 SB Ramps	N/A	0.70	0.70	0.70	3.00	3.70	3.70	3.70
Lake Forest Dr. & Trabuco Rd.	N/A	0.80	0.90	1.10	3.00	3.80	3.90	4.10
Los Alisos Bl. & Jeromino Rd.	2.00	1.00	1.00	1.00	5.00	4.00	4.00	4.00
Los Alisos Bl. & Rockfield Bl./Fordview St.	N/A	0.60	0.60	0.60	3.00	3.60	3.60	3.60
Los Alisos Bl. & Trabuco Rd.	1.20	0.80	0.80	0.80	4.20	3.80	3.80	3.80
Moulton Pkwy. & Alicia Pkwy.	N/A	0.80	0.80	0.80	3.00	3.80	3.80	3.80
Moulton Pkwy. & Glenwood Dr./Indian Creek Ln.	N/A	1.00	1.00	1.00	3.00	4.00	4.00	4.00
Moulton Pkwy. & Laguna Hills Dr.	N/A	1.10	1.10	1.10	3.00	4.10	4.10	4.10
Muirlands Bl. & Los Alisos Bl.	3.10	1.40	1.50	1.50	6.10	4.40	4.50	4.50
Paseo de Valencia & Avenida de la Carlota	N/A	1.00	1.00	1.10	3.00	4.00	4.00	4.10
Portola Pkwy .East & SR-241 Ramps	1.40	1.50	1.50	1.50	4.40	4.50	4.50	4.50
Ridge Route Dr. & Jeronimo Rd.	N/A	0.50	0.60	0.60	3.00	3.50	3.60	3.60
Ridge Route Dr. & Moulton Pkwy.	1.30	0.80	0.80	1.20	4.30	3.80	3.80	4.20
Ridge Route Dr. & Rockfield Bl.	N/A	0.70	0.70	0.70	3.00	3.70	3.70	3.70
Sand Cyn. Av. & Alton Pkwy.	N/A	1.60	1.70	1.70	3.00	4.60	4.70	4.70

Table 5.3-29
CALINE 4.0 1-hour Carbon Monoxide Modeling Results Post-2025

Intersection Name	1-hr CO Maximum Concentrations (ppm)				1-hr CO Maximum Concentrations (including Background 3 ppm) (ppm)			
	2002 Existing Conditions	Post -2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan	2002 Existing Conditions	Post-2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan
Sand Cyn. Av. & Collector St.	N/A	1.40	1.40	1.50	3.00	4.40	4.40	4.50
Sand Cyn. Av. & I-5 NB Ramps	N/A	N/A	0.80	0.90	3.00	3.00	3.80	3.90
Sand Cyn. Av. & Irvine Bl.	N/A	0.70	0.70	0.70	3.00	3.70	3.70	3.70
Sand Cyn. Av. & Irvine Center Dr.	N/A	N/A	0.70	0.70	3.00	3.00	3.70	3.70
Sand Cyn. Av. & Oak Cyn./Laguna Cyn. Rd.	N/A	N/A	1.10	1.10	3.00	3.00	4.10	4.10
Sand Cyn. Av. & Trabuco Rd.	N/A	1.10	N/A	N/A	3.00	4.10	3.00	3.00
Santa Maria Av. & Moulton Pkwy.	1.20	1.20	0.90	0.90	4.20	4.20	3.90	3.90
Trabuco Rd. & Alicia Pkwy.	1.80	0.90	0.90	0.90	4.80	3.90	3.90	3.90
University Dr. at I-405 SB Ramps	1.40	N/A	N/A	N/A	4.40	3.00	3.00	3.00
University Dr. at Michelson Dr.	1.30	N/A	N/A	N/A	4.30	3.00	3.00	3.00
Yale Av. & Irvine Bl.	N/A	0.70	0.70	0.70	3.00	3.70	3.70	3.70
Yale Av. & Irvine Center Dr.	N/A	N/A	0.50	0.50	3.00	3.00	3.50	3.50
Number of Intersections above 1-hr state standard of 20 ppm					0	0	0	0

Table 5.3-30
CALINE 4.0 8-hour Carbon Monoxide Modeling Results Post-2025

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	Post -2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan	2002 Existing Conditions	Post-2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan
"A" Dr. & Irvine Bl.	N/A	N/A	0.58	0.58	2.38	2.38	2.96	2.96
"B" Dr. & Irvine Bl.	N/A	N/A	N/A	0.58	2.38	2.38	2.38	2.96
"Y" St. & Irvine Bl.	N/A	N/A	0.58	0.66	2.38	2.38	2.96	3.04
"Y" St. & Portola Pkwy.	N/A	N/A	0.58	0.58	2.38	2.38	2.96	2.96
Alicia Pkwy. & Muirlands Bl.	1.41	1.00	1.00	1.00	3.79	3.38	3.38	3.38
Alton Pkwy. & Enterprise Dr.	N/A	0.75	0.66	0.58	2.38	3.13	3.04	2.96
Alton Pkwy. & I-5 NB Ramps	N/A	1.41	1.33	1.33	2.38	3.79	3.71	3.71
Alton Pkwy. & Irvine Bl.	N/A	1.33	0.91	1.00	2.38	3.71	3.29	3.38
Alton Pkwy. & Irvine Center Dr.	N/A	1.58	1.49	1.49	2.38	3.96	3.87	3.87
Alton Pkwy. & Muirlands Bl.	N/A	0.58	0.58	0.66	2.38	2.96	2.96	3.04
Bake Pkwy. & Commercentre Dr.	1.08	0.58	0.58	0.58	3.46	2.96	2.96	2.96
Bake Pkwy. & I-5 NB Ramps	N/A	0.66	0.75	1.00	2.38	3.04	3.13	3.38
Bake Pkwy. & I-5 SB Ramps	1.66	N/A	N/A	0.75	4.04	2.38	2.38	3.13
Bake Pkwy. & Irvine Bl.	1.91	1.41	0.91	1.33	4.29	3.79	3.29	3.71
Bake Pkwy. & Jeronimo Rd.	2.32	1.33	1.33	1.33	4.70	3.71	3.71	3.71
Bake Pkwy. & Muirlands Bl.	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
Bake Pkwy. & Ridge Route Dr.	N/A	N/A	N/A	0.33	2.38	2.38	2.38	2.71
Bake Pkwy. & Rockfield Bl.	1.58	1.33	1.33	1.41	3.96	3.71	3.71	3.79
Bake Pkwy. & Toledo Wy.	1.08	N/A	N/A	0.66	3.46	2.38	2.38	3.04
Barranca Pkwy. & I-5 HOV Ramp	N/A	0.50	N/A	0.42	2.38	2.88	2.38	2.80
Barranca Pkwy. & Technology Dr.	N/A	0.83	0.75	0.75	2.38	3.21	3.13	3.13
Culver Dr. & Bryan Av.	N/A	0.50	0.50	0.50	2.38	2.88	2.88	2.88
Culver Dr. & I-5 SB Ramps	1.49	0.75	0.75	0.75	3.87	3.13	3.13	3.13
Culver Dr. & Irvine Bl.	N/A	0.58	0.58	0.58	2.38	2.96	2.96	2.96
Culver Dr. & Irvine Center Dr.	N/A	0.75	0.75	0.75	2.38	3.13	3.13	3.13
Culver Dr. & Trabuco Rd.	1.33	1.08	1.08	1.08	3.71	3.46	3.46	3.46
Culver Dr. & University Dr.	1.58	1.66	1.66	1.66	3.96	4.04	4.04	4.04
Culver Dr. & Walnut Av.	1.83	0.83	0.83	0.83	4.21	3.21	3.21	3.21
El Toro Rd. & Avenida de la	3.32	0.91	1.33	1.33	5.70	3.29	3.71	3.71

Table 5.3-30
CALINE 4.0 8-hour Carbon Monoxide Modeling Results Post-2025

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	Post -2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan	2002 Existing Conditions	Post-2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan
Carlota								
El Toro Rd. & I-5 NB Ramps	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
El Toro Rd. & Jeronimo Rd.	1.08	0.75	1.16	1.16	3.46	3.13	3.54	3.54
El Toro Rd. & Moulton Pkwy.	1.58	1.58	1.58	1.58	3.96	3.96	3.96	3.96
El Toro Rd. & Portola Pkwy./Santa Margarita Pkwy.	N/A	0.75	0.75	0.75	2.38	3.13	3.13	3.13
El Toro Rd. & Rockfield Bl.	1.25	0.58	0.58	0.58	3.63	2.96	2.96	2.96
El Toro Rd. & Trabuco Rd. (CMP)	N/A	0.83	0.83	0.83	2.38	3.21	3.21	3.21
El Toro Rd. at Aliso Creek Rd.	1.16	N/A	N/A	N/A	3.54	2.38	2.38	2.38
El Toro Rd. at Muirlands Bl.	1.25	N/A	N/A	N/A	3.63	2.38	2.38	2.38
I-5 SB Ramps & Alicia Pkwy.	1.49	N/A	N/A	N/A	3.87	2.38	2.38	2.38
I-5 SB Ramps & Enterprise Dr.	N/A	0.50	0.33	0.50	2.38	2.88	2.71	2.88
Irvine Center Dr. & I-405 SB Ramps	N/A	0.83	0.83	0.83	2.38	3.21	3.21	3.21
Jeffrey Rd. & Alton Pkwy.	1.83	0.91	0.91	0.91	4.21	3.29	3.29	3.29
Jeffrey Rd. & Barranca Pkwy.	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
Jeffrey Rd. & Bryan Av.	N/A	0.75	0.75	0.75	2.38	3.13	3.13	3.13
Jeffrey Rd. & I-405 NB Ramps	2.57	0.91	0.91	0.91	4.95	3.29	3.29	3.29
Jeffrey Rd. & Irvine Bl.	N/A	0.75	0.75	0.75	2.38	3.13	3.13	3.13
Jeffrey Rd. & Irvine Center Dr.	N/A	1.08	1.08	1.08	2.38	3.46	3.46	3.46
Jeffrey Rd. & Trabuco Rd.	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
Jeffrey Rd. & Walnut Av.	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
Laguna Cyn. Rd & Bake Pkwy.	N/A	1.49	1.49	1.49	2.38	3.87	3.87	3.87
Laguna Cyn. Rd. & Lake Forest Dr.	N/A	0.75	0.75	0.75	2.38	3.13	3.13	3.13
Laguna Cyn. Rd. & Old Laguna Cyn. Rd.	N/A	1.16	1.16	1.16	2.38	3.54	3.54	3.54
Laguna Cyn. Rd. & Santa Maria Av.	N/A	1.25	1.25	1.25	2.38	3.63	3.63	3.63
Laguna Cyn. Rd. & SR-73 NB Ramps	N/A	0.58	0.58	0.58	2.38	2.96	2.96	2.96
Laguna Hills Dr. & Paseo de Valencia	N/A	1.08	1.08	1.16	2.38	3.46	3.46	3.54

Table 5.3-30
CALINE 4.0 8-hour Carbon Monoxide Modeling Results Post-2025

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	Post -2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan	2002 Existing Conditions	Post-2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan
Lake Forest Dr. & Avenida de la Carlota	N/A	1.49	1.33	1.33	2.38	3.87	3.71	3.71
Lake Forest Dr. & I-5 NB Ramps	N/A	0.66	0.75	0.75	2.38	3.04	3.13	3.13
Lake Forest Dr. & Irvine Center Dr.	N/A	N/A	0.58	0.58	2.38	2.38	2.96	2.96
Lake Forest Dr. & Jeronimo Rd.	N/A	0.58	0.75	0.75	2.38	2.96	3.13	3.13
Lake Forest Dr. & Muirlands Bl.	N/A	0.58	0.66	0.66	2.38	2.96	3.04	3.04
Lake Forest Dr. & Portola Pkwy.	N/A	1.08	1.08	1.08	2.38	3.46	3.46	3.46
Lake Forest Dr. & Rancho Pkwy. N	N/A	1.16	1.16	1.16	2.38	3.54	3.54	3.54
Lake Forest Dr. & Rancho Pkwy. S	N/A	1.25	1.25	1.25	2.38	3.63	3.63	3.63
Lake Forest Dr. & Rockfield Bl.	1.41	1.00	1.58	1.08	3.79	3.38	3.96	3.46
Lake Forest Dr. & SR-241 SB Ramps	N/A	0.58	0.58	0.58	2.38	2.96	2.96	2.96
Lake Forest Dr. & Trabuco Rd.	N/A	0.66	0.75	0.91	2.38	3.04	3.13	3.29
Los Alisos Bl. & Jeromino Rd.	1.66	0.83	0.83	0.83	4.04	3.21	3.21	3.21
Los Alisos Bl. & Rockfield Bl./Fordview St.	N/A	0.50	0.50	0.50	2.38	2.88	2.88	2.88
Los Alisos Bl. & Trabuco Rd.	1.00	0.66	0.66	0.66	3.38	3.04	3.04	3.04
Moulton Pkwy. & Alicia Pkwy.	N/A	0.66	0.66	0.66	2.38	3.04	3.04	3.04
Moulton Pkwy. & Glenwood Dr./Indian Creek Ln.	N/A	0.83	0.83	0.83	2.38	3.21	3.21	3.21
Moulton Pkwy. & Laguna Hills Dr.	N/A	0.91	0.91	0.91	2.38	3.29	3.29	3.29
Muirlands Bl. & Los Alisos Bl.	2.57	1.16	1.25	1.25	4.95	3.54	3.63	3.63
Paseo de Valencia & Avenida de la Carlota	N/A	0.83	0.83	0.91	2.38	3.21	3.21	3.29
Portola Pkwy .East & SR-241 Ramps	1.16	1.25	1.25	1.25	3.54	3.63	3.63	3.63
Ridge Route Dr. & Jeronimo Rd.	N/A	0.42	0.50	0.50	2.38	2.80	2.88	2.88
Ridge Route Dr. & Moulton Pkwy.	1.08	0.66	0.66	1.00	3.46	3.04	3.04	3.38
Ridge Route Dr. & Rockfield Bl.	N/A	0.58	0.58	0.58	2.38	2.96	2.96	2.96
Sand Cyn. Av. & Alton Pkwy.	N/A	1.33	1.41	1.41	2.38	3.71	3.79	3.79

Table 5.3-30
CALINE 4.0 8-hour Carbon Monoxide Modeling Results Post-2025

Intersection Name	8-hr CO Maximum Concentrations (ppm)				8-hr CO Maximum Concentrations (including Background 2.38 ppm) (ppm)			
	2002 Existing Conditions	Post -2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan	2002 Existing Conditions	Post-2025 No Project	Post-2025 Base Plan	Post-2025 Overlay Plan
Sand Cyn. Av. & Collector St.	N/A	1.16	1.16	1.25	2.38	3.54	3.54	3.63
Sand Cyn. Av. & I-5 NB Ramps	N/A	N/A	0.66	0.75	2.38	2.38	3.04	3.13
Sand Cyn. Av. & Irvine Bl.	N/A	0.58	0.58	0.58	2.38	2.96	2.96	2.96
Sand Cyn. Av. & Irvine Center Dr.	N/A	N/A	0.58	0.58	2.38	2.38	2.96	2.96
Sand Cyn. Av. & Oak Cyn./Laguna Cyn. Rd.	N/A	N/A	0.91	0.91	2.38	2.38	3.29	3.29
Sand Cyn. Av. & Trabuco Rd.	N/A	0.91	N/A	N/A	2.38	3.29	2.38	2.38
Santa Maria Av. & Moulton Pkwy.	1.00	1.00	0.75	0.75	3.38	3.38	3.13	3.13
Trabuco Rd. & Alicia Pkwy.	1.49	0.75	0.75	0.75	3.87	3.13	3.13	3.13
University Dr. at I-405 SB Ramps	1.16	N/A	N/A	N/A	3.54	2.38	2.38	2.38
University Dr. at Michelson Dr.	1.08	N/A	N/A	N/A	3.46	2.38	2.38	2.38
Yale Av. & Irvine Bl.	N/A	0.58	0.58	0.58	2.38	2.96	2.96	2.96
Yale Av. & Irvine Center Dr.	N/A	N/A	0.42	0.42	2.38	2.38	2.80	2.80
Number of Intersections above 8-hr state standard of 9 ppm					0	0	0	0

Motor Vehicle Trip Reduction

In accordance with the requirements of the AQMP, the proposed project is required to demonstrate that vehicle trips and vehicle miles traveled will be reduced by its implementation. This may be accomplished through the implementation of a variety of transportation management strategies. Some of the major strategies that deserve consideration include increased utilization of public transportation, discouraging single occupant car use by increasing commuter parking fees, using parking fees as incentives for ride sharing, planning auto free land uses, and encouraging employer sponsored transit services.

The proposed project includes the construction of an Orange County Transportation Authority (OCTA) facility aimed at encouraging the use of alternative transportation such as buses, trains and bicycles and thus, reducing the overall motor vehicle trips generated by the proposed project.

Air Quality

The proposed project is also required to demonstrate that it does not have a long-term (post-construction) negative impact on the region's air quality. The major air quality impacts expected from the development of the proposed project include pollutant emissions due to construction (short-term), and emissions due to energy consumption and motor vehicle (mobile source) use. Construction impacts are considered short-term impacts though the complete development of the project is expected to last 19 years. These impacts will be mitigated using appropriate measures as required by the SCAQMD and local governing agencies. Energy consumption and motor vehicle impacts are long-term impacts that are considered to have localized air quality impacts above the SCAQMD significance thresholds, but they only constitute less than one-half (0.5) percent of projected SCAB basin wide emissions. Mitigation measures would be implemented that would further decrease these emissions, but the proposed project is not expected to significantly impact the overall air quality within the SCAB.

Unavoidable Adverse Impacts

Certain impacts that result from the development of the proposed project are termed "unavoidable" as these impacts cannot be completely mitigated and most of these changes are irreversible. Irreversible changes generally include a large commitment of nonrenewable resources, committing future generations to specific uses of the environment (e.g., converting undeveloped land to urban uses), or enduring environmental damage due to an accident.

Implementation of the proposed project is not anticipated to result in any significant irreversible adverse environmental changes. The proposed project would place only an incremental demand on nonrenewable and limited resources, such as energy, relative to the accelerated rate of use of these resources due to population growth and increased consumer demand. Construction related emissions are expected to cause unavoidable short term impacts and the implementation of mitigation measures will assist in minimizing these impacts. Operational emissions of the proposed project consist of area source and motor vehicle emissions, but the overall effect on air quality within the SCAB for the life of the proposed project is minimal.

5.3.4 Significant Impacts

Base Plan and Overlay Plan

- AQ1.** Implementation of the proposed project will result in a significant air quality impact associated with the fugitive dust emissions resulting from the demolition of existing structures, and land preparation and excavation for the construction of proposed structures. Additionally, the operation of the project will result in a significant impact associated with motor vehicle emissions.

5.3.5 Mitigation Measures

Base Plan and Overlay Plan

The following section provides a summary of the possible mitigation measures that could be implemented for the development of the former MCAS El Toro according to the proposed project. The limited availability of specific data to quantify air quality impacts for emission sources within the proposed project make it impossible to accurately quantify the effectiveness of each of the mitigation measures. However, these measures are identified as possibilities for the project, while some are recommended by the SCAQMD for all development projects within the SCAB. As expected, the implementation of some or all of the mitigation measures will result in an overall reduction in potential air emissions from the proposed project. However, the implementation of any of these emission mitigation measures cannot be guaranteed at this stage of the proposed project, because they may not be technically or economically feasible once actual development gets underway. Therefore, the emission mitigation measures discussed in the following sections are defined as alternate control measures that could be implemented for the proposed project.

Construction Emissions Mitigation

The major source of construction emissions are fugitive dust emissions resulting from the demolition of existing structures, and land preparation and excavation for the construction of proposed structures. Actual erection of structures is considered a minimal source of construction related dust emissions. The following mitigation measures are intended to effectively reduce pollutant emissions from construction activities. Some or all of the mentioned mitigation measures can be implemented as necessary, but quantification and application of these measures cannot be specified at this time.

- AQ1.** Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors; etc.; shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.

- AQ2.** Prior to the commencement of construction activities required to demolish and/or remove existing DON structure, including, runways, the Director of Community

Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plans shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Evaluate the availability and use, if available, of low-emission (i.e., methanol- or natural gas-powered) construction equipment instead of diesel for each construction phase.
- Water exposed soils at least twice daily and maintain equipment and vehicle engines in good condition and in proper tune.
- Wash off trucks leaving the site.
- Replace ground cover on construction sites when it is determined that the site will be undisturbed for lengthy periods.
- Reduce speeds on unpaved roads to less than 15 miles per hour.
- Halt all grading and excavation operations when wind speeds exceed 25 miles per hour.
- Suspend all emission generating activities during smog alerts.
- Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible.
- Properly maintain diesel-powered on-site mobile equipment.
- Sweep streets at the end of the day if substantial visible soil material is carried over to the adjacent streets.
- Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible.
- Use of low-VOC asphalt.
- Cover all trucks hauling dirt, sand, soil or other loose material to and from the site.
- Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic.
- Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible.
- Reroute construction trucks away from congested streets, whenever feasible.
- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible.

AQ3. Prior to the issuance of building permits for any future development, the applicant shall submit, and the Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Utilize built-in energy-efficient appliances to reduce energy consumption and emissions.
- Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions.

- Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible.
- Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning.
- Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible.
- Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods.
- Centralize space heating and cooling for multiple-family dwelling units and commercial space.
- Orient buildings north/south for reducing energy-related combustion emissions.
- Use solar energy, when feasible.
- Use high rating insulation in walls and ceilings.

AQ4. Information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find employment nearby.

AQ5. Future employment generating non-residential development shall include measures to reduce vehicle trips including: the promotion of carpool incentives and alternative work schedules, easy access to public transit systems, trail linkages between uses, low-emissions vehicle fleets, and the provision of on-site facilities such as banking and food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.

5.3.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Due to the size of the project, certain impacts that result from development will be "unavoidable" as these impacts cannot be completely mitigated and most of these changes are irreversible. This is considered a significant unavoidable impact, although the overall effect on air quality within the Basin for the life of the proposed project is estimated at less than one half of one percent. Construction-related emissions are expected to result in unavoidable short-term impacts in terms of ROG and NO_x, although implementation of mitigation measures during construction will minimize these impacts to the extent feasible. Short-term impacts on sensitive receptors are expected to be mitigated during construction and no long-term CO hotspots will be created that may affect sensitive receptors. Operational emissions from future development under the proposed project will consist of area source and motor vehicle emissions, which will exceed SCAQMD thresholds. These air quality emissions from future development under the proposed project will remain significant, even after mitigation.

Area Source (Post-Construction) Emission Mitigation

Emissions resulting from the post-construction and routine operation of various sources within a development contribute to long term impacts on air quality throughout its life. Some of the mitigation measures that could reduce energy consumption within the proposed project and thus, reduce associated emissions should be considered for implementation and are listed below.

- ◆ Central residential space heating and cooling for multi-dwelling units.
- ◆ Orient buildings north/south for reducing energy-related combustion emissions.
- ◆ Central commercial space heating.

These measures could be accounted for in the planning process such that the overall impact of the proposed project on prevalent air quality in the SCAB is minimized.

Motor Vehicle (Operational) Emission Mitigation

Motor vehicle emissions form a large portion of the total operational emissions from the proposed project. These emissions can be mitigated by the use of fuel-efficient vehicles and a well designed transportation system. However, most of the measures will be ineffective unless the occupants of various commercial and residential establishments within the project contribute their share in the mitigation effort. The implementation of some of the measures cannot be stated with certainty, as they are owner and employer specific and related specific land use types within the proposed project. Development of the proposed project will identify motor vehicle mitigation measures that would result in reductions in emissions and thereby contribute to the overall improvement in air quality within the SCAB. The inclusion of the OCTA facility within the proposed project is aimed at encouraging the use of alternative transportation thereby reducing motor vehicle congestion and related air quality emissions and impacts. The implementation of an emission reduction program under SCAQMD Rule 2202 is also expected to result in reducing motor vehicle air quality emissions and impacts.

Notes and References

1. Midwest Research Institute, Improvement of Specific Emission Factors (BACM Project No.1), 1996.

5.4 Noise

An environmental noise assessment to determine the potential noise impacts of the proposed project prepared by Black and Veatch Corporation is provided as Appendix H in Volume II of this Final Program EIR. The report is summarized below and provides the basis for determining projects impacts.

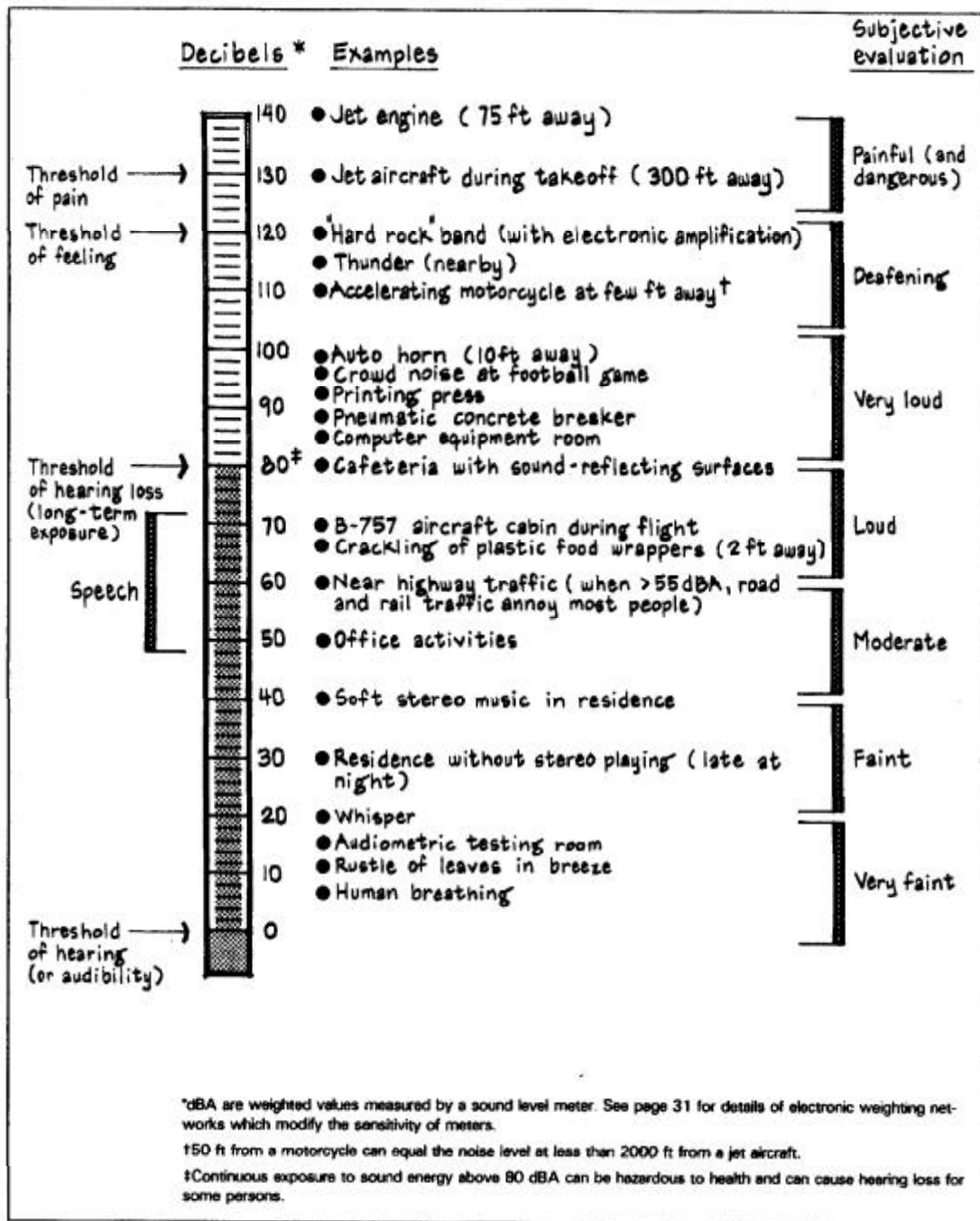
Acoustical Terminology

Definitions

Sound is generated by the propagation of energy in the form of pressure waves. Being a wave phenomenon, sound is characterized by amplitude (sound level) and frequency (pitch). Sound amplitude is measured in decibels (dB) and sound frequency is measured in hertz (Hz). The decibel is the logarithmic ratio of a sound pressure to a reference sound pressure. Typically, zero dB corresponds to the threshold of human hearing. For reference, the sound pressure levels associated with common noise sources are shown in Figure 5.4-1. The standard unit of measure for frequency is Hz (cycles per second). The typical human ear can hear frequencies ranging from 20 Hz to 20,000 Hz.

At typical sound pressure levels, the human ear is more sensitive to sounds in the middle and high frequencies (1,000 to 8,000 Hz) than sounds in the low frequencies. Various weighting networks have been developed to simulate the frequency response of the human ear. The A-weighting network was developed to simulate the frequency response of the human ear to sounds at typical environmental levels. The A-weighting network emphasizes sounds in the middle to high frequencies and de-emphasizes sounds in the low frequencies. Most sound level instruments can apply these weighting networks automatically. Any sound level to which the A-weighting network has been applied is expressed in A-weighted decibels (dBA) and most community noise standards are expressed in decibels on the dBA scale. Noise levels of common sounds in the environment include office background noise at about 50 dBA, human speech at 10 feet (ft) at about 60-70 dBA, cars driving by at 50 feet at 65-70 dBA, trucks at 50ft at 75-80 dBA, and aircraft overflights a mile from the approach at about 95-100 dBA. Table 5.4-1 shows typical sound levels according to the A-weighted decibel scale.

People are exposed to sound on a daily basis. Sound is perceived as a normal part of the natural environment. People quickly adapt to most everyday sounds and barely notice its presence. Other sounds can be annoying or disturbing. For purposes of environmental assessment, noise is defined as unwanted sound. Noise in the urban environment typically is produced by transportation activities and stationary activities. Transportation noise includes noise from automobile and truck traffic, trains and airplanes. Stationary noise sources typically include heating, ventilation and air conditioning systems, manufacturing activities, industrial equipment, entertainment activities, yard care equipment, and outdoor activities. Stationary sources of a temporary nature include construction activities and agricultural operations.



Source: Architectural Acoustics, M. David Egan, 1988.

Figure 5.4-1
Typical Sound Pressure Levels
Associated with Common Noise Sources

**Table 5.4-1
Typical Noise Levels**

Over-all Level (Noise level, dB(A))		Community (Outdoor)	Home or Industry (Indoor)	Loudness (Human Judgment of Different Sound Levels)
120-130	Uncomfortably Loud	Military Jet Aircraft Take-Off With After-Burner From Aircraft Carrier @ 50 ft. (130)	Oxygen Torch (121)	32 Times As Loud As 70 dB(A)
110-119		Turbo Fan Aircraft @ Take-Off Power @ 200 ft. (118)	Riveting Machine (110) Rock and Roll Band (108-114)	16 Times As Loud As 70 dB(A)
100-109		Boeing 707, DC-8 @ 6080 ft. Before Landing (106), Jet Flyover @ 1000 ft. (103), Bell J-2A Helicopter @ 100 ft. (100)		8 Times As Loud As 70 dB(A)
90-99	Very Loud	Power Mower (96) Boeing 707, CD-8 @ 6080 ft. Before Landing (97) Motorcycle @ 25 ft. (90)	Newspaper Press (97)	4 Times As Loud As 70 dB(A)
80-89		Car Wash @ 20 ft. (89) Propellor Plane Flyover @ 1000 ft. (88) Diesel Truck, 40 mph @ 50 ft. (84) Diesel Train, 45 mph @ 100 ft. (83)	Food Blender (88) Milling Machine (85) Garbage Disposal (80)	2 Times As Loud As 70 dB(A)
70-79	Moderately Loud	High Urban Ambient Sound (80) Passenger Car, 65 mph @ 25 ft. (77) Freeway @ 50 ft. From Pavement Edge @ 10 A.M. (76 +/- 6)	Living Room Music (76) TV-Audio, Vacuum Cleaner (70)	
60-69		Air Conditioning Unit @ 100 ft. (60)	Cash Register @ 10 ft. (65-70)	1/2 As Loud As 70 dB(A)
50-59	Quiet	Large Transformers @ 100 ft. (50)		1/4 As Loud As 70 dB(A)
40-49		Bird Calls (44) Lower Limit of Urban Ambient Sound in daytime (40)		1/8 As Loud As 70 dB(A)
	Just Audible	dB(A) Scale Interrupted		
0-10	Threshold of Hearing			

Source: Adapted by CBA from Melville C. Branch and R. Dale Beland. *Outdoor Noise in the Metropolitan Environment*. City of Los Angeles. 1970. Page 2.

Sound Level Metrics

Community noise consists of a wide variety of sounds, some near and some far away, some of which are short and some of long duration, some constant and some infrequent, which vary over the 24-hour day. Scientists and planners have found that humans respond generally to the 24-hour variation in noise based on the total energy content of the sound over the day, with a greater sensitivity to noise at night.

Several noise metrics have been developed to quantify fluctuating noise levels. These metrics include the equivalent-continuous sound level, the day-night sound level, and the community noise equivalent sound level. California standards for community noise use the Community Noise Equivalent Level (CNEL), in which the energy is averaged over a 24-hour day with a five-decibel penalty from 7:00 pm to 10:00 pm and a ten-decibel penalty from 10:00 pm to 7:00 am. The EPA uses the Day-Night Noise Level (L_{dn}) measure, which is identical to the CNEL, but without the evening noise weighting.

The equivalent-continuous sound level (L_{eq}) is the level of a hypothetical steady sound that has the equivalent sound energy as the actual fluctuating sound over a given time duration. For example, $L_{eq(24h)}$ is the equivalent-continuous sound level measured over a 24-hour period. This sound level provides an indication of the overall sound level over a 24-hour period, but does not provide any indication as to the variability of the sound level, such as from daytime to nighttime.

The day-night sound level (L_{dn}) is the 24-hour average L_{eq} sound level with a ten dB penalty applied to nighttime sound levels (10:00 pm to 7:00 am) to account for increased sensitivity to nighttime noise.

The exceedance sound level, L_x , is the sound level exceeded “x” percent of the sampling period and is referred to as a statistical sound level. The most common L_x values are L_{90} , L_{50} , and L_{10} . L_{90} is the sound level exceeded 90 percent of the sampling period. L_{90} is often referred to as the residual sound level because it measures the background sound level without the influence of loud, transient noise sources. L_{50} is the sound level exceeded 50 percent of the sampling period or the median sound level. L_{10} is the sound level exceeded ten percent of the sampling period. L_{10} is often referred to as the intrusive sound level because it measures the occasional louder noises.

Human Response to Sound

Human response to sound is highly individualized. Annoyance is the most common issue regarding community noise. The percentage of people claiming to be annoyed by noise will generally increase with the environmental sound level. However, many other factors will also influence people’s response to noise. These factors can include the character of the noise, the variability of the sound level, the presence of tones or impulses, and the time of day of the occurrence. Additionally, non-acoustical factors, such as the person’s opinion of the noise source, the ability to adapt to the noise, the attitude towards the noise and those associated with it, and the predictability of the noise, will all also influence people’s response. As such, response to noise varies widely from one person to another and with any particular noise, individual responses will range from “highly annoyed” to “not annoyed.”

Applicable Laws, Ordinances, Regulations, and Standards

This section outlines the laws, ordinances, regulations, and standards that are applicable to mixed land use developments and the proposed project. Regulatory requirements related to environmental noise are typically promulgated at the local level. However, federal and state agencies provide standards and guidelines to the local jurisdictions.

Federal Agencies

A number of federal agencies have published standards and guidelines related to environmental noise. These agencies include the Environmental Protection Agency, the Federal Highway Administration, the Department of Housing and Urban Development, and the Occupational Safety and Health Administration.

Environmental Protection Agency

As mandated by the Noise Control Act of 1972, the EPA has identified yearly day-night average sound levels (L_{dn}) sufficient to protect public health and welfare from the effects of environmental noise. According to the EPA, outdoor yearly levels are sufficient to protect public health and welfare if they do not exceed an L_{dn} of 55 dBA in sensitive areas such as residences, schools, and hospitals. Similarly, indoor yearly levels are sufficient to protect public health and welfare if they do not exceed an L_{dn} of 45 dBA. Additionally, the EPA has established that the 24-hour equivalent sound level exposure, L_{eq} , at the ear should not exceed 70 dBA in order to protect against hearing damage. The EPA emphasizes that these levels were derived without concern for technical feasibility and contain a margin of safety to ensure their protective value. Therefore, the levels must not be viewed as standards, criteria, regulations, or goals; but rather they should be viewed as levels below which there are no reason to suspect that the general population will be at risk from the effects of noise.

Federal Highway Administration

The Federal Highway Administration (FHWA) has established a set of design goals for traffic noise exposure. FHWA has established that impacts occur when predicted traffic noise levels approach or exceed established Noise Abatement Criteria. FHWA defines four land use categories and assigns maximum hourly equivalent sound levels (L_{eq}) as listed in Table 5.4-2. Category B, defined as picnic and recreation areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals, has a corresponding maximum exterior L_{eq} of 67 dBA. Category E, defined as residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums, has a corresponding maximum interior L_{eq} of 52 dBA. All highway projects funded by FHWA are subject to these criteria. Additionally, FHWA considers these limits to be goals in the design and evaluation of highway facilities and to also be helpful for planning projects near existing or future highways.

**Table 5.4-2
Federal Highway Administration - Traffic Noise Abatement
Criteria**

Activity Category	Leq(h)	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties or activities not included in Categories A or B.
D	–	Undeveloped lands.
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: 23 CFR Part 772.

Department of Housing and Urban Development

The Department of Housing and Urban Development (HUD) has established environmental criteria and standards for interior and exterior noise impacting HUD assisted housing sites. These standards are based on day-night average sound levels (L_{dn}) and identify the need for noise abatement, either at the property boundary or in the building construction. HUD's Site Acceptability Noise Standards rank exterior environmental noise and consider housing sites exposed to exterior noise levels not exceeding an L_{dn} of 65 dBA as acceptable. Housing sites exposed to noise levels exceeding an L_{dn} of 65 dBA require additional noise attenuation other than that provided in customary building techniques.

HUD also specifies minimum sound isolation standards for wall and floor/ceiling constructions separating living units from other living units, common service areas, or public spaces. For example, HUD specifies a minimum Sound Transmission Class (STC) of 45 for walls and floor/ceiling constructions separating living units, and a minimum Impact Isolation Class (IIC) of 45 for floor/ceiling constructions separating living units. These standards must be met if HUD financing will be considered for the housing developments.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration (OSHA) has established worker noise exposure limits. The OSHA worker noise exposure limits are based on a worker's noise exposure over a specific time period. Examples of these limits are outlined in Table 5.4-3.

Table 5.4-3
Occupational Safety and Health Administration - Permissible Daily Noise
Exposures

Duration per day in hours.	Sound Exposure Level, dBA.
8	90
6	92
4	95
3	97
2	100
1-1/2	102
1	105
1/2	110
1/4 or less	115

Source : 29 CFR Part 1910

When worker noise exposure exceeds the permissible noise exposure, feasible engineering or administrative controls must be implemented to reduce the noise exposure. When such controls fail to reduce the noise exposure, personal protective equipment must be provided and used to reduce the noise exposure to a permissible level. Although the permissible noise exposure over an 8-hour duration is shown as 90 dBA, OSHA has established a trigger level of 85 dBA over an 8-hour duration. When the trigger level is exceeded, the employer must provide the workers with hearing protection and establish an annual audiometric testing program.

All commercial and industrial uses developed within the project site must comply with the OSHA noise exposure limits.

State of California

California Environmental Quality Act

CEQA was enacted in 1970 and requires that all known environmental effects of a project be analyzed, including the environmental noise impacts. Under CEQA, a project has a potentially significant impact if the project exposes people to noise levels in excess of standards established in the local general plan or noise ordinance. Additionally, under CEQA, a project has a potentially significant impact if the project creates a substantial increase in the ambient noise levels in the project vicinity above levels existing without the project. If a project has a potentially significant impact, mitigation measures must be considered. If mitigation measures to reduce the impact to less than significant are not feasible due to economic, social, environmental, legal, or other conditions, the most feasible mitigation measures must be considered.

California Government Code

California Code Section 65302(f) mandates that the legislative body of each county and city adopt a noise element as part of their comprehensive general plan. The local noise element must recognize the land-use compatibility guidelines established by the State Department of Health Services as shown in Figure 5.4-2.

California Department of Transportation

The California Department of Transportation (CALTRANS) has established traffic noise policies for new construction or reconstruction transportation projects. These policies are also helpful in planning and evaluating non-transportation projects that are located near highways and roadways. CALTRANS has identified two conditions under which a traffic noise impact occurs. First, traffic noise impact occurs when the project creates a substantial increase in traffic noise. A substantial increase occurs when the predicted noise levels with the project exceed the existing noise levels by 12 dB, $L_{eq}(h)$. Second, a traffic noise impact also occurs when predicted noise levels with the project approach within one dB or exceed the Noise Abatement Criteria. The Noise Abatement Criteria is consistent with the FHWA criteria listed in Table 5.4-2. If traffic noise impacts are predicted, feasible and reasonable noise abatement measures must be evaluated and considered.

California Streets and Highways Code

The California Streets and Highways Code specify limits for noise within elementary or secondary schools produced by the traffic on a state freeway or by the construction of a state freeway. The interior noise level shall not exceed an hourly L_{eq} of 52 dBA or an L_{10} of 55 dBA due to the freeway traffic or construction. This requirement is consistent with the interior Noise Abatement Criteria for schools established by FHWA and CALTRANS.

This requirement applies to the construction or reconstruction of state transportation projects and does not specifically apply to this project. However, the criteria can be used as a guideline for the compatibility of new schools near roadways.

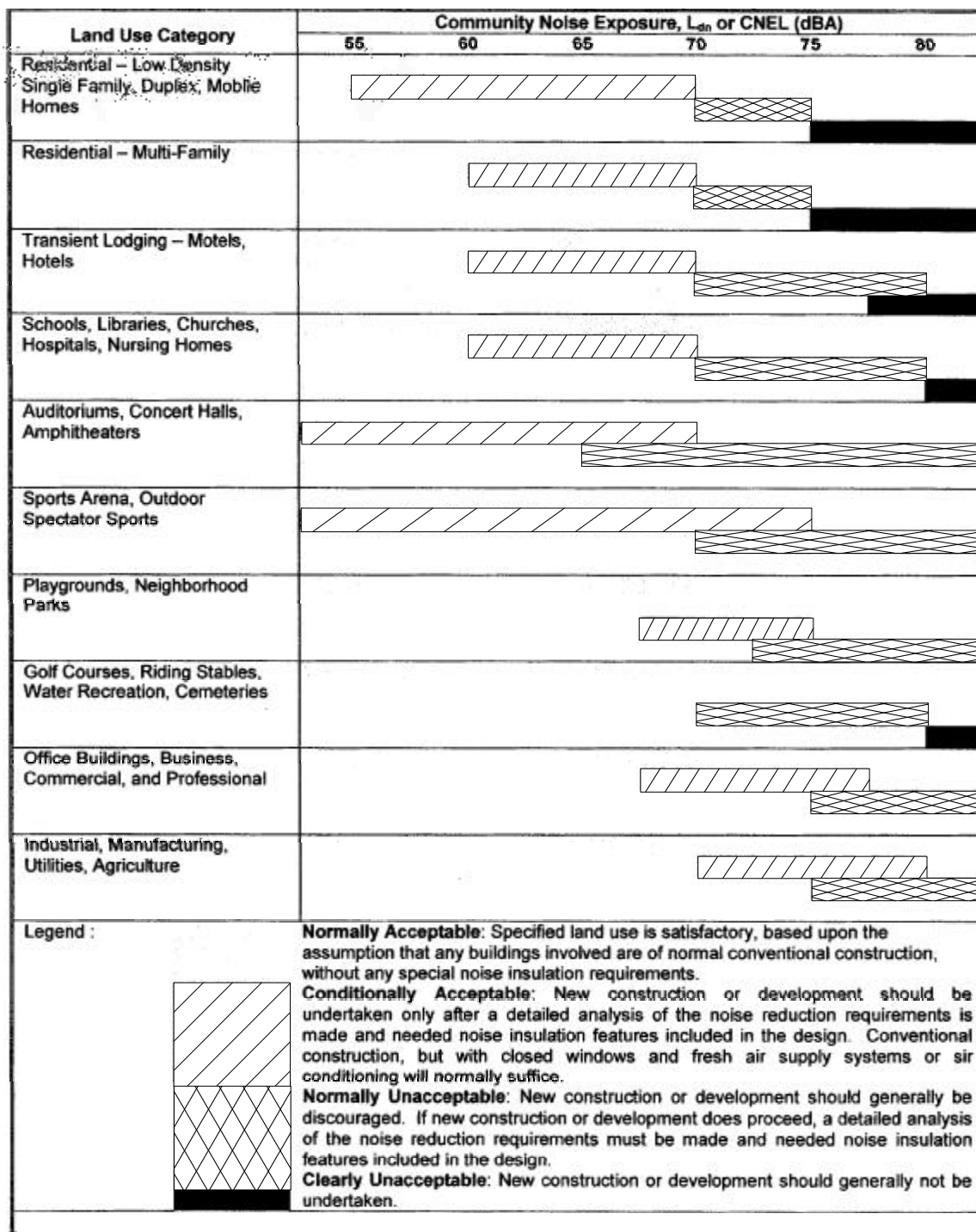
California Division of Occupational Safety and Health

The California Division of Occupational Safety and Health (CALOSHA) has established noise exposure limits to protect workers. The CALOSHA noise exposure limits are consistent with the OSHA worker noise exposure limits. All commercial and industrial uses developed within the project site must comply with the CALOSHA noise exposure limits.

California Building Standards

The California Building Standards establish uniform minimum noise insulation performance standards to protect persons within new hotels, motels, dormitories, long-term care facilities, apartment houses, and dwellings (other than detached single-family homes) from the effects of excessive noise. These standards specify minimum sound insulation requirements for interior and exterior sound transmission.

Wall and floor/ceiling assemblies separating habitable rooms from each other and from public or service areas such as interior corridors, garages, and mechanical spaces must provide airborne sound insulation. The airborne sound insulation must equal that required to meet a Sound Transmission Classification (STC) of 50 or a Noise Isolation



Source: General Plan Guidelines, Office of Planning and Research, California, November 1998, pg. 187.

Figure 5.4-2
California Department of Health Services
Land Use Compatibility Standards

Classification (NIC) of 45 if field tested. Additionally, floor/ceiling assemblies must provide impact sound insulation equal to that required to meet an Impact Insulation Classification (IIC) of 50 or a Field Impact Insulation Classification (FIIC) of 45 if field tested.

Interior noise levels attributable to exterior sources must not exceed 45 dBA in any habitable room. The noise metric should be either L_{dn} or CNEL; whichever is consistent with the noise element of the local general plan. When the exterior noise levels cause interior noise levels to exceed 45 dBA, the building must be designed to prevent the transmission of exterior noise. Proper acoustical design includes, but is not limited to, orientation of the structure, setbacks, shielding, and sound insulation of the building itself.

The California Building Standards will apply to all new hotels, motels, dormitories, long-term care facilities, apartment houses, and habitable dwellings other than detached single-family homes within the project site.

County of Orange

As mandated by the California Government Code, the County of Orange has adopted a noise element as a component of the Orange County General Plan. The Orange County Noise Element is administered by the Orange County Planning and Development Services Department and applies to all unincorporated portions of the County. The Noise Element establishes noise criteria to ensure that each county resident's quality of life is not affected adversely by high noise levels. The noise criteria are based on land use compatibility and are depicted in Table 5.4-4 and 5.4-5. In general, all outdoor living areas are compatible with noise levels less than CNEL 65 dBA. Outdoor living areas are defined in Figure 5.4-3. Similarly, indoor living spaces are compatible with interior noise levels less than CNEL 45 dBA. As mentioned, these standards only apply to unincorporated areas of the County. Therefore, these standards are only applicable to the project as guidelines for land use compatibility.

The County of Orange has also adopted a noise ordinance. The intent of the Orange County Noise Ordinance is to control unnecessary, excessive, and annoying sounds emanating from unincorporated areas of the County. Since the project site will be within the Irvine city boundaries, the ordinance is not applicable to the proposed project.

Local Jurisdictions

The local jurisdictions adjacent to the project area include the cities of Irvine and Lake Forest. Since Irvine intends to incorporate the project area in the Sphere of Influence, the project area and all future development of the area will be under the jurisdiction of Irvine.

City of Irvine

As mandated by the California Government Code, Irvine has adopted a noise element as a component of the Irvine Comprehensive General Plan. Irvine's interior and exterior noise standards are based on land use compatibility and are shown in Figure 5.4-4. Irvine has established a residential noise standard of CNEL 65 dBA for outdoor environments and CNEL 45 dBA for indoor environments. These standards are consistent with the noise

compatibility standards established by Orange County and are applicable to the project for evaluating land use compatibility within Irvine.

Table 5.4-4
Compatibility Matrix for Land Use and Community Noise
Equivalent Levels

Type of Use	65+ decibels CNEL	60-65 decibels CNEL
Residential	3a, b, e	2a, e
Commercial	2c	2c
Employment	2c	2c
Open Space		
<i>Local</i>	2c	2c
<i>Community</i>	2c	2c
<i>Regional</i>	2c	2c
Educational Facilities		
<i>Schools (K through 12)</i>	2c, d, e	2c, d, e
<i>Preschool, college, other</i>	2c, d, e	2c, d, e
Places of Worship	2c, d, e	2c, d, e
Hospitals		
<i>General</i>	2a, c, d, e	2a, c, d, e
<i>Convalescent</i>	2a, c, d, e	2a, c, d, e
Group Quarters	1a, b, c, e	2a, c, e
Hotels/Motels	2a, c	2a, c
Accessory Uses		
<i>Executive Apartments</i>	1a, b, c	2a, e
<i>Caretakers</i>	1a, b, c, e	2a, c, e

Source: Orange County Noise Element

Note: See Table 5.4-5 for Explanations and Definitions

**Table 5.4-5
Explanation and Definitions of Table 5.4-4**

Action Required to Ensure Compatibility Between Land Use and Noise from External Sources

- 1 = Allowed if interior and exterior community noise can be mitigated.
 2 = Allowed if interior levels can be mitigated.
 3 = New residential uses are prohibited in areas within the 65-decibel CNEL contour from any airport or air station; allowed in other areas if interior and exterior community noise levels can be mitigated. The prohibition against new residential development excludes limited "infill" development within an established neighborhood.

Standards Required for Compatibility of Land Use and Noise

- a = Interior Standard: CNEL of less than 45 decibels (habitable rooms only).
 b = Exterior Standard: CNEL of less than 65 decibels in outdoor living areas.
 c = Interior Standard: Leq(h)=45-65 decibels interior noise level; depending on interior use.
 d = Exterior Standard: Leq(h) of less than 65 decibels in outdoor living areas.
 e = Interior Standard: As approved by the Board of Supervisors for sound events of short duration such as aircraft flyovers or individual passing railroad trains.

Key Definitions

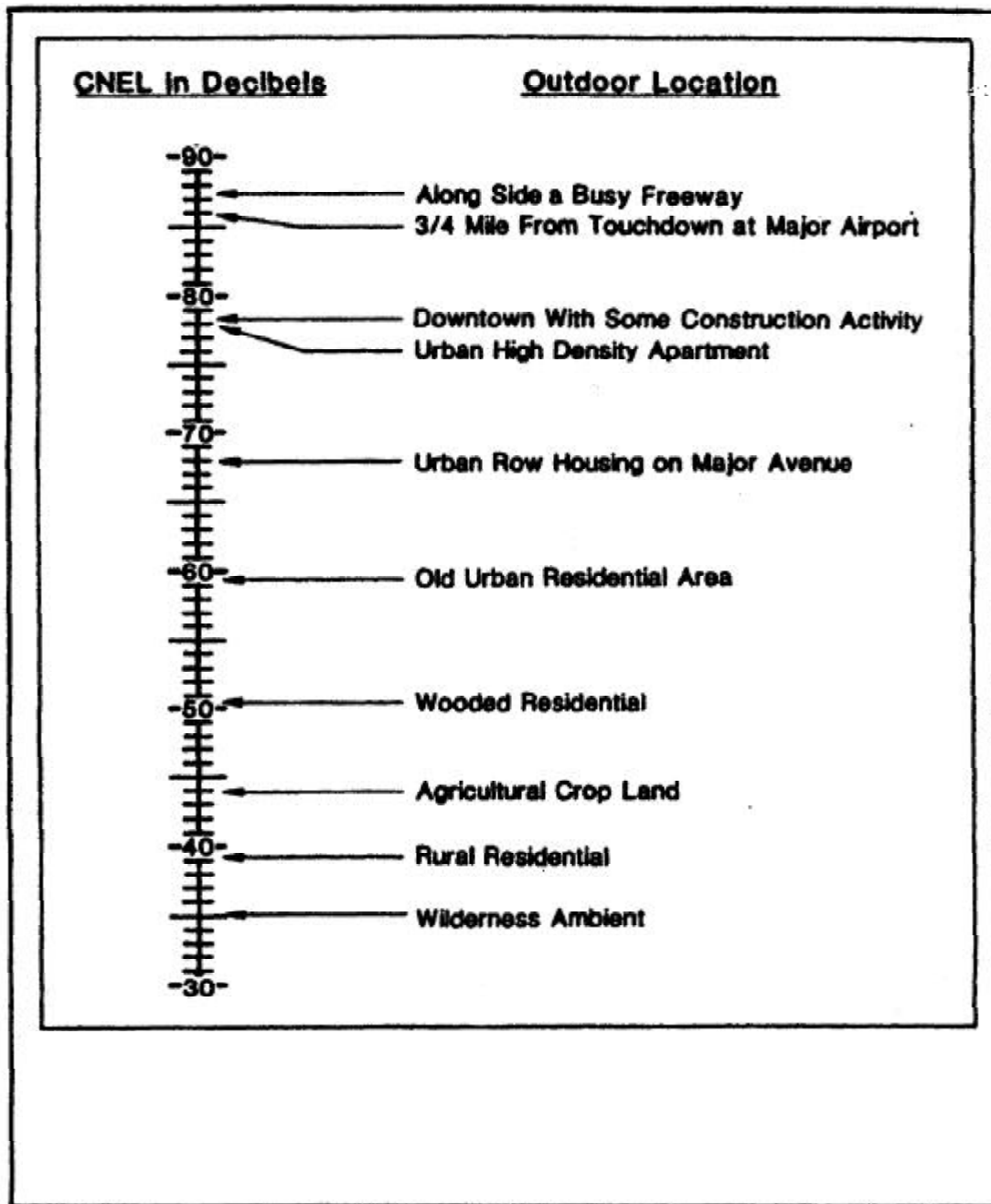
Habitable Room: Any room meeting the requirements of the Uniform Building Code or other applicable regulations which is intended to be used for sleeping, living, cooking, or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms, and similar spaces.

Interior: Spaces that are covered and largely enclosed by walls.

Leq(h): The A-weighted equivalent sound level averaged over a period of "h" hours. An example would be Leq(12) where the equivalent sound level is the average over a specified 12-hour period (such as 7:00 am to 7:00 pm). Typically, time period "h" is defined to match the hours of operation of a given type of use.

Outdoor Living Area: Outdoor living areas is a term used by the County of Orange to define spaces that are associated with residential land uses typically used for passive private recreational activities or other noise-sensitive uses. Such space include patio areas, barbeque areas, Jacuzzi areas, etc. associated with residential uses; outdoor patient recovery or resting areas associated with hospitals, convalescent hospitals, or rest homes, outdoor areas associated with places of worship which have a significant role in services or other noise-sensitive activities; and outdoor school facilities routinely used for education purposes which may be adversely impacted by noise. Outdoor areas usually not included in this definition are: front yard areas, driveways, greenbelts, maintenance areas, and storage areas associated with residential land uses; exterior areas at hospitals that are not used for patient activities; outdoor areas associated with places of worship and principally used for short-term gatherings; and outdoor areas associated with school facilities that are not typically associated with educational uses prone to adverse noise impacts (for example, school play yard areas).

Source: *Orange County Noise Element*



Source: Orange County Noise Element.
(Based on EPA, "Protective Noise Levels, Condensed Version of the EPA Levels Document," 1979, Fig. 4).

Figure 5.4-3
Examples of Outdoor CNEL Levels
at Various Locations

INTERIOR AND EXTERIOR NOISE STANDARDS ENERGY AVERAGE (CNEL)

LAND USE CATEGORIES	USES	ENERGY AVERAGE (CNEL)	
		INTERIOR ¹	EXTERIOR ²
RESIDENTIAL	Single Family	45 ³	65
	Multiple Family		
	Mobile Home	—	65 ³
COMMERCIAL/ INDUSTRIAL/ INSTITUTIONAL	Hotel, Motel, Transient lodging	45	65
	Commercial, retail, bank, restaurant	55	—
	Office building, Professional office, research development, city office building	50	—
	Amphitheater, concert hall, auditorium meeting hall	45	—
	Gymnasium (Multipurpose)	50	—
	Sport clubs	55	—
	Manufacturing, warehousing, wholesale, utilities	65	—
	Movie theatre	45	—
INSTITUTIONAL	Hospital, school classroom	45	65
	Church, library	45	—
OPEN SPACE	Parks	—	65

Interpretation

1. Indoor environment excluding bathrooms, toilets, closets and corridors.
2. Outdoor environment limited to private yard of single family; multi-family private patio or balcony which is served by a means of exit from inside; mobile home park; hospital patio; park's picnic area; school's playground; and hotel and motel recreation area.
3. Noise level requirement with closed windows. Mechanical ventilating system or other means of natural ventilation shall be provided as of Chapter 12, Section 1205 of UBC.
4. Noise level requirement with open windows, if they are used to meet natural ventilation requirement.
5. Exterior noise level should be such that interior noise level will not exceed 45 CNEL.
6. Except those areas affected by aircraft noise.

Source: City of Irvine Comprehensive General Plan Noise Element.

Figure 5.4-4
Interior and Exterior Noise Standards
Energy Average (CNEL)

Irvine has also adopted a noise ordinance. The intent of the Irvine Noise Ordinance is to control unnecessary, excessive, and annoying noise from stationary sources within the city limit. The noise level limits are based on the noise zone of the property receiving the noise and are outlined in Table 5.4-6.

**Table 5.4-6
City of Irvine Noise Ordinance Maximum Permissible Noise Levels**

Noise Zone		Period	Permissible Noise Level (dBA) (for a period not exceeding)				
			30 min	15 min	5 min	1 min	0 min
1	Exterior	7 am to 10 pm	55	60	65	70	75
		10 pm to 7 am	50	55	60	65	70
	Interior	7 am to 10 pm	-	-	55	60	65
		10 pm to 7 am	-	-	45	50	55
2	Exterior	Anytime	55	60	65	70	75
	Interior	Anytime	-	-	55	60	65
3	Exterior	Anytime	60	65	70	75	80
	Interior	Anytime	-	-	55	60	65
4	Exterior	Anytime	70	75	80	85	90
	Interior	Anytime	-	-	55	60	65

Noise Zone Designations:

- 1 All hospitals, libraries, churches, schools, and residential properties
- 2 All professional office and public institutional properties.
- 3 All commercial properties excluding professional office properties.
- 4 All industrial properties.

The Irvine Noise Ordinance also specifies construction activities and agricultural operations can only occur between 7:00 am and 7:00 pm Monday through Friday and between 9:00 am and 6:00 pm on Saturday. No construction activities or agricultural operations are permitted outside these hours or on Sundays or federal holidays unless a temporary waiver is requested and granted.

Following annexation to the City the Irvine Noise Ordinance is directly applicable to the project site. All future stationary noise sources associated with the various land use developments within the project site must comply with these regulations. Additionally, all construction activities associated with the development of the project must comply with these regulations.

City of Lake Forest

As mandated by the California Government Code, Lake Forest has adopted a noise element as a component of the Lake Forest General Plan. Lake Forest's interior and exterior noise standards are based on land use compatibility and are shown in Figure 5.4-5. Lake Forest has established a residential noise standard of CNEL 65 dBA for outdoor environments and CNEL 45 dBA for indoor environments. These standards are consistent

INTERIOR AND EXTERIOR NOISE STANDARDS

Land Use	Noise Standards ¹	
	Interior ^{2,3}	Exterior
Residential - Single family, multifamily, duplex, mobile home	CNEL 45 dB	CNEL 65 dB ⁴
Residential - Transient lodging, hotels, motels, nursing homes, hospitals	CNEL 45 dB	CNEL 65 dB ⁴
Private offices, church sanctuaries, libraries, board rooms, conference rooms, theaters, auditoriums, concert halls, meeting halls, etc.	Leq(12) 45 dB(A)	-
Schools	Leq(12) 45 dB(A)	Leq(12) 67 dB(A) ⁵
General offices, reception, clerical, etc.	Leq(12) 50 dB(A)	-
Bank lobby, retail store, restaurant, typing pool, etc.	Leq(12) 55 dB(A)	-
Manufacturing, kitchen, warehousing, etc.	Leq(12) 65 dB(A)	-
Parks, playgrounds	-	CNEL 65 dB ⁵
Golf courses, outdoor spectator sports, amusement parks	-	CNEL 70 dB ⁵

NOTES

1. CNEL: Community Noise Equivalent Level.
Leq(12): The A-weighted equivalent sound level averaged over a 12-hour period (usually the hours of operation).
2. Noise standard with windows closed. Mechanical ventilation shall be provided per UBC requirements to provide a habitable environment.
3. Indoor environment excluding bathrooms, toilets, closets and corridors.
4. Outdoor environment limited to rear yard of single family homes, multifamily patios and balconies (with a depth of 6' or more) and common recreation areas.
5. Outdoor environment limited to playground areas, picnic areas, and other areas of frequent human use.

Source: Lake Forest General Plan Safety and Noise Element.

Figure 5.4-5
Interior and Exterior Noise Standards

with the noise compatibility standards established by Orange County and are applicable to the project for evaluating land use compatibility within Lake Forest.

Lake Forest has also adopted a noise ordinance. The intent of the Lake Forest Noise Ordinance is to ensure that adjacent properties are not exposed to excessive noise from stationary sources (non-transportation) located within the city limits. The ordinance is not applicable to the proposed project.

5.4.1 Environmental Setting

Existing Noise Sources

The existing acoustical environment around the project area is typical of urban and suburban communities. The primary sources of noise throughout the community include both mobile and stationary sources. The mobile sources include the various modes of transportation such as automobiles, trucks, motorcycles, trains, and aircraft. The community locations directly adjacent to the roadways experience noise dominated by vehicles. The project area and locations immediately surrounding the project area currently experience noise from aircraft operations associated with John Wayne Airport and other outlying area airports. As the military mission at the former MCAS El Toro is terminated, no noise from military flight operations associated with the former air station is present.

The project area is dominated by mobile noise sources (i.e., traffic noise from roadways and freeways located near the project area). The project area is located north of the Santa Ana (I-5) Freeway, east of the Eastern Transportation Corridor (SR-133), and south of the Foothill Transportation Corridor (SR-241). Major roadways that border the project area include Barranca Parkway to the south, Sand Canyon Avenue to the west, Portola Parkway and Irvine Boulevard to the north, and Alton Parkway to the east. In addition, the Irvine Transportation Center, a major multi-modal transit center linking bus, commuter rail, and Amtrak rail services, is located along the southern edge of the project area, adjacent to the Southern California Regional Rail Authority (SCRRA) railroad. Passenger train operations at this facility generate noise along the tracks.

Noise emanating from the project area is limited to vehicle noise from security personnel and other limited activities. The Musick Branch Jail generates noise associated with vehicles trips to and from the jail and from stationary sources and activities associated with the jail. The IRWD parcel generates limited noise from the pump equipment. Land uses adjacent to the project area that generate vehicle noise include commercial business, light industry, and agricultural uses.

The stationary sources include the noise associated with the commercial and industrial land uses throughout the community. These stationary noise sources typically include building systems, manufacturing activities, industrial equipment, and entertainment activities. Specifically, the Irvine Spectrum business park and entertainment center is located to the south of the project area, industrial/business parks are located to the east, and agricultural land and a regional park are located to the north. Stationary sources of a temporary nature include construction activities and agricultural operations. Other community noise sources

include the noise from residential sources such as air conditioners, yard care equipment, and outdoor activities.

Ambient Noise Survey

A noise survey was conducted on December 10-12, 2002, to characterize the existing acoustical environment at nearby noise sensitive receptors. Noise measurements were conducted within the residential areas near the project area. Four representative residential locations were identified for long-term measurement and five additional locations were selected for short-term measurement. The locations selected are shown in Figure 5.4-6. Each location was selected to capture the acoustical environment within the residential community. Long-term noise measurements were conducted for a minimum duration of 46 hours and included the hourly equivalent-continuous sound level (L_{eq}); the 90-percentile exceedance sound level (L_{90}); the 50-percentile exceedance sound level (L_{50}); and the 10-percentile exceedance sound level (L_{10}). The short-term measurements were conducted for a minimum of 10 minutes to capture a typical spectrum that is experienced during the daytime. Weather conditions during the measurement period generally included clear skies, light winds, and temperatures ranging from approximately 47°F to 75°F.

The measurement results are detailed in Table 5.4-7 and Figure 5.4-7. Detailed survey results are included in the Noise Technical Report provided in Appendix H of this Final Program EIR. As indicated in Table 5.4-6, the CNEL sound levels at the surveyed residential locations ranged from 58 dBA to 65 dBA. The audible sources included typical suburban sources such as local traffic, distant traffic, birds, aircraft, and human voices. The measured sound levels are typical of suburban residential areas and are compatible with residential areas based on the local standards.

The additional survey results detailed in Figure 5.4-7 provide an indication of the variation in the daily sound levels at each location. As expected, the smallest variations occurred during the nighttime hours when local/neighborhood activities were minimal. During the nighttime hours, the L_{90} and L_{10} sound levels approached equivalent levels. These trends are typical of suburban areas.

Groundborne Noise and Vibration¹

Non-seismic groundborne vibration is generally a concern inside buildings and is rarely perceived as a problem outdoors. Groundborne vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings, and then throughout the remainder of the structure. Building vibration may be perceived by occupants as motion of building surfaces, rattling of items on shelves or hanging on walls, or as a low-frequency rumbling noise. The rumble noise is caused by the vibrating walls, floors, and ceilings radiating sound waves. In most cases, groundborne noise and vibration is annoying but does not cause damage.

Typical sources of groundborne vibration are construction equipment, trains, and traffic on rough roads. Problems with groundborne vibration and noise from these sources are usually localized to areas within about 100 feet from the vibration source. When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible.

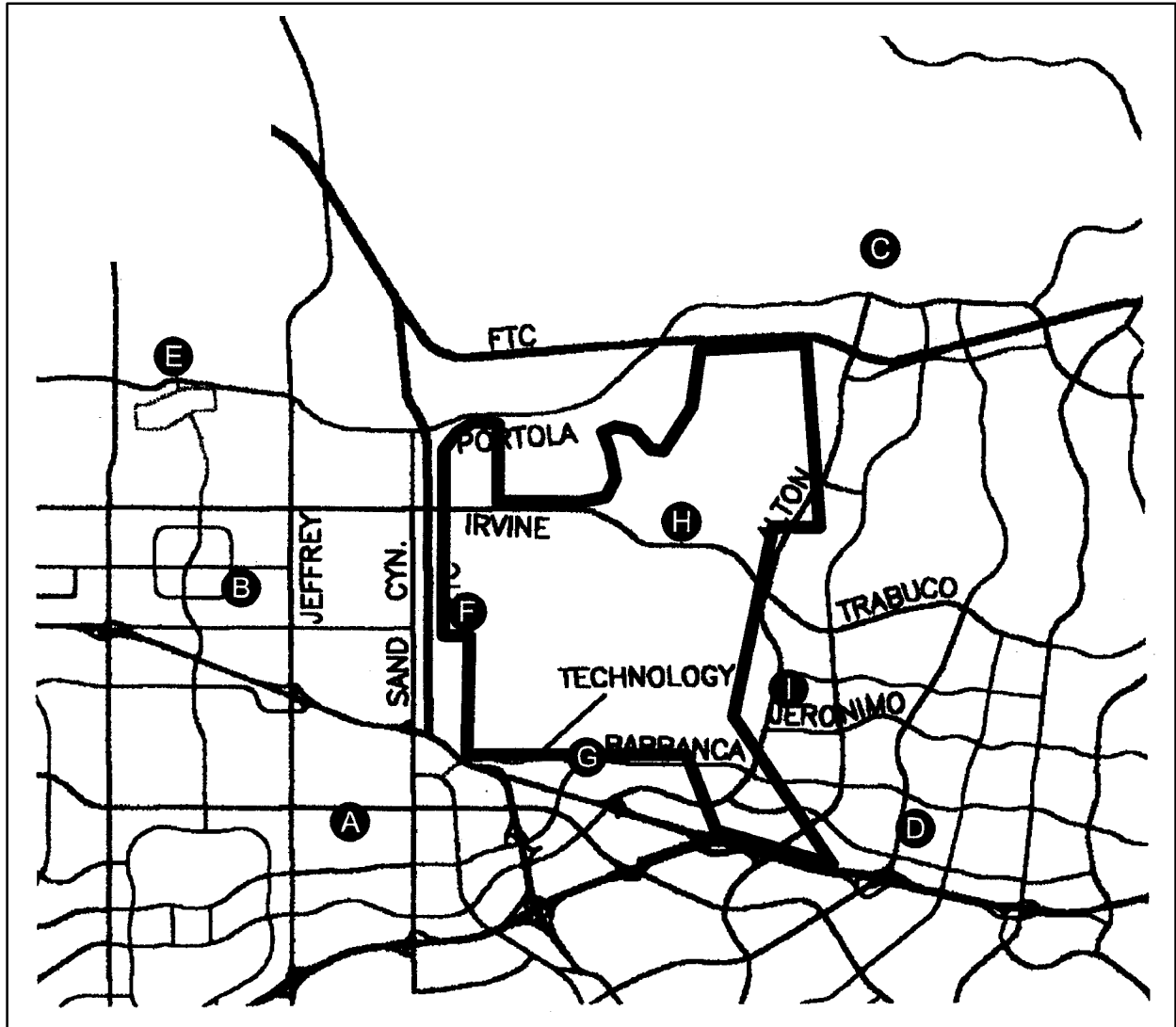


Figure 5.4-6
Measurement Locations for the Long-Term (A-D)
and Short-Term (E-I) Ambient Monitoring Locations
in Irvine and Lake Forest

Not to Scale

Table 5.4-7
Long-term and Short-term Ambient Noise Level Measurements

Noise Monitoring Location		L_{eq} dBA	L_{dn} dBA	L_{den} (CNEL) dBA	Audible Noise Sources
A	Orange Blossom and Tarocco (Irvine)	56 (46 hrs)	58	58	Local traffic, distant traffic, human voices, music from car stereo
B	Columbus and Eastwood (Irvine)	59 (47 hrs)	62	63	Local traffic, distant traffic, occasional small power tools
C	Teed and Roebuck (Lake Forest)	56 (49 hrs)	64	64	Distant traffic, local traffic, electric power tool, birds, distant aircraft, sprinklers
D	Paloma and Vallecito (Lake Forest)	60 (46 hrs)	64	65	Local traffic, distant traffic, barking dog, distant human voices, residential A/C unit
E	Portola east of Culver west of Jeffrey	61 / 63 (10 min)	n/a	n/a	Local traffic, birds
F	Trabuco at MCAS El Toro gate (Cal. St. Fullerton) at SR133	64 / 65 (10 min)	n/a	n/a	Local traffic, distant traffic, agricultural equipment
G	Barranca east of Technology in Irvine Spectrum Bus. Park	66 / 67 (10 min)	n/a	n/a	Local traffic, distant traffic
H	MCAS El Toro Gate 2; Irvine Blvd. west of Alton	58 / 59 (10 min)	n/a	n/a	Traffic, distant agricultural equipment
I	Corner of Alton and Morgan by Residence Inn	65 (10 min)	n/a	n/a	Traffic, small aircraft

Note:

1. Measured hourly L_{eq} , L_{90} , and L_{10} sound levels are shown in Figure 5.4-7 for A, B, C, and D
2. "n/a" denotes not applicable

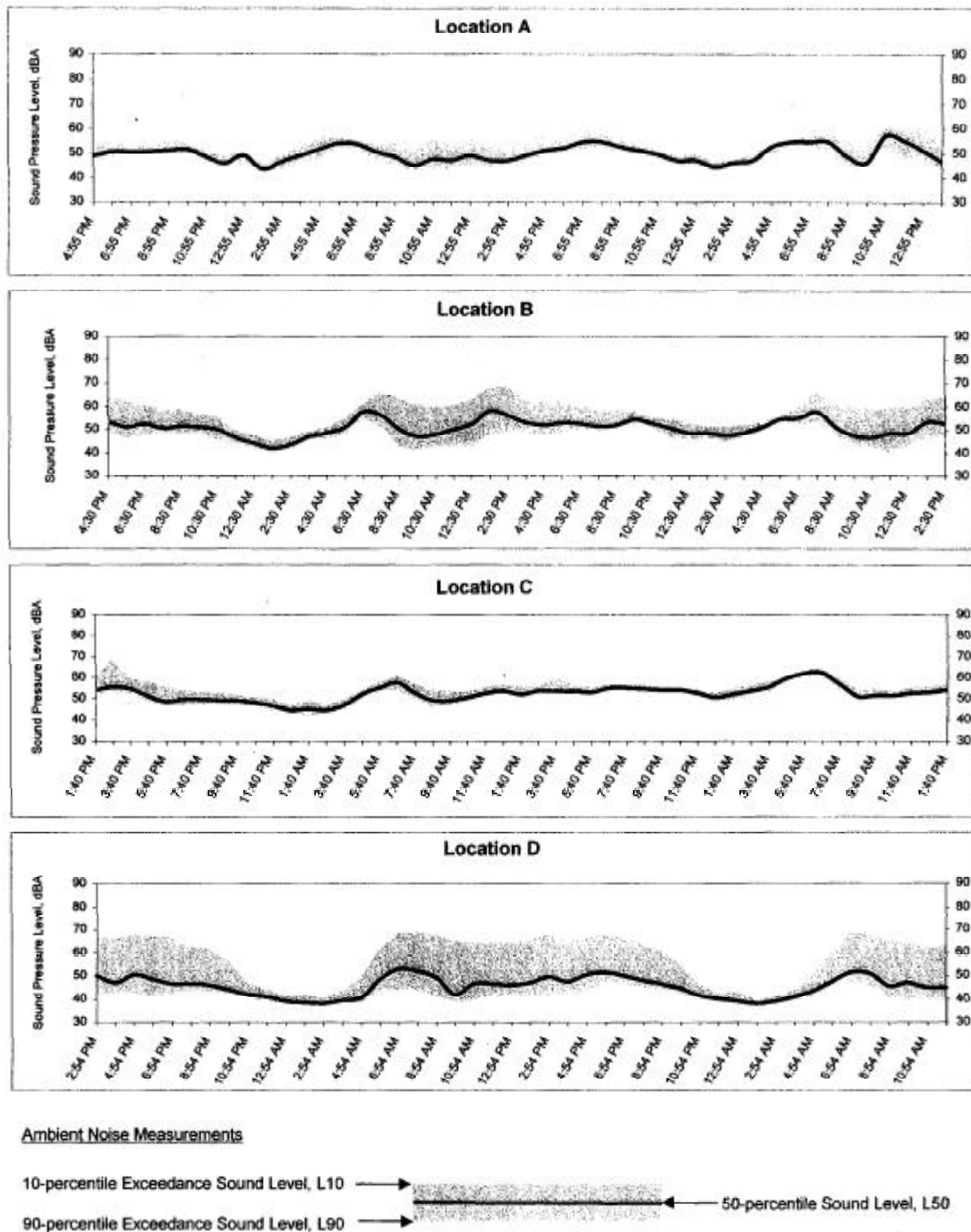


Figure 5.4-7
Ambient Sound Level Measurements
within Nearby Residential Areas

Physical damage from groundborne vibration is generally limited to construction activities, except in rare cases. Groundborne noise is generally not a problem because noise arriving airborne usually is greater than the associated groundborne noise.

5.4.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G, outlines the thresholds for determining significance for noise.

Would the project result in:

1. *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*
2. *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*
3. *Substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*
4. *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*
5. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*
6. *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?*

5.4.3 Environmental Impact

The Musick Branch Jail and the IRWD parcel are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. As a result, implementation of the proposed project will not result in a significant noise quality impact associated with the annexation of the Musick Branch Jail or the IRWD parcel.

Noise impacts on the surrounding areas due to the proposed project can be considered either short-term impacts or long-term impacts. Short-term impacts include those noise impacts due to the construction of the project from initial construction to final build-out. Long-term impacts include those post-construction noise impacts due to the operation and occupancy of the project area after its completion.

Construction Impacts

Threshold 1: Would the project cause exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Threshold 4: Would the project cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Base Plan and Overlay Plan

The construction phases are scheduled to correspond with the capacity and development of proposed roadways and growth of the surrounding community. Specific construction activities, level of activity, and the location of the construction will continually change throughout the course of project development. Development phasing will result in staggered noise impacts from demolition and construction activities and prevent extensive construction noise at any one time. Early construction will involve demolition and removal of portions of the existing infrastructure including the runways, and construction of the infrastructure backbone.

The proposed project has been designed so that noise-sensitive areas are buffered from noise sources that surround the project area and is compatible with the Irvine General Plan and zoning ordinance. Sensitive receptors are buffered from major transportation corridors and off-project area industrial land uses by areas of commercial land development and open space areas. Also, sensitive receptors will be located away from major noise sources such as the sports park and the OCTA facility, as well as the existing railroad line and the I-5 Freeway. New development under Overlay Plan will be required to comply with all applicable federal, state and local noise regulations as they relate to publicly funded roadway and housing projects, employee safety and noise compatibility. Also, HUD standards must be met if HUD financing is considered for the multi-family residential uses. All commercial uses developed within the project area must comply with the OSHA and CALOSHA noise exposure limits. California Building Standards related to noise will apply to all new hotels, motels, dormitories, long-term care facilities and multi-family housing associated with the Overlay Plan.

Total development of the project is expected to occur over approximately a 20-year period. The construction phases are scheduled to correspond with the capacity and development of the proposed roadways and growth of the community. The specific construction activities, the level of activity, and the location of the construction will continually change throughout the course of the project development. The phasing of development will stagger the noise impacts from demolition and construction activities and prevent extensive construction noise at any one time during the 20-year development period.

The removal of the existing runways will take place during the course of the project. The specific timing of the removal is dependent upon the availability of funding for park improvements as well as the market for the aggregate created. Demolition of the runways will involve breaking up the concrete using up to five tracked breakers, 15 wheel loaders,

and one or two portable on-site crushing plants. The temporary crushing plants will be located remote from the existing noise sensitive areas. Removal of the crushed concrete by heavy truck is anticipated, as the crushed concrete may be sold for use as aggregate for off-project area roadways and other uses. The runway demolition and crushing activities are anticipated to be the noisiest component of construction. The nearest residences are located more than 1 mile from the existing runways.

The construction of the infrastructure will also be scheduled to support the construction schedule for the various proposed developments. Construction of the infrastructure will involve the installation of major sewer lines, water lines, gas lines, and electrical/communication cables, as well as the grading, clearing, and preparing of land. Infrastructure construction will require a variety of large diesel equipment operating at various locations on the site. It is anticipated that four to 20 large pieces of mobile equipment will be operating at various locations on the site at any given time. The nearest off-site residences are located approximately 4,000 feet from the edge of the project area.

Estimated sound levels for typical construction equipment are shown in Table 5.4-8. The outlined sound levels are based on typical equipment sound levels at a distance of 50 feet from the equipment. The main noise producing activities are anticipated to occur primarily during the early phases of construction. Portions of the infrastructure construction activities and runway demolition may occur simultaneously. The sound levels associated with this worst case condition were evaluated at the nearest off-project area residences. The combined sound level was estimated for 20 pieces of large mobile equipment operating at a distance of 5,000 feet, five concrete breakers operating at a distance of 6,000 feet, and two crusher plants operating at a distance of 10,000 feet. These distances represent the closest possible location of the construction equipment to the nearest off-project area residences. Based on these equipment types and quantities, the combined effect of this equipment would result in a sound level of approximately 56 dBA at the nearest off-project area residential locations during a heavy construction period. The construction sound levels will be below this level during most of the construction period. During general project construction, noise emissions are anticipated to be less than the noise emissions from runway demolition and infrastructure construction.

Post-construction Project Impacts

Long-term impacts include those post-construction noise impacts due to the operation and occupancy of the various land uses proposed for the project area. Post-construction noise sources include vehicle traffic generated by the project and stationary sources associated with the project land uses, such as commercial uses, and transportation facility uses. Post-construction noise impacts due to traffic generated by the project can be evaluated quantitatively by utilizing traffic volume studies. However, since the exact type, amount, and location of the project stationary noise sources are undetermined at this time, long-term impacts due to stationary noise sources can only be evaluated qualitatively.

**Table 5.4-8
Typical Noise Levels for Construction Equipment¹**

Type of Equipment	Range of Measured Sound Levels, dBA at 50 feet	Suggested Sound Level for Analysis, dBA at 50 feet
Material-Handling and Transport Equipment: Concrete Batch Plants Vibratory Conveyors Concrete Vibrators Pavers	80 – 85 70 – 80 68 – 81 82 – 92	83 77 78 89
Impact Equipment: Pile Drivers 12000-18000 ft-lb/blow 20000-32000 ft-lb/blow Rock Drills Paving Breakers, Jack Hammers unquieted quieted Pneumatic Tools Temporary Crushing Plant	81 – 96 94 – 107 83 – 99 75 – 85 69 – 77 78 – 88	93 104 96 82 75 85 95 ⁽²⁾
Auxiliary Equipment: Pumps Chain Saws Electric Gas Electric Saws Welders Paging Systems Warning Horns	68 – 80 59 – 69 72 – 88 66 – 72 66 – 75 80 – 92 98 – 102	77 66 85 70 73 89 100

Notes:

1. Based on *Power Plant Construction Noise Guide*, Bolt Beranek and Newman Inc., 1977
2. Sound level based on similar construction equipment

Threshold 1: Would the project cause exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Threshold 3: Would the project cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Base Plan and Overlay Plan

Traffic Noise Analysis Methodology

Under CEQA, consideration must be given to the magnitude of the increase and the existence of noise sensitive receptors in order to determine if the noise increase is a significant adverse environmental effect. Since CEQA does not define the magnitude of a significant increase, other applicable sources must be referenced. In general, a noise level increase of three dB is typically considered just barely perceptible while an increase of five dB is typically considered clearly noticeable. CALTRANS defines a noise increase as substantial when the predicted noise levels with the project exceed the existing noise levels by 12 dB. Additionally, CALTRANS has established a screening procedure that recommends further detailed traffic noise analysis when the ratio of the traffic volumes indicates a noise level increase equal to or greater than three dB. In addition, Lake Forest has recently developed a document titled *CEQA Significance Thresholds Guide* which provides guidance for the preparation of environmental documents. The guide specifies that traffic noise is significant if 1) the project causes a noise increase of three dB or more near a sensitive receptor and 2) the “future with project” noise level exceeds 65 dB CNEL. Therefore, to be conservative, this screening analysis includes further evaluation of any project-related traffic noise level increase greater than 1.5 dB within residential areas.

Base Plan

Traffic Noise Impacts

The Noise Technical Report is provided as Appendix H of this Final Program EIR and lists the changes in traffic noise for the with and without the project for interim years 2007 and 2025 and for build-out year post-2025 in Table B-2. The future traffic noise level change is represented as ten times the logarithm of the ratio of the future traffic volume to the existing traffic volume. The traffic noise change due solely to the project is the difference between the future change with and without the project. A negative change indicates a decrease in the traffic noise level and a positive change indicates an increase in the traffic noise level.

As shown in Table B-2 on the Noise Technical Report (Appendix H), the increase in the traffic noise levels due solely to the project-generated traffic ranges from -4.6 dB to 9.8 dB in the interim year 2007, -10.0 dB to 13.3 dB in the interim year 2025, and -1.7 dB to 13.1 dB in the build-out year post-2025. Specifically, eight roadway segments are predicted to experience a traffic noise level increase greater than 1.5 dB due to the project in either the

interim years 2007 and 2025 or in the build-out year post-2025. These roadway segments include the following.

Year 2007

- ◆ Trabuco Road from Jeffery Road to Sand Canyon Avenue
- ◆ Marine Way
- ◆ Jeronimo Road from Alton Parkway to Bake Parkway
- ◆ Barranca Parkway from Technology Drive to Alton Parkway
- ◆ Rockfield Boulevard from Bake Parkway to Lake Forest Drive
- ◆ Toledo Way from Alton Parkway to Bake Parkway

Year 2025

- ◆ Marine Way
- ◆ Jeronimo Road from Alton Parkway to Bake Parkway
- ◆ Barranca Parkway from Technology Drive to Alton Parkway
- ◆ Post-2025
- ◆ Irvine Boulevard west of Alton Parkway
- ◆ Toledo Way from Alton Parkway to Bake Parkway
- ◆ Barranca Parkway from Technology Drive to Alton Parkway
- ◆ Rockfield Boulevard from Alton Parkway to Bake Parkway
- ◆ Marine Way

Overlay Plan

The increase in the traffic noise levels due solely to the project-generated traffic ranges from -4.6 dB to 9.0 dB in the interim year 2007, -2.8 dB to 13.6 dB in the interim year 2025, and -1.4 dB to 13.4 dB in the build-out year post-2025. Specifically, eight roadway segments listed in Table B-2 are predicted to experience a traffic noise level increase greater than 1.5 dB due to the project in either 2007, 2025, or post-2025. These roadway segments include the following.

Year 2007

- ◆ Barranca Parkway from Technology Drive to Alton Parkway
- ◆ Jeronimo Road from Alton Parkway to Bake Parkway
- ◆ Marine Way
- ◆ Toledo Way from Alton Parkway to Bake Parkway
- ◆ Rockfield Boulevard from Bake Parkway to Lake Forest Drive
- ◆ Trabuco Road from Jeffery Road to Sand Canyon Avenue

Year 2025

Barranca Parkway from Technology Drive to Alton Parkway

- ◆ Marine Way
- ◆ Jeronimo Road from Alton Parkway to Bake Parkway
- ◆ Irvine Boulevard from Research Drive to Alton Parkway

Post-2025

- ◆ Barranca Parkway from Technology Drive to Alton Parkway
- ◆ Marine Way
- ◆ Toledo Way from Alton Parkway to Bake Parkway
- ◆ Irvine Boulevard from Research Drive to Alton Parkway
- ◆ Jeronimo Road from Alton Parkway to Bake Parkway
- ◆ Rockfield Boulevard from Alton Parkway to Bake Parkway

The land uses along these specific roadway segments are identified and listed in Table B-1 based on available land use and zoning maps. As shown, the land uses along all of these roadway segments consist of agricultural, commercial, or industrial uses. In general, most of the operations in these land uses are conducted indoors, and employees and occupants at these sites would not be exposed to traffic noise levels that could pose a nuisance. Agricultural, commercial, and industrial land uses are typically not considered noise sensitive land uses under the local noise elements.

Project Land Uses

Activities associated with the operation and occupancy of the land uses proposed for the project may emit noise to the existing surrounding land uses. The existing surrounding land uses consist of a mixture of commercial, agricultural, and open space. The nearest residential neighborhoods are located approximately one mile west and southwest of the site and approximately one mile east and southeast of the site.

Commercial Uses

Interim and future commercial land uses are anticipated to include retail stores, business offices, entertainment facilities, hotel/overnight accommodations, and other supporting services. Interim industrial uses are anticipated to include warehousing, materials recovery, light manufacturing facilities such as communication equipment manufacturing, electronics manufacturing, furniture manufacturing, and pharmaceutical manufacturing; motion picture studios; printing and publishing businesses. The primary stationary noise sources associated with these uses will be noise from the specific on-site equipment, loading/unloading operations (delivery and shipment of goods), and the operation of HVAC equipment.

Noise from specific HVAC and other equipment will be highly variable and can only be evaluated as individual projects and land uses are developed. Individual commercial and industrial developments must be designed in accordance with the compatibility guidelines set forth in the City of Irvine Noise Element and the regulations set forth in the City of Irvine Noise Ordinance. Noise associated with the commercial and industrial land uses will be less than significant provided appropriate acoustical design features are incorporated to comply with the local regulations. Acoustical design features may include effective sound insulating construction, perimeter barrier walls, acoustical equipment enclosures, and operational restrictions. Additionally, commercial and industrial land uses within the project must comply with the OSHA and CALOSHA worker noise exposure limits in order to protect all workers from hearing damage. Noise mitigation measures required to ensure compliance with OSHA and CALOSHA must be evaluated on a case-by-case basis as each proposed land-use occupies existing spaces or is developed. In general, mitigation measures may

include equipment enclosures, barrier walls, low-noise equipment, hearing-protection devices, or limited worker access.

Cultural/Institutional/Educational Uses

The cultural, institutional, and educational land uses may emit noise to the surrounding community during their use. The noise associated with these uses will vary depending on the specific use, but are likely to include building equipment noise and activity noise. While the cultural/institutional/educational land use areas have been identified for the project, the specific uses and locations will not be known until the properties are purchased and developed. As such, noise from the cultural/institutional/educational uses must be evaluated as the individual properties are developed. Nonetheless, the individual developments must be designed in accordance with the compatibility guidelines set forth in the City of Irvine Noise Element and the regulations set forth in the City of Irvine Noise Ordinance.

Transportation Facilities

The transportation facilities will be constructed along the existing Southern California Regional Rail Authority (SCRAA) corridor in the southern portion of the site and will be integrated with the existing Irvine Transportation Center. The transportation center will include a maintenance center and will serve as a transit hub for bus, rail, and shuttle transportation. The facility will be located along the existing rail line within a light industrial area or transit-oriented development remote from off-site residences. Noise sources associated with the facility will be similar to those currently experienced at the existing Irvine Transportation Center and will include rail traffic, vehicle traffic, and bus traffic. Other sources may include the noise from any stationary equipment associated with the operation of the facility. The actual sound levels from the various facilities will depend on the specific activities and equipment. As such, noise from the proposed transportation facilities must be evaluated as each specific facility is developed. Nonetheless, the facilities must be designed in accordance with the compatibility guidelines set forth in the Irvine Noise Element and the regulations set forth in the Irvine Noise Ordinance.

Threshold 2: Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Base Plan and Overlay Plan

Short-term construction activities may result in groundborne noise and vibration. Since groundborne noise from construction will be less than airborne noise generated from that same construction, mitigation measures to limit construction noise will work to ensure a less-than-significant impact. Furthermore, groundborne noise from construction will be temporary, will cease with construction, and is not expected to be discernable from airborne noise. The impact related to groundborne noise will be less than significant.

Groundborne vibration from construction may in some cases be noticeable and perhaps even result in damage if structures are located adjacent. However, for damage to occur, the source of the vibration will need to be extremely close and powerful. For example, bulldozers and other heavy earth-moving equipment may result in groundborne-vibration-

induced cosmetic damage (e.g. plaster cracks) to sensitive structures (for example, historic buildings) between 25 feet and 50 feet away. No sensitive structures are located at the former MCAS El Toro (refer to Section 5.11), and heavy construction equipment is not expected to be concentrated for longer periods of time within close proximity to structures.

Extremely close blasting and impact pile driving are the primary sources of damage from groundborne vibration. In this case, such activities may occur during the demolition of runways. These operations will take place far from any habitable structure, and impact will be less than significant. Nuisance vibration from other construction-related groundborne vibration will be temporary, and therefore, less than significant.

Post-construction (long term) groundborne noise and vibration results primarily from trains and vehicular traffic (and in particular, truck traffic) on uneven roads. Annoyance and damage from these sources is very rare, except at extremely close distances. Again, groundborne noise is almost always drowned out by the corresponding airborne noise, and impact will be less than significant. All roads on the project site will be constructed and maintained to acceptable standards such that the impact of groundborne vibration from traffic on adjacent streets will be less than significant.

The proposed project site is located adjacent to the SCRRA railroad tracks. Vibration from trains can result in annoyance at sensitive uses, such as residences, within approximately 50ft to 100ft of the track. Groundborne vibration increases if the tracks are not maintained adequately or there is extensive switching infrastructure imbedded in the track. Structural damage from train-induced groundborne vibration is rare, except at extremely close distances to the track (substantially closer than 25 feet). Groundborne vibration will be limited adjacent to these tracks because they are relatively straight in this stretch and switching equipment is rare. Irvine and the SCRRA require setbacks to its tracks to ensure that, among other things, groundborne vibration-induced damage is limited. The impact will be less than significant.

Threshold 5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Base Plan and Overlay Plan

The proposed project is a non-aviation alternative for the former MCAS El Toro site. Flight activities on the site have ceased. No public airport, public use airport, or airport land use plan is located in the vicinity. No impact will result.

Threshold 6: For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Base Plan and Overlay Plan

The project is not in the vicinity of any private airstrip. No impact will result.

Off-Project Area Noise Impacts

Noise impacts on the proposed project site can be considered either short-term impacts or long-term impacts. Short-term impacts include those noise impacts due to the construction of the project from initial construction to final build-out. Long-term impacts include those noise impacts on the project itself due to the surrounding community and the proposed project land uses.

Construction Project Impacts

Short-term impacts include those noise impacts due to the construction of the project from initial construction to final build-out.

Base Plan and Overlay Plan

Project Construction

The noisiest construction activities will include demolition of the existing runways and construction of the infrastructure. Project site construction will continue throughout the development of the overall project area. The construction activities of the on-going development may cause some short-term noise within the residential areas.

In the Overlay Plan, the residential areas are proposed just south of the intersection of College Road and Irvine Boulevard as well as along the east side of Irvine Boulevard just west of the Habitat Preserve. The specific construction equipment, the level of activity, and the location of the construction activities are not known at this time. However, the cumulative construction sound level was conservatively estimated for the worst possible case where approximately 20 pieces of large mobile equipment, five concrete breakers, and two crusher plants are operating at a distance of approximately 600 feet from the nearest residential area. This represents the demolition of the north end of the runways. Based on these equipment types and quantities, the combined effect of this equipment would result in a sound level of approximately 70 dBA at the nearest on-site residential locations during a typical heavy construction period. As mentioned, this applies to a situation that includes residential occupancy of the project site during heavy construction (i.e., runway demolition). During the general construction periods that are anticipated to follow the initial heavy construction period, the construction sound levels are anticipated to be below this level and of short-term duration.

Construction activities must be conducted in accordance with the Irvine Noise Ordinance. The Irvine Noise Ordinance does not specify a limit on construction noise levels but does specify that construction activities only occur between 7:00 am and 7:00 pm Monday through Friday and between 9:00 am and 6:00 pm on Saturday. No construction activities are permitted outside these hours or on Sundays or federal holidays unless a temporary waiver is requested and granted.

Post-construction Project Impacts

Long-term impacts include those noise impacts due to the operation and occupancy of the various land uses proposed for the project site. Long-term noise sources include vehicle traffic within the project and stationary sources associated with the land uses within and surrounding the project.

Base Plan and Overlay Plan

Traffic Noise

The proposed land uses within the project site will be exposed to noise from project generated traffic and non-project related traffic. As discussed, the Base Plan does not include any noise sensitive receptors, such as residences. Therefore, the traffic noise associated with the Base Plan would not impact any on-site noise sensitive receptors. The Overlay Plan, however, includes limited low-density and medium density residential areas along Irvine Boulevard and College Road. The traffic noise impact on the residences within the project should be evaluated during the detailed design of the residential areas to determine the specific required setback or mitigation necessary to comply with the local limit of CNEL 65 dBA. However, for preliminary purposes, the traffic noise impacts on the residences within the project were evaluated to determine an estimated setback necessary to comply with the local limit. The methodology used to estimate the traffic noise levels is based on the FHWA Highway Traffic Noise Prediction Model. The model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to estimate traffic noise level. The California reference energy mean emission levels were used for each vehicle type as required by CALTRANS. Urban Crossroads, Inc. provided the traffic volumes. The mix and hourly traffic flow distribution were based on those specified by the Orange County Environmental Management Agency. The roadway geometries were based on preliminary roadway information detailed in previous reuse plans due to the lack of roadway information in the current Great Park Plan.

Preliminary estimates indicate that the residences along Irvine Boulevard must include a setback of approximately 1540 feet from the edge of the road right-of-way (ROW) in order to comply with the local compatibility standard of maximum allowable CNEL 65 dBA. This setback is based on an estimated ROW width of 160 feet, a vehicle speed of 65 mph, flat terrain, and no roadside barrier walls. It is anticipated that this setback distance is prohibitive with respect to economical development of the residential areas. Therefore, if residences will be located closer than this distance, measures to reduce traffic noise would need to be implemented, which would occur through compliance with existing City regulations in the City's noise ordinance.

Preliminary estimates also indicate that the residences along College Road must include a setback of approximately 110 feet from the ROW in order to comply with the local compatibility standard of maximum allowable CNEL 65 dBA. This setback based on an estimated ROW width of 120 feet, a vehicle speed of 45 mph, flat terrain, and no roadside barrier walls. If residences will be located closer than this distance, measures to reduce traffic noise would need to be implemented which would occur through compliance with existing City regulations in the City's noise ordinance.

Surrounding Land Uses

Noise from land uses within and surrounding the project site may cause impacts on noise sensitive land uses within the project site. Noise sensitive land uses within the project include low and medium density residences (proposed in the Overlay Plan only). The project site has been arranged such that residential areas within the project are buffered from noise producing areas within the project. In addition, the residential areas within the project are located remotely from the off-site commercial and industrial areas that would be considered incompatible with the residential areas.

All land uses within the project must be designed and developed in accordance with the compatibility guidelines set forth in the Irvine Noise Element and the regulations set forth in the Irvine Noise Ordinance. Additionally, the noise sensitive land uses may be subject to the Noise Insulation Standards in the California Building Standards.

Project Land Uses

Noise from land uses within the project site may cause impacts on noise sensitive land uses within the project site. Noise sensitive land uses within the project include low and medium density residences. The commercial developments within the project may impact noise sensitive land uses within the project site.

Aircraft Noise

The project site is located approximately 7 miles from the John Wayne Airport. The project site is well outside the current and future CNEL 60 dBA contour associated with the aircraft operations at John Wayne Airport. Although distant aircraft operations may, on occasion, be discernible on-site, the noise impact due to aircraft associated with John Wayne Airport will not exceed the local noise compatibility standards for residential land uses and will be less than significant.

The project site is also located approximately seven miles from the MCAS Tustin. There will be no impacts on the project due to the fact that aircraft operations at the former MCAS Tustin ceased with base closure as of July 1999.

5.4.4 Significant Impacts

Base Plan and Overlay Plan

No significant noise impact has been identified.

5.4.5 Mitigation Measures

Base Plan and Overlay Plan

No mitigation measure is proposed, as no significant noise impact has been identified.

5.4.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Not applicable.

Notes and References

1. Alameda Corridor Transportation Authority. *Alameda Corridor Draft Environmental Impact Report*. January 1993.

5.5 Public Health and Safety

5.5.1 Environmental Setting

Hazardous Materials and Wastes

Former MCAS El Toro (PAs 51 and 30)

The operation of facilities located in PA 51 (the former MCAS El Toro) historically included many involving the use, storage, transfer, and disposal of hazardous materials. The following discussion summarizes information from the Base Realignment and Closure Business Plan for MCAS El Toro dated May 2002 and other relevant sources. This information is subject to periodic change as additional information is generated from cleanup programs and activities that are being planned for or are in progress. This information may be found at the MCAS El Toro Information Repository Collection located both at the Heritage Park Regional Library in Irvine, California and at the former MCAS El Toro in the Administrative Record.

The military mission at the MCAS El Toro commenced towards the end of World War II and concluded with the closure of the air station in 1999. During the approximate 55 years of military operation, air station activities, the operation and maintenance of military aircraft and automotive vehicles, required the use of a large variety of hazardous materials. These hazardous materials consisted of petroleum-based products such as aviation and vehicular fuels, engine and lubricating oils, solvents, cleaners, paints, thinners, pesticides and herbicides; chlorinated/halogenated compounds, including trichloroethylene (TCE) and polychlorinated biphenyls (PCB); some radioactive materials; ordnance munitions; and propellants. Use of these materials typically involves the generation of hazardous byproducts and waste. A risk of explosion is associated with some of these materials. Oil-water separators (OWS) were located throughout the former air station at various facility locations. Wastewater from aircraft wash areas and vehicle wash racks passed through OWSs to the sanitary sewer and storm drainage systems. Materials recovered from the OWSs were handled as hazardous wastes. Fuel storage areas also generated hazardous wastes when fuel storage tanks were cleaned and sludge pumped out or when fueling/de-fueling or loading/unloading operations resulted in spills. Storage areas were located throughout the former air station and held hazardous, flammable, and unused chemical material and wastes. Ordnance munitions were used, handled, stored, and disposed of in PA 51. Pesticides and herbicides historically were used at the former air station to control rodents, vectors, and weeds as well as on agricultural parcels leased to farming operations. PCB transformers were in use throughout the former air station.

Many of the existing buildings and facilities may contain hazardous building materials such as asbestos-containing building materials (ACM) and lead-based paint (LBP). Asbestos is associated with respiratory ailments, including cancer, caused by inhaled asbestos fibers and gastro-intestinal disease associated with ingestion. Friable (brittle or readily crumbled) ACM is more readily released into the air than non-friable ACM. These hazardous building materials were in common use prior to 1980 when many of the structures were built on PA

51. Lead is known to have adverse effects on the human body, particularly in children. Exposure is usually through ingestion and inhalation.

Prior to the transfer or sale of any portion of the former MCAS El Toro site containing ACM, the DON must document all available information concerning ACMs, including the following:

- The type, location and condition of ACMs
- The results of any asbestos testing
- Description of asbestos control measures taken, if any
- The costs or time necessary to remove existing ACMs
- The results of any site-specific asbestos inventory updates

Existing source of ACMs are not required to be remediated unless they present an immediate threat to human health or are otherwise not in compliance with applicable regulations at the time of transfer. This is generally limited to friable asbestos in accessible locations. The DON policy is to not remove or otherwise abate asbestos hazards if remediation is otherwise required when all of the following conditions are met:

- The building is scheduled for demolition by the transferee
- The transfer documents specifically prohibit use and occupation of the building prior to demolition
- The transferee has assumed the responsibility to manage the ACMs in accordance with all applicable regulatory requirements

Certain LBP abatement and hazard disclosure requirements must be complied with prior to the transfer of the former MCAS El Toro site from federal responsibility. Housing units constructed prior to 1960 must be abated of LBP and LBP hazards. The presence of LBP and LBP hazards must be disclosed for housing units constructed between 1960 and 1978. Occupation of housing units scheduled for demolition due to the presence of LBP or LBP hazards is prohibited. Post-demolition sampling and response actions for any hazards due to lead in soil shall be conducted, consistent with regulatory requirements, prior to the occupancy of any newly constructed housing units to ensure public health and safety. Remediation of existing sources of LBPs is not required in certain circumstances:

- The building is scheduled for demolition by the transferee and the property transfer document specifically prohibits occupation of the units
- The building is scheduled for non-residential use
- The building is scheduled for residential use and the transferee agrees to comply with all LBP hazard abatement activities in accordance with applicable regulatory requirements

Many of the existing public streets in the project vicinity were probably used by vehicles transporting hazardous materials and wastes to and from PA 51 and the region resulting in the potential for hazardous spills. Rail cars on the railroad tracks may also have transported hazardous materials. Hazardous materials were also transported on-site by pipeline (jet fuel and natural gas). There is an existing fuel pipeline in the railroad right-of-way along the southern boundary of the site. A preliminary investigation into the potential presence of hazardous materials associated with the railroad is being conducted.

Environmental Regulations Affecting MCAS El Toro

In 1975, the DOD initiated a pilot program to investigate past disposal sites at military installations. In 1980, the Installation Restoration Program (IRP) was established to identify and remediate hazardous contamination sites that originated at military installations. IRP sites are sources of environmental contamination that are either within the boundaries of the installation or originated on the installation and subsequently migrated off-site. The IRP has three phases. The first phase was an Initial Assessment Study (IAS) to identify disposal sites and contaminated areas through record searches, on-site surveys, and employee interviews. The second phase consisted of a confirmation study to verify and characterize contamination and rank sites for priority of cleanup. The last phase was the identification, development and implementation of remedial measures to remove the contamination and/or restore the sites to acceptable conditions. The intent of these IRP actions was to protect human health and safety, and the environment. The IRP is an “in-house” program managed by DOD with the participation of state regulatory agencies as appropriate.

As the IRP only addresses contaminated sites that are within federal jurisdiction, it does not include a public review and comment process or independent third party review. At the former MCAS El Toro, the IRP sites are those covered by the Comprehensive Environmental Response, Liability and Cleanup Act (CERCLA). The 1980 “Superfund” legislation and subsequent amendments to CERCLA created a national framework for the identification and cleanup of contaminated sites, provided standards and financial assistance for site cleanups and imposed liability on parties responsible for such contamination.

The Resource Conservation and Recovery Act (RCRA), adopted in 1976, provides the basic framework for federal regulation of hazardous waste. The California Department of Toxic Substances Control (DTSC) is authorized to implement the State hazardous waste program in lieu of federal RCRA regulations. RCRA provides for “cradle-to-grave” regulation of hazardous wastes including generation, treatment, transportation, and disposal. RCRA sites at the project area consist of temporary accumulation areas (TAA) and solid waste management units (SWMU). Sites that are contaminated with petroleum products, which are not federally regulated, are not covered by the IRP or RCRA, but are managed by state agencies.

On the former MCAS El Toro, RCRA addresses existing and former hazardous waste storage and management facilities, while CERCLA addresses the release of hazardous materials and hazardous waste. There are both RCRA and CERCLA sites located on the project area. The DTSC manages implementation of RCRA, while the EPA manages the implementation of CERCLA. Sites are ranked using a Hazard Ranking System (HRS). Under CERCLA the EPA established a National Priorities List (NPL) for the expenditure of cleanup funds for contaminated sites ranked most hazardous by the HRS. The former MCAS El Toro was officially placed on the NPL Federal Section in February 1990.

Site Evaluation and Risk Assessment Methods

The site evaluation and cleanup method(s) selection under CERCLA is generally referred to as the Remedial Investigation and Feasibility Study process (RI/FS). The RI covers site assessment activities under which lead agencies evaluate the nature and extent of site contamination, general site conditions, and begin to identify possible cleanup methods. Considerations for remedial action objectives are provided in 40 Code of Federal

Regulations section 300.430(e)(2)(i), and states that remedial actions selected must attain a degree of cleanup and control further releases which, at a minimum, assures protection of human health and the environment. In the FS process, comprehensive cleanup options are developed and evaluated to select alternatives. Permanent solutions are preferred as opposed to mere containment or re-disposal of contaminated materials. The EPA and individual states approve cleanup plans, including cleanup standards, in a formal document called the Record of Decision (ROD). Final cleanups should reduce contamination to levels that meet Clean Water Act and Safe Drinking Water Act standards as well as potentially more stringent Applicable or Relevant and Appropriate Requirements (ARAR) standards.

All IRP sites on military installations follow the comprehensive, step-by-step CERCLA RI/FS process. Although some sites may require interim remedial actions, permanent cleanup follows the signing of a ROD. For evaluated sites that are determined to not have any contamination or have insignificant levels of contamination, no feasibility study is conducted and the process is completed with a No Further Action ROD. Some sites may require the implementation of interim remedial actions.

As lead agency, the DON is responsible for the establishment of cleanup goals. The DON's approach to the project site has been to evaluate and identify remediation strategies that allow for unrestricted use of as much of the land and resources as possible. The City of Irvine requested and received from the DON its policy regarding potential land-use control strategies that may be employed on specific IRP sites; this policy is outlined in a letter from the DON to the City of Irvine dated November 29, 2000 and is kept on file with the City of Irvine and the DON's Administrative Record. During the initial screening process for potential environmental contamination the DON may make use of the EPA's preliminary remediation goals (PRG) to protect human health. However, PRGs are not always applicable to a particular site and do not address non-human health endpoints such as ecological impacts (e.g., impacts to groundwater resources).

Base Realignment and Closure Cleanup Plan

In March 1993, the former MCAS El Toro was listed for closure by the Base Realignment and Closure Act (BRAC III). DON established a BRAC Cleanup Team (BCT) to manage and coordinate closure activities and to prepare a BRAC Cleanup Plan (BCP) for the former MCAS El Toro. The BCT is also the decision-making body for the level and methodology of remediation. The BCT includes representatives from DON, EPA, DTSC, and the Santa Ana Regional Water Quality Control Board.

The scope of the BCP considers the following regulatory mechanisms:

- BRAC III
- National Environmental Policy Act
- RCRA
- CERCLA, as amended by the Superfund Amendments and Reauthorization Act (SARA), and the Community Environmental Response Facilitation Act (CERFA)
- Other applicable state and local laws

The BCP objectives of the environmental restoration program for MCAS El Toro are as follows:

- Expedite and improve environmental response actions to facilitate the disposal and reuse of the site
- Protect human health and the environment
- Comply with existing federal, state, and local statutes and regulations
- Conduct IRP activities in a manner consistent with Section 120 of CERCLA as amended by SARA
- Meet the provisions of the Federal Facilities Agreement (FFA)
- Continue efforts to identify potentially contaminated areas
- Establish priorities for environmental restoration-related compliance activities so that property disposal and reuse goals can be met
- Design schedules and cost estimate costs for performing remedial activities for IRP sites and compliance program issues
- Identify and map area suitable for transfer by deed/lease and areas unsuitable for transfer by deed

The BCP for the former MCAS El Toro describes the current status of environmental restoration and compliance programs. The first BCP was issued in 1994 and is updated annually with the latest version being released in May 2002. The current BCP outlines 866 locations of concern, including IRP sites, TAAs, SWMUs, underground storage tanks (UST), and aboveground storage tanks (AST), targeted for remediation. The programs outlined in the BCP support the environmental restoration of the site and its disposal and reuse. The BCP describes active remediation sites, the status of other studies and assessments being conducted, and other on-going compliance-related programs. Remediation is on-going and required by the DON even though the military mission at the former MCAS El Toro has been terminated. The BCP emphasizes expedited remedial actions rather than lengthy site characterization studies and prolonged RI/FS activities. Several methods are used to streamline and accelerate cleanup of the former MCAS El Toro. Presumptive remedies use preferred technologies developed for common categories of waste sites to ensure consistency in remedy selection and reduce time and cleanup costs at appropriate sites. Currently accepted presumptive remedies exist for volatile organic compounds (VOC) and municipal and military landfills. Other strategies for streamlining cleanup include overlapping phases and a commitment to partnership amongst the BCT.

Environmental Restoration Programs at MCAS El Toro

An environmental baseline survey (EBS) was conducted in 1995 for the purpose of identifying which properties on the former MCAS El Toro were eligible for transfer or sale as uncontaminated. This study also provided information regarding the general environmental status of other structures, facilities and other properties on the former MCAS El Toro site. In preparation for transfer of available land, the DON has updated its 1995 EBS with an April 2003 Draft Final EBS. The April 2003 Draft Final EBS represents the most relevant evaluation of continuing remediation efforts undertaken by the DON. The updated EBS has identified 76 new potential release locations, all of which require further evaluation for potential releases to the environment and subsequent remediation, if required. The April 2003 Draft Final EBS catalogs the types of sites and distinguishes between those that require no further action, those that require further evaluation, those that require implementation of response actions, and those that require completion of on-going response actions. The DON will not transfer fee title to the property of the former MCAS El Toro until the parcels have been remediated to acceptable exposure levels; property not meeting acceptable exposure levels will not transfer or may be transferred to private control through a lease in furtherance of conveyance until remediation is complete. The April 2003 Draft Final EBS

concludes that of the 3,738-acres of former MCAS El Toro property expected to become available for transfer, approximately 84 percent are environmentally suitable for transfer of fee title at the present time. The DON evaluated potential soil contamination adjacent to and underneath certain runway extensions; no evidence of significant levels of contamination exists in these areas. The updated EBS also concludes that widespread unidentified contamination is not likely to exist at the former MCAS El Toro.

The DON is required to complete all necessary remedial actions before the fee title to the former MCAS El Toro is transferred from federal ownership. However, even after the title is transferred the federal government is required to conduct further remediation if additional contamination caused by DON actions is discovered or of a remedy fails to perform adequately. Federal law also provides that the DON may be required to indemnify the new owners or certain other parties for liabilities arising from claims of personal injury or property damage resulting from the release or threatened release of any hazardous substances, pollutants or contaminants, or petroleum or petroleum derivatives attributable to DON actions on military installations.

Installation Restoration Program

The IRP was authorized in 1984 for the former MCAS El Toro and the Initial Report was completed in 1986 outlining hazardous remediation needs. The IRP identified 24 sites (Sites 1-22, 24, and 25) for investigation at the former MCAS El Toro. The IRP sites are now divided into two categories: No Further Action sites and Action Required sites. As of September 1997, ten No Further Action sites were identified, following EPA guidance. These sites are 4, 6, 7, 9, 10, 13, 14, 15, 19, 20, 21, 22 and 25. The Action Required sites are shown on Figure 5.5-1, Installation Restoration Program Sites.

A number of IRP sites are under various stages of remedial investigation and/or cleanup. The six IRP sites that have the highest priority are Sites 18 and 24 (VOC groundwater and soil contamination) and landfill Sites 2, 3, 5, and 17. A presumptive remedy is being used for the vadose zone of the VOC source area (Site 24). Presumptive remedies are being considered for the landfill sites (Sites 2, 3, 5, and 17).

VOC Sites 24 (Soil-Source) and 18 (Groundwater-Regional). The two most wide spread contamination problems are Sites 18 and 24. Aircraft and support vehicle maintenance utilizing industrial solvents was conducted at Site 24 (potential VOC source area) from the mid-1940s to the mid-1970s. Solvents, including trichloroethylene, (TCE) and other VOCs were used for degreasing parts, painting, stripping, and aircraft and vehicular washing. Site 18 is a VOC plume caused by VOC contaminants leaching from Site 24 through the subsurface soils (vadose zone) into the shallow aquifer and then to the deeper aquifer, which flows generally to the northwest. Site 18 currently extends roughly from Site 24 down-gradient approximately three miles (west and northwest) into the City of Irvine.

Remediation for the sites is a two-step process. Soil remediation of Site 24 by soil vapor extraction (SVE) was planned to prevent or significantly minimize further impact to the

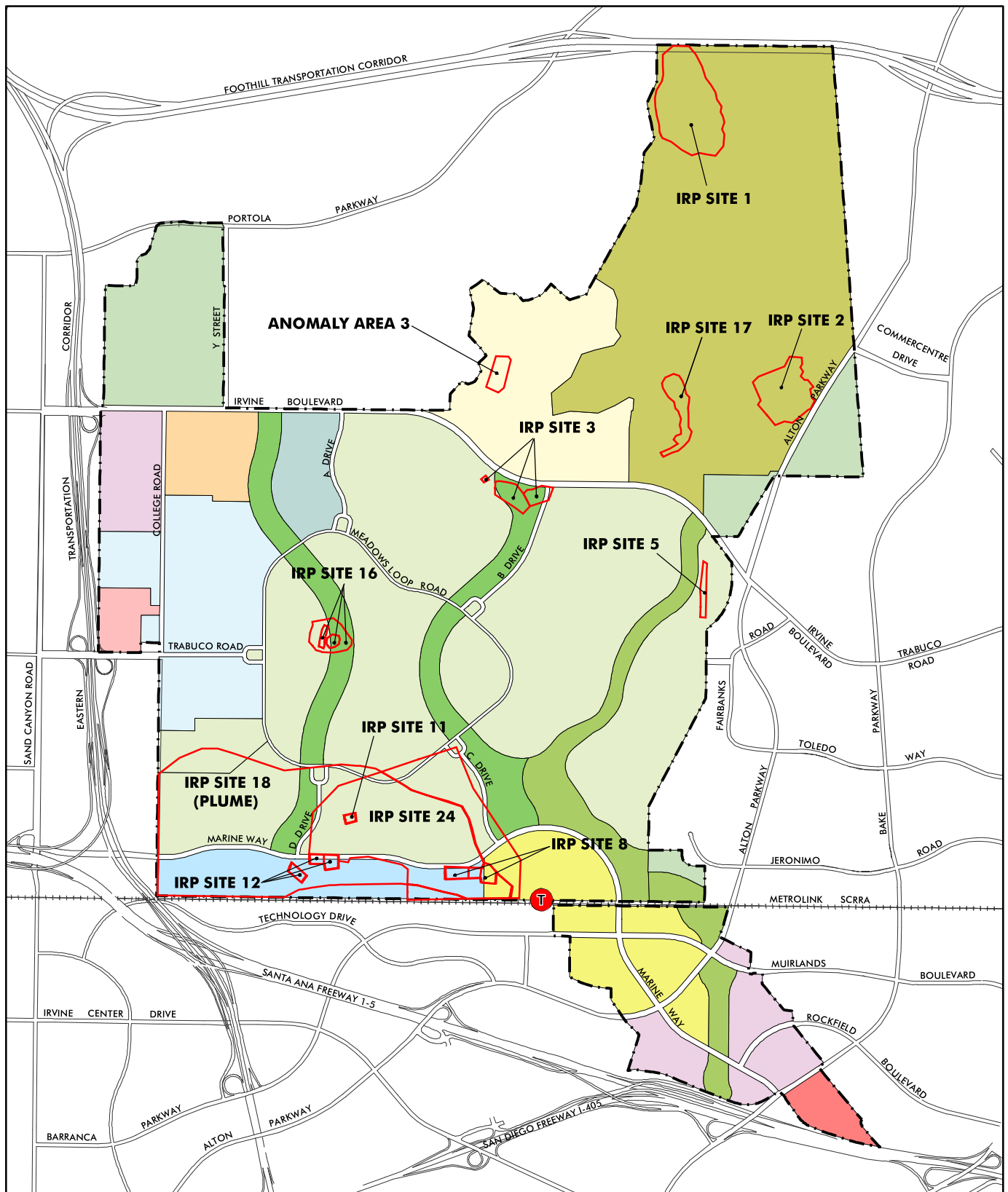


Figure 5.5-1
Installation Restoration
Program Sites

groundwater. Following the signing of the interim ROD for Site 24 in 1997, SVE treatment commenced in 1999. Testing of the vadose zone was completed in 2000 and a draft closure report was issued in 2001. For Site 18, the DON, the Orange County Water District (OCWD), and the Irvine Ranch Water District (IRWD) negotiated an agreement to construct and operate a joint water supply treatment project to remove contaminants from the groundwater to levels acceptable to the regulatory agencies (the Irvine Desalter Project).

In addition to the interim ROD for the contaminated soil of Site 24, a final ROD for groundwater contamination at Sites 18 and 24 was signed in June 2002. Please refer to the *Final Record of Decision, Operable Unit 1, Site 18 – Regional Volatile Organic Compound Groundwater Plume, Operable Unit 2A, Site 24 – VOC Source Area, Former MCAS El Toro, California* (Bechtel National, Inc. 2002a) for additional information. The draft ROD for Sites 3 and 5 was issued in March 1999. The draft final ROD will be issued following evaluation of the results from radiological survey/sampling. Please refer to the *Draft ROD, Operable Unit 2C, Landfill Sites 3 and 5, MCAS El Toro, California* (Bechtel National, Inc. 1999) for additional information.

Landfill Sites 2, 3, 5, and 17. IRP Site 2 (Magazine Road Landfill) operated between 1950 and 1980. It is believed to contain inert solid waste, municipal solid waste, unspecified industrial wastes, lead batteries, transformers, household refuse, hydraulic fluid, unspecified waste fuels, crankcase oil, lead-based paint residues, and scrap metal. IRP Site 3 (Original Landfill) covers approximately 20 acres and operated between 1943 and 1955. It is believed to contain municipal solid waste, scrap metal, incinerator ash, construction debris, paint residues, unspecified oily wastes, industrial solvents, hydraulic fluid and engine coolants. IRP Site 5 (Perimeter Landfill) operated between 1955 and the late-1960s, covers approximately 1.5 acres, and contains municipal solid waste, solvents and cleaning fluids, scrap metals, paint residues, and unspecified oil and fuel wastes. The draft version of the ROD for Sites 3 and 5 was issued in March 1999. The draft final ROD will be issued following evaluation of the results from radiological survey/sampling. Please refer to the *Draft ROD, Operable Unit 2C, Landfill Sites 3 and 5, MCAS El Toro, California* (Bechtel National, Inc. 1999) for additional information.

Site 17 (Communication Station Landfill) operated between 1981 and 1993. It contains cooking grease, oils, fuels, and municipal debris. Initially, the presumptive remedy for these landfill sites of capping with a soil cover (and a flexible membrane for several of the landfills) plus institutional controls and long-term groundwater monitoring was proposed by the DON and taken into consideration by CALEPA and EPA. Recently, the issue of potential presence of radioactive materials in the landfills resulting from the disposal of radium paint residues was identified in the Historical Radiological Assessment (HRA) report. As a result, the DON conducted site specific radiological investigations for the presence of radioactive materials. A final report is expected in 2003. Until this issue is appropriately resolved, the proposed remedy and the associated ROD are held in abeyance until the presence or non-presence of these materials can be confirmed. An interim ROD was signed in July 2000 for Sites 2 and 17 to allow for the design of the landfill caps to proceed. However, construction of the landfill caps will not proceed until radiological survey/sampling is complete and the data have been evaluated to determine potential impact on the remedial design. Please refer to the *Final Interim ROD, Operable Unit 2B, Landfill Sites 2 and 17, MCAS El Toro, California* (Bechtel National, Inc. 2000) for additional information.

Sites 8, 11, and 12. IRP Site 8 is the Defense Reutilization and Marketing Office (DRMO) Storage Yard where PCB-containing transformer fluids were released. It operated from the

mid-1970s to early 1999. PCB-containing transformers were stored at IRP Site 11 (the Transformer Storage Area) between 1968 and 1983. Wastewater sludge was spread on land at two locations adjacent to IRP Site 12 (Sludge Drying Beds) from 1943 to 1972. Site 12 also includes former sewage and industrial wastewater treatment plant sites. The HRA Report also identified IRP Sites 8 and 12 as potentially associated with the storage or disposal of radium paint residues. According to information in the HRA Report, IRP Site 8 may have received empty radium paint containers and debris from the demolition of the Radium Paint Shop at Building 296 for temporary storage waiting for disposal. IRP Site 12 may have received sludge contaminated with Radium 226 from the sanitary sewage treatment plant as resulting from the disposal of radium paint to the sanitary sewer system. Originally, the draft proposed plan for remediation of these sites recommended remedial actions for excavation of shallow soil contamination. This plan is now in abeyance until the issue is resolved by a radiological investigation to be conducted by DON.

Sites 7, 14, and 16. Kerosene-based jet fuel (JP-5) and lubrication oils were rinsed from aircraft drop tanks at IRP Site 7 (Drop tank Drainage Area No. 2) from 1969 to 1983. IRP Site 14 (Battery Acid Disposal Area) was used for disposal of vehicle battery acid, lubrication oils and paint residue between 1977 and 1983. Aviation fuels (JP-5, AVGAS), chlorinated solvents, hydraulic fluid, crankcase oil, white phosphorus, magnesium phosphate, and napalm were burned in unlined pits for fire training at IRP Site 16 (Crash Crew Pit No. 2) from 1972 to 1985. A Phase I Remedial Investigation was conducted for these three sites. A No Action ROD was signed for Sites 7 and 14 in 2001. Due to TCE contamination in groundwater at Site 16, the DON is completing a RI/FS to determine the appropriate remedial action that will likely include multi-phase extraction to remove contaminants from soil and groundwater simultaneously.

Site 7, Drop Tank Drainage Area No.2, and Site 14, Battery Acid Disposal Area, received concurrence for no further action in the final ROD signed in June 2001. Please refer to the *Final ROD, Operable Unit 3B, No Action Sites 7 and 14, MCAS El Toro, California* (Bechtel National, Inc. 2001) for additional information. Monitored natural attenuation is the selected remediation procedure for Site 16. A ROD is being prepared to document the selected remediation process. Please refer to the *Proposed Plan for Site 16, Crash Crew Training Pit No.2 at MCAS El Toro* (Bechtel National, Inc 2002b) for additional information.

Site 1 – Explosive Ordnance Disposal Range. The Explosive Ordnance Disposal (EOD) Range, located in the habitat preserve area, is currently inactive. The site was used for the disposal of excess and/or defective ordnance. Hazardous materials including sulfur trioxide, chlorosulfonic acid, and perchlorate, have been associated with the site. Post closure status of the range has not yet been determined. It may be closed by the DON under CERCLA, transferred to another federal, state, or local agency, or continue to be used as an EOD facility by law enforcement agency(s). The DON operations at the site were terminated by the DTSC in mid-1999 for operating a non-permitted disposal facility. As such, formal closures activities conducted by the DON are anticipated to begin in the near future. Currently, if a public agency desires to re-open the site as an EOD facility, then that agency will be required to prepare an application for and receive a Part B Permit from the DTSC to operate it as a treatment, storage and disposal facility. The Department of Justice is considering retaining this site as an EOD range. The DON is in the process of completing a remedial investigation to determine the nature and extent of contamination at Site 1. Please refer to the *Final Work Plan, Phase II Remedial Investigation, IRP Site 1, Explosive Ordnance Disposal Range, MCAS El Toro, California* (Earth Tech, Inc. 2001) for additional information.

Resource Conservation and Recovery Act Facility Assessment

A RCRA Facility Assessment (RFA) was conducted for the former MCAS El Toro between 1990 and 1993. The purpose of the RFA was to identify SWMUs and TAAs where there was an actual, or potential for, release of hazardous waste into the environment, and whether further actions might be required. The RFA was finalized on May 31, 1996. It presents results, recommendations and closure strategies for SWMUs and TAAs. Some of these sites are incorporated in the IRP; others are handled under alternative regulatory procedures. The RCRA sites must meet current environmental compliance requirements. The State of California considers any site from which hazardous constituents may migrate to be a SWMU, but corrective action can be addressed through the Federal Facilities Agreement for the former MCAS El Toro or responses to petroleum releases with oversight provided by the Regional Water Quality Control Board.

Compliance Program Sites and Other Locations of Concern

A number of compliance programs are in effect at the former MCAS El Toro that involve different types of locations of concern including USTs, less-than 90-day accumulation areas, PCB transformers, and OWSs. Many of these facilities were used to support current operations on the former air station.

A storage tank assessment was conducted at former MCAS El Toro to address compliance and closure issues related to UST/AST. The April 2003 Draft Final EBS provides the most recent and comprehensive assessment of the status of storage tanks at the former MCAS El Toro. The Orange County Health Care Agency (OCHCA) oversees tank closure and ensures that the proper locations are sampled when tanks are removed. The Santa Ana Regional Water Quality Control Board (SARWQCB) oversees site assessments, site remediation, and groundwater remediation associated with releases of hazardous substances from USTs. Based on the April 2003 Draft Final EBS, a total of 404 USTs were in use at the former air station. Of these USTs, 357 have been remediated and have received findings of “no further action” from the appropriate regulatory authority. Of a total of 39 ASTs used in support of the military mission at the former MCAS El Toro, 36 have been remediated and received “findings of no further action.”

The DTSC states that the former MCAS El Toro contains two hazardous waste management units (HWMU). The HWMUs include a hazardous waste container storage area and open burn/open detonation (OB/OD) hazardous waste treatment unit. A hazardous waste facility permit (a RCRA-equivalent permit) to operate the hazardous waste container storage area designated as Building 673-T3 was issued in August 1993 by the DTSC. The permit allowed the storage of hazardous wastes for longer than 90-days in Building 673-T3. In March 1996, the closure certification report was accepted by the DTSC and the container storage area was considered closed.

James A. Musick Jail Facility (Portion of PA 35)

Existing environmental issues consist of transformers installed prior to 1978 which may contain PCBs, soils containing agricultural pesticides, buildings containing ACMs, an underground storage tank, six 55-gallon drums, a small oil pump, and the storage and use of solvents on-site. EIR 654 concludes that there are no hazardous materials issues on-site.

IRWD Parcel (Portion of PA 35)

No significant hazardous material has been identified on this parcel.

Emergency Plans

The former MCAS El Toro (PA 51 and 30) is a potential emergency response staging area in the event of a large regional catastrophe such as a severe earthquake because of its capacity for processing and storing large quantities of cargo. The County of Orange, in coordination with all other local jurisdictions and emergency service providers in the County, is responsible for the preparation, maintenance, and implementation of emergency response plans and emergency evacuation plans for the County. The “Orange County Emergency Plan” is the official emergency plan for the County. The Plan is a basic reference and training document for emergency preparedness, response, recovery, mitigation, and provides the authority and basis for the development of more detailed departmental and functional standard operating procedures. This plan was recently revised to incorporate the standardized emergency management system (SEMS) established by the Governor’s Office of Emergency Services (OES). The SEMS standardizes the response to emergencies involving multiple jurisdictions or agencies.

Wildland Fires

Former MCAS El Toro (PAs 51 and 30)

The former MCAS El Toro is not identified as a high or very high fire hazard zone in the Safety Element of the Orange County General Plan. However, the area northeast of the project area is identified as a high fire hazard area in the Orange County’s Safety Element. This area is adjacent to the proposed habitat preserve and has the same coastal sage scrub plant community and topography as the habitat preserve. The habitat preserve has the same high fire hazard level. The existing housing in the northeastern part of PA 51 has a higher fire hazard risk than other portions of the former air station because of the numerous eucalyptus trees which increase the fire hazard and the potential for wildland fires associated with the adjacent coastal sage scrub plant community adjacent to the housing area.

James A. Musick Jail Facility (Portion of PA 35)

The jail facility is not identified as a high fire severity zone in the Safety Element of the City of Irvine General Plan.

IRWD Parcel (Portion of PA 35)

The IRWD parcel is not identified as a high fire severity zone in the Safety Element of the City of Irvine General Plan.

5.5.2 Threshold For Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for public health and safety.

Would the project:

1. *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*
2. *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*
3. *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*
4. *Be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?*
5. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area?*
6. *For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area?*
7. *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*
8. *Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

5.5.3 Environmental Impact

The following analysis focuses on the potential public health and safety impacts associated with implementation of the Base Plan and the Overlay Plan for the former MCAS El Toro (PAS 51 and 30). The Musick Branch Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. As a result, implementation of the proposed project will not result in a significant public health and safety impact associated with the annexation of the James A. Musick Jail Facility and the IRWD Parcel.

The potential for adverse impacts in the form of human exposure to unsafe levels of hazardous contaminants may occur if cleanup standards applied to site remediation activities are not appropriate for the proposed land uses. These impacts are most likely to occur in areas where recreational, or mixed land uses are proposed. Under CERCLA, contaminated federal property cannot be transferred until all necessary remedial actions have been taken or a remediation system is operating properly and successfully. Cleanup responsibility remains with the DOD until the property is fully remediated. Therefore, some of the former air station property cannot be transferred immediately.

There are 9 recommended federal conveyances for the former air station property at this time. The proposed project accommodates the transfer of the 995-acre Habitat Preserve to the Federal Aviation Administration (FAA). Other conveyances, such as property transfers for transitional housing or warehouse facilities, may not be implemented until appropriate remediation has been completed. The construction and operation of the proposed project could result in an impact related to public health and safety as described below. Any reuse of the former MCAS El Toro may involve the use, storage, handling and/or disposal of hazardous materials or waste, all of which will be subject to all applicable federal, state, and local environmental regulations.

Threshold 1. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Base Plan and Overlay Plan

There is a potential project impact resulting from the routine transport of hazardous materials on the proposed streets in the project area. This same potential impact exists for all freeways, local streets, and railroad tracks in the project vicinity, surrounding areas, and the region. However, federal and state regulations strictly control the design and size of transport vehicles, the training of vehicle operators, the types and quantities of materials that can be transported, the documentation of the material from its source to its destination, and procedures in the event of an accidental spill. In addition, California Department of Transportation, the California Highway Patrol, and local law enforcement and fire authorities are trained in emergency response procedures for safely responding to accidental spills of hazardous and toxic substances.

Many of the proposed land uses such as the recreational/cultural/open spaces, and sports park are not likely to use and store substantial quantities of hazardous materials other than typical materials such as cleaners and relatively small amounts of paints and thinners, fuels and oil, pesticide and other chemicals used for building and/or grounds maintenance. Other proposed uses such as golf courses, agriculture, auto center parking, educational, and research and development may store, handle and use hazardous materials and generate hazardous waste. However, business activities or facilities will be required to comply with all regulatory requirements and permit conditions administered by applicable federal, state and local regulatory agencies with jurisdiction over hazardous material storage and use and hazardous waste management.

The proposed project is not expected to result in a significant adverse impact related to the transport, use, or disposal of hazardous materials on or through the project area. Therefore, no mitigation is required.

Threshold 2. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Base Plan and Overlay Plan

Asbestos-Containing Building Materials and Lead-Based Paint

Prior to the transfer or sale of any portion of the former MCAS El Toro site containing ACMs, the DON must document all available information concerning ACMs, including the following:

- The type, location and condition of ACMs
- The results of any asbestos testing
- Description of asbestos control measures taken, if any
- The costs or time necessary to remove existing ACMs
- The results of any site-specific asbestos inventory updates

Existing source of ACMs are not required to be remediated unless they present an immediate threat to human health or are otherwise not in compliance with applicable regulations at the time of transfer. Where remediation may otherwise be required, it is the DON policy to not remediate asbestos if all of the following conditions are met:

- The building is scheduled for demolition by the transferee
- The transfer documents specifically prohibit use and occupation of the building prior to demolition
- The transferee has assumed the responsibility to manage the ACMs in accordance with all applicable regulatory requirements

Certain LBP abatement and hazard disclosure requirements must be complied with prior to the transfer of the former MCAS El Toro site from federal responsibility. Housing units constructed prior to 1960 must be abated of LBP and LBP hazards. The presence of LBP and LBP hazards must be disclosed for housing units constructed between 1960 and 1978. Occupation of housing units scheduled for demolition due to the presence of LBP or LBP hazards is prohibited. Post-demolition sampling and response actions for any hazards due to lead in soil shall be conducted, consistent with regulatory requirements, prior to the occupancy of any newly constructed housing units to ensure public health and safety. Remediation of existing sources of LBPs is not required if the following conditions are met:

- The building is scheduled for demolition by the transferee and the property transfer document specifically prohibits occupation of the units
- The building is scheduled for non-residential use
- The building is scheduled for residential use and the transferee agrees to comply with all LBP hazard abatement activities in accordance with applicable regulatory requirements

Construction activities involving demolition and possible substantial remodeling of existing structures in the project area as the project area develops could result in the disturbance of structures and/or soils containing ACMs or LBPs. This is considered a significant impact. A total of 161 non-residential buildings on the site are known to contain ACMs, 52 of which have friable ACMs. There are 233 non-residential buildings that have not been surveyed for the presence of ACMs. Some residential units were also found to contain ACMs.

The DON policy states that any facility on the former MCAS El Toro site constructed, repaired or maintained prior to 1980 is assumed to contain LBP. Approximately 670 units on the former air station in three residential communities have “high” LBP levels according to hazardous risk assessment criteria. They are the Moffet Meadows/Saddleback Terrace housing built in 1964, the Wherry Housing built in 1954, and the Saddleback Terrace/Vista Terrace housing built in 1947. In addition, there are 450 non-residential structures constructed prior to 1980 that are assumed to have LBP.

All non-residential construction projects of five or more acres require the project proponent to seek coverage under the National Pollutant Discharge Elimination System (NPDES) General Construction Storm Water Discharge Permit. This coverage requires a Storm Water Pollution Prevention Plan (SWPPP), which identifies all materials storage areas and construction vehicle/equipment staging areas and any other areas where hazardous materials are used and stored. The SWPPP must include Best Management Practices (BMP) to ensure that unauthorized discharges of hazardous materials do not drain into stormdrains or natural drainages during construction.

Major grading and/or land altering actions may result in the disturbance of previously unidentified contaminated soils that could expose construction workers to contamination. Proper management actions and regulatory compliance, including implementing a hazardous materials management plan for construction activities, testing if soils are suspected of containing contaminants, and reporting findings to regulatory agencies, will minimize potential impact from such occurrences.

There is also a potential impact associated with accidental releases of stored hazardous materials such as fuels and paint and potential leakage associated with construction equipment parking and staging areas. However, construction activities are also required to comply with all regulatory requirements and permit conditions administered by appropriate federal, state, and local regulatory agencies.

Remediation efforts at IRP Sites 18 and 24 could result in some releases of VOCs into the environment. According to the South Coast Air Quality Management District (SCAQMD), air emissions from vapor extraction activities typically generate one to two percent (by weight) of the volatile constituent after controls such as oxidation and carbon adsorption. The individual VOC emissions from the site remediation activities do not pose a significant impact on the air quality of the region. Implementation of mitigation measures such as site watering to control fugitive dust emissions during construction as described in Section 5.3 of this Final Program EIR will reduce the potential impacts of construction-related releases to below a level of significance. No significant long-term impacts associated with the release of hazardous materials into the environment are anticipated as a result of the proposed project.

Threshold 3. *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

Base Plan and Overlay Plan

A regional educational campus is planned on the west side of the former MCAS El Toro site. The campus could support both corporate and public educational and training facilities (research and development) with ancillary retail, lodging and housing uses. These facilities will likely store, use and transport some hazardous materials as well as generate some hazardous waste. Typical hazardous materials/waste will likely consist of, but not be limited: oils and petroleum products, paints, solvents, pesticides and herbicides, and VOC air emissions. These substances are regulated and controlled through federal, state and local regulations governing the storage, handling, transportation and manifesting of hazardous materials and wastes. None of these hazardous materials are considered atypical for research and development purposes, and should not represent a significant risk to people residing and working within one-quarter mile of the proposed project area. Therefore, the proposed project is not anticipated to result in a significant impact related to hazardous emissions or materials within one-quarter mile of a proposed school. This issue is not considered a significant impact.

Threshold 4. *Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?*

Base Plan

The proposed project will result in substantial changes to the existing land uses on the project area. While much of the air station contamination was evaluated and assessed prior to the advent of the current proposed project, adopted cleanup standards contemplated a wide variety of uses for IRP sites. Some contaminated sites are located in areas proposed for land uses including recreational, research and development, transportation, and open space/park.

Under CERCLA, contaminated federal property cannot be transferred until all necessary remedial actions have been initiated or a remediation system is operating properly and successfully. Remediation efforts have been ongoing since 1985. As established by BRAC III, the DON will continue its environmental restoration activities after installation disposal. Sites that require continuing monitoring and remediation will receive continuing investigation/remediation beyond installation closure, which occurred in July 1999.

The DON considered the “No Further Action” IRP Sites 4, 6, 9, 10, 13, 19, and 22 to be available for unrestricted uses, which would include the proposed recreational and multi-use activities. No significant impacts are associated with these sites.

The “Action Required” IRP sites are superimposed on Figure 5.5-1. Zoning districts of the Base Plan in relation to “Action Required” IRP sites are shown in Table 5.5-2. The environmental impacts of these sites are analyzed in the following sections.

Sites 18 and 24 (VOC Contamination)

Remediation of contaminated soils at IRP Site 24, the VOC Source Area, began in spring 1999 and was completed in 2001. IRP Site 24 is located in zoning districts categorized as 6.1 Institutional and 1.5 Recreation. The DON's human health risk assessment for Site 24 indicates that neither a recreational or institutional land use of the proposed site would result in a higher than acceptable risk. The DON, however, intends to remediate the existing contamination of the shallow groundwater at Site 24 to an unrestricted standard. This remediation process will likely take multiple years to complete and during this time the DON is likely to implement various institutional controls that will limit access to groundwater and related activities to portions of Site 24. Consequently, the temporary restricted use/access of Site 24 due to institutional controls (not contamination) is considered a significant impact.

IRP Site 18, VOC Groundwater Contamination Plume, is a plume of TCE extending below the ground surface into the aquifer system off-site of the former air station. This contamination does not impact the existing and proposed land uses on the project area.

Sites 2, 3, 5, and 17 (Landfills)

All of the landfill sites will be managed with institutional controls that prevent unauthorized access, degradation, access to groundwater, and irrigation of the site. The controls may also limit use and access by providing a buffer zone around the landfills. Issues relating specifically to IRP Sites 2, 3, 5, and 17 (landfills), including settling, are not expected to constrain proposed land uses within the project area. Possible exposure issues in regard to the potential presence of radioactive materials in the landfills resulting from the disposal of radium paint residues were identified in the HRA report. As a result, the DON is conducting site specific radiological investigations for the presence of radioactive materials. Until this issue is appropriately resolved, the proposed remedy and the associated RODs are held in abeyance by the regulatory agencies until the presence or non-presence of these materials can be confirmed.

IRP Sites 2 (Magazine Road Landfill) and 17 (Communications Station Landfills) are located in the proposed zoning district designated as 1.4 Preservation. Notwithstanding any potential changes resulting from the above mentioned radiological investigation, the proposed presumptive remedy for landfills at the former MCAS El Toro is the installation of an impermeable layer with a soil cap. This remedy will not result in any impact to the habitat preserve and is not considered a significant impact.

Table 5.5-1
Zoning Districts of No Further Action IRP Sites – Base Plan

IRP Site	IRP Site Description	Zoning District
4	Ferrocene Spill Area	1.5 Recreation
6	Drop Tank Drainage Area No. 1	1.5 Recreation
9	Crash Crew Pit No. 1	1.5 Recreation
10	Petroleum Disposal Area	1.5 Recreation
13	Oil Change Area	1.5 Recreation
15	Suspended Fuel Tanks	1.5 Recreation
19	Aircraft Expeditionary Refueling	1.5 Recreation
20	Hobby Shop	1.5 Recreation
21	Materials Management Group	6.1 Institutional
22	Tactical Air Fuel Dispensing System	1.5 Recreational

Sources: Cotton/Bridges/Associates 2002.

Table 5.5-2
Zoning Districts of Action Required IRP Sites – Base Plan

IRP Site	IRP Site Description	Zoning District
1	EOD Range	1.4 Preservation
2	Magazine Road landfill	1.4 Preservation
3	Original Landfill	1.5 Recreation
5	Perimeter Road Landfill	1.5 Recreation
7	Drop Tank Drainage Area No. 2	1.5 Recreation
8	DRMO Storage Yard	6.1 Institutional
11	Transformer Storage Area	1.5 Recreation
12	Sludge Drying Beds	6.1 Institutional
14	Battery Acid Disposal Area	1.5 Recreation
16	Crash Crew Pit No. 2	1.5 Recreation
17	Communications Station Landfill	1.4 Preservation
24	VOC Source Area	6.1 Institutional/ 1.5 Recreation

Source: Cotton/Bridges/Associates 2002.

IRP Site 3 (Original Landfill) is located in the proposed zoning district designated as 1.5 Recreation. As stated above, notwithstanding any potential changes resulting from the above radiological investigation, the proposed presumptive remedy for landfills at former MCAS El Toro is the installation of an impermeable flexible membrane with a soil cap. Due to the use of institutional controls, Site 3 and a possible buffer site surrounding it will not be available for immediate reuse activity. Apart from restricted access to the site by unauthorized parties, no impacts from contamination following implementation of the proposed remediation are likely to occur. The restricted use of Site 3 due to institutional controls (not contamination) is considered a significant impact.

IRP Site 5 (Perimeter Road Landfill) is located in the proposed zoning district designated as 1.5 Recreation. Notwithstanding any potential changes resulting from the radiological investigation, the proposed presumptive remedy for landfills at former MCAS El Toro is the installation of an impermeable flexible membrane with a soil cap. It is likely that this issue will not result in a significant impact to the habitat preserve/wildlife corridor.

Site 8

IRP Site 8 is located in zoning district designations 6.1 Institutional. As mentioned previously, information in the HRA Report indicates that IRP Site 8 may have received empty radium paint containers and debris from the demolition of the Radium Paint Shop at Building 296 for temporary storage awaiting disposal. The draft proposed plan for remediation of this site recommended excavation and proper disposal of shallow soil contamination. This plan is now in abeyance until the radiological issue is successfully resolved following completion of the radiological investigation that will be conducted by the DON. The DON intends to convey the site as suitable for unrestricted use. Therefore, no significant impacts are associated with this site.

Sites 11 and 12

IRP Site 11 (Transformer Storage Area) is located in a zoning district designation 1.5 Recreation and Site 12 (Sludge Drying beds) is located in a zoning district designation 6.1 Institutional. Site 12 may have received sludge contaminated with Radium 226 from the sanitary sewage treatment plant resulting from the disposal of radium paint to the sanitary sewer system. The draft proposed plan for remediation of these sites recommended excavation and proper disposal of shallow soil contamination. This plan is also in abeyance until the radiological issue is successfully resolved following completion of the radiological investigation that will be conducted by the DON. No significant impact is expected to result from remediation activities on Site 12, withstanding any potential changes that may result from the radiological investigation. Site 11 is located in 1.5 Recreation. The DON intends to convey the site as suitable for unrestricted use. Therefore, no significant impacts are associated with this site.

Sites 7, 14, and 16

IRP Site 7 (Drop Tank Drainage) is located in zoning district designations 1.5 Recreation. The DON intends to convey the site as suitable for unrestricted use. Therefore, no significant impacts are associated with this site.

IRP Site 14 (Battery Acid Disposal Area) is located in zoning district designation 1.5 Recreation. The DON intends to convey the site as suitable for unrestricted use. Therefore, no significant impacts are associated with this site.

IRP Site 16 (Crash Crew Pit No. 2) is located in zoning district designation 1.5 Recreation. Because of the potential risks associated with the existing groundwater contamination, the DON may restrict use of the site until the groundwater is remediated to an appropriate risk level, at which time the site would be released for unrestricted use. This remediation process will likely take multiple years to complete, and during this time various institutional controls will be implemented to limit certain activities and unauthorized access to the site.

Consequently, the temporary restricted use/access of Site 16 due to institutional controls (not contamination) is considered a significant impact.

Site 1

IRP Site 1 (EOD Range) is located in zoning district designation 1.4 Preservation. Post closure status of the EOD Range has not been determined. It could be closed by the DON under CERCLA, transferred to another federal, state or local agency, or continue to be used as an EOD facility. If a government agency desires to use the site as an EOD facility, then a RCRA Part B Permit would be required from CALEPA and the DTSC. In this circumstance, an independent remedial investigation outside of the current CERCLA program would be required as well as an independent cleanup, as appropriate. If this circumstance does not materialize, then remediation of the site will remain within current CERCLA program requirements. No significant impact is expected from the remediation of Site 1.

Anomaly Area 3

Anomaly Area 3 is an approximately 9-acre site located in the northwest section of the project area near Pusan Way and adjacent to Agua Chinon wash in zoning district designation 1.5 Recreation. This site is considered a former refuse disposal area for construction debris. To date, the DON has conducted a geophysical investigation, exploratory trenching, radiological screening, and installed monitoring wells and vadose zone wells. Preliminary results indicate buried metallic and construction debris, along with plastics, asbestos, pipes, wood and concrete. Radiological readings in the soil were at or below background levels. Some groundwater samples exceeded the maximum contaminant levels and are subject to further investigation. Soil levels for arsenic, total petroleum hydrocarbons, lead, and benzopyrene exceed industrial and residential PRGs. Investigation of the site is ongoing and no decisions about remediation have been made to date. If the DON remediates consistent with unrestricted use there will be no significant impacts. Otherwise, if the DON adopts a remediation strategy that includes institution controls, there would be a significant impact.

Due to the use of institutional controls, Anomaly Area 3 and a possible buffer site surrounding it will not be available for immediate reuse activity. Apart from restricted access to the site by unauthorized parties, no impacts from contamination following implementation of the proposed remediation are likely to occur. The restricted use of Anomaly Area 3 due to institutional controls (not contamination) is considered a significant impact.

Jet Fuel Distribution System

The Norwalk Pipeline was used as a jet fuel distribution system in support of the military mission at the former MCAS El Toro. The pipeline originates in Norwalk, California, enters the project area near the existing commissary located adjacent to Irvine Boulevard, and runs through the former air station housing to the former storage tank facilities. In May 1999, all the jet fuel was purged from the pipeline from Norwalk to the installation using a pigging process and replaced with an inert gas (nitrogen). The Defense Energy Support Center (DESC) currently maintains the pipeline. The presence of the pipeline containing inert material is considered a less than significant impact.

Overlay Plan

“Further Action” IRP sites are superimposed on the Figure 5.5-1. Zoning districts of the Overlay Plan in relation to “No Further Action” IRP sites are shown in Table 5.5-3. The DON intends to convey the “No Further Action” IRP Sites 4, 6, 9, 10, 13, 19, and 22 as suitable for unrestricted use. Therefore, there are no significant impacts associated with these sites.

Table 5.5-3
Zoning Districts of No Further Action IRP Sites – Overlay Plan

IRP Site	IRP Site Description	Zoning District
4	Ferrocene Spill Area	4.4 Commercial Recreation
6	Drop Tank Drainage Area No. 1	2.2 Low-Density Residential with 1.8 Golf Course Overlay
9	Crash Crew Pit No. 1	1.5 Recreation
10	Petroleum Disposal Area	1.5 Recreation
13	Oil Change Area	1.5 Recreation
15	Suspended Fuel Tanks	1.5 Recreation
19	Aircraft Expeditionary Refueling	2.2 Low-Density Residential with 1.8 Golf Course Overlay
20	Hobby Shop	2.3 Medium Density Residential
21	Materials Management Group	6.1 Institutional
22	Tactical Air Fuel Dispensing System	1.5 Recreational

Sources: Cotton/Bridges/Associates 2002.

The “Action Required” IRP sites are superimposed on Figure 5.5-1. Zoning districts of the Overlay Plan in relation to “Action Required” IRP sites are shown in Table 5.5-4.

Table 5.5-4
Zoning Districts of Action Required IRP Sites – Overlay Plan

IRP Site	IRP Site Description	Zoning District
1	EOD Range	1.4 Preservation
2	Magazine Road landfill	1.4 Preservation
3	Original Landfill	1.5 Recreation/ 2.2 Low-Density Residential with 1.8 Golf Course Overlay
5	Perimeter Road Landfill	1.5 Recreation
7	Drop Tank Drainage Area No. 2	1.5 Recreation
8	DRMO Storage Yard	6.1 Institutional/ 3.2 Transit Oriented Development
11	Transformer Storage Area	1.5 Recreation
12	Sludge Drying Beds	6.1 Institutional
14	Battery Acid Disposal Area	1.5 Recreation
16	Crash Crew Pit No. 2	1.5 Recreation
17	Communications Station Landfill	1.4 Preservation
24	VOC Source Area	6.1 Institutional/ 1.5 Recreation/ 3.2 Transit Oriented Development

Source: Cotton/Bridges/Associates 2002.

The environmental impacts of the “Action Required” sites are analyzed in the sections that follow.

Sites 18 and 24 (VOC Contamination)

Remediation of contaminated soils at IRP Site 24, the VOC Source Area, began in spring 1999 and was completed in 2001. IRP Site 24 is located in zoning districts categorized as 6.1 Institutional and 1.5 Recreation. The DON’s human health risk assessment for Site 24 indicates that neither a recreational or institutional land use of the proposed site would result in a higher than acceptable risk. The DON, however, intends to remediate the existing contamination of the shallow groundwater at Site 24 to an unrestricted standard. This remediation process will likely take a period of years to complete and during this time the DON is likely to implement institutional controls that will limit access to groundwater and related activities to portions of Site 24. Consequently, the temporary restrictions on Site 24 due to institutional controls (not contamination) are considered a significant impact.

IRP Site 18, VOC Groundwater Contamination Plume, is a plume of TCE extending below the ground surface into the aquifer system off-site of the former air station. This contamination does not impact the existing and proposed land uses on the project area.

Sites 2, 3, 5, and 17 (Landfills)

Issues relating to IRP Sites 2, 3, 5, and 17 (landfills), including settling are not expected to constrain proposed land uses within the project area. Possible exposure issues in regard to the potential presence of radioactive materials in the landfills resulting from the disposal of radium paint residues were identified in the HRA report. As a result, the DON is conducting

site specific radiological investigations for the presence of radioactive materials. Until this issue is appropriately resolved, the proposed remedy and the associated RODs are held in abeyance by the regulatory agencies until the presence or non-presence of these materials can be confirmed.

IRP Sites 2 (Magazine Road Landfill) and 17 (Communications Station Landfills) are located in the proposed zoning district designated as 1.4 Preservation. Notwithstanding any potential changes resulting from the above mentioned radiological investigation, the proposed presumptive remedy for landfills at the former MCAS El Toro is the installation of an impermeable layer with a soil cap with the use of institutional controls. This remedy will not result in any impact to the habitat preserve and is not considered a significant impact.

IRP Site 3 (Original Landfill) is located in the proposed zoning district designated as 1.5 Recreation. As stated above, notwithstanding any potential changes resulting from the above radiological investigation, the proposed presumptive remedy for landfills at former MCAS El Toro is the installation of an impermeable flexible membrane with a soil cap. Due to the use of institutional controls, Site 3 and a possible buffer site surrounding it will not be available for immediate reuse activity. Apart from restricted access to the site by unauthorized parties, no impacts from contamination following implementation of the proposed remediation are likely to occur. The restricted use of Site 3 due to institutional controls (not contamination) is considered a significant impact.

IRP Site 5 (Perimeter Road Landfill) is located in the proposed zoning district designated as 1.5 Recreation. Notwithstanding any potential changes resulting from the radiological investigation, the proposed remedy for landfills at former MCAS El Toro is the installation of an impermeable flexible membrane with a soil cap, along with institutional controls. It is likely that this issue will not result in a significant impact to the habitat preserve/wildlife corridor.

Site 8

IRP Site 8 is located in zoning district designations 6.1 Institutional and 3.2 Transit Oriented Development. As mentioned previously, information in the HRA Report indicates that IRP Site 8 may have received empty radium paint containers and debris from the demolition of the Radium Paint Shop at Building 296 for temporary storage awaiting disposal. The draft proposed plan for remediation of this site recommended the excavation and proper disposal of shallow soil contamination. This plan is now in abeyance until the radiological issue is successfully resolved following completion of the radiological investigation that will be conducted by the DON. Withstanding any potential changes resulting from the radiological investigation, the proposed presumptive remedy for Site 8 is excavation and removal of the contaminated soil. As the DON intends to convey the suit as suitable for unrestricted use, there would be no significant impact associated with this site.

Sites 11 and 12

IRP Site 11 (Transformer Storage Area) is located in a zoning district designation 1.5 Recreation and Site 12 (Sludge Drying beds) is located in a zoning district designation 6.1 Institutional. Site 12 may have received sludge contaminated with Radium 226 from the sanitary sewage treatment plant resulting from the disposal of radium paint to the sanitary sewer system. The draft proposed plan for remediation of these sites recommended the

excavation and proper disposal of shallow soil contamination. This plan is also in abeyance until the radiological issue is successfully resolved following completion of the radiological investigation that will be conducted by the DON. No significant impact is expected to result from remediation activities on Site 12 because industrial standards are adequate for this land use, withstanding any potential changes that may result from the radiological investigation. Site 11 is located in 1.5 Recreation. As the DON intends to convey the site as suitable for unrestricted use, there is no significant impact associated with this site.

Sites 7, 14, and 16

IRP Site 7 (Drop Tank Drainage) is located in zoning district designations 1.5 Recreation. As the DON intends to convey the site as suitable for unrestricted use, there is no significant impact associated with the site.

IRP Site 14 (Battery Acid Disposal Area) is located in zoning district designation 1.5 Recreation. As the DON intends to convey the site as suitable for unrestricted use, there is no significant impact associated with the site.

IRP Site 16 (Crash Crew Pit No. 2) is located in zoning district designation 1.5 Recreation. Because of the potential risks associated with the existing groundwater contamination, the DON may restrict use of the site until the groundwater is remediated to an appropriate risk level, at which time the site would be released for unrestricted use. This remediation process will likely take multiple years to complete, and during this time various institutional controls will be implemented to limit certain activities and unauthorized access to the site. Consequently, the temporary restricted use/access of Site 16 due to institutional controls (not contamination) is considered a significant impact.

Site 1

IRP Site 1 (EOD Range) is located in zoning district designation 1.4 Preservation. Post closure status of the EOD Range has not been determined, although it is intended to be retained by the Federal government. It could be closed by the DON under CERCLA, transferred to another agency, or continue to be used as an EOD facility. If a government agency desires to use the site as an EOD facility, then a RCRA Part B Permit would be required from CALEPA and the DTSC. In this circumstance, an independent remedial investigation outside of the current CERCLA program would be required as well as an independent cleanup, as appropriate. If this circumstance does not materialize, then remediation of the site will remain within current CERCLA program requirements. The DON's remedial investigation and feasibility studies are ongoing. Pending resolution of the site status and the outcome of the RI/FS process, remediation is expected to be consistent with the land use designation and the potential reuse activities. Therefore, no significant impact is expected.

Anomaly Area 3

Anomaly Area 3 is an approximately 9-acre site located in the northwest section of the project area near Pusan Way and adjacent to Agua Chinon wash in zoning district designation 2.2 Low Density Residential. This site is considered a former refuse disposal area for construction debris. To date, the DON has conducted a geophysical investigation, exploratory trenching, radiological screening, and installed monitoring wells and vadose

zone wells. Preliminary results indicate buried metallic and construction debris, along with plastics, asbestos, pipes, wood and concrete. Radiological readings in the soil were at or below background levels. Some groundwater samples exceeded the maximum contaminant levels and are subject to further investigation. Soil levels for arsenic, total petroleum hydrocarbons, lead, and benzopyrene exceed industrial and residential PRG standards. Investigation of the site is ongoing and no decisions about remediation have been made to date. Due to the use of institutional controls, Anomaly Area 3 and a possible buffer site surrounding it will not be available for immediate reuse activity. Apart from restricted access to the site by unauthorized parties, no impacts from contamination following implementation of the proposed remediation are likely to occur. The restricted use of Anomaly Area 3 due to institutional controls (no contamination) is considered a significant impact.

Jet Fuel Distribution System

The Norwalk Pipeline was used as a jet fuel distribution system in support of the military mission at the former MCAS El Toro. The pipeline originates in Norwalk, California, enters the project area near the existing commissary located adjacent to Irvine Boulevard, and runs through the former air station housing to the former storage tank facilities. In May 1999, all the jet fuel was purged from the pipeline from Norwalk to the installation using a pigging process and replaced with an inert gas (nitrogen). The pipeline is currently maintained by the DESC. The presence of the pipeline containing inert material is considered a less than significant impact.

Threshold 5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Base Plan and Overlay Plan

The proposed project is a non-aviation plan for the former MCAS El Toro site. Absence of aviation uses on the site would eliminate the risk of aircraft accidents. This is not considered a significant impact.

Threshold 6. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Base Plan and Overlay Plan

The project is not in the vicinity of a private airstrip. This is not considered a significant impact.

Threshold 7. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Base Plan and Overlay Plan

There is a minimal impact as a result of changes that would be necessary to current emergency response and evacuation plans. Following annexation, the City of Irvine would

assume responsibility for the project area and would need to revise its existing emergency response and evacuation plans. The land use changes associated with the proposed project will also require revisions to the Orange County Emergency Plan. Currently, former MCAS El Toro is designated a potential emergency response staging area for fixed-wing aircraft and emergency response equipment. The implementation of a non-aviation plan for the project area will remove the site as a potential emergency response staging area for fixed-wing aircraft. Two other sites in the County, the Los Alamitos Armed Forces Reserve Center in Los Alamitos and Mile Square Regional Park in Fountain Valley, will remain designated emergency staging areas. Portions of the proposed project area could remain available to non-aviation emergency response equipment. Therefore, the proposed project is not expected to interfere with emergency response and evacuation plans once they are revised and would not result in a significant impact related to emergency response and evacuation plans.

Threshold 8. *Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

Base Plan and Overlay Plan

There is an impact resulting from exposure of people and structures to wildland fires. The Habitat Preserve, Wildlife Corridor, and Recreational areas in the northeastern portion of PA 51 will be exposed to the highest level of fire risk from wildfires because these areas and adjacent areas are currently defined as having high risk for wildland fires. The proposed project will result in an increase in both population and structures adjacent to this high fire risk area and the impact is considered significant. Additionally, the City has no record of construction of existing structures on the site. Reuse of existing structures will require the City to inspect the building for conformance to fire life safety code requirements. This is a potentially significant impact.

5.5.4 Significant Impacts

Base Plan and Overlay Plan

HH 1. Construction activities involving demolition and possible substantial remodeling of existing structures in the project area as the project area develops could result in the disturbance of structures and soils containing ACMs or LBP. This is considered a significant impact.

The presence of ACMs and LBP in structures and soils of properties conveyed by the DON may pose a future hazard to the public if the materials degrade or are otherwise disturbed. This is considered a significant impact.

HH 2. IRP Site 24 is located in zoning districts categorized as 6.1 Institutional and 1.5 Recreation. The site may be conveyed with temporary restrictions on use that are not appropriate for transportation facility use. This is considered a significant impact.

Future uses of IRP Site 3 may be potentially constrained by the implementation of institutional controls. This is considered a significant impact.

IRP Site 16 (Crash Crew Pit No. 2) is located in zoning district designation 1.5 Recreation. The site may be conveyed with temporary restrictions on use that are not appropriate for recreational land uses. This issue is considered a significant impact.

- HH 3.** The Habitat Preserve, Wildlife Corridor, and Recreational areas in the northeastern portion of PA 51 will be exposed to the highest level of fire risk from wildfires because these areas and adjacent areas are currently defined as having high risk for wildland fires. The proposed project will result in an increase in both population and structures adjacent to this high fire risk area and the impact is considered significant. Additionally, existing structures may not meet City fire safety requirements.

5.5.5 Mitigation Measures

Base Plan and Overlay Plan

HH 1.

- a. Prior to the conveyance of the property and issuance of subsequent grading permits, where the presence of ACMs is identified, the DON or its transferee shall ensure that all available information concerning ACMs has been provided to the City of Irvine, and the purchasers of the property, including:
 - The type, location and condition of ACMs
 - The results of any asbestos testing
 - Description of asbestos control measures taken, if any
 - The costs or time necessary to remove existing ACMs
 - The results of any site-specific asbestos inventory updates
- b. For any structures known to contain ACMs that will be renovated and/or demolished prior to transfer, the DON shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.
- c. Prior to transfer of any structure constructed before October 1988, scheduled for renovation and/or demolition, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by the DON. This requirement can be waived if an architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building material, and to the best of their knowledge, no ACMs were used as a building material.

- d. Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.
- e. Any renovation and/or LBP abatement activities on residential units at former MCAS El Toro, shall be conducted in accordance with all applicable federal, state and local regulatory requirements.

HH 2.

- a. Prior to transfer, the City of Irvine shall receive from the DON, with the concurrence of the appropriate regulatory agencies, a statement that the "Action Required" IRP Site 3 is to be conveyed for restricted use and that all institutional controls have been identified and implemented. The City of Irvine will adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.
- b. Prior to transfer, if the DON chooses to impose temporary restrictions on the use of Sites 16 and 24 pending adequate remediation of groundwater, the City of Irvine shall receive from the DON a statement of temporary restrictions on the use of the sites and the release of the sites for unrestricted use following implementation of adequate remediation of groundwater. The City of Irvine shall adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.

- HH 3.** The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for "Development Within and Exclusion from Very High Fire Severity Zones" and "Fuel Modification Plans and Maintenance." Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the proposed project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.

- HH 4.** Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.
- HH 5.** Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director of Community Development of the City of Irvine in a timely manner.
- HH 6.** The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells located on the former MCAS El Toro in a geographic information systems database (GIS). The City will review all permit applications on the former air station for monitoring well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to monitoring wells will be limited to authorized personnel.

5.5.6 Significance of Impact After Mitigation

Base Plan

Less than Significant.

Overlay Plan

Less than Significant.

Notes and References

1. County of Orange. *MCAS El Toro Community Reuse Plan DEIR, Volume 1*. 1996.
2. City of Irvine. *General Plan*. March 9, 1999.
3. County of Orange. *James A. Musick Jail Expansion and Operation DEIR No. 564*. August 1996.

5.6 Geology and Seismicity

5.6.1 Environmental Setting

Former MCAS El Toro (PAs 51 and 30)

Geology/Soils

Planning Areas 51, 35, and 30 (PAs 51, 35, and 30) extend from the southern margin of the foothills of the Santa Ana Mountains to the southeastern edge of the alluvial Tustin Plain. The Santa Ana foothills are underlain by a tilted sequence of stratified sedimentary bedrock units which make up the hills and ridges. The Tustin Plain is a gently sloping alluvial plain underlain by alluvial fan sediments consisting of sand, silt, and clayey silty sand.

PA 51 and PA 35 are situated within both the Santa Ana foothills and alluvial plain areas of the subject site. Foothill elevations range from approximately 450 feet above mean sea level (MSL) to about 750 feet above MSL. Some slopes of the foothills exceed 20 percent in gradient. The topography of the Tustin Plain portion of PA 51 is nearly flat and slopes gently down to the west to southwest with elevations ranging from approximately 450 feet above MSL to 200 feet above MSL. Slope gradients within this area of the Tustin Plain range from 2.5 percent in the northeast to 1.5 percent in the southwest. PA 30 is located at the southeast margin of the Tustin Plain, bordered on the west by the San Joaquin Hills. Elevations within PA 30 range from roughly 260 to 300 feet above MSL, with a gentle slope upward from the northwest to the southwest.

The foothill portions of the project area are underlain by sedimentary bedrock units, mantled by only a thin soil cover. Within PA 51 and PA 35, the Tustin Plain contains alluvial soils of six major soil associations, consisting predominantly of varying sands, silts, and clayey silty sands. The surface and near-surface soils underlying PA 30 are composed of terrace deposits, old alluvium, and unconsolidated recent alluvium of the Myford and Sorrento series. Both the Myford and Sorrento soils are comprised of sand, silt, and clay mixtures. The northern one-quarter of PA 30 is underlain by clayey loam alluvial material.

The historic uses of PAs 51 and 30 (the former MCAS El Toro) for natural resources has been restricted to limited sand and gravel borrow sites in the foothill areas and agricultural uses such as citrus and field crops within the alluvial plain. Several small landslides have been documented in the undeveloped northeastern portions of PA 51; however, due to the relatively flat topography of the remainder of the site, the landslide potential outside of the Santa Ana foothills is considered very low. No known mudflows have occurred in the project area, and there are no unusual or unique topographic features on the site. No oil, gas or mineral extraction has occurred on the site and these resources are not anticipated based on the known geologic conditions.

Seismicity

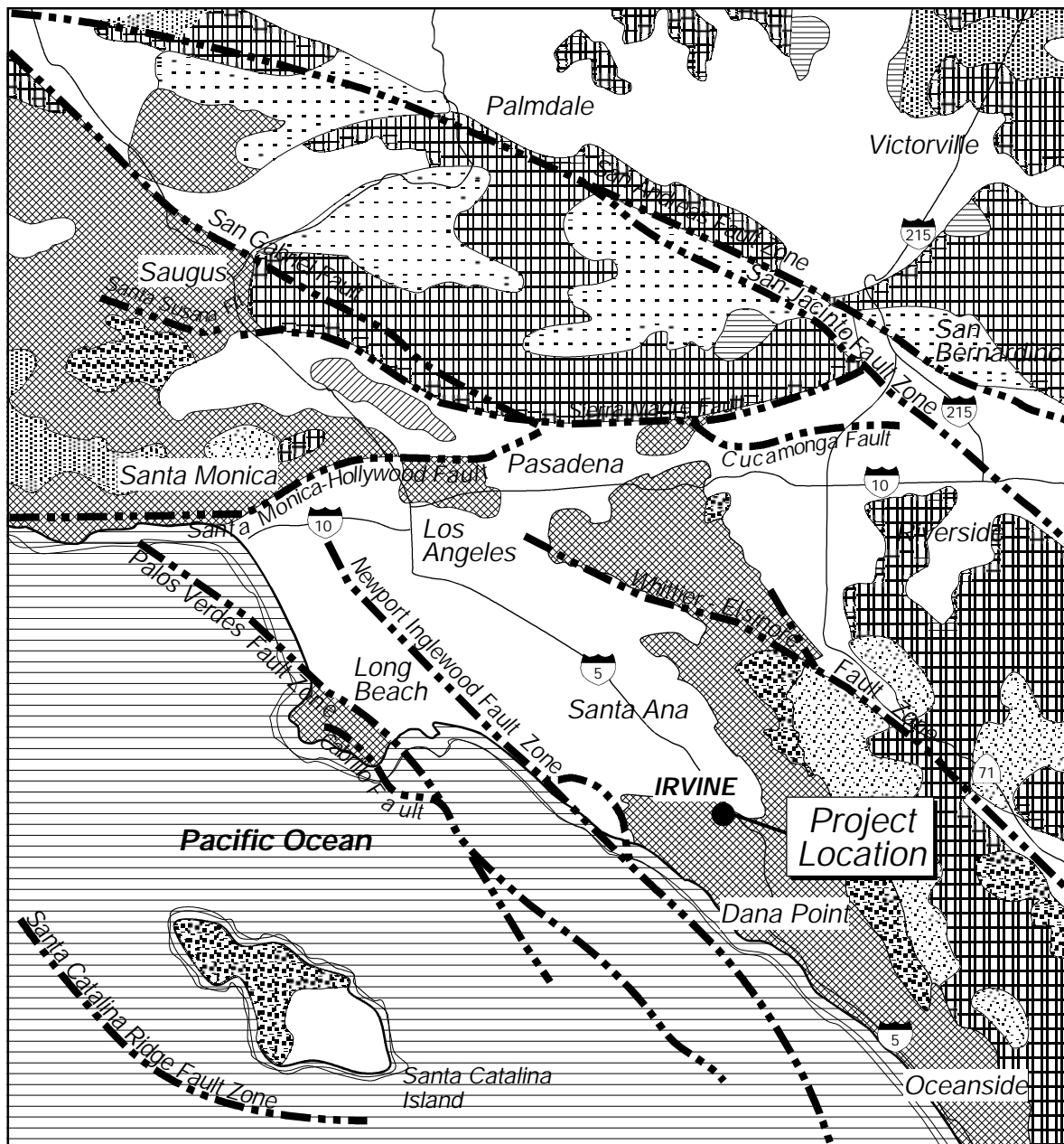
The project area is located in the seismically active Southern California region. There is no known active or potentially active fault crossing or projecting into the project area. Ground shaking has been experienced in the past and may occur in the future. The site has a low susceptibility for liquefaction because the alluvial sediments are relatively coarse and the water table is generally more than 80 feet below the ground surface. Figures 5.6-1 and 5.6-2, Regional Geology and Inactive Fault Locations, depict the location of major fault and fault zones, and inactive fault zones in relation to the project site. The Elsinore Fault, located approximately 14 miles northeast of the site, and the Newport-Inglewood Fault have the greatest potential for seismic ground shaking on the site. The recently discovered San Joaquin Hills fault is also located to the west of the site. The status of the newly discovered San Joaquin fault is being researched by the geologic community. The fault runs roughly along the coastline south of Huntington Beach and north of Dana Point; however, its precise location is unknown. The fault geologic community is researching whether the fault is considered active or inactive, and the potential earthquake magnitude.

In order to assess the geologic/seismic risk associated with potential development, the City evaluates five general types of geologic conditions through Seismic Response Areas (SRA). SRAs describe the different types and magnitudes of potential seismic hazards, making it possible to evaluate the risks of property damage, personal injury, and loss of vital services which may result from an earthquake. The majority of the project area, including most of PA 51 and all of PAs 30 and 35, is located within SRA-2. SRA-2 consists of denser soils/deeper ground water. The primary potential seismic hazard in this area is ground motion. The majority of the project area is within SRA-2 and is considered suitable for development. The northeastern portion of the project area is located within SRA-3 and SRA-4. SRA-3 consists of shallow alluvium over and abutting bedrock. In this area, the primary potential seismic hazard is ground motion. Figure 5.6-3 depicts Seismic Response Areas from the City's General Plan.

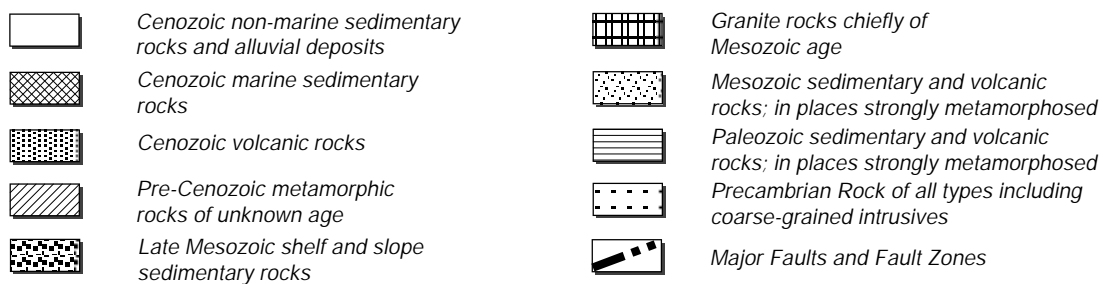
Many of the existing buildings on the former MCAS El Toro do not meet current seismic codes. Many are older structures that were constructed prior to seismic codes being in place or were constructed to federal military standards, not California Seismic Code standards.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail site is relatively flat, with a localized highland in the northeastern portion of the site. Throughout the site, total relief is approximately 82 feet. Borrego Wash lies to the west/northwest of the property and will ultimately be separated from the jail facility by the future extension of Alton Parkway. Groundwater was not encountered on the site within 45 feet of the ground surface. The Musick Jail occupies portions of both SRA-2 (denser soils/deeper groundwater) and SRA-3 (alluvium/shallow bedrock).



Source: City of Irvine, General Plan



No Scale

Figure 5.6-1
Regional Geology



Source: City of Irvine, General Plan



Fault Line

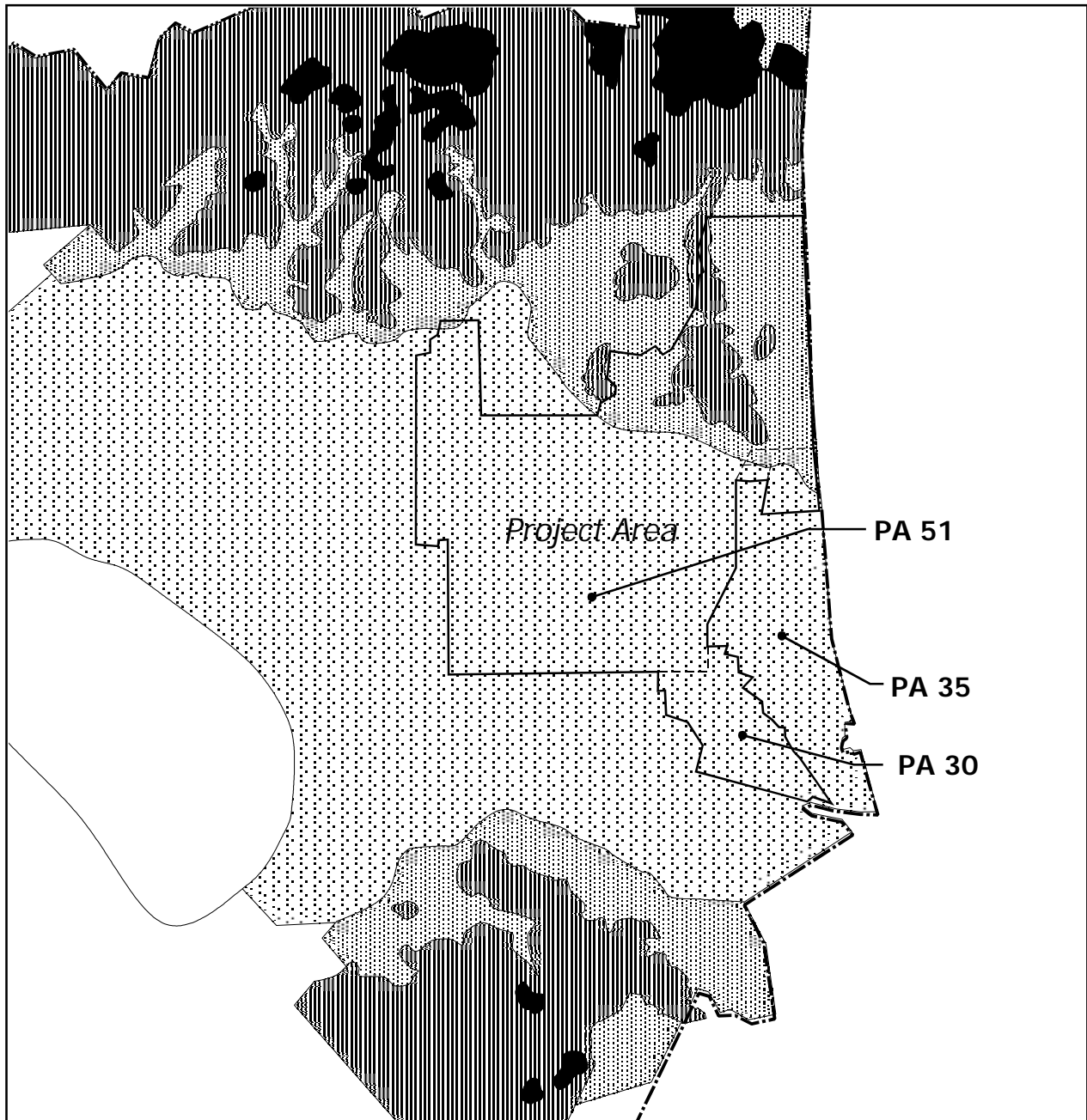


Project Area




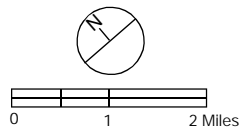
0 1 2 Miles

Figure 5.6-2
Inactive Fault Locations



Source: City of Irvine, GIS Program

- | | | | |
|---|--|---|--|
|  | SRA-1: Soft soils/high groundwater |  | SRA-4: Highlands over 20% slope |
|  | SRA-2: Denser soils/deeper groundwater |  | SRA-5: Less stable geologic formations |
|  | SRA-3: Alluvium/shallow bedrock | | |



*Figure 5.6-3
Seismic Response Areas*

IRWD Parcel (Portion of PA 35)

The IRWD parcel is relatively flat, with a localized highland in the northeastern portion of the site. The types of soils that underlie the site are mainly alluvial and terrace deposits, with some clay content. The IRWD parcel occupies portions of both SRA-2 (denser soils/deeper groundwater) and SRA-3 (alluvium/shallow bedrock).

5.6.2 Threshold for Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for geology and seismicity.

Would the project:

1. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:*
 - *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?*
 - *Strong seismic ground shaking?*
 - *Seismic-related ground failure, including liquefaction?*
 - *Landslides?*
2. *Result in substantial soil erosion or the loss of topsoil?*
3. *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*
4. *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?*
5. *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*
6. *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*
7. *Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

5.6.3 Environmental Impact

The following analysis focuses on the potential geology and seismic impacts associated with implementation of the Base Plan and the Overlay Plan for the former MCAS El Toro (PAs 51

and 30). The Musick Branch Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. As a result, implementation of the proposed project will not result in a significant geology and seismicity impact associated with the annexation of the James A. Musick Jail Facility and the IRWD Parcel.

Threshold 1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

- ***Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?***

Base Plan and Overlay Plan

The potential for fault rupture in the project area is extremely low, whether the project site is developed according to the land uses identified in the Base Plan or the Overlay Plan. According to the City of Irvine General Plan, Figure D-1 (see Figures 5.6-1 and 5.6-2) there are no known active or potentially active faults crossing or projecting into the project area. No significant impact is anticipated through the post 2025 level of development.

Threshold 1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

- ***Strong seismic ground shaking?***

Base Plan and Overlay Plan

Whether the project site is developed according to Base Plan land uses or Overlay Plan land uses, future development of the project area has the potential to result in the exposure of people or structures to strong seismic ground shaking in the event a major earthquake occurs along any one of the active faults in the region. This is considered a significant impact. Severe ground shaking can cause damage to poorly designed or constructed buildings. The level of seismic activity expected in the project area is similar to the County as a whole, and other areas of Southern California. As such, the risk of loss, injury or death involving strong seismic ground shaking is similar to the risk associated with other regions within Southern California. New development in the project area will need to be constructed according to the latest adopted building codes, which address construction practices related to seismic safety.

PA 30 is located in that portion of the Coastal Plain that is bounded by the Santa Ana Mountains on its southern and eastern borders and the San Joaquin Hills on its western border. The surface and near surface soils of the site are composed of Terrace deposits, old alluvium, and unconsolidated alluvium of the Myford and Sorrento series. Both the Myford and Sorrento soils are composed of sand, silt, and clay mixtures. The northern one-quarter of the site is underlain with clayey loam alluvial material. Due to the topography of the site, landslide potential is considered very low. In addition, PA 30 is located in SRA-2, which is comprised of denser soils and deeper groundwater. PA 30 has a low potential for

seismically induced liquefaction due to the dense soils and deep groundwater which underlie the area.

Many of the existing buildings on the former MCAS El Toro site do not meet current seismic codes. The City has no record of how the existing structures were constructed; whether they were constructed to seismic codes in effect at the time; whether they were field inspected, and if so, what type of field inspection and quality control existed; and whether they are still being utilized for their originally intended use. The reuse of existing development would need to meet a level of life safety protection that is appropriate for that use. The City would need to assess the building condition, compliance with codes, and suitability of the current intended reuse. As such, temporary or permanent reuse of these facilities could expose people to a greater seismic risk than buildings that are constructed to applicable seismic codes. This is considered a significant impact.

Threshold 1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

- ***Seismic-related ground failure, including liquefaction?***

Base Plan and Overlay Plan

The potential for seismically induced liquefaction resulting from severe ground shaking is considered low based on the characteristics of the existing soils in the project area. No significant impact to this issue is anticipated. However, the potential for liquefaction will be analyzed by site-specific geological investigations prior to grading and construction of individual projects in the project area.

Threshold 1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

- ***Landslides?***

Base Plan

The only documented landslides are located in the undeveloped northeastern foothills area of the project area within PA 51. The land use designation for this portion of the project area is proposed as OCGP Habitat Preserve (Hab) and OCGP Cemetery/OCGP Low Density Residential (Cem/Ldr). Under the Base Plan this area is planned as Habitat Preserve and Open Space and will be used as natural open space to protect significant wildlife habitat. No intensive development is proposed in this area and no significant impact to this issue is anticipated.

Overlay Plan

The only documented landslides are located in the undeveloped northeastern foothills area of the project area within PA 51. The land use designation for this portion of the project area is proposed as OCGP Habitat Preserve (Hab) and OCGP Cemetery/OCGP Low Density Residential (Cem/Ldr). Under the Overlay Plan, this area is planned as Habitat Preserve and Low Density Residential. Because development of habitable structures would

be allowed under the Overlay Plan, the project would result in a significant impact associated with landslides.

Threshold 2: Result in substantial soil erosion or the loss of topsoil?

Base Plan and Overlay Plan

Grading associated with future development in any portion of the project area will involve the removal of soils, compaction, and possible import or export of fill material. Grading will include the renewal of the existing runways. These activities will expose soil surfaces to increased wind and water erosion. Future development of the project area has the potential for impacts resulting from soil erosion or the loss of topsoil. This impact is considered significant.

Threshold 3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Base Plan and Overlay Plan

The majority of the soil material in the project area is identified as well suited for grading and construction. No significant impact to this issue is anticipated.

Threshold 4: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risk to life or property?

Base Plan and Overlay Plan

Some expansive soils may be present in localized areas within the project area. The presence of expansive soils could create risks to life or property. This issue is considered a significant impact.

Threshold 5: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Base Plan and Overlay Plan

Sewers will be available to serve all future development for the disposal of wastewater. No significant impact to this issue is anticipated.

Threshold 6: Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Base Plan and Overlay Plan

There are no known mineral resources on the site. No significant impact to this issue is anticipated.

Threshold 7: *Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

Base Plan and Overlay Plan

There is no known mineral resource on the site. No significant impact regarding this issue is anticipated.

5.6.4 Significant Impacts

Base Plan and Overlay Plan

- GS 1.** Future development of the project area has the potential to result in the exposure of people or structures to strong seismic ground shaking in the event a major earthquake occurs along any one of the active faults in the region. This is considered a significant impact.
- GS 2.** The level of seismic activity expected in the project area is similar to the County as a whole, and other areas of Southern California. As such, the risk of loss, injury or death involving strong seismic ground shaking is similar to the risk associated with other regions within Southern California.
- GS 3.** Some expansive soils may be present in localized areas within the project area. The presence of expansive soils could create risks to life or property through the post 2025 development levels. This impact is considered significant.
- GS 4.** Many of the existing buildings on the former MCAS El Toro site may not have been constructed in a manner that is acceptable for its intended use. Temporary or permanent reuse of these facilities could expose people to a greater seismic risk than buildings that are constructed to applicable seismic codes. This is considered a significant impact.
- GS 5.** Future development of the project area has the potential for impacts resulting from soil erosion or the loss of topsoil. This impact is considered significant through the post 2025 development levels.
- GS 6.** Some expansive soils may be present in localized areas within the project area. The presence of expansive soils could create risks to life or property. This is considered a significant impact.

5.6.5 Mitigation Measures

Base Plan and Overlay Plan

- GS 1.** Prior to issuance of a building permit, the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.
- GS 2.** Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.
1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be conducted. The purpose of the subsurface evaluation is to:
 - a. Further evaluate the subsurface conditions in the area of the proposed structures.
 - b. Provide specific data on potential geologic and geotechnical hazards.
 - c. Provide information pertaining to the engineering characteristics of earth materials in the project area.

From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural sections, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:

- C Seismic Ground Shaking - Measures to prevent risk of loss, injury or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.
- C Erosion or Loss of Topsoil – Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances.
- C Where Expansive Soils Exist – Measures for the design of foundations, slabs, flatwork and other improvements subject to drainage from expansive soils.

Compliance with this measure shall be verified by the Community Development Department.

- GS 3.** Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of any existing structure if a building permit is not issued, a seismic evaluation of the structure including recommendations for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.
- GS 4.** Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

5.6.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Less than significant.

Notes and References

1. City of Irvine. *Irvine Planning Area 30 GPA/ZC 321633-GA/21635-ZC FEIR*, pg. 4.4-1. November 26, 1996.
2. County of Orange. *James A. Musick Jail Expansion and Operation DEIR* No. 564, pgs. 53 and 57. August 1996.
3. City of Irvine. *General Plan, Figure D-1*. March 9, 1999.
4. PBS&J. *MCAS El Toro Community Reuse Plan, Volume 1*, pgs. 3-15. January 1995.
5. County of Orange. *MCAS El Toro Community Reuse Plan DEIR, Volume 1*. August 1996.
6. City of Irvine. *General Plan*, pgs. D-1 - D-7. March 9, 1999.

5.7 Hydrology/Water Quality

5.7.1 Environmental Setting

Hydrologic Setting

Former MCAS El Toro (PAs 51 and 30)

The project area lies within the San Diego Creek watershed, which is 105 square miles and encompasses portions of the cities of Irvine and Tustin, Santa Ana, Costa Mesa, Lake Forest, Laguna Hills, Orange and Newport Beach, as well as unincorporated Orange County. The watershed includes the San Diego Creek along with Peters Canyon channel and their tributaries. Natural watercourses, agricultural channels, storm drain systems, and flood control channels transport runoff from the proposed annexation area and surrounding lands in the watershed to Upper Newport Bay.

The former MCAS El Toro property is traversed by six drainage channels flowing generally from the northeast to the southwest. Headwaters originate off-site in the Santa Ana Mountains, collect in the various upstream canyons and flow downstream into four improved channels that cross the former base property from Irvine Boulevard to the SCRRA railroad tracks. These are referred to as the “Marshburn”, “Bee Canyon”, “Agua Chino”, and the “Borrego” Channels (see more detailed discussion below). South of the Metrolink railroad (i.e. within PA 30) two other facilities cross the property. These facilities are the “Serrano Creek” channel and the Upper San Diego Creek channel. Each channel connects and discharges to existing County of Orange regional facilities.

James A. Musick Jail Facility (Portion of PA 35)

James A. Musick Branch Jail is a relatively small portion of PA 35. The Jail facility lies within the San Diego Creek drainage basin. Approximately 20 acres of the existing 100-acre Musick Jail site is covered by impervious surface. Approximately 36 acres of the site are tributary to a storm drain at the southerly corner of the site, which flows into a drain in Parker Avenue and eventually into Serrano Creek. The remaining 64 acres of the site are tributary to Borrego Canyon Wash.¹ Both Serrano Creek and Borrego Canyon Wash are tributaries of San Diego Creek.

IRWD Parcel (Portion of PA 35)

The Irvine Ranch Water District (IRWD) parcel is also a relatively small portion of PA 35. The IRWD parcel also lies within the San Diego Creek drainage basin. The parcel drains into the Borrego Canyon Wash.

Storm Drain System

Former MCAS El Toro (PAs 51 and 30)

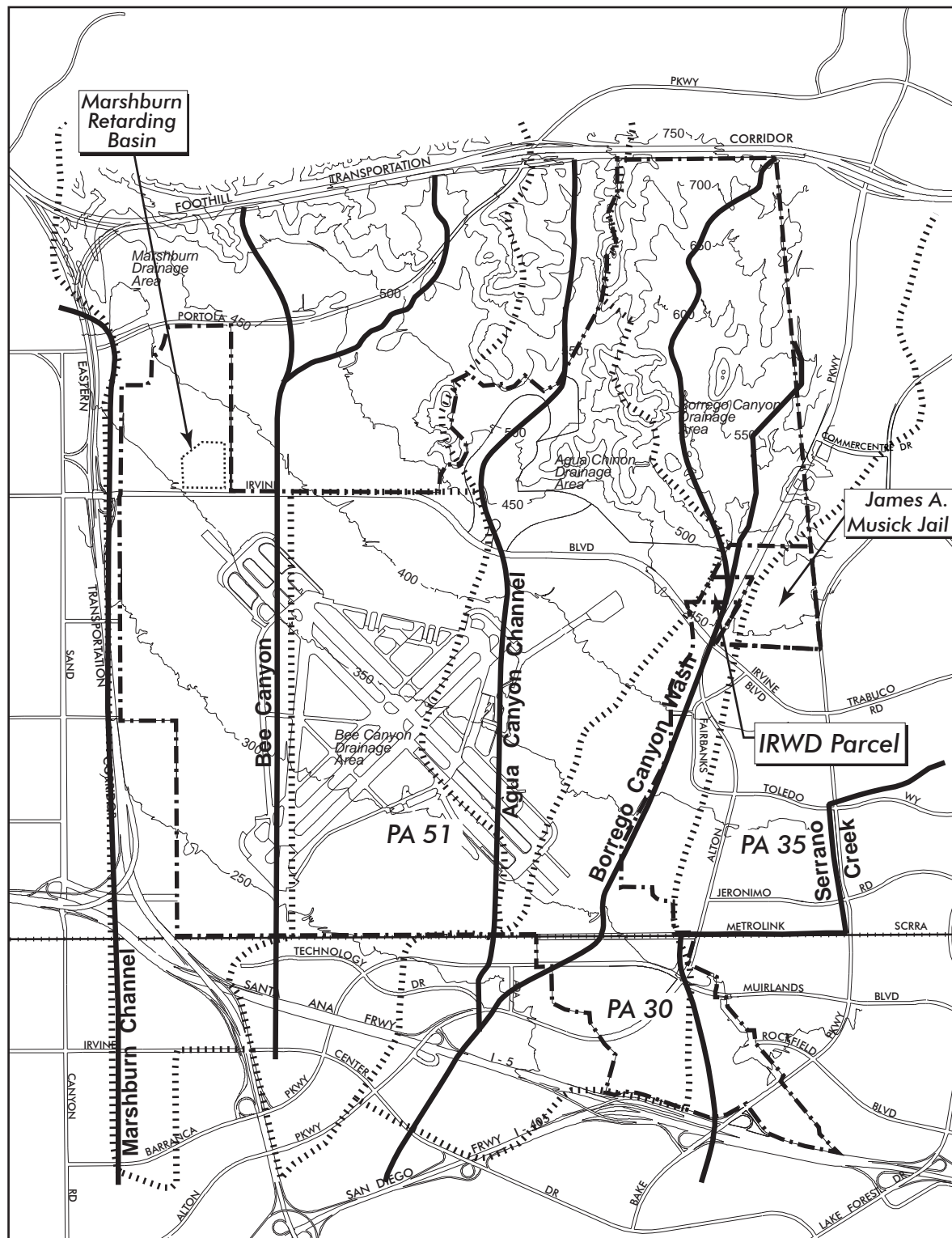
Figure 5.7-1 illustrates the drainage areas and topographic conditions present in the project area. The following provides a description of the major drainage channels and the Marshburn Retarding Basin located in the project area.

Marshburn Channel: Tributary drainage areas upstream of Irvine Boulevard drain into the Marshburn retarding basin located just north of Irvine Boulevard between the Eastern Transportation Corridor and Lambert Road. An interim 48-inch diameter Spiral Rib Pipe in Irvine Boulevard delivers flows northwesterly toward the Marshburn Channel from the retarding basin. This channel runs along the southeasterly side of the Eastern Transportation Corridor. The channel reach between Irvine Boulevard and Trabuco Road is a trapezoidal concrete lined channel with a bottom that varies from eight-feet to 10-feet in width and ranges from five-feet to seven-feet in depth. South of Trabuco Road to Interstate 5, Marshburn Channel is a concrete rectangular channel with the bottom of the channel varying from 14-feet to 15-feet and ranging from nine-feet to 10.5 feet in depth.

Bee Canyon Channel: The Bee Canyon Channel drainage system consists of reinforced concrete boxes ten feet by six feet and 3.5 feet by 4.5 feet under the runways and open channels outside the runway areas. The capacity of the boxes is 680 cubic feet per second (cfs) and 630 cfs, respectively. Upstream of the box underneath Irvine Boulevard is a transition structure with a weir structure routing excess flows into the Marshburn retarding basin. The channel reach south of the SCRRA railway tracks to Interstate 5 is a 12-foot wide by nine feet in depth double reinforced concrete box. The Bee Canyon and Round Canyon retarding basins have been constructed in conjunction with the Foothill Transportation Corridor.

Agua Chinon Channel: The Agua Chinon Channel begins at the northeasterly limits of the Wherry housing area. Similar to the Bee Canyon Channel system, this system consists of a series of boxes under the existing runways and open channels outside the runways. The drainage facility south of the railroad tracks is a combination of 10-foot wide by 7.5-foot high with a 2:1 slope, rock lined trapezoidal channel, 12-foot by 12-foot triple reinforced concrete box, and six 10-foot by 10-foot reinforced concrete box underneath Interstate 5. In addition, the Agua Chinon retarding basin has been constructed just south of the Foothill Transportation Corridor.

Borrego Canyon Channel: The Borrego Canyon Channel runs along the southern boundary of the base. Its headwaters begin in the Santa Ana Mountains to the east. The facility is a natural bottom channel upstream of Irvine Boulevard. Downstream of this point, for a distance of about 2,900 feet, the channel is a 25-foot wide by 9.5-foot high reinforced concrete channel. This concrete channel is outside the former base. Downstream of this point, the channel enters the base property and becomes a soft bottom channel.



- Existing Drainage Channels
- - - Proposed Project Area
- Drainage Area Boundary
- Basin
- 300' — Topographic Lines

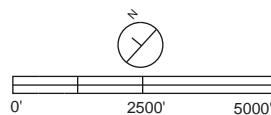


Figure 5.7-1
Drainage Areas and Topography

Serrano Creek: Serrano Creek is a drainage system located in the southern tip of the former base. It consists of a 30-foot-wide by 10-foot-high rectangular concrete channel upstream of Muirlands Boulevard and an earthen channel downstream of Muirlands Boulevard to Interstate 5. The creek crosses the intersection of Alton Parkway and Muirlands Boulevard in a triple 10-foot by 10-foot reinforced concrete box.

Upper San Diego Creek Channel: At the southerly most point of PA 30 is the Upper San Diego Creek Channel, which is an unimproved earthen berm.

Marshburn Retarding Basin: The Marshburn Retarding Basin was constructed as part of the Eastern Transportation Corridor (SR-133) improvements. The basin is located north of Irvine Boulevard, approximately 2,500 feet east of Sand Canyon Avenue. The basin is designed to accommodate the future ultimate condition drainage/runoff; however, the interim condition configuration for the basin was designed so that the interim discharge from the basin would not exceed the capacity of the Marshburn Channel. Reconstruction of the collector system and outflow lines will be required to accommodate ultimate development of the watershed.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail is located within the Borrego Canyon drainage system. Approximately 69 acres of the site drain into the Borrego Canyon Wash, and the remaining 36 acres drain into a storm drain located at the southern corner of the site which connects to the Serrano Creek facility.

IRWD Parcel (Portion of PA 35)

The IRWD parcel is located within the Borrego Canyon drainage system, and drains into the Borrego Canyon Wash.

Flood Conditions and System Deficiencies

The “Flood Control Master Plan for San Diego Creek” (John M. Tettemer and Associates, 1989) analyzed the existing tributary drainage areas of San Diego Creek from its headwaters to I-405 downstream of the confluence with Peters Canyon Channel. The Flood Control Master Plan identified a range of flood control improvements for the San Diego Creek watershed that would control flood peaks based on a 100-year flood. The Flood Control Master Plan was adopted by the City of Irvine, the City of Tustin, the Irvine Company, and the Orange County Environmental Management Agency and is currently being implemented in phases by these agencies.

The Orange County Flood Control District (OCFCD) is the agency responsible for regional channel reaches where it has right-of-way (either fee title or easements). Local facilities are the responsibility of the County of Orange in unincorporated areas and the City of Irvine within its city limits.

PAs 51 and 30 (Former MCAS El Toro)

Final EIR 563 and the Draft Supplemental Analysis indicated that a variety of flood control facility deficiencies existed in PAs 51 and 30 as of 1995. Likewise, the U.S. Army Corps of Engineers had previously reported that about 40 percent of PAs 51 and 30 would be flooded during a 100-year storm. The recent construction of transportation corridors and freeway improvements adjacent to the site has included installation of drainage improvements and retarding basins (Bee Canyon, Round Canyon, Aqua Chinon, and Marshburn) that have significantly reduced, but not entirely eliminated, the flooding problems previously identified. The Federal Emergency Management Agency (FEMA) identified two modifications (associated with the Eastern Transportation Corridor (SR-133) improvements) to the flood plain maps. The changes will show that the 100-year flood zone north and west of the project area has been reduced due to the development of drainage improvements described above. The extent of that reduction is discussed in the following sections. There are no improvements to existing flood control systems currently adopted for the annexation area.

James A. Musick Jail Facility (Portion of PA 35)

The Musick Jail is located within the Borrego Canyon drainage system. The improvements related to the expansion of Alton Parkway will assist in alleviating flooding problems on-site.

IRWD Parcel (Portion of PA 35)

The IRWD parcel is located within the Borrego Canyon drainage system, and drains into the Borrego Canyon Wash.

Water Quality

Regulatory Background

For the purposes of regional administration of California's water quality control program, the State is divided into nine regions, each having its own Regional Water Quality Control Board (RWQCB). The City of Irvine is in the Santa Ana Region (Region 8). The Santa Ana RWQCB has adopted a Water Quality Control Plan (WQCP) or Basin Plan, which outlines Board responsibilities for adoption and implementation of water quality control plans, issuance of waste discharge requirements, and performance of other functions concerning water quality control. This document is called the "Water Quality Control Plan - Santa Ana Basin (8)". Specifically, the Basin Plan: (1) designates beneficial uses for surface and ground waters; (2) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's antidegradation policy; (3) describes implementation programs to protect the beneficial uses of all waters in the Region; and (4) describes surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan [California Water Code §§13240 - 13244, and §13050(j)]. The Basin Plan incorporates by reference all applicable State and Regional Board plans and policies.

California Water Code Section 13050(h) defines “water quality objectives” as “the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.”

By definition, water quality objectives must protect the most sensitive of the beneficial uses, which have been designated for a water body. Water quality objectives may be numerical values for water quality constituents or narrative descriptions.

Surface Waters

The Basin Plan states that point sources and nonpoint sources of pollution shall be controlled to protect designated beneficial uses of water. Beneficial uses are defined as the uses of water necessary for the survival or well being of humans, plants, and wildlife. Examples include drinking, swimming, industrial, and agricultural water supply, and the support of fresh and saline aquatic habitats. Inland surface waters of the San Diego Creek drainage basin have been exempted by the Regional Board from the municipal use designation under the terms and conditions of State Board Resolution No. 88-63, Sources of Drinking Water Policy. Surface waters in the project area discharge directly into water bodies with beneficial uses. Runoff water from the proposed project will also discharge into the municipal storm drain system that eventually drains into the San Diego Creek. The San Diego Creek, in turn, drains into Upper Newport Bay. Beneficial uses, as identified by the Regional Board are depicted in Table 5.7-1.

Coastal Receiving Waters

The coastal waters of the Pacific Ocean are defined in the Basin Plan as waters subject to tidal action. Beneficial uses of receiving coastal waters (i.e., Upper and Lower Newport Bay) generally include REC-1, REC-2, EST (estuarine habitat), WILD, RARE (habitat support for rare, threatened or endangered species), MAR (marine habitat), and NAV (navigation).

Groundwater

The Basin Plan indicates that the Irvine Forebay I and II groundwater subbasins generally encompass the proposed project area. Groundwaters that meet the criteria mandated by the Sources of Drinking Water Policy are designated MUN (municipal and domestic water supply). The Basin Plan currently designates the project area groundwater subbasins for municipal and domestic supply, agricultural supply, and industrial process and service supply. A large plume of groundwater contaminated by organic compounds including trichloroethylene (TCE) as a result of the historical use of solvents and fuels, is present beneath the project area.

Table 5.7-1
Beneficial Uses of Upper Newport Bay, San Diego Creek, and Tributaries

Beneficial Use	Other Tributaries	San Diego Creek (below Jeffery Road)	San Diego Creek (above Jeffery Road)	Upper Newport Bay
Groundwater Recharge	X		X	
Water Contact Recreation	X	X	X	X
Non-Contact Water Recreation	X	X	X	X
Commercial and Sport Fishing				X
Warm Freshwater Habitat	X	X	X	
Preservation of Biological Habitats of Special Significance				X
Wildlife Habitat	X	X	X	X
Rare, Threatened, or Endangered Species				X
Spawning, Reproduction, and Development				X
Marine Habitat				X
Shellfish Harvesting				X
Estuarine Habitat				X
1 For areas of San Diego Creek upstream of Jeffery Road, the Agua Chinon Wash, and other tributaries, applicable beneficial uses are intermittent only, meaning that water conditions do not allow the beneficial use to exist year-round.				

Existing Permits and Water Quality Management Plans

Surface water quality is regulated by the U.S. Environmental Protection Agency (EPA), the California State Water Resources Control Board, the California Regional Water Quality Control Board, the Santa Ana Region Water Quality Control Board, the County of Orange (for unincorporated areas), and the City of Irvine.

The federal Clean Water Act and the State Porter Cologne Act are the principal statutes governing water quality. The laws are similar in many ways. The fundamental purpose of both laws is to protect the beneficial uses of water. An important distinction between the two is that the Porter Cologne Water Quality Control Act addresses both ground and surface waters while the Clean Water Act addresses surface water only. The Clean Water Act requires the State to adopt water quality standards for water bodies subject to the review and approval of the EPA. Direct discharges of pollutants into waters of the United States are not allowed, except in accordance with the permitting program of the Clean

Water Act, the National Pollutant Discharge Elimination System. The County of Orange and the City of Irvine hold a NPDES permit governing the storm drain systems. Additionally, the State has issued a NPDES general permit relating to construction activities on sites over five acres in area. In March 2003, this provision will apply to residential construction sites that result in the disturbance of one acre or more.

Where water quality standards are not being achieved, the Clean Water Act requires the identification and listing of that water body as “impaired” under Section 303(d). Once a water body has been deemed “impaired” a Total Maximum Daily Load (TMDL) for the pollutant that has impaired the water body must be developed for that water body. A TMDL is an estimate of the total load of pollutants that a water body may receive without exceeding applicable water quality standards. Once established, the TMDL is allocated among current and future dischargers into the water body. Impaired waters relevant to the project are the San Diego Creek and Upper Newport Bay. TMDLs have been established for these water bodies and are shown on Table 5.7-2

The State Water Resources Control Board adopted the “Nonpoint Source Management Plan” (NPSMP) in 1988. In that plan, San Diego Creek was designated as the region's pilot watershed project since the Creek's water quality has been impaired by excessive sedimentation, nitrates, pesticides, and metals originating from point and nonpoint sources.

In 1982, the Southern California Association of Governments (SCAG) completed the “San Diego Creek Comprehensive Stormwater Sedimentation Control Plan” as part of an areawide planning process conducted pursuant to Section 208 of the Clean Water Act (The Flood Control Master Plan for San Diego Creek also includes the “208 Plan” for watershed sedimentation control). This Plan recommends management of the erosion-siltation problem through agricultural and construction Best Management Practices (BMPs) and Resource Conservation Plans (RCPs). The recommendations of the 208 Plan have been and are being implemented by the State, local agencies and The Irvine Company, the largest private landowner in the watershed. To minimize sediment transport to Newport Bay, programs have been implemented to control erosion resulting from grading operations at construction sites and to prevent erosion of agricultural lands. The cities of Irvine, Costa Mesa, Santa Ana, and Newport Beach have grading ordinances that require erosion/siltation control plans for construction projects within their boundaries. The focus of these plans is on the implementation of BMPs. Permit actions by the RWCQB (the areawide stormwater permit for Orange County) and the State Water Resources Control Board (the general construction activity stormwater permit) will necessitate additional coordinated efforts between the two agencies to control sediment inputs from construction activities. With technical assistance from the RWCQB, Orange County oversees a program to ensure development and implementation of RCPs by agricultural landowners, principally The Irvine Company.

Table 5.7-2
TMDLs Applicable to Newport Bay and San Diego Creek

	Sediment	Nutrients	Pathogens	Toxics (future)
General Info & Reduction	1998 estimate: 250,000 tons deposited/yr. Reduction: 50% (to 125,000 tons/yr) within ten years.	1998 estimate: 1,087,000 lbs/yr. Predominant sources: commercial nursery and agricultural land tailwaters. Reduction: 50% by 2012.	Fecal coliform bacteria used as indicator. Reduction: less than 200 organisms/100 ml. No more than 10% of samples to exceed 400 organisms/100 ml for any 30-day period.	San Diego Creek and Newport Bay are "impaired" water bodies for toxic substances. Problem toxic substances: PCBs, DDT, diazinon, chlorpyrifos, toxaphene, copper and selenium (may occur naturally).
Allocation	62,500 tons to Newport Bay. 62,500 tons to rest of the watershed. Load allocations (total 10 yr. running annual avg. (in tons/yr): open space = 28,000; agriculture = 19,000; construction = 13,000; urban = 2,500.	Loading targets for seasonal and annual amounts of total nitrogen and phosphorus, with 5, 10, and 15-year target dates. Waste & load allocations for total nitrogen (5-year target) (in lbs/season): nursery = 67,344; Silverado Constr. = 25,671; urban = 20,785; agricultural = 22,963; open space & natural = 63,334. Waste & load allocations for total phosphorous (5-year target) (in lbs/yr): urban = 4,102; construction = 17,947; agricultural = 26,196; open space = 38,640.	Waste & load allocations (14 yr. target date): urban runoff (incl. storm water), agricultural runoff (incl. storm water), and natural sources = 5-day sample/30-day geometric means of less than 200 organisms/100 ml, no more than 10% of samples to exceed 400 organisms/100 ml for any 30-day period; vessel waste = 0.	282.1 g/yr PCB to San Diego Creek, 432.6 g/yr DDT to San Diego Creek, Diazinon: acute 80 ng/L; chronic 50 ng/L, chlorpyrifos: acute 20 ng/L; chronic 14 ng/L, toxaphene 8.9 g/yr, copper to Newport Bay 11,646 lbs/yr, selenium to San Diego Creek 891.4 ug/L.
Implementation	Monitoring and surveys conducted by the County, and cities of Irvine, Tustin, Lake Forest, Costa Mesa, Santa Ana, and Newport Beach with the financial participation of The Irvine Company. Maintenance of basins to performance standards and other requirements.	Agricultural Nutrient Management approved by Regional Board identifies management measures and guidance practices. Based upon monitoring studies, Regional Board will review and may revise the current nitrogen objective for San Diego Creek in the Basin Plan.	Monitoring plans resulting from studies conducted by County Health Care Agency. Monitoring study to determine appropriateness of current bacteria objectives and reduction target.	Phase out household use of diazinon and chlorpyrifos. DDT and PCBs – State conduct investigations or potential spill sites to identify hotspots and remedial action. Selenium – monitor flow, discharge management practices. Copper – reduce through five areas of action.

National Pollutant Discharge Elimination System MS 4 Permit

The City of Irvine is a co-permittee under the National Pollutant Discharge Elimination System (NPDES) program. A co-permittee is a permittee to an NPDES permit (i.e., Areawide Municipal Storm Water Permit) that is responsible for permit conditions relating to the discharge for which it is operator. As used in the Storm Water Permit Implementation Agreement, co-permittees are the County of Orange, its incorporated cities, and OCFCDD.

General Permits are issued administratively to a discharger after a completed Notice of Intent (NOI) or appropriate application has been filed and, if necessary, the Regional Board Executive Officer has determined that the discharger meets the conditions specified in the Permit. The Areawide and general NPDES permits contain waste discharge requirements for storm water and urban runoff from the County of Orange, the Orange County Flood Control District, and the incorporated cities of Orange County.

The Regional Board has issued a MSW (MS4) Permit to the County, the County Flood Control District, and most of the incorporated cities in the County, including the City of Irvine for their storm drain systems. (Regional Board Order 96-31) The Drainage Area Management Plan (DAMP) is a document required under the MSW permit granted to the co-permittees by the Santa Ana RWQCB. The DAMP contains required and recommended BMPs aimed at alleviating pollutant levels in stormwater runoff. BMPs are defined as "schedules of activity, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the pollution of 'waters of the United States'." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. A Revised DAMP is currently being prepared by the County with input from all Co-permittees. The proposed project will be required to comply with any new requirements or BMPs that are adopted as part of the revised DAMP.

The current DAMP established by the County and City pursuant to the Municipal Stormwater Permit relies upon BMPs instead of numeric effluent limitations to comply with the Basin Plan. The original DAMP was prepared in 1993 and has been revised several times, with the most recent revision in September 2000. The DAMP specifically addresses BMPs for new development. It describes the range of structural controls, such as filtration, and non-structural controls, such as education programs. The DAMP also includes other programs and requires the preparation of a Water Quality Management Plan to address post-construction water quality. The DAMP does not specify a minimum development size to be considered for BMP applications, nor does it specify which land uses should receive the most attention. In general, BMPs are required on a variety of land uses, both residential and non-residential.

Although the provisions of the draft MSW permit may still be modified prior to final vote on the permit, the current draft MSW permit contains the following requirements:

- Pollution in discharges from the Municipal Separate Storm Sewer System (MS4) must be reduced to the maximum extent practicable;
- Certain non-storm water discharges are conditionally allowed (such as irrigation return flows, non-commercial car wash water, fire fighting flows) but other non-storm water discharges to the MS4 are prohibited;

- Local governments must inspect and report upon certain commercial, industrial, and construction facilities on a specified schedule;
- Local governments are given specific guidance regarding the elimination of illicit and illegal connections to the MS4, regarding the repair of leaking sanitary sewer and septic lines that might discharge into the MS4, regarding water quality from municipally-owned construction and industrial properties, regarding mandatory citizen education programs, and regarding regional monitoring of water quality;
- Local governments must review their project approval process to focus upon specified water quality improvement goals;
- In lieu of an approved water quality management plan, or equivalent or alternative regional water quality controls, new development projects that have not received tentative tract map approval by July 1, 2003 must implement structural best management practices meeting a specific design standard (treatment, infiltration, or filtration of specified volumes or flow rates associated with a design storm event);
- By October 1, 2003, the permittees must review and revise the DAMP to reflect specific water quality goals set for new development and significant redevelopment and to make any other revisions to the document annually necessary to comply with the permit; during the revision process; the permittees must implement their existing requirements for new development;
- Discharges from the MS4 are subject to relevant waste load allocations established in the TMDLs for the area.

As indicated in Final EIR 563 and the Draft Supplemental Analysis, PA 51 and 30 have a current industrial site NPDES permit for stormwater runoff. At the time of base closure, numerous structural BMP controls were employed in PA 51 due to the high propensity for pollutant runoff from a variety of sources, including aircraft and vehicle fluids and the accidental release of hazardous materials and wastes into off-site water courses. Oil and water separators, properly permitted hazardous materials storage and use facilities, routine sweeping, and a Spill Prevention Countermeasure and Control (SPCC) Plan are among the BMPs implemented at the facility.

Additional BMPs suited for various types of development include first flush diversion, detention/retention basins, infiltration trenches/basins, porous pavement, grass swales, swirl concentrators, and engineering and design modification of existing structures. Non-structural BMPs include programs to educate the public on proper disposal of hazardous/toxic wastes, regulatory approaches, street sweeping and facility maintenance, and detection and elimination of illicit connections and illegal discharges. Prior to the issuance of a precise grading permit, each new development is required to submit a Water Quality Management Plan (WQMP) and implement appropriate non-structural and structural BMPs, in keeping with the size and type of development, to minimize the introduction of pollutants into the drainage system.

Surface Water Quality

The San Diego Creek and its tributaries ultimately flow to the Upper and Lower Newport Bay. Any water quality deficiencies upstream of Newport Bay are compounded when they reach the Bay and contribute to water quality problems. Urban and agricultural runoff are the primary constituents of storm water and pollutants conveyed to Newport Bay. As indicated in EIR 563 and in the Basin Plan, although BMP implementation in PA 51 (former

MCAS El Toro) and surrounding sites has been effective at reducing the discharge of contaminated water to flood control facilities, the entire Newport Bay watershed is characterized by relatively high levels of various pollutants.

The Water Quality Control Plan notes that San Diego Creek and certain portions of Newport Bay have shown high levels of trace metals and organics, thus the Bay's inclusion in the State Toxic Substances Monitoring Program and the Bay Protection and Toxic Cleanup Program. Additionally, the Basin Plan notes that nutrient loading to the Bay is high, particularly from the San Diego Creek watershed, as a result of nutrient-laden runoff from agricultural crops and nurseries. Such pollutants contribute to seasonal algal blooms, which can adversely affect recreational, aesthetic, and habitat beneficial uses of Newport Bay.

The EIR 563 Draft Supplemental Analysis recognized several water quality deficiencies of the project area flood control system. Those deficiencies related to the inability of the existing system (as of 1995) to minimize sediment loading and transport within the project area drainage facilities. High sedimentation levels in stormwater runoff were deemed indicative of reduced surface water quality, particularly during 100-year storm events. The specific facility deficiencies are described in detail in the EIR 563 Draft Supplemental Analysis. Additionally, the Basin Plan notes that erosion in the watershed and the resulting siltation in the Bay are a continual threat to the Bay's designated beneficial uses.

San Diego Creek, which is the largest drainage system in the watershed, accounts for approximately 94 percent of the sediment delivered to Newport Bay. Sediment loads result from erosion of open space lands in foothill areas and from urban activity in the watershed, including: extensive grading for development; increased runoff and channel erosion due to urbanization; and erosion of agricultural lands and unprotected channel embankments. Most deposition occurs during major storm events, although low-level transport occurs year-round. However, recent construction of and/or improvements to the Marshburn, Bee Canyon, Round Canyon, and Agua Chinon detention basins have reduced many of the identified capacity deficiencies, thereby improving sedimentation levels accordingly. Additionally, project-related detention and conveyance facility improvements are proposed as part of the proposed project, as discussed in following sections.

Groundwater Quality

Although most ground waters in the Region are considered suitable or potentially suitable as sources of drinking water, EIR 563 and the Basin Plan have documented the contamination of groundwater in the Irvine Forebay. Constituents include a variety of volatile organic compounds (VOCs) historically used in PA 51 (former MCAS El Toro), as well as contaminants related to past agricultural activities in PAs 51 and 30. Section 5.5 (Public Health and Safety) contains information about groundwater pollutant levels and the status of groundwater remediation activities.

5.7.2 Threshold For Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for hydrology and water quality.

Would the project:

1. *Violate any water quality standards or waste discharge requirements?*
2. *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*
3. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?*
4. *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*
5. *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*
6. *Otherwise substantially degrade water quality?*
7. *Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*
8. *Place within a 100-year flood hazards area structures which would impede or redirect flood flows?*
9. *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?*
10. *Cause inundation by seiche, tsunami or mudflow?*

As per the criteria provided in the WQCP for the Santa Ana River Basin, failure to implement the Plan would also result in a significant adverse environmental impact. Water quality would not be protected, thereby resulting in an adverse impact to the public and wildlife. An adverse impact on a beneficial use would also occur where there is an actual or threatened loss or impairment of that beneficial use.

Additionally, violations of waste discharge requirements (WDRs) or applicable statutory or regulatory requirements, as defined in the State Water Resources Control Board Water Quality Enforcement Policy (Resolution No. 96-030, as amended by Resolution No. 97-085), would result in a significant environmental impact.

5.7.3 Environmental Impact

The following analysis focuses on the potential hydrology and water quality impacts associated with implementation of the Base Plan and the Overlay Plan for the former MCAS El Toro (PAs 51 and 30). The Musick Branch Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. As a result, implementation of the proposed project will not result in a significant hydrology or water quality impact associated with the annexation of the James A. Musick Jail Facility and the IRWD Parcel.

Threshold 1: Violate any water quality standards or waste discharge requirements?

Base Plan and Overlay Plan

Grading and excavation activities required for future development could result in the exposure of bare soils which could result in both wind and water-related erosion, and a significant water quality impact if not properly treated. Through buildout of the proposed project, wind and water related erosion has the potential to violate water quality standards or waste discharge requirements. This is considered a significant impact.

Threshold 2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Base Plan and Overlay Plan

Previous analyses, including Final EIR 563 and the EIR 563 Draft Supplemental Analysis, indicate that proposed development in the project area will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. This issue is not considered a significant impact. Groundwater quality and ongoing military base remediation activities are discussed in detail in Section 5.5 (Public Health and Safety).

Threshold 3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Base Plan and Overlay Plan

The project will not substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site. No significant impact to this issue is anticipated. All proposed stormwater conveyance and detention facilities are intended to reduce siltation in area flood control facilities, including San Diego Creek and in the receiving waters of Newport Bay. As flood control improvements are implemented, they will augment capacity within existing channels and facilities but will not substantially alter the existing drainage pattern of the site or area in a way that would result in substantial erosion or siltation on- or off-site. Future development will be planned and phased in accordance with the capacities of existing or planned stormwater drainage systems and pollutant reduction programs.

Threshold 4: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Base Plan and Overlay Plan

The existing drainage patterns of the project site will not be substantially altered nor will stream courses or rivers be substantially altered. With recent improvements to upstream flood control facilities, the floodplain area has likely decreased and fewer areas of the project area are subject to inundation. The phasing of the flood control system improvements in PAs 51 and 30 will be coordinated with the street-phasing schedule so that the storm drains are installed prior to or in concert with road construction. Improvements to the flood control system shall be evenly scheduled during the various phases of development. The City's DAMP requires that increased surface flow due to increased impervious surfaces be minimized. The DAMP requires that BMPs be implemented in order to reduce increased runoff to stormdrains. The project proposed flood control facilities that will control runoff on-site. However, without proposed project drainage improvements a substantial increase in the rate or amount of surface runoff due to new development in localized areas may occur, resulting in flooding on- or off-site depending on the future proposed development, and it must be assured that proposed flood control facilities are implemented. The potential for flooding to occur on- or off-site as a result of future development of the project area is considered a significant impact.

Threshold 5: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Base Plan and Overlay Plan

The "Regional Flood Control Master Plan for San Diego Creek" (John M. Tettner and Associates, April 1989) analyzed various drainage areas within the San Diego Creek watershed and provides a summary of proposed improvements within the watershed to accommodate the 100-year storm. Various components of the Master Plan have been implemented as projects within the drainage basin have been constructed. Construction of

the Foothill Transportation Corridor in the 1990's included construction of Bee Canyon Retarding Basin as well as the Round Canyon Retarding Basin. The Agua Chinon and Marshburn Retarding Basins have also been built. Improvements to the Marshburn Channel downstream of Trabuco Road to the I-5 Freeway were done in conjunction with the construction of the Eastern Transportation Corridor. These improvements were built on the basis of the 1989 Master Plan recommendations. The four retarding basins, located upstream of the El Toro Marine Base site, have dramatically restricted storm flows entering on to the base property.

As part of site planning for the reuse of the former MCAS El Toro, a hydrology study for the 100-year storm was prepared based on the Orange County Hydrology Manual (BV Engineering, March 2002). Design discharges were developed and compared against values found in the 1989 Master Plan report. The Orange County Unit Hydrograph method was used to generate peak flows for the sub-drainage areas. Table 5.7-3 provides a summary of the peak flows:

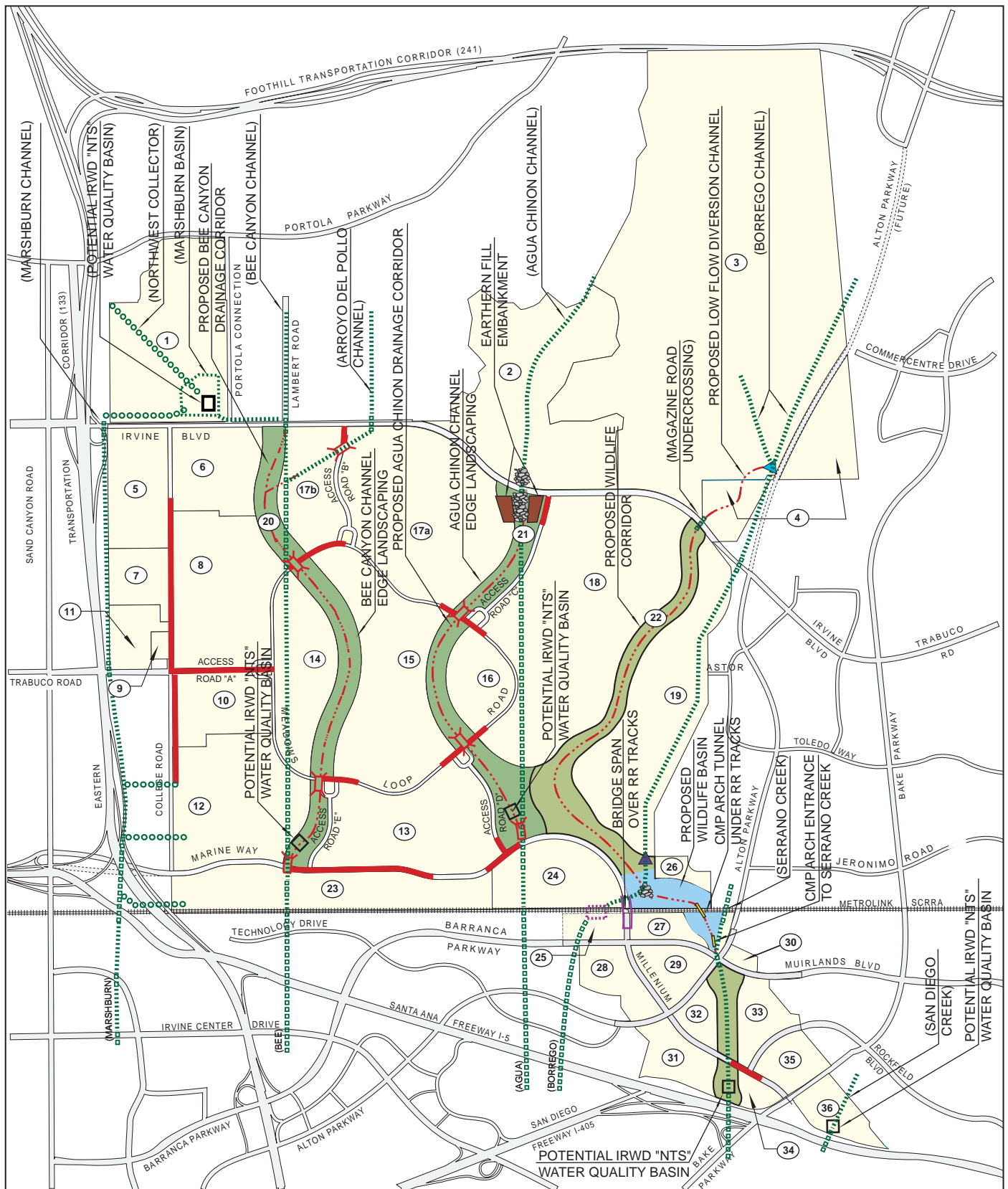
**Table 5.7-3
Summary of Peak Flows**

Channel	Subareas Designation	1989 Master Plan Report Peak Flows (cfs)
Marshburn	C30A	902
	C30C	168
	C30B	1084
	C31A	592
	C31B	480
Bee Canyon	L24A	1850
Chinon Channel	B19A	3076
Borrego Canyon	B14	5592

Source: BV Engineering, March 2002.

In order to address stormwater flows on the project site, a drainage concept plan has been prepared for the proposed project. Pipe locations and sizing, and proposed drainage channels were developed based upon anticipated runoff from various land uses so as to maintain and improve the existing level of flood control service. The proposed systems all drain into existing County of Orange regional facilities.

The backbone flood control system for the PA 51 and PA 30 components of the project area is based on proposed land uses and subsequent development potential. The proposed storm drain system is shown in Figure 5.7-2. The proposed storm drain system calculations were prepared assuming 25-year flows would be conveyed in the pipe with the streets carrying the incremental difference during a 100-year occurrence. The Orange County Hydrology Manual Rational Method was used to estimate peak runoffs in the systems. Storm runoff was estimated by applying appropriate runoff values for the various land uses in the site. The conceptual storm drain system, shown in Figure 5.7-2, takes into consideration and implements improvements identified in the Flood Control Master Plan for San Diego Creek. The drainage boundaries for each drainage facility identified in that master plan was maintained when the proposed system was analyzed.



Source: Fuscoe Engineering, City of Irvine, 2002.

LEGEND

- ① Parcel Number (Typical)
- EXISTING STORM DRAIN FACILITIES**
- Buried Pipeline
 - At Grade Open Channel
 - Buried Box Culvert Channel
 - Buried Box Culvert Crossing

- Railroad Trestle
- Basin

PROPOSED STORM DRAIN FACILITIES

- Stream Flowline
- Buried Culvert w/ Inlet & Outlet Structures
- Rip Rap Lining
- Storm Drain Pipe

- ▲ Borrego Channel Drop Structure
- ▲ Low Flow Division Structure At Borrego Creek

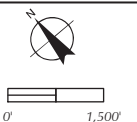


Figure 5.7-2
Proposed Drainage System

The Orange County Flood Control District (OCFD) is the local governmental body with jurisdiction for flood protection in the San Diego Creek watershed. In 1989, flood control consultants John Tettemer and Associates produced a study of the San Diego Creek watershed areas that was converted into a Flood Control Master Plan (FCMP) and subsequently adopted by the Orange County Public Facilities and Resources Department (formerly the Orange County Environmental Management Agency), the Irvine Company, and the cities of Irvine and Tustin. The OCFD maintains the FCMP which specifies comprehensive flood control measures designed to protect the basin from a 100-year return interval storm event by identifying specific flood control improvements for the San Diego Creek watershed drainage channels and devices. The FCMP is currently being implemented in phases as development occurs in the watershed.

The proposed drainage plan for the project is based on an earthen open channel and landscaped drainage corridor (corridor) method. A typical "corridor" consists of a trapezoidal channel cross-section that is four to six feet deep and up to 500 feet wide with side slopes climbing at a rate of five to ten percent, depending on the location. A "strip" approximately 100 feet in width containing the streamline and the lowest portion of the side slopes is proposed to be protected by natural riparian plant types. Adjacent to the riparian strip, the corridor is proposed to be planted to the edges with a conventional landscaping palette.

The proposed improvements for each of the major drainage areas are described below:

Marshburn Channel. Under the proposed plan, the Marshburn Channel detention basin and Marshburn Channel will remain substantially unchanged and will continue to be owned and operated by the OCFCD. Under this arrangement, proposed on-site improvements will be restricted only to the extension of an existing 66" diameter pipe branch departing the main channel. Connecting to the Marshburn Channel in the southwest corner of the site, the new storm drain installation would capture runoff from the westerly most portion of the former base for conveyance to the main channel. In the future, off-site FCMP facilities may be constructed separately by other projects, however, off-site improvements are not proposed as part of this project. These improvements include 2,000 lineal feet of concrete box channel measuring nine feet wide by ten feet high serving as an inlet to the existing detention basin, 3,200 lineal feet of spiral ring pipe, measuring 120 inches in diameter used to supplement a similar pipe inlet to the existing detention basin, 1,400 lineal feet of reinforced concrete pipe measuring 96 inches in diameter to replace the existing collector channel adjacent to Irvine Boulevard, and 2,000 lineal feet of concrete box channel measuring 14 feet wide by six feet high to replace the existing trapezoidal section main channel adjacent to the Eastern Transportation Corridor between Irvine Boulevard and Trabuco Road. No additional downstream improvements are necessary since the existing channel discharge capacity is adequate to transmit tributary flow.

Bee Canyon Channel. Under the proposed plan, the Bee Canyon Channel, upstream of Irvine Boulevard, would remain substantially unchanged and would continue to be maintained by the present owner. Downstream (south) of Irvine Boulevard, in selected locations, the existing concrete box culverts and open channels would be demolished and replaced with the corridor cross-section and supporting internal culvert crossings, and storm drain laterals. The corridor measures approximately 10,200 feet in length. Further downstream, in the vicinity of the SCRRA railroad tracks, the new drainage corridor would reconnect to the existing Bee Canyon Channel. Continuing downstream, the channel would

cross the railroad and depart the project site via a reinforced concrete box measuring 12 feet wide by nine feet high that will be protected in place. No additional downstream improvements are necessary since the existing channel discharge capacity is adequate to transmit the tributary flow from the project.

Agua Chinon Channel. Under the proposed plan, the Agua Chinon Channel, upstream of Irvine Boulevard, would remain substantially unchanged and would continue to be maintained by the present owner. At Irvine Boulevard, the existing concrete box culvert crossing will be protected in place. Immediately upstream and downstream of the culvert location, the existing earthen channel will be improved with a riprap lining. Downstream from that location, the plan proposes selected demolition of the existing concrete box culverts and open channels and replacement with the corridor cross-section; and supporting internal culvert crossings and storm drain laterals. The corridor is approximately 8,000 feet in length. Further downstream, in the vicinity of the SCCRA railroad tracks, the new drainage corridor would reconnect to the existing Agua Chinon Channel. Continuing downstream, the channel would cross the railroad tracks and depart the project site via a reinforced concrete box measuring 12 feet wide by ten feet high that is proposed to be protected in place. No additional downstream improvements are necessary since the existing channel discharge capacity is adequate to transmit tributary flow.

Borrego Channel, Wildlife Corridor and Serrano Creek. The upstream reach of Borrego Channel east of Irvine Boulevard currently consists of a natural wash flowing down from the Santa Ana Mountains. Runoff flows beneath the intersection of Irvine Boulevard and Alton Parkway in a dual barrel culvert crossing which outlets to a trapezoidal section channel measuring 25 feet wide by six feet high, traveling 2,800 feet to the southwest. At the end of the trap channel section, the channel transitions into a vertical wall-reinforced concrete section measuring 25 feet wide by nine feet high. From there, the channel continues for approximately 4,000 lineal feet into the vicinity of the SCRRRA railroad tracks, where it curves to the northwest and transitions into a rock lined earthen channel. This rock-lined channel travels about 600 lineal feet to a point where it crosses the railroad tracks, ultimately discharging runoff downstream into an OCFCD regional drainage facility. No additional downstream improvements are necessary since the existing channel discharge capacity is adequate to transmit tributary flow.

Under the proposed project, the Borrego Channel would be modified to initially release upstream and later recapture downstream, low flow water rerouted out of the existing wash and into a new Wildlife Corridor (as described in Section 5.9 Biological Resources of this Final Program EIR). East of Irvine Boulevard, in the upstream reach of Borrego Wash, a concrete structure will be constructed to divert flow out of the wash streamline. From that point, a shallow channel would be constructed to convey the flow toward and through the existing Magazine Road tunnel below Irvine Boulevard to the entrance of the proposed Wildlife Corridor. Diverted flow will travel in the new corridor streamline to a downstream location in the vicinity of the SCRRRA railroad tracks near the Borrego Channel. At this location, Borrego Channel will be covered with a reinforced concrete roof span and buried below the earthen fill. Low flow runoff that is diverted from Borrego Wash into the wildlife corridor will arrive at this location, will cross over the buried Borrego Channel and flow toward a new catch basin inlet where it is recaptured and returned northwesterly to the rock lined section of the Borrego Channel via a storm drain lateral.

From the Magazine Road tunnel to the recapture inlet, the proposed wildlife corridor will be approximately 9,000 lineal feet and generally parallels Borrego Channel. It has a cross section and landscaping matching the descriptions previously given for depth, side slope, and ground cover. At the recapture inlet, intercepted low flow will be redirected to the northwest, while the wildlife corridor will continue southeasterly toward a connection to Serrano Creek. Along the southeasterly route, wildlife movement will be channeled through a proposed 15 foot wide by 12 foot high corrugated metal arch tunnel crossing below the SCRRA railroad. The tunnel will emerge on the southerly side of the railroad, where the corridor continues uncovered for 700 lineal feet to a second arch tunnel of a similar configuration. The second tunnel will be built to permit wildlife movement into the existing Serrano Creek Channel at the intersection of Barranca Parkway and Alton Parkway. Below the Barranca-Alton intersection, a triple ten foot high by ten foot wide reinforced concrete box culvert will allow wildlife movement to proceed south in Serrano Creek to the project boundary at the I-5 Freeway.

San Diego Creek. At the southerly most point of PA 30 is the San Diego Creek. It is an unimproved earthen channel that will be replaced with 1,000 lineal feet of buried storm drain conduit measuring 96 inches in diameter.

With recent improvements to upstream flood control facilities, the floodplain area has likely decreased and fewer areas of the project area are subject to inundation. The phasing of the flood control system improvements in PAs 51 and 30 will be coordinated with the street-phasing schedule so that the storm drains are installed prior to or in concert with road construction. Improvements to the flood control system shall be evenly scheduled during the various phases of development. However, without proposed project drainage improvements a substantial increase in the rate or amount of surface runoff due to new development in localized areas may occur, resulting in flooding on- or off-site depending on the future proposed development. This is considered a significant impact.

Threshold 6: Otherwise substantially degrade water quality?

Base Plan and Overlay Plan

Flood control conveyance and detention facilities that are proposed to be implemented during project buildout will comply with the requirements of the Basin Plan and decrease the project area contribution to sediment loading and toxic pollutants in downstream facilities and the receiving waters of Newport Bay.

The Irvine Ranch Water District (IRWD) is proposing installation of “natural treatment system” (NTS) basins that will capture and treat dry weather flow. The proposed system consists of NTS detention basins of varying dimension and capacity, selectively situated throughout the watershed. The basins will cleanse surface water by impounding low flow. As the impounded water in the basin accumulates, the “natural ecosystem process” works to remove sediments, nutrients, pathogens, and other contaminants from impounded flow. To address potential water quality issues as a result of proposed development under the plan, NTS basins (or equivalent) will be placed in or adjacent to the stream paths of the Bee Canyon, Agua Chinon, Serrano and San Diego Creek Channels and Marshburn Basin. The basins or equivalent will mitigate regional water quality impacts. Additionally, mitigation of on-site water quality impacts will be provided on the project site in accordance with the requirements of the NPDES program.

As per the requirements of the Regional Water Quality Control Board, proposed projects occurring upstream of or discharging into impaired waterbodies listed on the Clean Water Act Section 303(D) list may be subject to additional controls (specifically Total Maximum Daily Loads or TMDLs) pursuant to that regulation. Depending on the specific type of project proposed, these controls could include discharge prohibitions, revisions to discharge permits, or management plans to address water quality impacts. This is especially important in the Newport Bay watershed. At this program level of planning, the potential to degrade surface water quality is considered a significant impact.

Threshold 7: Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary of Flood Insurance Rate Map or other flood hazard delineation map?

Base Plan and Overlay Plan

With recent improvements to upstream flood control facilities, the floodplain area has likely decreased and fewer areas of the project are subject to inundation. The exact boundaries of the 100-year floodplain in PA 51 and 30 is unknown at this time. The entire County of Orange Flood Insurance Rate Maps (FIRMs) are being revised by the Federal Emergency Management Agency (FEMA). At the request of the City of Irvine, the revisions will add the former MCAS El Toro to the FIRMs. When the FIRMs were originally prepared, Federal lands were not included, but are now being added as those lands change into non-Federal ownership. The revised FIRMs are due to be completed in the spring of 2003. Developers with property located in the newly delineated 100-year floodplain will be required to construct such improvements as necessary to remove the property from the 100-year floodplain and to prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request is filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from property. After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process. The potential for placement of housing within a 100-year floodplain is low; however, at this program level of environmental review, this issue is considered significant. FEMA maps, or Flood Insurance Rate Maps (FIRMs) have not been prepared for the project area as the area is still currently federal property.

Project development is proposed in areas of PAs 51 and 30. Existing and proposed development within these areas could be subject to potential flooding associated with a 100-year frequency storm. This is considered a significant impact.

Threshold 8: Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Base Plan and Overlay Plan

With recent improvements to upstream flood control facilities, the floodplain area has likely decreased and fewer areas of the project are subject to inundation. The exact location of the 100-year floodplain in PAs 51 and 30 is unknown at this time. During the site planning process for the project area the 100-year floodplain boundary shall be delineated in order to

accurately ascertain flood-prone areas and development constraints. The potential for the placement of structures within a 100-year floodplain is considered a significant impact. Updates to existing Federal Emergency Management Agency (FEMA) flood hazard maps may already have been processed as flood control improvements have been completed and will be reflected in future site plans. The City will coordinate floodplain delineation efforts with the Orange County Flood Control District and FEMA.

Project development is proposed in areas of PAs 51 and 30. Existing and proposed development within these areas could be subject to potential flooding associated with a 100-year frequency storm. This is considered a significant impact.

Threshold 9: Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Base Plan and Overlay Plan

The proposed project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam because there is not a levee or a dam in the vicinity of the project area. The impact to this issue is not considered significant.

Threshold 10: Would the project result in inundation by seiche, tsunami or mudflow?

Base Plan and Overlay Plan

The proposed project would not place people or structures in a location that would be adversely affected by a seiche, tsunami or mudflow. There is not a dam or levee in the vicinity of the project site that could result in a potentially harmful seiche or mudflow resulting from an earthquake. The project site is located far enough from the shoreline as to avoid the adverse affects of a tsunami. The impact to this issue is not considered significant.

5.7.4 Significant Impacts

Base Plan and Overlay Plan

H/WQ 1. Grading and excavation activities required for future development could result in the exposure of bare soils which could result in both wind and water-related erosion, and a significant water quality impact if not properly treated. Through buildout of the proposed project, wind and water related erosion has the potential to violate water quality standards or waste discharge requirements. This is considered a significant impact. Implementation of Mitigation Measures HW1 and HW2 will reduce the impact associated with the potential to violate water quality standards and waste discharge requirements to a level less than significant.

Additionally, a Storm Water Pollution Prevention Plan (SWPPP), Water Quality Management Plan (WQMP) will be prepared. A Notice of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the City Engineer for: a) any disturbance of one acre or more of soil in the project area; b) General Dewatering NPDES Permit of the Santa Ana RWQCB; and c) provisions of the Countywide Permit.

These measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned, designed, and constructed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future.

- H/WQ 2.** Improvements to the flood control system shall be evenly scheduled during the various phases of development. However, a substantial increase in the rate or amount of surface runoff due to new development may occur, resulting in flooding on- or off-site depending on the future proposed development. The potential for flooding to occur on-or off-site as a result of future development of the project area is considered a significant impact. Implementation of Mitigation Measure HW3 will reduce this impact to a level less than significant.
- H/WQ 3.** With recent improvements to upstream flood control facilities, the floodplain area has likely decreased and fewer areas of the project area are subject to inundation. The phasing of the flood control system improvements in PAs 51 and 30 will be coordinated with the street-phasing schedule so that the storm drains are installed prior to or in concert with road construction. Improvements to the flood control system shall be evenly scheduled during the various phases of development. However, a substantial increase in the rate or amount of surface runoff due to new development may occur, resulting in flooding on- or off-site depending on the future proposed development. This is considered a significant impact. Implementation of Mitigation Measure HW3 will reduce on- or off-site flooding due to surface runoff to a level less than significant.
- H/WQ 4.** As per the requirements of the Regional Water Quality Control Board, proposed projects occurring upstream of or discharging into impaired waterbodies listed on the Clean Water Act Section 303(D) list may be subject to additional controls (specifically Total Maximum Daily Loads or TMDLs) pursuant to that regulation. Depending on the specific type of project proposed, these controls could include discharge prohibitions, revisions to discharge permits or management plans to address water quality impacts. This is especially important in the Newport Bay watershed. At this program level of planning, the potential to degrade surface water quality is considered a significant impact. Implementation of Mitigation Measure

HW1 will reduce the impact of future development on surface water quality to a level less than significant.

Additionally, a Storm Water Pollution Prevention Plan (SWPPP), Water Quality Management Plan (WQMP), Notice of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the City Engineer for: a) any disturbance of one acre or more of soil in the project area; b) General Dewatering NPDES Permit of the Santa Ana RWQCB; and c) provisions of the Countywide Permit.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Grading or building permit applicants will be required to submit and obtain approval of a Water Quality Management Plan (WQMP) from the City of Irvine prior to issuance of the permits. The WQMP will specifically identify BMPs that will be used on-site to control predictable pollutant runoff. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.), and shall reference the location(s) of structural BMPs.

Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

- H/WQ 5.** Project development is proposed in areas of PAs 51 and 30. Existing and proposed development within these areas could be subject to potential flooding associated with a 100-year frequency storm. Mitigation Measure HW4 will reduce the impact of exposure of future residential development in the project area to a level less than significant.

5.7.5 Mitigation Measures

Base Plan and Overlay Plan

- H/WQ 1.** Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City of Irvine adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will

ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area . . . and residential construction sites that result in the disturbance of five acres or more . . . shall be required to develop and implement BMPs . . . to control erosion and siltation and contaminated runoff from the construction sites." Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of one acre or more.

The City's standard conditions of approval indicate that a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.

Additionally, prior to the issuance of a grading permit, project applicants must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.), and shall reference the location(s) of structural BMPs.

Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the Director of Community Development for any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES Permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

- H/WQ 2.** Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TDML) Implementation Plan adopted for this watershed.
- H/WQ 3.** Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrology studies and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.
- H/WQ 4.** Prior to issuance of a building permit, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.
- After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process.

5.7.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Less than significant.

Notes and References

1. County of Orange. *MCAS El Toro Community Reuse Plan DEIR No. 563, Volume 1*. 1996.
2. County of Orange. *Draft Supplemental Analysis for EIR No. 563*. 1999.

3. City of Irvine. *Draft Urban Services Plan for the El Toro Annexation*. Cotton/Beland/Associates. October 1999.
4. City of Irvine. *Irvine Planning Area 30, GPA/ZC-#21633-GA/#21635-ZC FEIR*. 1996.
5. *ETRPA Millennium/MCAS El Toro Reuse Plan Technical Appendices*. 1998.
6. City of Irvine. *General Plan*. March 9, 1999.
7. Tettemer, John A. and Associates. *Flood Control Master Plan for San Diego Creek*. 1989.

5.8 Agricultural Resources

5.8.1 Environmental Setting

To assess potential impacts to agricultural resources, lands classified as agricultural land by the California Department of Conservation and any land in the project area that is currently used for agricultural production, zoned for agricultural use, or within a Williamson Act contract, must be identified.

Agricultural Classifications Within the Project Area

The California Department of Conservation, through the Farmland Mapping and Monitoring Program (FMMP) of the Division of Land Resource Protection defines classifications of agricultural lands as follows:

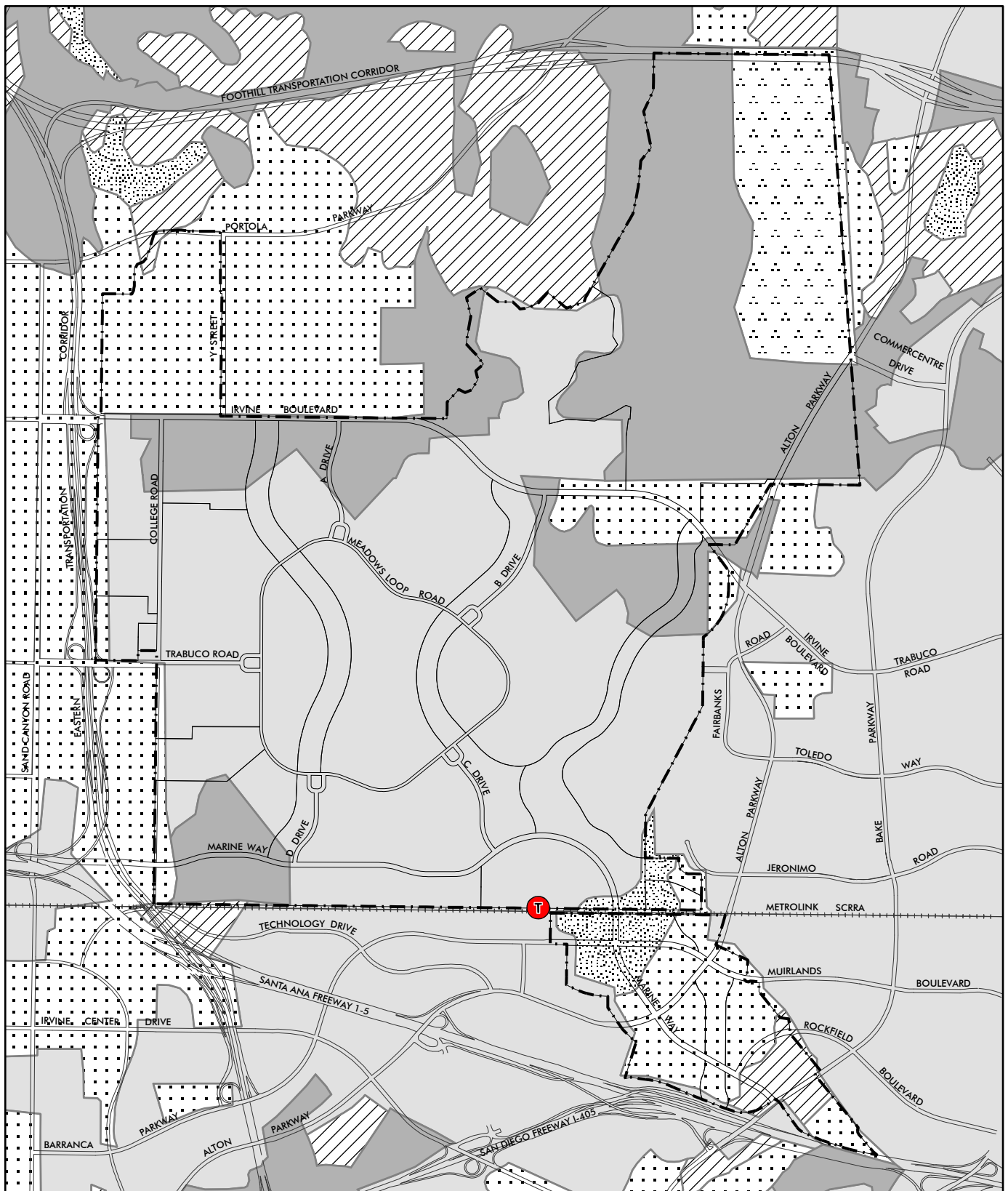
Prime Farmland: Land which has the best combination of physical and chemical features able to sustain long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for production of irrigated crops at some time during the previous two map updates.

Farmland of Statewide Importance: Similar to Prime Farmland that has a good combination of physical and chemical features able to sustain long-term production of agricultural crops. This land has minor shortcomings, such as greater slopes or less ability to store soil moisture than Prime Farmland. Land must have been used for production of irrigated crops at some time during the two previous map updates.

Unique Farmland: Lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. This land is used for the production of specific high economic value crops such as oranges, olives, avocados, rice, grapes, or cut flowers. Land must have been cropped at some time during the two previous map updates.

Farmland of Local Importance: Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

The Orange County Board of Supervisors has not designated any farmland as being of "Local Importance." Table 5.8-1 shows the approximate acreages of the different FMMP agricultural classifications within the project area. The location of these farmland classifications is depicted in Figure 5.8-1.



Source: California Department of Conservation, Farmland Mapping and Monitoring Program, 2000.

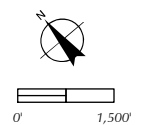
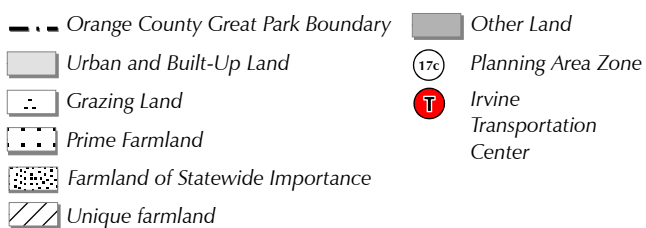


Figure 5.8-1
Agricultural Resources

**Table 5.8-1
Existing Agricultural Classifications Within
the Project Area**

Agriculture Classification	Approximate Acreage
Prime Farmland	659*
Farmland of Statewide Importance	99
Unique Farmland	70

Source: California Department of Conservation FMMP, 2002.

* includes 55 acres on the Musick Jail Facility

Surrounding Agricultural Classifications

The project area is adjacent to unincorporated land within the City of Irvine's Sphere of Influence and incorporated areas of Irvine and Lake Forest. As shown in Figure 5.8-1, land to the north and west of the project area is identified as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland by the FMMP. The remainder of existing agricultural land within the City of Irvine (including all of the existing agricultural land within the project site) is designated for urban uses, and agriculture is only designated as an interim use until the land is developed.

Orange County Agriculture Conversion

Table 5.8-2 depicts the conversion of agricultural land to non-agricultural uses within Orange County from 1998-2000. As depicted in this table, 10,127 acres of Prime Farmland, 763 acres of Farmland of Statewide Importance and 6,063 acres of Unique Farmland were inventoried in Orange County in 2000. Based on the County's total acreage, the lands identified by the FMMP for the project site as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland comprise seven, 13, and one percent of the County's total acreage of these categories, respectively.

As can be seen in Table 5.8-2, a net loss of agricultural lands within Orange County occurred from 1998 to 2000. This trend is expected to continue as the increase in population continues to create pressure for new housing and employment opportunities.

Lands in Agricultural Production

Portions of the project area are within agricultural production. Specifically, portions of PAs 51 and 30 are currently leased for agricultural uses, and approximately 55 acres of PA 35 are used for agricultural production associated with the James A. Musick Jail operation. No agriculture is contained on the IRWD parcel.

Table 5.8-2
Orange County
Change In Land Use Summary

Land Use Category	Total Acreage Inventoried		1998-00 Acreage Changes			
	1998	2000	Acres Lost (-)	Acres Gained (+)	Total Acreage Changed	Net Acreage Changed
Prime Farmland	11,099	10,127	985	13	998	-972
Farmland of Statewide Importance	842	763	83	4	87	-79
Unique Farmland	6,259	6,063	264	68	332	-196
Farmland of Local Importance	0	0	0	0	0	0
Important Farmland Subtotal	18,200	16,953	1,332	85	1,417	-1,247
Grazing Land	38,518	37,964	660	106	766	-554
Agricultural Land Subtotal	56,718	54,917	1,992	191	2,183	-1,801
Urban and Built-Up Land	269,986	273,383	592	3,989	4,581	3,397
Other Land	181,770	180,174	2,351	755	3,106	-1,596
Water Area	986	986	0	0	0	0
Total Area Inventoried	509,460	509,460	4,935	4,935	9,870	0

Source: Farmland Conversion Report 1998 to 2000 (Department of Conservation).

(1) Total area inventoried differs from previously reported acreage due to adoption of 1:24,000 digital county boundary file and conversion to Albers Equal Area Projection.

Williamson Act

All of the identified agricultural land within PAs 51 and 30 is currently in governmental ownership and is exempt from taxes; no agricultural land within the project area is currently covered by Williamson Act contracts. Williamson Act contracts with private landowners in the vicinity of the project area have been noticed for non-renewal by the landowners and all contracts have terminated as of July 1999.

City of Irvine Policies and Programs

Build-out of the City of Irvine and its Sphere of Influence in accordance with the General Plan would result in the conversion of open space, including agricultural land, to urban use. In the City of Irvine Comprehensive General Plan Update – Phase 2 and Zoning Ordinance Update – Phase VI Master EIR (State Clearinghouse #93-111034), this was considered a potentially significant impact.

In accordance with the policies and programs of the Conservation and Open Space Element, the General Plan Land Use Diagram designates large areas in the City and Sphere of Influence for permanent open space. Over time, as build-out of the City occurs, these lands will all be dedicated and placed in public ownership through the City's Phased Dedication and Compensating Development Program.

The City of Irvine General Plan includes as a stated objective the protection and preservation of agriculture in undeveloped areas until the areas are ready for development, or if the areas are not available for development (Objective L-10). In June 2002, the City of

Irvine amended General Plan Objective L-10 regarding the City's policies related to agriculture. The purpose of this amendment was to address the cumulative loss of agricultural resources in Irvine and Orange County as a whole. The revised amendment, as follows, shifted the emphasis from retention of agriculture for open space relief (which the community achieves through its Phased Dedication and Compensating Development Program) to a retention of smaller scale agricultural operations for heritage value.

Objective L-10: Agriculture

"Encourage the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development. "

Policy (a): Provide for farming opportunities in the community, where feasible and appropriate, through an Agricultural Legacy Program facilitating limited scale agricultural operations and programs on public lands. The program may include components such as edible landscape, metro-farming, heritage farming, model farming, education and community service farming and other farm or farm market programs. Locations for implementation of the Agricultural Legacy Program to be considered should, at a minimum, include:

- C Designated open space spine network
- C Designated open space areas not subject to the Natural Community Conservation Plan (NCCP)
- C Other appropriate publicly owned lands

Policy (b): Consider creating a "working model" farm to act as a center for education and enjoyment of all age groups pursuant to the Agricultural Legacy Program in conjunction with the City's planning efforts concerning the reuse of MCAS El Toro, or with the Couth Coast Research Extension owned by UC Regents.

Policy (c): Permit agricultural use of land which is unsuitable for building because it is within flood plains, or is subject to hazards to public health, safety, and welfare or similar constraints precluding development. Conversion from agricultural use may be allowed where the identified hazard conditions have been eliminated.

Policy (d): Permit agriculture uses, on an interim bases, on land designated for development, and consider agricultural uses as part of the City's planning efforts for the re-use of MCAS El Toro.

Policy (e): Encourage and support federal and state legislation proposed for the purpose of preservation of agricultural lands which are compatible with the City's goals and objectives.

Policy (f): Allow for conversion of interim and permanent agricultural uses to development to provide land for the construction of housing units consistent with the Land Use and Housing Elements, and the development of commercial and industrial buildings consistent with the provision of job opportunities as described in

the Land Use Element, where such conversion does not conflict with other L-10 policies.

Policy (g): Pursue the open space policies contained in the Conservation and Open Space Element and address any open space or aesthetic impacts from the conversion of interim and permanent agricultural uses to development as part of the City's existing policies for the preservation of open space and existing policies for mitigation of views and aesthetic impacts under the policies in the Conservation and Open Space Element.

PAs 51 and 30 are currently designated for a variety of urban uses in the City of Irvine General Plan. The jail and IRWD parcels are designated for Public Facilities. No portion of the project area is presently designated agriculture on the City's Conservation and Open Space or Land Use Element diagrams. However, this does not preclude agricultural use. In keeping with the policies above, the project encourages agriculture as an interim land use prior to development of the land.

Agricultural Legacy Program

The purpose of the Agricultural Legacy Program outlined in Policy L-10 is to facilitate limited scale agricultural operations and programs on public lands within Irvine. As part of the Agricultural Legacy Program, specific sites in Irvine will be made available for metro farming within the next five years. Metro farming generally includes small scale agricultural operations and activities that can be accommodated in an urban environment. Such activities could include, but not be limited to, small-scale specialty farming, model farming, heritage farming, and community service/educational farming. One example of a metro-farming operation is an Edible Landscape Program, a heritage farming operation involving Southern California Edison easements, where produce is grown within the public easements and sold by the farmer.

The City identified the following areas as having the soils and other qualities that make them candidates for metro-farming, subject to further evaluation:

- C Approximately 100 acres within Planning Area 6. These areas are currently proposed for development as part of the Northern Sphere Project, but may be made available for agricultural use.
- C Approximately 11 acres within the Jeffrey Open Space Spine south of Interstate 5, between Walnut Avenue and the railroad right-of-way.
- C Approximately 266 acres within Planning Area 16 (Implementation Districts G and H). Habitat sensitive agricultural operations could be considered within this area.
- C Approximately 51 acres within minor preservation areas P-10 and P-13.
- C Easements or public lands, including land within the former MCAS El Toro designated for agricultural uses in accordance with any re-use plan.

The Irvine Company and the City of Irvine are in the process of further evaluating potential sites to include in the Agricultural Legacy Program. Specific sites that may be suitable for implementation of the Agricultural Legacy Program, as well as Southern California Edison (SCE) easements/properties in general are currently being considered. The Draft Technical Memorandum for the Irvine Agricultural Legacy Program Preliminary Sites Assessment (City of Irvine November 26, 2002) identifies potential sites as well suited for inclusion in the Agricultural Legacy Program due to its soils, local and regional access, established nursery operations, and topography. Site 5 (SA-1 of the project area, which is a portion of PA 51) is included as a potential site for implementation of the Agricultural Legacy Program. Both the Base Plan and Overlay Plan propose Agriculture land use and zoning designations in this portion of PA-51.

In the past few years the City has been considering conversion of agricultural lands in three remaining areas of the City and its Sphere of Influence – the Northern Sphere, Spectrum 8, and the proposed project site. The City has examined the combined, or cumulative impact of the conversion of agricultural lands, and has also examined potential locations for agricultural land to be preserved as mitigation for some or all of the conversions of agricultural land considered in these areas. The City has also examined potential City-wide mitigation and fee programs for all of these conversions, and has concluded that it is not appropriate or feasible to preserve large scale agricultural operations, or to adopt a fee program designed to generate revenue to acquire agricultural lands elsewhere.

The City has adopted its Agricultural Heritage program which is designed to mitigate impacts on a City-wide basis as part of the City's implementation of General Plan Policy L-10 as amended in June 2002. Policy L-10 was intended by the City to apply throughout the City and its sphere areas. As part of its current proposed development plan for the Orange County Great Park, the City has designated agricultural land to be preserved, in addition to the land that would be included in the City's Agricultural Heritage program. Beyond these preserved areas, and looking at this issue on a combined basis, and in the context of each project, the City has determined that there are no additional areas within each of these areas that are suitable for agricultural preservation.

Long Term Viability of Large Scale Agricultural Production in Orange County

Even apart from the perceived potential for the conversion of agricultural uses to other uses due to development pressure, the long-term viability of agricultural production in Orange County in general continues to deteriorate. Factors that impact the viability of agricultural uses include: 1) the cost of land; 2) the cost of water; 3) the cost of labor; 4) property taxes; 5) the impact of urbanization; 6) competition; and 7) the impact of environmental regulation.

Land Value: Land prices in Orange County for raw land in the vicinity of the proposed project range from about \$600,000 to \$1,000,000 per acre, depending upon variables such as location, intended uses, existing infrastructure, existing land use entitlements, land constraints, and other issues. Agricultural production is considered not to be viable on any parcel valued at more than \$30,000-\$35,000 per acre, since a reasonable rent based on these land values would be prohibitive to a profitable agricultural operation. (See *Trends in*

Agricultural Land & Lease Values – 2001, California Chapter of the American Society of Farm Managers and Rural Appraisers, [<http://www.calasfmra.com>].

Water Costs: Irrigation water cost is a major component in determining the viability of agricultural operations. Irrigation water for existing agricultural tenants within the project area is approximately \$290 per acre foot. This water includes water purchased from the Irvine Ranch Water District and water transported from deep wells that produce water of sufficient quality for agricultural operations located in the western portion of the City and transported to the agricultural area in the northeast part of the City through a system of pipes and lift stations. This contrasts with water costs for growers in the major comparable growing areas in the Central Coast area, which includes Oxnard and Santa Maria, where the weighted average cost of agricultural surface water is \$128 per acre foot. On a regional basis, the South Coast Region, which includes Orange County, has by far the highest weighted average cost of agricultural water in the state at \$373 per acre foot. (California Department of Water Resources, California Water Plan, Bulletin 160-98, Appendix 4A)

Labor Costs: In general, an adequate labor supply is available for Irvine growers. The cost of labor is actually slightly lower for Irvine growers than in Oxnard and Santa Maria. Recently, however, growers have reported that agricultural workers are moving from the fields to higher paying warehouse, factory, and other support service jobs, which are becoming more plentiful as surrounding areas develop. Even so, the cost of labor for Irvine growers is higher in competitive markets outside of California where the minimum wage is lower. (US Department of Labor, Minimum Wage Laws in the States, [<http://www.dol.gov>].

Property Taxes: Since none of the agricultural areas are subject to Williamson Act contracts, property taxes in areas considered likely to convert to other uses reflect increasingly higher property values, subject to the constraints of Proposition 13. In other words, these areas are subject to high property taxes due to the high value of the land, making it difficult to obtain an economic return on the land from agricultural operations.

Urbanization: As land surrounding the current agricultural operations continues to develop, operational and economic constraints increase. These constraints include limitations on hours of operation, limits on chemical (pesticide and fertilizer) applications, required setbacks from adjacent non-agricultural uses, and clean up required due to the use of farm equipment on public roads. Growers also experience increasing acts of vandalism and crop theft due to adjacent urbanization. (Dr. Daniel Hagillhi, South Coast Research and Extension Center SCREC))

Competition: Increasingly, Oregon and other areas with lower production costs, such as Santa Maria and Oxnard, are also shifting to high cash crops. This shift has impacted the ability of Orange County farmers to overcome the high cost of agricultural activities in Orange County in the competitive market. In addition, competition from foreign growers is increasing considerably. Produce grown in Mexico, Chile, Argentina, and the Dominican Republic can be produced at dramatically lower costs due to cheap labor, availability of land and resources, a farm friendly environment, and the lack of regulatory requirements that are in California. The North American Free Trade Agreement (NAFTA), which calls for gradual removal of tariffs and trade barriers, is resulting in the easing of restrictions on the import of agricultural products, such as avocados, which will result in even greater competition. Mexico, for example, is by far the largest producer of avocados in the world.

(Food and Agriculture Organization of the United States, Statistical Data Base, Year 2000 Data)

Environmental Regulation: The regulation of agricultural activities is an increasingly significant cost for agricultural operations. Both the Clean Water Act and Clean Air Act, as administered through state agency regulations, increasingly affect agriculture, and particularly field crops. By way of example, under the Clean Air Act, the PM₁₀ rule affects the amount of suspended particulates from a field, just as that regulation applies to a construction project. Also, by way of example, the Clean Water Act requires states to adopt and implement water quality standards for water bodies in the state. The watershed within the project area drains into San Diego Creek and ultimately to the Upper and Lower Newport Bay. These water bodies have been classified as “impaired” under Section 303(d) of the Clean Water Act. Accordingly, the Regional Water Quality Control Board must adopt a Total Daily Maximum Load (TMDL) for these water bodies. The TMDLs must then be allocated between current and future dischargers into those bodies. TMDLs have been adopted for nutrients, sediment, and pathogens, and agricultural operators have been allocated TMDLs for these items. An additional TMDL is currently under development for toxicity, which will include agricultural chemicals.

5.8.2 Threshold For Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for agricultural resources.

Would the project:

1. *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use;*
2. *Involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland to non-agricultural use; or*
3. *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

5.8.3 Environmental Impact

The following analysis focuses on the potential impacts associated with implementation of the Base Plan and the Overlay Plan for the Former MCAS El Toro (PAs 51 and 30). The Musick Branch Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. As a result, implementation of the proposed project will not result in a significant agricultural resources impact associated with the annexation of the James A. Musick Jail Facility and the IRWD Parcel.

Threshold 1: Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use?

Base Plan and Overlay Plan

A major component of the Orange County Great Park Plan is the preservation of agriculture within several areas of the property. Under the proposed Base Plan, 443 acres of land are proposed for an Agriculture land use. Of these 443 acres, a total of 370 of the approximately 1,053 acres of land classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance will be preserved in perpetuity as agriculture. Interim agriculture will be allowed on another 121 acres of Prime Farmland and Farmland of Statewide Importance.

Under the proposed Overlay Plan, 307 acres of land are designated as an Agriculture land use. Of these 307 acres, 251 of the approximately 1,053 acres of land classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance will be preserved in perpetuity.

Although the proposed project helps implement the Agricultural Legacy Program by proposing agricultural land uses in the portion of PA 51 that is identified by the Irvine Agricultural Legacy Program Preliminary Sites Assessment (City of Irvine November 26, 2002), both the Base Plan and Overlay Plan would result in the permanent loss of between 683 acres (under the Base Plan) and 802 acres (under the Overlay Plan) of land classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. This is considered a significant impact.

For a discussion of mitigation measures considered to reduce the significant impact associated with the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses, please see Section 5.8.5 Mitigation Measures of this Final Program EIR. This section discusses several mitigation measures determined to be infeasible and identifies feasible measures. Even with implementation of the feasible mitigation measures, the impact associated with conversion of land classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses is significant and unavoidable.

Threshold 2. Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of existing farmland to non-agricultural use?

Base Plan and Overlay Plan

While both the proposed Base Plan and Overlay Plans will result in the loss of some existing agriculture on-site, both plans would also preserve in perpetuity several large areas of farmland. Agriculture will continue to be allowed as an interim use, and portions of the property that are not currently used for any agricultural purposes may be converted to agriculture and utilized for agricultural production on an interim basis.

The project would not have a significant indirect effect of increasing development pressure and accelerating the loss of the remainder of the agricultural land in the surrounding area. Development pressure already exists in these surrounding lands as a result of newly constructed roadways that provide access to the area. Additionally, surrounding property owners have already submitted plans to develop the surrounding agricultural lands with a

variety of urban uses. Specifically, the recently approved 7,743 acre Northern Sphere Project, which is located directly to the north of the project area, allows a variety of residential, community commercial, commercial recreational, medical and science, institutional, multi-use, and recreation uses. The Northern Sphere Project also allows a minimum of four elementary/middle schools, and over 3,000 acres of open space. The 730-acre PA 40 (Spectrum 8), which is located directly to the west of the project area, proposes approximately 640 acres of General Industrial and Medical and Science development. An additional 21 acres of the site would be dedicated for recreational use along the Jeffrey Open Space Spine. Land uses to the east and south of the site are primarily developed.

However, a net decrease in farmland under cultivation in the project area may have an indirect consequent increase in agricultural production costs such as transportation and labor. Agricultural activities tend to be incompatible with urban and suburban neighbors because of factors such as dust, odors, pesticide use, and machinery noise associated with normal farming operations. Residential uses are proposed in the northern portion of the project area. Also, the Educational Use allows for lodging and housing. Inclusion of on-going agricultural operations in the City's standard disclosure notices would forewarn residents and occupants of new development in the project area of adjacent agricultural activities. This would offer some degree of protection to farmers from complaints and nuisance suits regarding activities that are part of normal agricultural operations. Please see Section 5.8.5 Mitigation Measures for a detailed discussion of mitigation measures considered, but determined to be infeasible, and feasible mitigation measures that will be implemented.

The conversion of agricultural land to urban uses is a long and continuing trend in Orange County. Although it is difficult to quantify the amount of agricultural land that is under development pressure within the County, it is unarguable that such pressure exists and will continue with or without implementation of the proposed project. In addition, The Irvine Company, the owner of the unincorporated lands within the City of Irvine Sphere of Influence adjacent to the project area, has development plans for this property (i.e., Northern Sphere and PA 40) and the long-term agriculture is not viable due to the reasons identified in the EIRs for the subject projects.

As a result, while there are existing pressures that would result in the conversion of agriculture within and adjacent to the project area with or without implementation of the proposed project, the project will result in a significant and unavoidable impact associated with the conversion of existing agricultural land to non-agricultural uses.

Threshold 3: Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Base Plan and Overlay Plan

As discussed above, no land within the project area is designated by the City of Irvine General Plan for agriculture, nor is it zoned for agricultural uses in the Irvine Zoning Code. As all agricultural land within the project area is located on government owned land, no Williamson Act contract exists for properties within the project area. Agricultural lands surrounding the project area which have been under Williamson Act contracts have been noticed for non-renewal, and as of July 1999 all of the existing Williamson Act contracts

have terminated. As a result, the proposed project will not conflict with existing zoning or an existing Williamson Act contract.

5.8.4 Significant Impacts

Base Plan and Overlay Plan

- Ag 1.** The project Base Plan will convert 574 acres of Prime Farmland, 63 acres of Unique Farmland, and 46 acres of Farmland of Statewide Importance to non-agricultural use. The Overlay Plan will convert 651 acres of Prime Farmland, 63 acres of Unique Farmland and 88 acres of Farmland of Statewide Importance to non-agricultural uses.
- Ag 2.** The project will involve changes in the existing environment, which, due to their location or nature, could result in conversion of existing farmland to non-agricultural use.

5.8.5 Mitigation Measures

Mitigation Measures Considered But Determined to be Infeasible

CEQA Section 21002.1(b) requires that “each public agency shall mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so.” The term “feasible” is defined by CEQA Section 21061.1 to mean “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.”

A number of mitigation measures were considered for mitigating or avoiding the impact of the conversion of agricultural lands to other uses; however, no feasible mitigation measures are available that would reduce the impacts of the Base Plan or the Overlay Plan to a level less than significant. Potential mitigation measures considered include: the retention of agricultural land on-site; the purchase, set-aside, or transfer of development rights to preserve agricultural land elsewhere in the City or region, and assessing agricultural impact fees. The following is a brief discussion of the mitigation considered to attempt to reduce the impacts of the project to a level less than significant and the reasons why these measures were found to be infeasible.

Retention of Agricultural Uses

The encroachment of urban areas on agricultural lands is a long and continuing trend in Orange County. Although it is difficult to quantify the amount of agricultural land that is under development pressure within the County, it is evident that such pressure exists and will continue to exist with or without implementation of the project. The rising costs of irrigation water, increased land values, labor costs, and damage from vandalism have made

it difficult to maintain a successful large scale agricultural operation in the County. The conversion of agricultural land to urban uses is thus an important decisions that must ultimately be left to each local jurisdiction. The following describes actions considered by the City of Irvine to mitigate the loss of agricultural land.

Onsite Retention of Agricultural Uses

As discussed in subsection 5.8.1 *Environmental Setting* above, the City is working to establish an Agricultural Legacy Program, which is intended to address the local and regional loss of agricultural land. As part of this program, an initial assessment of candidate sites has been prepared (City of Irvine, November 26, 2002). Based on this preliminary assessment, several hundred acres of land will, within the next five years, be made available for metro farming, which may include such activities as specialty farming, model farming, heritage farming, and community service/educational farming. The proposed project helps implement the Agricultural Legacy Program on-site by proposing the OCGP General Plan designation and 1.1 Exclusive Agriculture Zoning designation on land within PAs 51 and 30, which will help retain on-site agricultural uses.

The retention of additional areas of the site in agricultural use is considered to be infeasible due to the constraints on the continued long-term viability of large scale agriculture in the area as discussed in the *Environmental Setting* subsection above. These constraints, particularly the economic constraints and constraints due to increased environmental regulation, will become greater over time. Despite any City actions to zone additional land for agricultural uses on-site, the City does not have the authority to require landowners to continue farming operations on land that is zoned for agricultural use. The retention of agricultural land use designations on the site will not, therefore, necessarily result in the continuation of agricultural uses. Moreover, a reduction in the development of the site would impede the City from achieving the voters' and the City's objectives for the site in a fiscally sound manner.

As noted above, the proposed project will retain a portion of the site in agricultural use, and agricultural uses may continue on other portions of the site until such time that development is to occur. These proposed long-term and interim uses, however, do not mitigate the significant impact of the conversion of significant farmland and existing agricultural land to non-agricultural uses.

Preservation of Agricultural Uses Citywide

The Irvine General Plan and the Phased Dedication and Compensating Development Opportunities Program will require the preservation of approximately 500 acres of land that has the soil quality and growing season that would otherwise qualify it as Significant Farmland.

Agricultural uses will continue on the South Coast Research and Extension Center SCREC site, which is owned by the University of California and is therefore not subject to many of the constraints on continued agricultural operations noted above. Land uses immediately adjacent to this facility should be planned with the continued agricultural operations at this

facility in mind. In addition, agricultural operations are currently occurring in open space areas or lands owned by utilities whose operations are compatible with continuing agricultural activities, such as utility corridors.

As discussed above, the City is working to establish an Agricultural Legacy Program, which is intended to address the local and regional loss of agricultural land. As part of this program, an initial assessment of candidate sites has been prepared (City of Irvine, November 26, 2002). All of the potential sites are undeveloped and most are currently available for agriculture. The topography, climate, and other factors associated with the sites make them conducive to growing a variety of crops. Based on the preliminary assessment of the candidate sites, several hundred acres of land will be made available for metro farming, which may include such activities as specialty farming, model farming, heritage farming, and community service/educational farming.

No other area of Significant Farmland within the City is planned for agricultural uses in the Irvine General Plan. The restriction of additional lands within the City for permanent and exclusive agricultural uses would be inconsistent with the goals and objectives of the Irvine General Plan. In addition, the same constraints on the continued viability of long-term, large-scale, agricultural production noted above with respect to the onsite preservation of agricultural uses would apply to these lands as well, regardless of the land use designation. Without some type of economic support or developed agreements, the mere designation of these lands for agricultural land uses will not ensure long-term agricultural operations.

Finally, even if it were feasible to preserve existing agricultural uses elsewhere in the City, the preservation of such uses would not result in the replacement of the agricultural land converted by the project. There is a finite amount of land suitable for agricultural production and there would still be a net reduction in Significant Farmland and land in agricultural production. The acquisition of fee title or conservation easements over off-site parcels would not, therefore, avoid, reduce, or compensate for the conversion of agricultural land to non-agricultural uses as a result of implementation of the project. At most, the acquisition might prevent the conversion of other farmland and agricultural uses as a result of other hypothetical future projects. This does not meet the requirement of a feasible measure as defined by CEQA.

Agricultural Impact Fees

Agriculture impact mitigation fees could be assessed against the project and used to purchase development rights in other areas so as to assure that permanent agriculture will be maintained. There are several programs that might be funded by impact fees.

The State Department of Conservation operates the California Farmland Conservancy Program, which provides grants to qualifying agencies for the acquisition of agricultural conservation easements. Establishing agricultural conservation easements involves purchasing deed restrictions on prime agricultural lands that preclude their use for development or non-agricultural purposes. The deed restriction would be permanent unless otherwise negotiated. The land under an easement remains in private ownership and use. Typically, restrictions imposed by an agricultural conservation easement limit residential, non-farm commercial, industrial, and extractive uses of the land. Deeds often allow construction of facilities for the production and processing of agricultural products. This

program does accept private contributions. Applications, however, must be made by public agencies such as a county or a city, or certain qualifying not-for-profit entities. The County of Orange and the City of Irvine have not participated in this program. No other agency in Orange County has been identified that participates in this program.

Also, the General Plan of the County of Orange contemplates an evaluation of the establishment of an Agricultural Preservation Program, which would use funds generated from the cancellation of agricultural preserves to fund grants, loans, research, and other programs relating to agricultural resources in an effort to mitigate the long-term impact of Williamson Act contract cancellations and to provide economic and technical support to County agricultural activities. The County has not yet initiated the evaluation of such a program, and has no plans to implement such a program (Northern Sphere EIR, December 2001).

Neither the City of Irvine nor the County of Orange has a fee mitigation program, nor has any specific local program been identified that might be funded by such an impact fee. To be successful, such a program would have to be implemented on a regional basis. In view of the lack of a regional fee mitigation program or any other program for the acquisition of development easements in the vicinity of the project, the imposition of a mitigation fee on a project-by-project basis is not considered to be feasible mitigation because it would not be capable of being accomplished within a reasonable period of time. Also, as is the case with the preservation of off-site agricultural resources, the preservation of existing agricultural resources by the acquisition of agricultural conservation easements would not prevent the net loss of significant farmlands and agricultural uses, and would not, therefore, mitigate the direct adverse effects of the project. Finally, the preservation of agricultural resources in the City of Irvine or even the County of Orange will not have a measurable impact on the availability of agricultural resources or agricultural production on a statewide or regional basis.

Since none of the potential mitigation measures are feasible, as discussed above, the impact related to the loss of agricultural land and significant farmland resulting from the implementation of the proposed project will remain significant and unavoidable.

Mitigation Measures Determined to be Feasible

Base Plan and Overlay Plan

Ag 1. In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operations, City Of Irvine Standard Discretionary Case Condition B.4 and City Of Irvine Standard Subdivision Condition 3.4 regarding disclosure statements shall be amended to include the following for subdivisions proposed adjacent to existing agricultural operations:

Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:

- C Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.

Ag 2. Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.

Ag 3. Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operation and adjacent urban uses.

5.8.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Ag 1. Significant and unavoidable.

Ag 2. Significant and unavoidable.

Notes and References

None.

5.9 Biological Resources

The information contained in this section is summarized from the *Biological Technical Report of Findings for the Millennium Plan - Phase II* prepared by the Chambers Group, Inc. (October 1999). The document is on file at the City of Irvine.

5.9.1 Environmental Setting

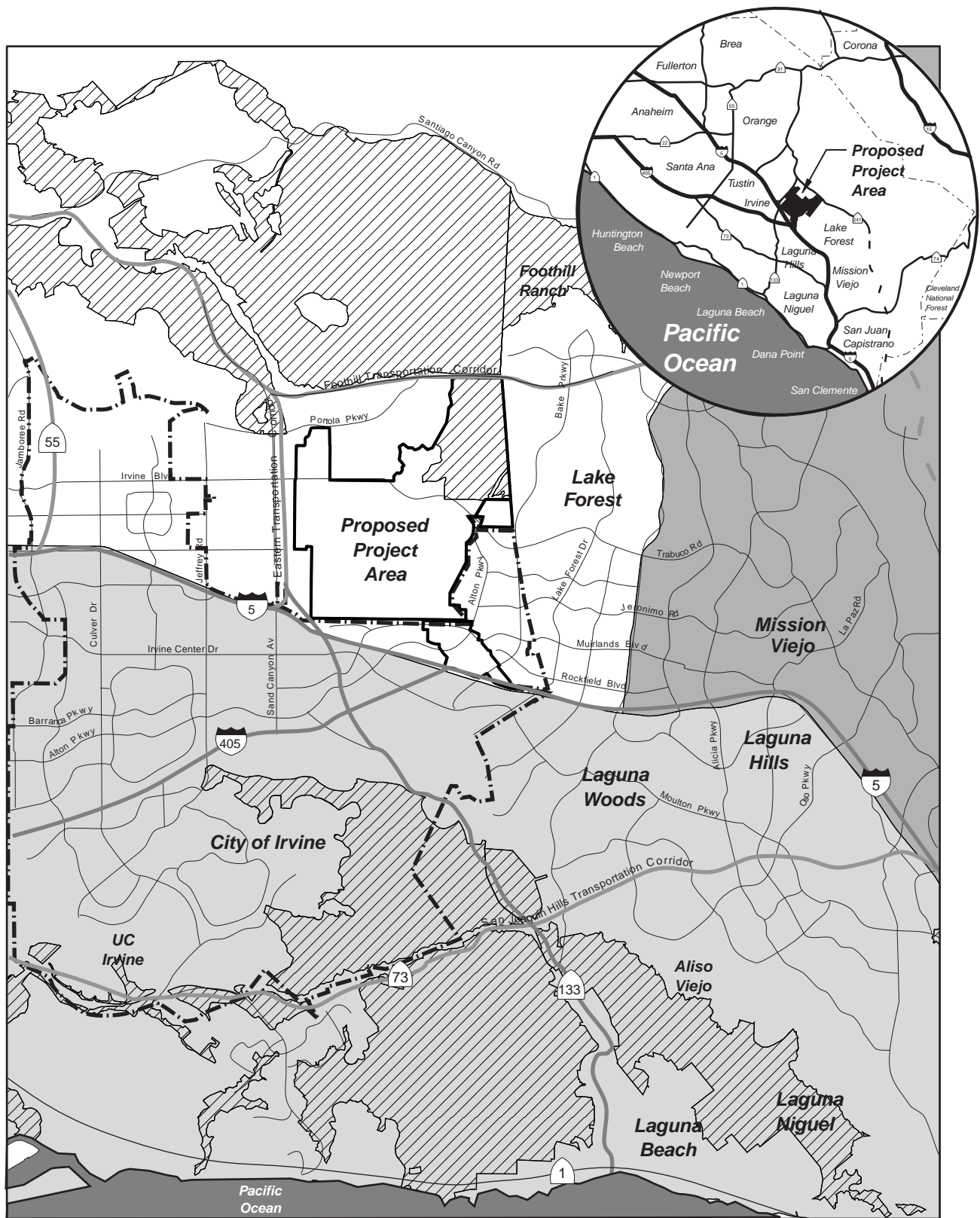
Former MCAS El Toro (PAs 51 and 30)

PAs 51 and 30 are relatively flat to moderately sloping terrain, with elevations ranging from approximately 220 to over 700 feet above mean sea level (MSL). Land uses contained on the former base consist mainly of airport runways, associated auxiliary aviation, military facilities, and housing areas. There is also a habitat preserve in PA 51, which consists of 995 acres, that has been used for military activities. The activities consisted of explosive ordinance demolition, magazine (ordnance storage), fuel storage, and pistol and archery ranges. A portion of the habitat preserve has been disturbed; however, the quality of the native habitats in the preserve is high and contains a number of special interest plant and wildlife species, including the California gnatcatcher, a species listed as threatened under the Federal Endangered Species Act.

The habitat reserve was identified for incorporation in the Orange County Central-Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) Reserve. This is based on consideration of the proximity of the reserve to the Lomas de Santiago frontal slopes; the density of California gnatcatcher and coastal cactus wren, which are NCCP target species in the reserve; potential linkages to core habitat areas and other areas containing high NCCP target species concentrations; and the ability for practical management within the reserve system. Figure 5.9-1 depicts the project site in relation to the NCCP/HCP. The NCCP/HCP is discussed in more detail below.

The intent of the County's NCCP program is to provide long-term, regional protection of the natural vegetation and wildlife diversity, while allowing compatible land use and appropriate development and growth. The Central-Coastal Subregion NCCP/HCP program, which includes the former MCAS El Toro property, was adopted by the Orange County Board of Supervisors on April 16, 1996. The Plan went into effect on July 17, 1996, on execution of the Implementing Agreement by the participating landowners and public agencies and issuance of a Section 10(a) permit by the U.S. Fish and Wildlife Service (USFWS) and 2081 and 2835 management authorizations from the California Department of Fish and Game (CDFG) to the program participants.

Although areas outside the habitat preserve provide minimal native or undisturbed habitat, many of these areas do provide agricultural, ornamental, and domestic landscapes. Golf courses, agricultural fields, residential neighborhoods, and landscaped area around commercial buildings commonly support migrating and local native bird species.



**Natural Community Conservation Planning /
Habitat Conservation Planning (NCCP / HCP)**

- NCCP/HCP Central Boundary
- NCCP/HCP Coastal Boundary
- NCCP/HCP South Boundary
- NCCP/HCP Reserve Area



0 1 2 Miles

Figure 5.9-1
Project Site in Relationship
to NCCP/HCP Area

Special Interest Biological Resources

Special interest species are species afforded special recognition by federal, State or local resource conservation agencies, organizations and/or jurisdictions. Special interest species include those listed as rare, threatened and/or endangered by resource conservation agencies such as the USFWS, CDFG, and the California Native Plant Society (CNPS).

In some cases, unlisted species considered sensitive by the scientific community or knowledgeable experts are included as special interest species. The special status of these species is generally due to limited, declining and/or threatened population sizes. The USFWS, CDFG, local agencies, and special interest groups such as CNPS publish “watch lists” of declining species; these lists often describe the general nature and perceived severity of the decline. In addition, recently published findings and preliminary results of on-going research provide a basis for consideration of species that are candidates for State and/or federal listing. Finally, species that are clearly not rare or threatened statewide or regionally, but whose local populations are sparse, rapidly dwindling or otherwise unstable, may be considered to be of “local concern.”

A sensitive species is considered as a potential inhabitant of the project area if its known geographical distribution encompassed part of the project area or if its distribution was near the project area and general habitat requirements of the species were present (such as the presence of roosting, nesting or foraging habitat, or a permanent water source). Furthermore, the potential for each species to occur in the project area was also assessed. The “potential for occurrence” ranking is based on the following criteria:

- C **Low potential for occurrence** - No recent or historical records exist of the species occurring in the project area or its immediate vicinity (within approximately five miles) and the diagnostic habitat requirements strongly associated with the species do not occur in the project area or its immediate vicinity.
- C **Moderate potential for occurrence** - Either a historical record exists of the species in the project area or its immediate vicinity (within approximately five miles) or the diagnostic habitat requirements associated with the species do occur in the project area or its immediate vicinity.
- C **High potential for occurrence** - Both a historical record exists of the species in the project area or its immediate vicinity (within approximately five miles) and the diagnostic habitat requirements strongly associated with the species do occur in the project area or its immediate vicinity.
- C **Species present** - The species was observed in the project area at the time of the survey on September 7, 1999 or in recent surveys.

Natural Community Conservation Program/Habitat Conservation Program (NCCP/HCP)

The State of California's NCCP pilot program is a cooperative effort to protect habitats and species. The program, which began in 1991 under the State's Natural Community Conservation Planning Act, is broader in its orientation and objectives than the California and Federal Endangered Species Acts (CESA, FESA). These laws are designed to identify and protect individual species that have already declined in number significantly. The primary objective of the NCCP program is to conserve natural communities and accommodate compatible land use. The program seeks to anticipate and prevent the controversies and gridlock caused by species' listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process.

The focus of the pilot program is the coastal sage scrub habitat of Southern California, home to the California gnatcatcher and approximately 100 other potentially threatened or endangered species. Because of its location on coastal plains and shallow slopes, urbanization and agricultural land conversion have disproportionately affected coastal sage scrub. This much-fragmented habitat is scattered over more than 6,000 square miles and encompasses large parts of three counties (Orange, San Diego, and Riverside) and smaller portions of two others (Los Angeles and San Bernardino). Fifty-nine local government jurisdictions, scores of landowners from across these counties, federal wildlife authorities, and the environmental community are actively participating in the program.

The Southern Coastal Sage Scrub NCCP region was approved in 1996 and established a 37,380-acre reserve system that includes significant areas of 12 major habitat types and covers 39 sensitive plant and animal species. The plan will guide habitat conservation and compatible land use over 209,000 acres of developed land and open space in two non-contiguous areas of Orange County (the Central and Coastal subregions, see below). The plan establishes a permanent reserve of about 38,000 acres of several types of habitat, including 19,000 acres of coastal sage scrub habitat. The NCCP region is organized into 11 planning "Subregions." For planning purposes, some of the Subregions are organized into "Subareas" that correspond to the geographic boundaries of participating jurisdictions or landowners. In each subregion and subarea, a local lead agency coordinates the collaborative planning process. Working with landowners, environmental organizations, and other interested parties, the local agency oversees the numerous activities that compose the development of a conservation plan. The CDFG and the USFWS provide the necessary support, direction, and guidance to NCCP participants in these functions.

Target and Identified Species

In 1996, the County of Orange approved the Central and Coastal Subregion NCCP/HCP and its associated Implementation Agreement. The NCCP/HCP designated the coastal California gnatcatcher, coastal cactus wren, and the orange-throated whiptail lizard as "Target Species," to be used as umbrella species to guide the design of a permanent habitat Reserve System to be created within the Central and Coastal Subregion. By providing long-term protection for the habitat required by the three "Target Species," sufficient coastal sage scrub (CSS) and other habitat would be protected to benefit a much broader range of CSS-related species. The NCCP/HCP also recognized "Identified Species" as those species that the NCCP/HCP addresses as if they were listed as endangered species under CESA or FESA.

Existing Use Areas or Special Linkage Areas

The Implementation Agreement defines “Existing Use Areas” as those areas with important populations of Identified Species but which are not included in the Reserve System and do not provide primary connectivity functions. Special Linkage Areas comprise areas that contain CSS, Target Species or provide connectivity functions between habitat areas within the Reserve System, between the Central/Coastal Subregion and other subregions, or between the Reserve System and outlying Identified Species populations such as those around Upper Newport Bay. Development within Special Linkage Areas is constrained by the Special Linkage Area provisions in the NCCP/HCP, including project design and open space requirements. The NCCP/HCP does not establish permanent commitments for the Existing Use Areas. However, significant portions of these areas contain Identified Species and these areas may serve to provide habitat for source populations in the event of declines of Identified Species within the Reserve System due to natural or other factors. Therefore, harming, harassing, modifying habitat or other activities prohibited by the Take provisions of FESA (“Take”) is not authorized in these areas under the NCCP/HCP Implementation Agreement. No Existing Use Areas or Special Linkage Areas are identified within the project area.

Protection, Mitigation, and Takings

The multiple-habitat Reserve System of the NCCP/HCP provides a diverse habitat mosaic within its boundaries. Inclusion of multiple habitat types provides significant levels of protection for a broad range of species beyond the “Target Species” that are dependent on both CSS and non-CSS habitats. In addition to protecting habitat for the “Target Species,” the Reserve System provides habitat for 36 other “Identified Species” at a level that justifies state and federal regulatory coverage under CESA and FESA. Included among these additionally covered species is the Peregrine falcon, a species that is currently listed as endangered by the USFWS.

The satisfactory implementation of the NCCP/HCP and its Implementation Agreement will adequately provide for the “conservation, protection, restoration, enhancement, and management of the Identified Species and their habitat in the Central/Coastal Subregion, and no additional mitigation for Identified Species will be required of Participating Landowners.” In addition, and specific to PAs 51 and 30, the Implementation Agreement provides that “neither USFWS nor CDFG shall seek to impose any mitigation requirements for impacts to the Identified Species or their habitat beyond those provided by the NCCP/HCP and this Agreement in connection with the reuse planning process for the former MCAS El Toro property. The mitigation measures and assurances provided in the Agreement shall be considered by USFWS and CDFG to serve as the basis for authorization of Take of any Identified Species on those portions of MCAS El Toro outside of the 1,033 acres designated for inclusion in the Reserve System.” In other words, implementation of the NCCP/HCP provides mitigation for adverse impacts to Identified Species (including Peregrine falcon) and no additional mitigation is necessary or can be required.

Habitat Preserve (Planning Analysis Zone 3)

As previously mentioned, the habitat preserve, as designated in the northeastern portion of the proposed project (Planning Analysis Zone 3), was identified for incorporation in the Orange County Central-Coastal Subregion NCCP/HCP Reserve System. The non-profit corporation, Nature Reserve of Orange County (NOC) was established for the management of the Reserve System as set forth in the Implementation Agreement. A “Fed to Fed” transfer (transfer from one federal agency to another) of the land in the habitat preserve has occurred and this area is under the control of the Federal Aviation Administration (FAA). It is anticipated that future management of the area by the Fish and Wildlife Service will occur. Following transfer, the El Toro National Wildlife Refuge (NWR) would be created. Establishment and management of the El Toro NWR would support the Orange County NCCP/HCP.

Vegetation Communities

A reconnaissance-level botanical survey was conducted on September 7, 1999, for PAs 51 and 30 to verify vegetation communities as delineated in the 1996 County of Orange EIR 563 and to determine the presence or potential presence of sensitive plant species and habitat.

Prior to the survey, the most recent records of the California Natural Diversity Database and the California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California were reviewed regarding the potential presence of threatened, endangered, candidate or other sensitive species in PAs 51 and 30. The database records are organized by U.S. Geological Survey (USGS) 7.5 minute topographic quadrangles. Records for the quadrangle containing the project area were searched.

Vegetation communities present within PAs 51 and 30 were consistent with those identified in EIR 563. Nine vegetation communities occur within PAs 51 and 30. These include Venturan-Diegan sage scrub, southern cactus scrub, chaparral, woodland, riparian scrub, grassland, open water, agriculture, and disturbed or developed. The disturbed or developed areas of the property have been severely impacted by past and present military and agricultural activities. The following discussions focus on the less disturbed habitat reserve part of the PA 51, as this is primarily where the native plant communities occur.

Venturan-Diegan Sage Scrub

This community can be defined as low, drought-deciduous and evergreen shrubs that occur on steep to moderate slopes mostly below 3,000 feet in elevation. It is considered a sensitive habitat due to its potential to support threatened and endangered species and has been acknowledged as such by its involvement in the NCCP. Four sub-communities occur in the reserve: sagebrush-black sage scrub, mixed scrub, sagebrush scrub, and bush mallow sage scrub.

Chaparral

Chaparral consists of evergreen, medium-height to tall shrubs, which commonly cover hills and low slopes of Southern California. This community is highly adapted to drought and fire conditions. Shrub canopy cover is generally continuous. California sagebrush and California buckwheat occur in the understory of the larger shrubs.

Woodlands

Woodland habitats consist of multi-layered vegetation with a canopy that is 20 to 80 percent tree cover. There are two types of wood lands in the habitat reserve, Mexican elderberry woodland and coast live oak woodland.

Riparian Habitats

Riparian habitats consist of trees, shrubs or herbs that occur along watercourses or water bodies.

Aquatic Habitat

The habitat reserve has three types of open water habitats: open water, ephemeral drainages and washes, and a freshwater swale. Most of these habitats are intermittent and do not contain standing water year round. Six drainages occur within the project area, including Marshburn Channel, Bee Canyon Channel, Agua Chinon Channel, Borrego Canyon Channel, Serrano Creek, and San Diego Creek. Limited amounts of mule fat scrub were found along the unchannelized portions of Borrego Canyon and Agua Chinon Channel. Serrano Creek exhibits hydrophytic vegetation and the appropriate hydrology to qualify as a wetland. The length of the creek between Muirlands Boulevard and the Santa Ana Freeway is proposed for channelization. Army Corps of Engineers (ACOE) jurisdictional wetlands were delineated within the project limits in San Diego Creek, scattered fragments along Borrego Canyon Channel south of the railroad tracks, and along Agua Chinon Channel south of the military housing. The vast majority of drainage courses within the project area are channelized and most are concrete-lined. Two blue-line drainages also occur along the southern boundary of PA 51 outside the habitat reserve.

Grasslands

Grassland consists of low herbaceous vegetation dominated by grasses. It grows in deep, well developed soils on gentle slopes and flats, mostly at low elevations. There are three types of grassland in the project area including native grassland, non-native annual grassland, and ruderal grassland.

Agriculture

Agricultural areas exist at several locations within PAs 51 and 30. The areas vary in size from less than one acre to about 290 acres. The largest area, 290 acres, is located in PA 30.

Disturbed/Developed

PA 51 has several locations that are disturbed/developed. They consist of urban, non-urban commercial, industrial and institutional, transportation, parks and ornamental, and cleared and graded areas. Also included in this category are the airport runways, hangars, and other related structures. There are also buildings constructed to support the Marines as well as open space and urban lawns.

Sensitive Plant Species

A sensitive species is considered a potential inhabitant if its known geographical distribution encompasses all or part of the project area or if its distribution is near the project area and general habitat requirements are present. The literature review resulted in a list of 20 special-status plant species with potential to occur within the project boundaries. A description of each of these species is included in Table 1 of the *Biological Technical Report of Findings for the Millennium Plan - Phase II* on file at the City. No federal or State listed or proposed endangered or threatened species were observed within PAs 51 and 30 during the survey on September 7, 1999.

Several sensitive plant species have the potential to occur within PAs 51 and 30. The prostrate spineflower has been observed within the habitat preserve, so is considered present. The southern tarplant, Palmer's grapplinghook, many-stemmed dudleya, Coulter's Matilija poppy, Catalina mariposa lily, and intermediate mariposa lily have a high potential to occur within PAs 51 and 30. The Coulter's saltbush, Laguna Beach dudleya, San Fernando Valley spineflower, and the Lewis's evening-primrose have a moderate potential for occurrence, while the Los Angeles sunflower, south coast saltscale, Santa Monica Mountains dudleya, heart-leafed pitcher sage, coast wooly-heads, slender-horned spineflower, Santa Barbara morning glory, tecate cypress and salt spring checkerbloom have a low potential for occurrence.

Mature Trees

No formal inventory has been performed; however, the project site contains a large number of mature trees. According to the Orange County Register (July 15, 1998. "Growing Awareness"), tree species include elm, oak, magnolia, carobwood, jacaranda, pepper, palm, and pink-flowered Laguneria pattersoni. The cost to purchase trees of similar age and condition (if they could be found) has been estimated at one million dollars or more. These trees also provide wildlife habitat in the disturbed portions of the project site.

Wildlife

Biological resources for wildlife are primarily found in the native habitats in the habitat preserve (Subarea 3) and the non-native habitats in the agricultural areas. The habitat preserve area includes high quality wildlife habitat, providing a wide variety of native vegetation, topographical conditions, and water that supports large numbers of wildlife species. Habitat in the agricultural areas is generally of low quality, consisting of homogeneous plantings of crops that lack diversity, are subject to pesticide and herbicide usage, and undergo periodic disturbance from plowing. Disturbed and developed areas

provide very little wildlife habitat value. However, agricultural fields, habitat preserve, and open grasslands do provide suitable foraging habitat for a number of raptor species, including the Swainson's hawk.

No amphibian was observed within PAs 51 and 30 during the surveys. However, a portion of the PAs 51 and 30 follows the course of the Borrego Canyon Wash and most likely supports common species such as the California chorus frog, western toad, and Pacific tree frog. One reptilian species, the western fence lizard, was observed during the surveys. Reptiles that have the potential to occur within the project area include the western whiptail, gopher snake, and side-blotched lizard.

Bird species observed during the site visit on September 7, 1999, included the mourning dove, red-tailed hawk, common raven, great egret, Anna's hummingbird, common yellowthroat, burrowing owl, song sparrow, killdeer, and turkey vulture. Local birds that utilize the local waterways, such as the snowy egret, black-crowned night-heron, and American coot are also likely to exist in PAs 51 and 30.

Two mammals, the California ground squirrel and the desert cottontail, were observed during the surveys. Bat vocalizations and guano were observed in a crevice in the ceiling of the I-5 freeway culvert, but identification of the bat species could not be determined at the time of the survey. Coyote tracks were observed within the wash at the northeast and southwest ends of the proposed wildlife corridor (discussed below).

Sensitive Wildlife Species

One sensitive wildlife species, the burrowing owl, was observed at the southwest end of the PAs 51 and 30 along Serrano Creek. Forty other sensitive wildlife species or species of local concern have the potential to occur within PAs 51 and 30. The biological technical report available at the City provides a description of federal- and State-listed endangered or threatened, State and FSOC species, and otherwise sensitive wildlife species that occur or have the potential to occur within PA 51 and 30.

Several sensitive wildlife species have the potential to occur within PAs 51 and 30. The western spadefoot, San Diego horned lizard, orange-throated whiptail, coastal western whiptail, Cooper's hawk, sharp-shinned hawk, ferruginous hawk, Swainson's hawk, northern harrier, white-tailed kite, prairie falcon, burrowing owl, California horned lark, coastal cactus wren, coastal California gnatcatcher, loggerhead shrike, Southern California rufous-crowned sparrow, grasshopper sparrow, Bell's sage sparrow, northwestern San Diego pocket mouse, and San Diego desert woodrat have been observed within PAs 51 and 30, so are considered present. The northern red diamond rattlesnake and red-shouldered hawk have a high potential to occur within PAs 51 and 30. The Riverside fairy shrimp, San Bernardino ringneck snake, coastal boa, merlin, peregrine falcon, southwestern willow flycatcher, least Bell's vireo, and yellow-breasted chat have a moderate potential for occurrence, while the quino checkerspot butterfly, arroyo southwestern toad, Coronado skink, southwestern pond turtle, golden eagle, and pacific pocket mouse have a low potential for occurrence. While not considered sensitive species, the San Diego black-tailed jackrabbit and coyote are present within PAs 51 and 30, and the southern grasshopper mouse and gray fox have a moderate potential to occur.

Habitat Linkages and Wildlife Corridors

Wildlife movement corridors are of substantial importance to the viability of regional planning efforts to obtain habitat linkages. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, some wildlife species, especially the larger and more mobile mammals, will not likely persist over time because they prohibit the infusion of new individuals and genetic information. Corridors mitigate the effects of this fragmentation by (1) allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fire or disease) will result in population or local species extinction, and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

Currently, the project area does not serve as a significant wildlife movement corridor between the habitat preserve and the coastal habitat preserves. Various agencies and organizations desire to establish a wildlife corridor between the Lomas Ridge and the San Joaquin Hills. Public agencies include the City of Irvine, the County of Orange, the U.S. Army Corps of Engineers, USFWS, and CDFG. This effort is also supported by various organizations, including the Laguna Canyon Foundation, The Irvine Company, and The Nature Conservancy.

Recognizing the environmental benefit for a wildlife corridor within the project area, a wildlife corridor is included in the proposed project. Figure 3-5 depicts the location of the proposed wildlife corridor. Wildlife sign (tracks, scat) and evidence of movement was found along both ends of the proposed corridor, including Serrano Creek and the I-5 undercrossing. Currently, these areas do not lead to additional wildlife habitat areas, but rather dead end into concrete channels and paved streets. The agricultural fields are the final destination of wildlife movement using these areas. The agricultural fields dead-end into Alton Boulevard and no evidence of movement along the concrete portion of Serrano Creek was observed. By definition, a corridor is a linear habitat whose primary wildlife function is to connect significant habitat areas. Therefore, by definition no wildlife corridor currently exists within the project area.

Wildlife Corridor Concept Plan

The Wildlife Corridor Concept Plan is designed to implement the draft Special Area Management Plan (SAMP)/Master Streambed Alteration Agreement (MSAA) policies for the El Toro Plan Area of the San Diego Creek Watershed. These guiding policies allowed for implementation of the SAMP/MSAA. Development within the El Toro area must be consistent with these policies in order to comply with the SAMP/MSAA. The SAMP/MSAA objective within the El Toro area is to support the delineation of specific habitat corridor linkages and aquatic habitat preservation/restoration areas.

Proposed Wildlife Corridor Vegetation and Wildlife

As part of the wildlife corridor feasibility study a vegetation and wildlife survey was completed for the proposed wildlife corridor. The following summarizes the findings.

As described in Section 3.0 – Project Description the project includes the development of a wildlife corridor where one currently does not exist (see the Environmental Impact discussion).

Wildlife is dependent on the biological resources found primarily in native habitat areas. Currently, most of the native habitat along the corridor is within the El Toro National Wildlife Reserve (NWR) and the Needlegrass Creek Conservation Area. Native vegetation can also be found along natural drainages found within the planning area, but those resources are not as significant as the El Toro NWR and Needlegrass Creek Conservation Area.

The El Toro NWR, located at the northern end of the wildlife corridor, is characterized by high quality wildlife habitat providing a wide variety of native vegetation, topographical conditions, and water that support large numbers of wildlife species. According to the Chambers Group report, an assortment of wildlife species were observed in this area, summarized in the following paragraphs.

Birds

Bird species observed included the morning dove, red-tailed hawk, common raven, great egret, Anna's hummingbird, common yellowthroat, burrowing owl, song sparrow, killdeer, and turkey vulture. Birds that utilize local waterways, such as the snowy egret, black-crowned night-heron, and American coot are also likely to occur onsite. Two red-tailed hawk nests were observed in large sycamore trees within the El Toro NWR.

Two focused surveys completed in 1996 and 1998 for the least Bell's vireo and southwestern flycatcher observed a total of four territorial male least Bell's vireo located within San Diego Creek, south of Irvine Center Drive. No southwestern willow flycatchers were located within this area. The survey also recorded several sensitive avian species including the yellow-breasted chats, yellow warblers, black-shouldered kites, sharp-shinned hawks, Cooper's hawk, and red shouldered hawks.

Mammals

Two mammals, the California ground squirrel and the desert cottontail, were observed during the survey. Bat vocalizations and guano were also observed in a crevice in the ceiling of the 1-5 culvert. The bats were not visible and identification of the species could not be determined at the time of the survey. Coyote tracks were also observed within the wash at the northeast and southwest ends of the proposed wildlife corridor.

Amphibians

Veeh Creek contains suitable habitat for the pacific pond turtle, however no evidence of this species has been found or recorded.

Sensitive Wildlife Species

Over 30 sensitive wildlife species have the potential to occur in the project area. "Sensitive" means any wildlife species native to the state of California that is vulnerable or declining and is likely to become endangered or threatened in a significant portion of its range within the state without cooperative management or removal of threats. The San Diego black-tailed jackrabbit and coyote are present, and the southern grasshopper mouse and gray fox have a moderate potential to occur.

Vegetation Communities

An investigation of existing vegetation communities was performed in 1999 to determine the presence or potential presence of sensitive plant species and habitat. Existing vegetation presents important opportunities, as it is used by wildlife for food, habitat, shelter, and protection from predators.

Nine vegetation communities were observed within the former MCAS El Toro site, many located within the El Toro NWR. They include Venturan-Diegan sage scrub, southern cactus scrub, chaparral, woodland, riparian scrub, grassland, open water, agriculture, and disturbed or developed land.

The disturbed or developed areas correspond to the former MCAS El Toro property, (not including the El Toro NWR). The following briefly describes the nine vegetation communities.

Venturan-Diegan Sage Scrub can be defined as low-drought-deciduous and evergreen shrubs that occur on steep to moderate slopes mostly below 3,000 feet in elevation. It is considered a sensitive habitat due to its potential to support threatened and endangered species. Four sub-communities occur in the El Toro NWR: sagebrush-black sage scrub, mixed scrub, sagebrush scrub, and bush mallow sage scrub.

Chaparral consists of evergreen, medium-height to tall shrubs, which commonly cover hills and slopes of Southern California. This community is highly adapted to drought and fire conditions. Shrub canopy cover is generally continuous. California sagebrush and California buckwheat occur within the understory of larger shrubs.

Woodland vegetation consists of multi-layered vegetation with a canopy that is 20 to 80 percent tree cover. There are two types of woodlands in the El Toro NWR, Mexican elderberry woodland and coast live oak woodland.

Riparian vegetation consists of trees, shrubs, or herbs that occur along intermittent and perennial waterways. It is also essential for maintaining high quality in streams and rivers.

Three types of aquatic habitat are found in the El Toro NWR: open water, ephemeral drainages and washes, and a freshwater swale. Most of these habitats are intermittent and do not contain standing water year-round. Two blue-line streams also exist along the southern boundary of the former marine base outside the El Toro NWR.

Grasslands consist of low herbaceous vegetation dominated by grasses. They thrive in deep, well developed soils on gentle slopes and flats, mostly at low elevations. Three types of grassland are found in the area: native grasslands, non-native annual grasslands, and ruderal grasslands.

Agricultural areas exist primarily south of the El Toro NWR near Musick Jail, and within Planning Area 30 (290 acres).

The El Toro Natural Wildlife Reserve is composed of primarily scrub, chaparral, and grassland vegetation communities. Riparian habitat is prevalent along the existing intermittent streams and creeks. A large portion of the reserve is disturbed due to prior MCAS El Toro activities.

Areas south of the El Toro NWR are primarily disturbed and developed. They consist of commercial, industrial, institutional, transportation, parks, ornamental, cleared, and graded areas. Also considered in this category are the airport runways, hangars, and other related structures. There are also buildings constructed to support former Marine operations as well as open spaces and urban lawns. Agriculture can be found along Irvine Boulevard just west of Alton Parkway and throughout the panhandle area.

The Spectrum 5 project area is primarily disturbed or developed but also contains riparian woodlands found adjacent to all the drainage channels within this area. Riparian woodlands can be found along San Diego Creek downstream from Irvine Center Drive, Veeh Creek, and an unnamed tributary to Veeh Creek. Willow and mulefat are commonly found in the riparian woodland corridors. Minor sections of the riparian area include emergent vegetation such as cattail, and several acres along Veeh Creek contain strands of the alien grass species known as giant reed.

Sensitive Plant Species

Several sensitive plant species may potentially occur within the project area. Only the prostrate spineflower has been observed onsite.

Habitat Areas

Three types of wildlife habitat exist in the project area that are known to provide ample resources for wildlife: Annual grasslands, coastal sage scrub and riparian.

Annual Grassland habitat occurs mostly on flat plains to gently rolling hills and can be found primarily in the El Toro NWR. Annual grassland can also be found southeast of the wildlife corridor where new development has not occurred. Many wildlife species use annual grasslands for foraging, but some require special habitat features such as cliffs, caves, ponds, or habitats with woody plants for breeding, resting, and escape cover. A variety of reptiles, mammals and birds depend on annual grassland for their habitat.

Coastal Scrub can be found on flat terraces and moderate slopes. California sagebrush, purple sage and California buckwheat are common vegetation species found in southern sage scrub, a subtype of coastal scrub found primarily in Southern California (Santa Barbara

to Orange County). Little is known about the importance of coastal scrub habitat to wildlife, however, the black-tailed gnatcatcher is found extensively within this habitat.

Riparian Habitat is a combination of plant species that thrive along intermittent and perennial waterways. These waterways include Serrano Creek, Borrego Wash, San Diego Creek and Veeh Creek. Riparian habitats are considered among the most valuable habitats for wildlife because of the presence of water, lush vegetation, and high insect populations. Less disturbed riparian areas support a wide variety of wildlife, including amphibian, reptile, bird, and mammal species.

A component of the proposed Spectrum 5 project includes the natural river management concept (NRMC). The NRMC allows flood protection while providing for natural habitat. There are approximately 26 acres of riparian habitat that will be preserved downstream of Irvine Center Drive within the San Diego Creek and approximately 3.4 acres of riparian habitat will be preserved upstream of Irvine Center Drive. The created habitat will provide the same quality of riparian habitat as the existing habitat. The NRMC will be extended north to other areas within the corridor through projects proposed in this plan.

5.9.2 Threshold For Determining Significance

The CEQA Environmental Checklist, Appendix G outlines the thresholds for determining significance for biological resources:

Would the project:

1. *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?*
2. *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?*
3. *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clear Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?*
4. *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites?*
5. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*
6. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or State habitat conservation plan?*

An evaluation of impacts using these criteria must consider the resource and its extent and distribution on a local and regional basis. For example, the permanent loss of an important resource, such as a population of a rare plant, would be considered a substantial impact. A determination of significance would depend on the degree to which the loss was substantial on a local or regional basis.

5.9.3 Environmental Impact

The following analysis focuses on the potential biological impacts associated with implementation of the Base Plan and the Overlay Plan for the Former MCAS El Toro (PAs 51 and 30). The Musick Branch Jail and the IRWD parcels are a portion of the annexation component of the proposed project; however, no new development is proposed for these parcels under the proposed project. EIR No. 564 was prepared by the County of Orange for the jail expansion and did not identify any potential impact to biological resources that may result from the proposed jail expansion. As a result, implementation of the proposed project will not result in a significant biological resources impact associated with the annexation of the James A. Musick Jail Facility and the IRWD Parcel.

Threshold 1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?

Base Plan and Overlay Plan

Coastal sage scrub is considered sensitive in regards to the habitat it provides for the California gnatcatcher, and due to the decline of this habitat in the region. The majority of the habitat preserve consists of coastal sage scrub and will be protected in perpetuity; however, small portions of the habitat preserve, such as the EOD (bomb disposal area) may probably be reconveyed to other agencies (the Federal Bureau of Investigation, in the case of the EOD) and will not be part of the wildlife refuge. These actions are not a component of the proposed project, and would need to be evaluated in terms of potential environmental effects, by the federal agency proposing the action.

No federally-listed plant species was observed within PAs 51 and 30 during the surveys. Several species of concern have a high potential to occur within the project limits. Only the habitat preserve portion of the project site contains suitable habitat for the identified sensitive plant species, with the exception of the southern tarplant. Because the habitat preserve portion of the site will remain intact, as proposed by the project under both the Base Plan and the Overlay Plan, development of the remaining portion of the site is not expected to impact these plant species. However, the southern tarplant, a federal species of concern, may be affected by development of the site. Although this species has a high potential to occur in the disturbed portions of the site, presence of this plant is undetermined, as focused sensitive plant species surveys have not yet been conducted. Such focused sensitive plant species surveys will be conducted prior to development of the site. If subsequent surveys identify this species in an area proposed for development, it may be

possible to modify the project to avoid impacts. Otherwise mitigation will be negotiated through consultation with USFWS and CDFG.

No federally-listed endangered wildlife species was observed within PAs 51 and 30 during the surveys of the project site. Two federally-listed threatened species, the California gnatcatcher and Swainson's hawk, were observed within the project area during previous surveys. The California gnatcatcher is limited to the coastal sage scrub habitat which will be preserved within the habitat preserve in PA 51, as discussed below. This species is covered under the Central-Coastal subregions of the Orange County NCCP/HCP. Because the portion of the habitat reserve conveyed to the FAA will be managed in compliance with regulations set forth by the NCCP/HCP, the potential impact to this species is considered to be less than significant.

The habitat reserve and non-native grassland within the project site serve as moderate to high quality raptor foraging habitat. Raptors that may be affected by loss of foraging habitat include the red-tailed hawk, northern harrier, turkey vulture, white-tailed kite, American kestrel, prairie falcon, merlin, peregrine falcon, ferruginous hawk, and Swainson's hawk. The Swainson's hawk has been observed foraging around the project area. The agricultural fields serve as low to moderate quality raptor foraging habitat (depending on the type of crop that is planted). Development of the site will result in the loss of some of the available raptor foraging habitat. Development of the site will not affect the 995-acre habitat reserve which comprises the southern extension of the NCCP habitat reserve. Due to the proximity of the site to the large amount of additional raptor foraging grounds, including agricultural fields, open space, and the 39,000-acre NCCP habitat reserve, impacts to raptor foraging habitat are not considered significant. In addition, under the Base Plan, low to moderate quality foraging habitat (comparable to the existing agricultural fields) in the form of the approximately 576 acres of proposed golf course, 716 acres of parkland, 438 acres of agriculture, 179 acres of wildlife corridor, and 229 acres of drainage/riparian corridor (2,138 acres total) will be available after the completion of the project. Under the Overlay Plan, low to moderate quality foraging habitat (comparable to the existing agricultural fields) in the form of the approximately 526 acres of proposed golf course, 382 acres of parkland, 303 acres of agriculture, 179 acres of wildlife corridor, and 229 acres of drainage/riparian corridor (1,619 acres total) will be available after the completion of the project.

Several federal- and state-listed wildlife species of concern were observed within the project limits. A number of these species were found within the limits of the habitat preserve and are covered under the Central/Coastal NCCP. However, no formal protection for these species exists under the Endangered Species Act, therefore, the impact to these species is not considered significant.

Threshold 2: *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?*

Base Plan and Overlay Plan

Coastal sage scrub is considered sensitive in regards to the habitat it provides for the California gnatcatcher, and due to the decline of this habitat in the region. The majority of

the land within PA 51 designated for habitat preserve consists of coastal sage scrub and has been conveyed to the FAA and will be protected in perpetuity as a portion of the NCCP/HCP; however, small portions of the habitat preserve, such as the EOD (bomb disposal area), have been and may continue to be reconveyed to other agencies (the Federal Bureau of Investigation, in the case of the EOD) and will not be part of the wildlife refuge. These non-open spaces uses could significantly impact the coastal sage scrub. The City of Irvine does not have control over whether the federal government will convey portions of the habitat preserve to governmental agencies for uses other than habitat preserve. In the event that the federal government does convey portions of the habitat preserve for non-habitat preserve uses, the federal government will be responsible for evaluating the significance of the potential impacts, and mitigating them to a level less than significant.

Threshold 3: *Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?*

Base Plan and Overlay Plan

As discussed above, there is a limited riparian and aquatic habitat within PAs 51 and 30 which may contain wetlands as defined by Section 404. Because of the limited amount and highly disturbed nature of wetland/riparian habitat, impacts are considered significant, and mitigable. The City will permit and mitigate impacts to jurisdictional waters through subsequent consultation with ACOE pursuant to Section 404 and CDFG pursuant to Section 1600 et. seq. Wetland and riparian habitat creation and enhancement are available for mitigation within the proposed park/open space areas and wildlife movement corridor. The proposed plan offers an opportunity for substantial creation of wetland areas within the project site. The plan proposes to “daylight” two major drainage courses that currently pass under the base property via underground pipes. These areas are identified as General Plan land use “Drainage Corridor” and are shown as Subareas 20 and 21 on Figure 3-3 in the Project Description. The combined Drainage Corridor acreage is 129 acres. Additionally, wetland creation would occur within the proposed wildlife corridor (see PAZs 22a and 22b) on Figure 3-3. Riparian habitat associated with the Agua Chinon and Borrego Canyon Channels is present within the habitat reserve, but will not be affected by the project under both the Base Plan and the Overlay Plan.

Threshold 4: *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Base Plan and Overlay Plan

As discussed above, no evidence of a wildlife corridor was found during the biological survey of PAs 51 and 30. In addition, according to the NCCP/HCP and Implementation Agreement, there are no Existing Use Areas or Special Linkage Areas within the project area. Such designations would indicate presence of important populations of sensitive species or migration corridors outside of designated preserve areas. Since there are no such areas on

the project site, no impact to fish or wildlife movement is anticipated and no mitigation is required.

Proposed Irvine Wildlife Corridor

While no wildlife corridor currently exists within the project area, as discussed above, a wildlife corridor is desired by several public agencies including the City of Irvine, County of Orange, US Army Corps of Engineers, USFWS, and CDFG. To provide for the creation of a wildlife corridor connecting the Lomas Ridge and the San Joaquin Hills, the proposed project includes a wildlife corridor land use. The proposed wildlife corridor is depicted in Figure 5.9-2.

The wildlife corridor provides connection to the 975-acre habitat preserve, as well as the Limestone-Whiting Wilderness Park. To the south, the corridor will connect to the Laguna Coast Wilderness Park through existing and future major open space linkages.

As part of the wildlife corridor feasibility study, preliminary "fatal-flaw" analysis was conducted on August 15, 1999, and has been examined on several subsequent occasions by wildlife biologists. Biologists examined the proposed route and its feasibility as a wildlife movement corridor. A focused survey of the biological conditions along the proposed corridor was conducted on September 7, 1999. Biologists surveyed the extent of the route including the adjacent connective habitat at the start and end of the proposed corridor. Serrano Creek and Borrego Canyon Wash were also surveyed for use/potential use as wildlife corridors. Subsequent to these initial surveys, the proposed wildlife corridor has been informally surveyed by wildlife biologists and members of conservation groups.

The alignment of the corridor can be described in terms of five general segments. The first segment of the corridor covers the El Toro NWR and adjacent areas to the west within the northern sphere area. Currently, the El Toro Refuge consists primarily of native vegetation. Several dirt and paved roads, some fencing, closed landfills, and munitions buildings and bunkers remain from former MCAS El Toro uses on this site. Uses surrounding this segment include agriculture, single-family housing units, the James A. Musick Branch Jail, and industrial uses located in the City of Lake Forest. The Foothill Transportation Corridor Freeway forms the northern edge of the corridor. Several intermittent streams run through the Refuge, including Borrego Canyon Wash and Agua Chinon Wash.

The El Toro NWR is designated as preservation under the proposed Orange County Great Park Plan. The conceptual alignment of the corridor begins west of the Refuge at the Foothill Transportation Corridor Freeway within the northern sphere area, linking to the Cleveland National Forest through the Agua Chinon Wash crossing under the freeway. The conceptual alignment then runs south along the western boundary of the El Toro NWR adjacent to the Agua Chinon Wash and Retention Basin. The alignment veers to the east, following topographical features, to connect to an existing intermittent stream. Joining the course of Borrego Canyon Wash, the alignment then turns west approaching the Irvine Boulevard undercrossing at Magazine Road.

The second segment covers areas of the Orange County Great Park located between Borrego Canyon Wash at Musick Jail and proposed Marine Way. The segment proceeds south under Irvine Boulevard at Magazine Road, carrying a small portion of the flow of

Borrego Canyon Wash as a constructed riparian channel. The corridor then bisects the proposed golf courses as it proceeds to proposed Marine Way. Existing uses adjacent to the corridor include hangars and buildings associated with former MCAS El Toro uses to the north, and an existing golf course and driving range to the south.

Within this segment, the core zone of the corridor surrounds the alignment of a low-flow channel diverted from Borrego Canyon Wash. This channel, downstream from the mainline Borrego Canyon Wash, is a daylighted creek promoting vegetation growth and wildlife movement options. A soft bottom channel will allow for vegetation growth, which will create a natural environment familiar to wildlife.

A 30-foot wide conservation zone is proposed that would screen the core zone from the proposed golf course on the north side of the creek.

As the corridor nears Irvine Boulevard, there is a windrow of Eucalyptus trees north of an agricultural field, where birds of prey and local small animal populations have become accustomed to this existing habitat.

Irvine Ranch Water District also has interests within this segment. This is an opportunity to achieve the water quality objectives of the corridor as the Borrego Canyon Wash begins to migrate through this area. Downstream, this wash may receive street runoff and nuisance water. The wetland strategy should begin here. Biofiltration can start the cleansing process, whereby reducing the eventual pollutants from reaching the Back Bay estuary.

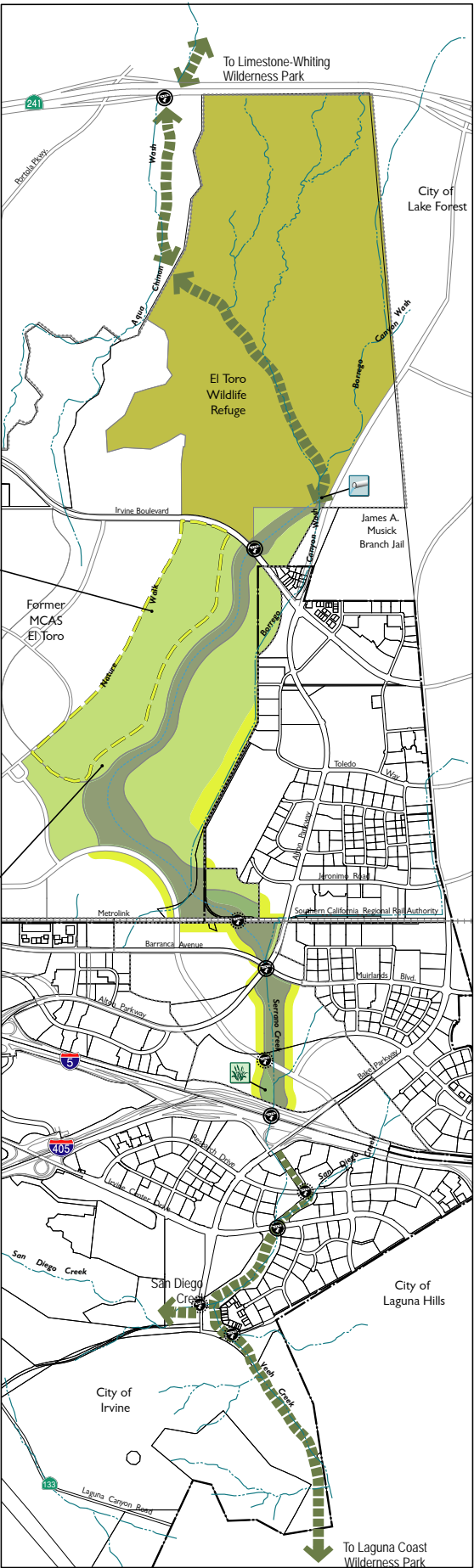
The corridor then runs south from proposed Marine Way to the Barranca Avenue/Alton Way undercrossing. All of the land in this third segment is under the planning jurisdiction of the City of Irvine.

Surrounding land uses in this segment present opportunities for creative design solutions within the corridor. A proposed 210-acre transit-oriented development is proposed adjacent to a portion of the corridor.

The corridor runs parallel to the alignment of proposed Marine Way, but is below the grade of the roadway to reduce potential conflicts. The corridor crosses over the capped channelized flood flow of Borrego Canyon Wash, passing through a proposed pier railroad bridge. Southeast of the railroad, the constructed riparian corridor merges with the natural course of Serrano Creek prior to crossing under the Alton/Barranca intersection.

Upon determination of actual location of clubhouse and residential units within golf course, these properties will be within the Encroachment Zone. Residential units and the clubhouse are subject to Encroachment Zone development regulations.

Clubhouse and residential uses within the golf course shall not be located within 500 feet of the centerline of the Core Zone



Legend

- Core Zone
- Habitat Zone - El Toro Wildlife Refuge
- Conservation Zone
- Activity Zone
- Encroachment Zone
- Wildlife Linkages
- Existing Wildlife Crossing
- Proposed Wildlife Crossing
- Proposed IRWD Water Quality Wetlands
- Low-flow Water Diversion
- Irvine City Limits
- Great Park Plan Boundary
- Creeks, Streams and Channels
- Low-flow Water Course

Figure 5.9-2
Wildlife Corridor Concept

The mainline Borrego Canyon Wash passes under the wildlife corridor just northeast of proposed Marine Way. From that point, the mainline channel crosses to the west, passing under Marine Way, across the railroad tracks, and into a box culvert southwest of Barranca Parkway, while the corridor (carrying low flow from the channel diverted in upper segment) continues to the southeast. Just before crossing under the SCRRA tracks, an inlet picks up the diverted Borrego Canyon Wash flow, carrying it northwest to rejoin the main channel just beyond proposed Marine Way. The inlet also carries a diverted portion of Serrano Creek from the same location. This second diverted flow forms the riparian channel used to carry the wildlife corridor under the SCRRA railroad and south to the Alton Parkway/Barranca Parkway undercrossing.

The fourth segment crosses the remaining portion of the El Toro "Panhandle." The corridor runs south from the Barranca Avenue/Alton Way undercrossing to the Interstate 5 / 405 interchange (the El Toro "Y").

The corridor runs southeast from the Barranca/Alton undercrossing, proceeding approximately 2,000 feet before passing under a proposed new undercrossing at Marine Way.

The size of this area presents an opportunity to create a detention basin, pond or lake as a means to provide additional wildlife habitat. This could be an open water/marsh area that will aid in the cleanup of water and enhance recharge of the Orange County aquifer, as well as attract a diverse range of wildlife. The wetlands produced will provide habitat for foraging and roosting waterfowl. The creation of such activities within the corridor will encourage animal movement. This area will also incorporate coastal sage scrub, where appropriate.

Within the portion of this segment north of Marine Way, a 30-foot wide conservation zone provides access to the core zone on the north side of Serrano Creek. Fencing will be added around the perimeter of this zone. South of Marine Way the IRWD water quality wetland is within the conservation zone.

This segment passes through one of the widest portions of the corridor within the built environment. Potential impacts can be reduced if parameters are defined and followed. Safeguards set in place in the early phases of corridor implementation can ensure that this area has limited human impact and high wildlife value. With the potential increase of artificial light sources and ambient noise levels generated by the planned Research and Development uses, as well as traffic on the northbound lanes of I-5, guidelines for placement of light sources within the encroachment zone are necessary. Design solutions including the choice of native plant species for screening and the placement of the core zone can also contribute to mitigating the impact of increased light and noise levels.

The fifth segment of the corridor travels south from the I-5/I-405 undercrossing through the Spectrum 5/Village 34 development project. At this location, development mitigation measures have determined the corridor alignment, width, and features.

Following the undercrossing at Interstate 5 Freeway, the corridor narrows to a width of approximately 145 feet. After crossing under Bake Parkway, the corridor continues south along Serrano Creek, crosses under Research Drive, and converges with San Diego Creek. Running southwest along San Diego Creek, the corridor separates into two segments. One

segment continues along San Diego Creek to the west, where it transitions into an open space corridor planned for walking and bicycle trails. A second segment runs along Veeh Creek crossing into Irvine Planning Area 18.

Running along Veeh Creek, this corridor segment passes under the proposed Lake Forest Drive extension, then travels southeast through the Needlegrass Creek Conservation Area, eventually crossing Laguna Canyon Road and entering the Laguna Coast Wilderness Park.

This portion of the corridor increases greatly in size as it converges into the dedicated open space areas of the Laguna Canyon Wilderness Park. Hiking and mountain bike trail linkages from the Laguna Canyon Wilderness Park could possibly exist within the Activity Zone, along San Diego Creek. As portions of Planning Area 18 adjacent to the corridor have been dedicated as open space and potential surrounding development would primarily involve low-density housing, artificial light and ambient noise potential is not as great as in other planning units. A more naturalistic appearance with wider open spaces can be provided in all zones.

The Wildlife Corridor planning efforts are on-going, and the Orange County Great Park Plan land use concepts will accommodate this on-going planning effort.

The guidelines presented here are chiefly concerned with the creation and revegetation of wildlife habitats that will flourish in the proposed areas and that will serve as protective cover for target wildlife species that will presumably utilize the proposed corridor. A preliminary design concept for the creation and/or revegetation of the proposed route has also been prepared which is consistent with the guidelines described below (Draft Irvine Wildlife Corridor Master Plan, November 2002). These terms are defined as they are generally used by restoration professionals in California and by the Society for Ecological Restoration (SER):

- C **Creation** establishes historical ecosystems on lands that did not previously support that ecosystem or on severely altered sites.
- C **Revegetation** establishes vegetation on disturbed lands. Ideally, revegetation uses plant material previously located on the site or adjacent to it, to maintain focal genetic diversity.

The viability of the final corridor will be based on the creation of suitable habitat that will serve as a linkage between habitat preserves. The revegetation/restoration plan would need to address various issues to increase the viability of the proposed corridor and will need to be prepared based on the following criteria:

- C **Reduce the amount of noise pollution and urban influence.** Sight and sound barriers need to be constructed at the edges of the corridor to help create a secluded, natural setting. Barriers may range from artificial sound walls to natural diversions such as hedges and tree lines.
- C **Remove and restore the unnecessary developed (paved) areas within the corridor right-of-way.** This includes all underpasses not associated with waterways, namely Magazine Road, and all unnecessary sidewalks and access roads. The reuse roads

crossing over the approximately 4.1 km long corridor. Astor Road is a secondary entrance that bisects both the corridor and the golf course. Restoration of this area will assist the continuity of the corridor and increase its viability.

- C **Create a protective habitat along the entire length of the corridor.** Based on observations during the site visit, the entire corridor should be revegetated with sycamore and cottonwood trees. Current conditions are suitable for the survival of these species and they will provide the necessary canopy for the corridor as well as suitable nesting sites for several bird species. Open, upland areas will need to be revegetated with native bunch grasses or an understory of drought resistant shrubs such as coastal sage scrub species. The earthen banks of the waterways will need to be revegetated with mule fat and other water associated plant species.
- C **Apply minimum height and width requirements based on the specific wildlife species.** Observations of common wildlife and plant species within the proposed migration area were recorded during the site visits. Table 5.9-1 provides a list of wildlife species expected to utilize the corridor. The species list was developed based on species observed during the site visit, species known to occur in the project vicinity.

Because of the length and proximity to highly urbanized areas, daily use of the corridor will likely be limited to reptiles, amphibians, birds, and small mammal species. The coyote is probably the largest predator that would utilize the corridor. However, deer and mountain lion are known to occur within the preserve and habitat just north of the preserve. Therefore, the corridor should be designed to accommodate these larger species that would require an escape route in case of wildfires or other emergencies.

While the project will not impact any existing wildlife corridor or movement since none currently exist in the project area, Mitigation Measure Bio B3 will ensure that the City of Irvine will continue to work with State and federal agencies to implement the revegetation/restoration plan necessary to create a viable wildlife corridor within the project area. The City has already engaged in this process as is demonstrated through the preparation of the Draft Irvine Wildlife Corridor Master Plan, which is independent of this project.

Threshold 5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Base Plan and Overlay Plan

In order to protect and enhance the existing urban forest resource by application of sustainability in landscaping policies and through the provision of professional management, the City of Irvine enacted the Urban Forestry Ordinance (UFO) (Section 5-7-401 et al) in 1994. PAs 51 and 30 contain a large number of trees, many of them mature, representing a wide range of species. The potential destruction or damage to these trees is considered a significant impact.

Threshold 6: *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

Both the Base Plan and the Overlay Plan designate the land in PAZ of PA 51 for habitat preserve, consistent with the adopted NCCP/HCP. The habitat preserve in PA 51 has been conveyed to the FAA and is expected to be preserved and maintained consistent with the NCCP/HCP. Since the proposed project is consistent with the adopted NCCP/HCP, no significant impact will occur.

**Table 5.9-1
Target Wildlife Species of Wildlife Corridor**

Reptiles	Amphibians
C Western fence lizard	C Pacific tree frog
C Gopher snake	C Western toad
C Coachwhip	C California chorus frog
C Side blotched lizard	
Mammals	Birds
C Striped skunk	C Showy egret
C Raccoon	C Great egret
C Burrowing rodents	C Lesser goldfinch
C Desert cottontail	C Great blue heron
C Blacktail jackrabbit	C Nuttall's woodpecker
C Coyote	C Common yellow throat
	C Yellow-rumped warbler
	C Bewick's wren
	C Song sparrow

5.9.4 Significant Impacts

Base Plan and Overlay Plan

- Bio 1.** The southern tarplant, a federal species of concern, may be affected by development of the site. This is considered a significant impact.
- Bio 2.** There is a limited amount of highly disturbed wetland habitat on the project site. The project may result in an impact to this habitat.
- Bio 3.** PAs 51 and 30 contain a large number of trees, many of them mature, representing a wide range of species. Implementation of the proposed project may result in damage and destruction to the trees. A significant impact related to conflicts with the City of Irvine's Urban Forestry Ordinance may occur.

5.9.5 Mitigation Measures

Base Plan and Overlay Plan

- Bio 1.** Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl, shall be conducted. Prior to approval of a subdivision map for development within, or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).
- Bio 2.** Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan subarea that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, re-creation (i.e. within the proposed wildlife corridor), and/or revegetation as deemed acceptable by the appropriate jurisdictional agencies.
- Bio 3.** The City shall continue to work with State and federal agencies during the implementation of the proposed project to implement the revegetation/restoration plan for the wildlife corridor. Measures such as sight and sound barriers, including artificial sound walls and natural diversions (e.g. hedges and tree lines) shall be incorporated into corridor design to ensure the viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the Final Program EIR.
- Bio 4.** Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered "Significant Trees" under the City of Irvine's Urban Forestry Ordinance (UFO) (Section 5-7-401 et al) and the UFO shall apply to all trees included in this inventory.

5.9.6 Significance of Impacts After Mitigation

Base Plan and Overlay Plan

Less than significant.

Notes and References

1. County of Orange. *James A. Musick Jail Expansion and Operation DEIR*, No. 564. August 1996.
2. City of Irvine. *Draft Irvine Wildlife Corridor Master Plan*. January 2002.

6.0 Alternatives

CEQA requires the consideration of alternative development scenarios and the analysis of impacts associated with the alternatives. Through comparison of these alternatives to the proposed project, the advantages of each can be weighed and analyzed. Section 15126.6 of the CEQA Guidelines states that an EIR, “describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.” (Section 15126.6(a)).

Additionally, Section 15126.6(e) and 15126.6(f) of the Guidelines state:

- C The specific alternative of “no project” shall also be evaluated along with its impact...If the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.
- C The range of alternatives required in an EIR is governed by a ‘rule of reason’ that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision-making.

Pursuant to the Guidelines stated above, a range of alternatives to the proposed project is considered and evaluated in this Final Program EIR. These alternatives were developed in the course of project planning and environmental review. The discussion in this section provides:

1. A description of alternatives considered;
2. An analysis of whether the alternatives meet most of the objectives of the project (described in Section 1.0 of this Final Program EIR); and
3. A comparative analysis of the alternatives under consideration and the proposed project. The focus of this analysis is to determine if alternatives are capable of eliminating or reducing the significant environmental effects of the project to a less than significant level.

Alternatives Initially Considered but Rejected From Further Consideration

Millennium Plan

In June 1999, the City of Irvine considered an annexation, General Plan amendment, and zone change for the project area based on the proposed land uses of the El Toro Reuse Planning Authority Millennium Plan.¹ The Millennium Plan proposed over 21,000,000 square feet of non-residential development and 5,897 dwelling units. Unlike the Orange County Great Park, the Millennium Plan did not propose a wildlife corridor through the project area. Additionally, the proposed central park was not large enough to meet plan objectives of implementing a diverse urban park with active and passive recreational amenities consistent with the recent passage of Measure W. Implementation of the Millennium Plan, as originally proposed, would create greater impacts than the proposed project in most of the environmental categories including traffic, air quality, noise, geology and seismicity, hydrology and water quality, agricultural resources, biological resources, paleontological resources, cultural resources, aesthetics, population/housing and public services, facilities and utilities. Also, because of its intensity it would not be as compatible with the surrounding communities. As such, the Millennium Plan is rejected from further consideration.

Alternative Location

This chapter does not include a consideration of alternative locations to the proposed project. Section 15126(f) (2) of the CEQA Guidelines states, in part, that the “key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR.” Development of the proposed project at an alternative location would likely result in similar and, in some cases, greater impacts than those identified in this Final Program EIR. Furthermore, it has been determined that no feasible alternative locations exist considering the fact that the project is the reuse of the former MCAS El Toro.

Aviation Reuse

The project site was previously proposed by the County of Orange to be reused as a commercial airport. Under the aviation reuse plan, the site would be developed with a full international passenger and cargo service airport with a projected 2020 service level of approximately 28.8 million annual passengers (MAP). The aviation reuse plan would include a terminal area and associated facilities, aircraft parking areas, and cargo facilities. Non-aviation uses included in the aviation reuse plan include habitat, open space, and recreation land uses, as well as several public facilities. (EIR #573)

¹ The City of Irvine previously considered implementing the Millennium Plan land use plan for the project site. However, the Millennium Plan was not adopted by the City and was subsequently followed by the Millennium Plan II. The Millennium Plan II was adopted for the City and represents the City's General Plan land uses for the project site.

According to the analysis of potential environmental impacts contained in EIR #573, implementation of this, or similar, aviation reuse plan will result in a greater impacts to land use, traffic/circulation, air quality, noise, public health and safety, geology and seismicity, hydrology and water quality, agricultural resources, biological resources, aesthetics, population/housing, public services and facilities, and utilities.

An aviation reuse plan would not meet the primary objectives of the proposed project. Also, the spirit and intent of the recently passed Measure W, by the county voters would not be met. As such, this alternative is rejected from further consideration.

Agricultural Preservation

The Agricultural Preservation Alternative assumes that all of the existing agriculture on site will be permanently retained for agricultural production. The primary difference between this alternative and the proposed project is that this alternative would preserve all of PA 30 for agricultural production (in addition to the existing agricultural area located north of Irvine Boulevard in PAZ 1, which is proposed to be preserved under the project). Additionally, the area north and south of Irvine Boulevard in PAZ 4 and a portion of PAZ 18 would be preserved. The remainder of PA 51 would be developed according to the proposed project.

The feasibility of preserving agricultural resources in perpetuity is addressed in detail in Section 5.8 – Agricultural Resources of this Final Program EIR. The long-term viability of agricultural production in Orange County continues to deteriorate. As described in Section 5.8, factors that impact the viability of agricultural uses include: 1) the cost of land; 2) the cost of water; 3) the cost of labor; 4) property taxes; 5) the impact of urbanization; 6) competition; and 7) the impact of environmental regulation. The retention of more area of the site in agricultural use than is proposed under the plan is considered to be infeasible due to the constraints on the continued long-term viability of large scale agriculture in the area. These constraints, particularly the economic constraints and constraints due to increased environmental regulation, will become greater over time. Despite any City actions to zone additional land for agricultural uses on-site, the City does not have the authority to require landowners to continue farming operations on land that is zoned for agricultural use. The retention of agricultural land use designations on the site will not, therefore, necessarily result in the continuation of agricultural uses. Moreover, a reduction in the development of the site would impede the City from achieving the voter's and the City's objectives for the site in a fiscally sound manner.

As noted above, the proposed project will retain a portion of the site in agricultural use, and agricultural uses may continue on other portions of the site until such time that development is to occur. These proposed long-term and interim uses; however, do not mitigate the significant impact of the conversion of significant farmland and existing agricultural land to non-agricultural uses. As such, this alternative is rejected from further consideration.

Alternatives Under Consideration

The alternatives considered in this EIR are summarized in Table 6-1 and include:

1. No Project/Measure W PA 51/Millennium Plan II PA 30
2. Existing City of Irvine General Plan (Millennium Plan II Land Uses)
3. Measure W PA 51/Millennium Plan II PA 30 - Modified
4. Alternative Land Use Plan – University Village
5. Increased Residential Alternative

Table 6-1
Comparison of Project Alternatives to Proposed Project

Impact Category	Alternative 6.1 No Project/Measure W PA 51/Millennium Plan II PA 30	Alternative 6.2 Existing City of Irvine General Plan (Millennium Plan II Land Uses)	Alternative 6.3 Measure W PA51/ Millennium Plan II PA30 - Modified	Alternative 6.4 Alternative Land Use Plan – University Village	Alternative 6.5 Increased Residential Alternative
Land Use	Similar	Similar	Similar	Similar	Similar
Traffic/Circulation	Less	Greater	Less	Greater	Greater
Air Quality	Less	Greater	Less	Greater	Greater
Noise	Less	Greater	Less	Greater	Greater
Public Health and Safety	Similar	Similar	Similar	Similar	Similar
Geology and Seismicity	Less	Greater	Less	Similar	Greater
Hydrology and Water Quality	Less	Greater	Less	Similar	Greater
Agricultural Resources	Similar	Greater	Similar	Similar	Similar
Biological Resources	Less	Greater	Less	Similar	Similar
Paleontological Resources	Less	Greater	Less	Similar	Similar
Cultural Resources	Less	Greater	Less	Similar	Similar
Aesthetics	Less	Greater	Less	Similar	Greater
Population/Housing	Less	Greater	Less	Less	Less
Public Services and Facilities	Less	Greater	Less	Greater	Greater
Utilities	Less	Greater	Less	Similar	Greater
Conclusion	Superior	Inferior	Superior	Inferior	Inferior

Less = impact of project alternative is less than impact of proposed project.

Similar = impact of project alternative is similar to impact of proposed project.

Greater = impact of project alternative is greater than impact of proposed project.

6.1 NO PROJECT/MEASURE W PA 51/MILLENNIUM PLAN II PA 30

CEQA requires analysis of the No Project Alternative (Public Resources Code Section 15126). According to Section 15126.6(e) of the CEQA Guidelines, “the specific alternative of ‘no project’ shall also be evaluated along with its impact. The ‘no project’ analysis shall discuss the existing conditions at the time the notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.”

Description of Alternative

The No Project/Measure W PA 51/Millennium Plan II PA 30 assumes that the former base would eventually be redeveloped according to the general provisions of Measure W for PA 51, which is the unincorporated portion of the base, and Millennium Plan II for PA 30, which is the portion of the base located within the City of Irvine. Table 6-2 provides a statistical summary of the potential development associated with this alternative. To develop this comparison, the Great Park concept plan was relied on to project land uses in PA 51. PA 30 land uses were based on the adopted City of Irvine General Plan and zoning. As depicted, approximately 5,203,000 square feet of non-residential development, 165 dwelling units, and 7,637 students would occur under this alternative. Approximately 3,535 acres would be devoted to open space, recreation, and agricultural uses. This compares to a maximum of 3,625 dwelling units, 6,585,594 square feet of non-residential, and 7,637 students that could occur under the proposed project.

Land Use

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in a similar land use impact as the proposed project. This alternative would implement the mandate of the voter approved Measure W for development of PA 51 with park uses. Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would have a similar impact as the proposed project regarding conflicts with the County of Orange Master Plan of Arterial Highways and the existing Airport Environs Land Use Plan (AELUP), Air Installation Compatible Use Zones (AICUZ), and Policy Implementation Line (PIL) since non-aviation reuse of the former base conflicts with these existing plans. No other land use conflict would occur under this alternative.

Traffic/Circulation

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of a traffic/circulation impact associated with the proposed project. Under this alternative, approximately 5,203,000 square feet of non-residential development would occur, 7,637 additional students in the area would be expected, and

Table 6-2
Existing City of Irvine General Plan Land Uses
(Millennium Plan II Land Use Plan)

Land Use Categories				
General Plan Land Use Category	Zoning District (using City of Irvine Districts)	Zoning Number	Max. sq. ft.	Max. d.u.'s
PA 51				
County of Orange	Exclusive Agriculture	1.1	–	–
County of Orange	Recreation	1.5	–	–
County of Orange	Preservation	1.4	–	–
County of Orange	Recreation	1.5	–	–
County of Orange	Recreation	1.5	26,000	
County of Orange	Institutional	6.1	1,285,000	7,637 students
County of Orange	Medical and Science	5.5	300,000	
County of Orange	Recreation	1.5	963,500	165
County of Orange	Recreation	1.5	25,000	
County of Orange	Recreation	1.5	–	–
County of Orange	Preservation	1.4	–	–
County of Orange	Institutional	6.1	300,000 Inst. 122,500 OCTA 263,000 Warehousing	
County of Orange	Institutional	6.1		375 parking spaces
Total PA 51			3,285,000	165 du's 7,637 students
PA 35				
Institutional – Public Facility	Institutional (already pre-zoned)	6.1	N/A (jail, water facility)	–
Total PA 35				–
PA 30				
Institutional	Institutional	6.1	–	–
Preservation	Preservation	1.4	–	–
Community Commercial	Vehicle-Related Commercial	4.3B	201,000	–
Commercial Recreation	Commercial Recreation-Arena/Stadium	4.4	85,000 seats	–
Recreation	Recreation – Outdoor Sports	1.5	41,000	–
Research and Industrial	Medical and Science	5.5	1,676,000	–
Total PA 30			1,918,000	–
Project Area Total			5,203,000	165 du's 7,637 students

165 dwelling units would be constructed. This is compared to 6,585,594 square feet of non-residential development, 7,800 students, and 3,625 dwelling units that could occur under the proposed project (pursuant to the Overlay Plan). Development of PA51 according to Measure W land uses would generate approximately 83,347 average daily trip (ADT) and development of PA30 according to the Millennium Plan II land uses would generate approximately 34,750 ADT.⁵ As such, the total trips generated by this alternative is 118,097 ADT. This compares to 148,000 trips generated by the project according to the Overlay Plan.

Air Quality

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of an air quality impact associated with the proposed project as the level of development and corresponding trip generation would be less. Mobile source air quality emissions are estimated to be approximately 20 percent less than the project, as the trips generated by this alternative are approximately 20 percent less than the project.

Noise

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of a noise impact as the proposed project, as the overall amount of development and vehicular trips on surrounding roadways would be less.

Public Health and Safety

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in a similar public health and safety impact as the proposed project. This alternative would cause portions of PA51 containing existing structures to be developed, resulting in the need to demolish existing structures. Development would occur in those areas containing remediation sites. However, the impact associated with structures and population being located adjacent to wildland fire hazard area would be less.

Geology and Seismicity

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of a geology and seismic impact associated with seismic ground shaking, soil erosion or loss of topsoil, and expansive soils since there would be less overall development within the project area.

Hydrology and Water Quality

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of a hydrology and water quality impact as the proposed project. Most of the development would be concentrated in PA30, and, as compared to the proposed project, significantly less development and impervious surfaces would occur within PA51. Additionally, under this alternative, the proposed drainage corridors would be implemented as is proposed under the project.

Agricultural Resources

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in a similar impact related to the loss of agriculture. This alternative would preserve the same amount of acreage of agriculture as is proposed under the Overlay Plan.

Biological Resources

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of an impact than the proposed project in regards to potential conflicts with the City of Irvine Urban Forestry Ordinance, since less development would occur under the alternative. Also, because less of the site would be converted to urban uses, potential biological impacts would be reduced. As with the proposed project, this alternative would allow for the creation of drainage corridors through the project site that could allow for wetland creation, and this alternative would provide the same wildlife corridor alignment as the proposed project.

Paleontological Resources

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of an impact to paleontological resources than the proposed project. Under this alternative, development would be concentrated primarily in PA30, with substantially less development occurring in PA51 as compared to the project. Therefore, the potential for this alternative to directly or indirectly destroy a unique paleontological resource or unique geologic feature is less than the project.

Cultural Resources

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of an impact to cultural resources than the proposed project. Under this alternative, development would be concentrated primarily in PA30, with substantially less development occurring in PA51 as compared to the project. Therefore, the potential for this alternative to directly impact cultural resources is less than the project.

Aesthetics

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of an aesthetic impact related to light and glare than the project since there would be less intensive development occurring within PA51 than is proposed under the project.

Population/Housing

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of a population/housing impact related to the jobs/housing balance as the proposed project as there would be less employment generating land uses. In regards to inducing population growth in the area, this alternative would have a similar impact as the proposed project since it would generate jobs and new residential opportunities that would attract new residents to the area.

Public Services and Facilities

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in less of an impact than the project related to the construction or expansion of public facilities. This alternative would result in less of a demand for school facilities and parks, as only approximately 165 dwelling units would be allowed under this alternative as compared to 3,625 dwelling units that would occur under the proposed project.

Utilities

Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in a similar impact related to the construction or expansion of utilities as a similar backbone system would be required to support this alternative, although the sizing and layout may vary to reflect the alternative configuration of land uses. Because less development would occur, overall energy consumption would be less than the project.

Conclusion

This alternative is environmentally superior to the proposed project. This alternative would result in less impacts to traffic/circulation, air quality, noise, geology/soils, hydrology/water quality, biological resources, paleontological resources, cultural resources, public services and utilities. Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in a similar impact to land use, public health and safety, and agricultural resources. The alternative meets the following project objectives identified in Section 3.0 – Project Description of this Final Program EIR:

2. Convert the former MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.
5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.

6.2 EXISTING CITY OF IRVINE GENERAL PLAN (Millennium Plan II Land Uses)

This alternative assumes that the project area would not be developed according to the proposed General Plan Amendment (GPA) and Zone Change. Instead, the project area would be developed with land uses consistent with the existing City of Irvine General Plan and Zoning of the property which was previously approved by the City of Irvine under the Millennium Plan II project.

Description of Alternative

The Existing City of Irvine General Plan Alternative (Millennium Plan II Land Uses) assumes that the former base would eventually be redeveloped according to the Millennium Plan II land use plan. Figure 6-1 depicts the City of Irvine adopted land uses for PAs 51 and 30 and Table 6-3 lists the land use summary. As depicted, the existing City of Irvine General Plan land use designations of the project area would allow a total of 15,773,000 square feet of non-residential uses and 3,216 maximum dwelling units. This compares to a maximum of 3,625 dwelling units and 6,585,594 square feet of non-residential uses that could be developed according to the Overlay Plan.

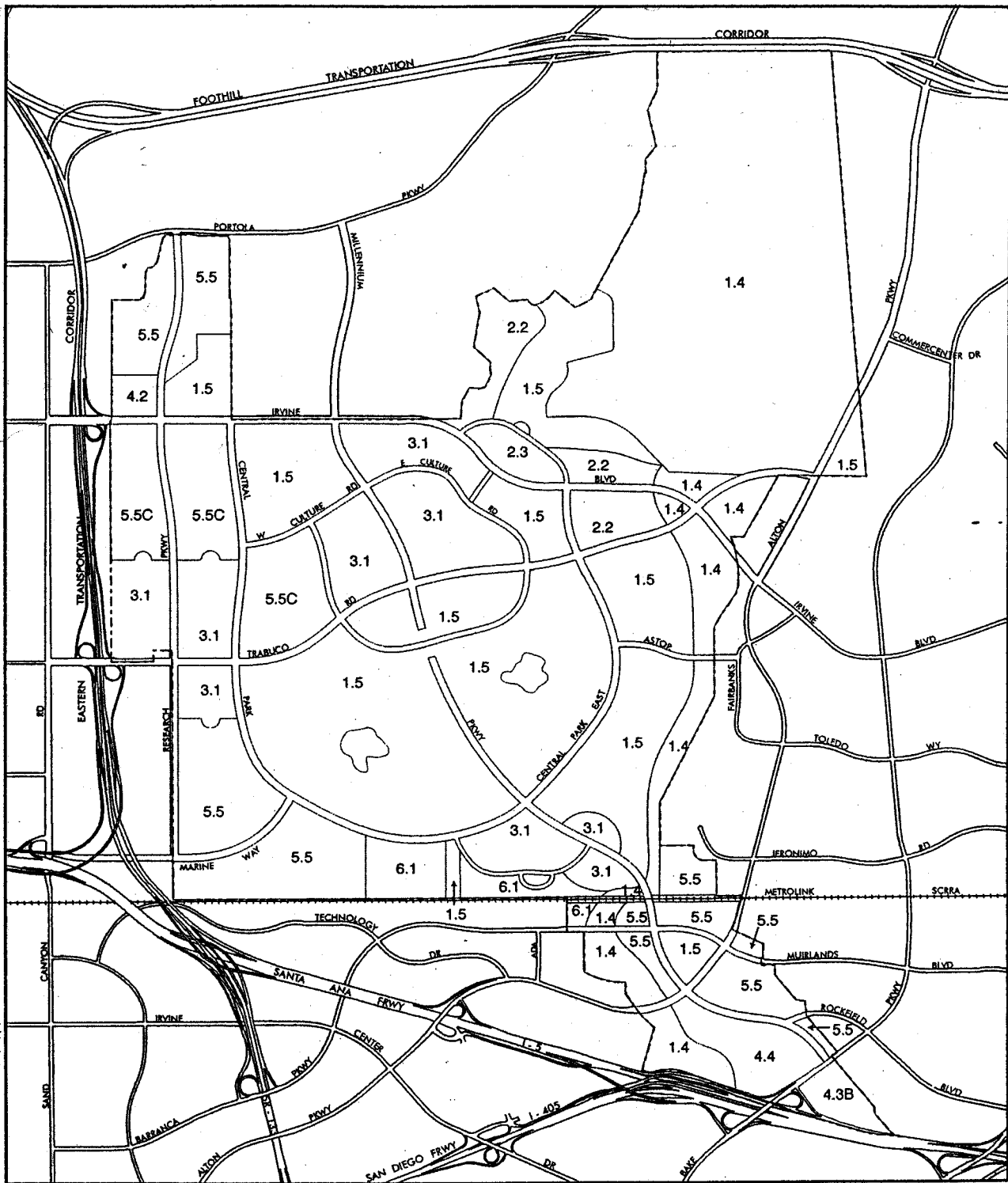
Land uses that could occur under this alternative include preservation, recreation, low and medium density residential, multi-use, community commercial, research and industrial, and institutional.

Land Use

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a similar land use impact as the proposed project. This alternative would implement, to some degree, the intent of the voter approved Measure W for development of PA 51 with park uses as a large portion of PA 51 is designated for recreation uses under the Millennium Plan II. This alternative would result in similar land use impacts related to conflicts with the County of Orange Master Plan of Arterial Highways and the existing Airport Environs Land Use Plan (AELUP), Air Installation Compatible Use Zones (AICUZ), and Policy Implementation Line (PIL), since the proposed development would conflict with these existing plans. This alternative would not impact off-site land uses.

Traffic/Circulation

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a substantially greater traffic/circulation impact than the proposed project. The Existing General Plan Alternative would result in a greater amount of traffic generated within the project area as the development intensity of the Millennium Plan II is greater than the proposed project. The Existing General Plan (Millennium Plan II Land Uses) Alternative is anticipated to generate approximately 228,000 ADT while the proposed project is anticipated to result in the generation of approximately 91,000 to 148,000 ADT. This alternative would place a significantly greater demand on the roadway system, in turn, impacting a larger area, and requiring more roadway infrastructure improvements.



Zone #	General Plan Land Use Category	Zoning District	Zone #	General Plan Land Use Category	Zoning District
1.4	Preservation	Preservation	4.4	Commercial Recreation	Commercial Recreation
1.5	Recreation	Recreation	5.5	Research and Industrial	Medical and Science
2.2	Low Density	Low Density Residential	5.5C	Research and Industrial	ERT Campus
2.3	Medium Low Density	Medium Low Density Residential	6.1	Institutional	Institutional
3.1	Multi-Use	Multi-Use			
4.2	Community Commercial	Community Commercial			
4.3B	Community Commercial	Vehicle-Related Commercial			

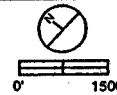


Figure 6-1
Alternative 6.2
Millenium Plan II Land Use

Table 6-3
Existing City of Irvine General Plan Land Uses
(Millennium Plan II Land Use Plan)

Land Use Categories				
General Plan Land Use Category	Zoning District	Zoning Number	Max. sq. ft.	Max. d.u.'s
PA 51				
Preservation	Preservation	1.4	-	-
Recreation	Recreation	1.5	519,000	-
Low Density	Low Density Residential	2.2	-	772
Medium Density	Medium Density Residential	2.3	-	176
Multi-Use	Multi-Use	3.1	4,463,000	2,313
Community Commercial	Community Commercial	4.2	177,000	-
Research and Industrial	Medical and Science	5.5	4,566,000	-
Research and Industrial	ERT Campus	5.5C	3,615,000	-
Institutional	Institutional	6.1	513,000	-
Total PA 51			13,853,000	3,261
PA 35				
Institutional – Public Facility	Institutional (already pre-zoned)	6.1	N/A (jail, water facility)	-
Total PA 35				-
PA 30				
Institutional	Institutional	6.1	-	-
Preservation	Preservation	1.4	-	-
Community Commercial	Vehicle-Related Commercial	4.3B	201,000	-
Commercial Recreation	Commercial Recreation-Arena/Stadium	4.4	85,000 seats	-
Recreation	Recreation – Outdoor Sports	1.5	41,000	-
Research and Industrial	Medical and Science	5.5	1,676,000	-
Total PA 30			1,918,000	-
Project Area Total			15,773,000	3,261

Air Quality

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a greater air quality impact than the proposed project since this alternative would have significantly more construction, development, and corresponding levels of traffic, resulting in substantially more construction and operational (both mobile and stationary) emissions than would occur under the project. The Existing General Plan (Millennium Plan II Land Uses) Alternative is anticipated to generate approximately 228,000 ADT while the proposed project is anticipated to result in approximately 91,000 to 148,000 ADT. The Millennium Plan II project would generate unmitigated emissions amounting to approximately 1.56 tons per day of ROG, 2.10 tons per day of NO_x, 8.83 tons per day of CO, and 0.75 tons per day of PM₁₀.¹ This is compared to the unmitigated emissions estimate for the proposed project (Overlay Plan) which are estimated at approximately .66 tons per day of ROG, .06 tons per day of NO_x, 1.38 tons per day of CO, and .21 tons per day of PM₁₀.

Noise

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a greater noise impact than the proposed project since this alternative would generate greater traffic within the project area and greater traffic noise. Unlike the proposed project, this alternative would result in a significant traffic-generated noise impact for the segment of Trabuco Road between Bake Parkway and Lake Forest Drive.² As indicated in Section 5.4 – Noise of this Final Program EIR, no impact would occur at this location under the proposed project.

Public Health and Safety

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a similar impact as the proposed project related to the disturbance of structures with asbestos-containing building materials or lead based paints. Buildings would be demolished under this alternative, and mitigation would be required to ensure that the building materials are properly handled and disposed. Implementation of this alternative would also result in a similar impact related to the potential health risks from remediation activities. Remediation would need to occur consistent with the health risk standards of the existing General Plan land uses. This alternative would also result in a similar impact related to wildland fire hazards as development would occur adjacent to a wildland fire hazard area in the northeastern portion of PA 51.

Geology and Seismicity

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a greater geology and seismic impact associated with seismic ground shaking, soil erosion or loss of topsoil, and expansive soils since there would be substantially more development within the project area. There would also be an increase in the number of residents and workers/employees impacted by seismic groundshaking and an increase in the amount of property and people subject to risk.

Hydrology and Water Quality

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a greater hydrology and water quality impact than the proposed project

related, as substantially more development would occur than the proposed project. With more development, the rate and amount of surface runoff would be greater than under the Orange County Great Park plan. Additionally, this alternative would not involve the creation of natural drainage corridors as proposed under the project.

Agricultural Resources

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a greater impact related to the loss and conversion of agricultural resources. Under existing General Plan designations, no portion of the project site would be retained for agricultural uses in perpetuity, whereas, the proposed project would preserve approximately 438 acres of agricultural land under the Base Plan, and 303 acres of agricultural land under the Overlay Plan.

Biological Resources

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a greater impact than the proposed project with respect to potential conflicts with the City of Irvine Urban Forestry Ordinance as development would occur that would impact existing trees within the project area. This alternative would result in the creation of a wildlife corridor on the eastern boundary of the project area; however, the wildlife corridor would be more constrained by adjacent land uses than the wildlife corridor proposed under the project. This alternative would not involve the creation of natural drainage corridors through the project site that offer the opportunity for wetland creation. Additionally, because no agricultural lands would be preserved and less parkland would be developed, the potential raptor foraging area within the project site would be less than the project.

Paleontological Resources

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in potentially a greater impact to paleontological resources than the proposed project. Because much more development would occur, the potential for disturbing paleontological resources as a result of grading activity is greater.

Cultural Resources

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in potentially a greater impact to cultural resources than the proposed project. Because much more development would occur, the potential for disturbing cultural resources as a result of grading activity and development is greater.

Aesthetics

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a greater aesthetic impact than the proposed project as this alternative would allow significantly more development which has the potential to increase the light and glare produced in the project area and cause a change to the visual quality of the project area. Additionally, less park and open space uses would be provided.

Population/Housing

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would provide approximately 3,261 housing units. However, this alternative would also provide approximately 30,000 to 35,000 jobs in the project area which would exacerbate the jobs/housing imbalance to a greater degree than the proposed project. In regards to inducing population growth in the area, this alternative would have a greater impact than the proposed project since it would generate significantly more jobs that would attract new residents to the area and increase pressure for the construction of additional housing.

Public Services and Facilities

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a greater impact related to the construction and expansion of public facilities, as there would be significantly more demand placed on these facilities from residential and non-residential development. This alternative would generate a similar for police, requiring approximately 20 sworn police officers, 2 sworn police supervisors, 2 non-sworn support staff, and 4 marked police vehicles. The alternative would generate approximately 2,251 students within the Irvine Unified School District;³ this is approximately 726 students more than the proposed project.

Utilities

Implementation of the Existing General Plan (Millennium Plan II Land Uses) Alternative would result in a greater impact related to the construction or expansion of utilities as significantly more development would occur within PAs 51 and 30 that would require new or expanded utilities. The daily potable water demand under this alternative is 3.3 million gallons per day. The daily sewer generation is 2.9 million gallons per day;⁴ this is approximately 1.55 million gallons per day more water and 2 million gallons per day more sewage than the proposed project.

Conclusion

This alternative is environmentally inferior to the proposed project. Implementation of the Existing City of Irvine General Plan (Millennium Plan II Land Uses) Alternative would result in greater impacts to traffic/circulation, air quality, noise, geology and seismicity, hydrology and water quality, agricultural resources, biological resources, paleontological resources, cultural resources, aesthetics, population/housing, public services and facilities, and utilities than the proposed project. This alternative would result in similar impacts to land use and public health and safety as the proposed project. The alternative meets the following project objectives identified in *Section 3.0 Project Description* of this Final Program EIR:

1. Annex the former MCAS El Toro site and adjacent lands within the City's Sphere of Influence.
4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.
5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.

6. Respond positively and effectively to the DON's decision to sell the property to private interests by allowing private development of some land while ensuring the implementation of park and open space amenities.

6.3 MEASURE W PA 51/MILLENNIUM PLAN PA 30-Modified

Description of Alternative

The Measure W PA 51/Millennium Plan II PA 30-Modified assumes that the former base would eventually be redeveloped according to the general provisions of Measure W for PA 51, which is the unincorporated portion of the base, and modified land uses of the Millennium Plan II for PA 30, which is the portion of the base located within the City of Irvine. Table 6-4 provides a statistical summary of the potential development associated with this alternative. To develop this comparison, the Great Park concept plan was relied on to project land uses in PA 51. PA 30 land uses were generally based on the adopted General Plan and zoning; however, the Research and Industrial use was decreased by 1,190,000 square feet, and 500 residential units were added. As depicted, approximately 4,013,000 square feet of non-residential development, 665 dwelling units, and 7,637 students would occur under this alternative. Approximately 3,535 acres would be devoted to open space, recreation, and agricultural uses. This compares to a maximum of 3,625 dwelling units, 6,585,594 square feet of non-residential, and 7,637 students that could occur under the proposed project.

Land Use

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in a similar land use impact as the proposed project. This alternative would implement the mandate of the voter approved Measure W for development of PA 51 with park uses. Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would have a similar impact as the proposed project regarding conflicts with the County of Orange Master Plan of Arterial Highways and the existing Airport Environs Land Use Plan (AELUP), Air Installation Compatible Use Zones (AICUZ), and Policy Implementation Line (PIL) since non-aviation reuse of the former base conflicts with these existing plans. No other land use conflict would occur under this alternative.

Table 6-4
Measure W PA 51/Millennium Plan II PA 30 - Modified

Land Use Categories				
General Plan Land Use Category	Zoning District (using City of Irvine Districts)	Zoning Number	Max. sq. ft.	Max. d.u.'s
PA 51				
County of Orange	Exclusive Agriculture	1.1	–	–
County of Orange	Recreation	1.5	–	–
County of Orange	Preservation	1.4	–	–
County of Orange	Recreation	1.5	–	–
County of Orange	Recreation	1.5	26,000	
County of Orange	Institutional	6.1	1,285,000	7,637 students
County of Orange	Medical and Science	5.5	300,000	
County of Orange	Recreation	1.5	963,500	165
County of Orange	Recreation	1.5	25,000	
County of Orange	Recreation	1.5	–	–
County of Orange	Preservation	1.4	–	–
County of Orange	Institutional	6.1	300,000 Inst. 122,500 OCTA 263,000 Warehousing	
County of Orange	Institutional	6.1		375 parking spaces
Total PA 51			3,285,000	165 du's 7,637 students
PA 35				
Institutional – Public Facility	Institutional (already pre-zoned)	6.1	N/A (jail, water facility)	–
Total PA 35				–
PA 30				
Institutional	Institutional	6.1	–	–
Preservation	Preservation	1.4	–	–
Community Commercial	Vehicle-Related Commercial	4.3B	201,000	–
Commercial Recreation	Commercial Recreation-Arena/Stadium	4.4	85,000 seats	–
Recreation	Recreation – Outdoor Sports	1.5	41,000	–
Research and Industrial	Medical and Science	5.5	486,000	–
Medium Density	Medium Density Residential	2.3	–	500
Total PA 30			728,000	–
Project Area Total			4,013,000	665 du's 7,637 students

Traffic/Circulation

Implementation of the Measure W PA51/Millennium Plan II PA30 – Modified Alternative would result in less of a traffic/circulation impact associated with the proposed project. Under this alternative, approximately 4,013,000 square feet of non-residential development would occur, 7,637 additional students in the area would be expected, and 665 dwelling units would be constructed. This is compared to 6,585,594 square feet of non-residential development, 7,800 students, and 3,625 dwelling units that could occur under the proposed project (pursuant to the Overlay Plan). Development of PA51 according to Measure W land uses would generate approximately 83,347 ADT and development of PA30 according to land uses in this alternative would generate approximately 28,513 ADT.⁵ As such, the total trips generated by this alternative is 111,860 ADT. This compares to 148,000 trips generated by the project according to the Overlay Plan.

Air Quality

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of an air quality impact associated with the proposed project as the level of development and corresponding trip generation would be less. Mobile source air quality emissions are estimated to be approximately 25 percent less than the project, as the trips generated by this alternative are approximately 25 percent less than the project.

Noise

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of a noise impact as the proposed project, as the overall amount of development and vehicular trips on surrounding roadways would be less.

Public Health and Safety

Implementation of the Measure W PA51/Millennium Plan II PA30 – Modified Alternative would result in a similar public health and safety impact as the proposed project. This alternative would cause portions of PA 51 containing existing structures to be developed, resulting in the need to demolish existing structures. Development would occur in those areas containing remediation sites. However, the impact associated with structures and population being located adjacent to wildland fire hazard area would be less.

Geology and Seismicity

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of a geology and seismic impact associated with seismic ground shaking, soil erosion or loss of topsoil, and expansive soils since there would be less overall development within the project area.

Hydrology and Water Quality

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of a hydrology and water quality impact as the proposed project. Most of the development would be concentrated in PA30, and, as compared to the proposed project, significantly less development and impervious surfaces would occur within PA 51.

Additionally, under this alternative, the proposed drainage corridors would be implemented as is proposed under the project.

Agricultural Resources

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in a similar impact related to the loss of agriculture. This alternative would preserve the same amount of acreage of agriculture as is proposed under the Overlay Plan.

Biological Resources

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of an impact than the proposed project in regards to potential conflicts with the City of Irvine Urban Forestry Ordinance, since less development would occur under the alternative. Also, because less of the site would be converted to urban uses, potential biological impacts would be reduced. As with the proposed project, this alternative would allow for the creation of drainage corridors through the project site that could allow for wetland creation, and this alternative would provide the same wildlife corridor alignment as the proposed project.

Paleontological Resources

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of an impact to paleontological resources than the proposed project. Under this alternative, development would be concentrated primarily in PA30, with substantially less development occurring in PA51 as compared to the project. Therefore, the potential for this alternative to directly or indirectly destroy a unique paleontological resource or unique geologic feature is less than the project.

Cultural Resources

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of an impact to cultural resources than the proposed project. Under this alternative, development would be concentrated primarily in PA30, with substantially less development occurring in PA51 as compared to the project. Therefore, the potential for this alternative to directly impact cultural resources is less than the project.

Aesthetics

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of an aesthetic impact related to light and glare than the project since there would be less intensive development occurring within PA 51 than is proposed under the project.

Population/Housing

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of a population/housing impact related to the jobs/housing balance as the proposed project as there would be less employment generating land uses. In regards

to inducing population growth in the area, this alternative would have a similar impact as the proposed project since it would generate jobs and new residential opportunities that would attract new residents to the area.

Public Services and Facilities

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in less of an impact than the project related to the construction or expansion of public facilities. This alternative would result in less of a demand for school facilities and parks, as only approximately 665 dwelling units would be allowed under this alternative as compared to 3,625 dwelling units that would occur under the proposed project.

Utilities

Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in a similar impact related to the construction or expansion of utilities as a similar backbone system would be required to support this alternative, although the sizing and layout may vary to reflect the alternative configuration of land uses. Because less development would occur, overall energy consumption would be less than the project.

Conclusion

This alternative is environmentally superior to the proposed project. This alternative would result in less impacts to traffic/circulation, air quality, noise, geology/soils, hydrology/water quality, biological resources, paleontological resources, cultural resources, public services and utilities. Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in a similar impact to land use, public health and safety, and agricultural resources. The alternative meets the following project objectives identified in Section 3.0 – Project Description of this Final Program EIR:

3. Convert the former MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.
5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.

6.4 ALTERNATIVE LAND USE PLAN – University Village

Description of Alternative

The Alternative Land Use Plan – University Village, generally involves redesignation of Planning Area Zone (PAZ) 5 from Research and Development (R&D) to Medium High

Density Residential (MHDR). The student population of the proposed university is increased from 7,800 to 15,000, including approximately 1,500 dorm rooms on PAZ 7. Figure 6-2 depicts the Alternative Land Use Plan – University Village. Table 6-5 provides the development data for this alternative. As compared to the Overlay Plan, the changes are as follows:

PAZ 5 – Land Use changes from R&D to MHDR. Square feet change from 1,000,000 to 0. Dwelling units change from 0 to 1,580.

PAZ 7 – Students increase from 1,306 to 2,512. Square footage changes from 243,302 to 467,900. 1,500 residence hall rooms are added.

PAZ 8 – Students increase from 5,570 to 10,711. Square footage changes from 1,037,234 to 1,994,735.

PAZ 9 – Students increase from 172 to 331. Square footage changes from 32,013 to 61,566.

PAZ 10 – Students increase from 752 to 1,446. Square footage changes from 140,045 to 269,248.

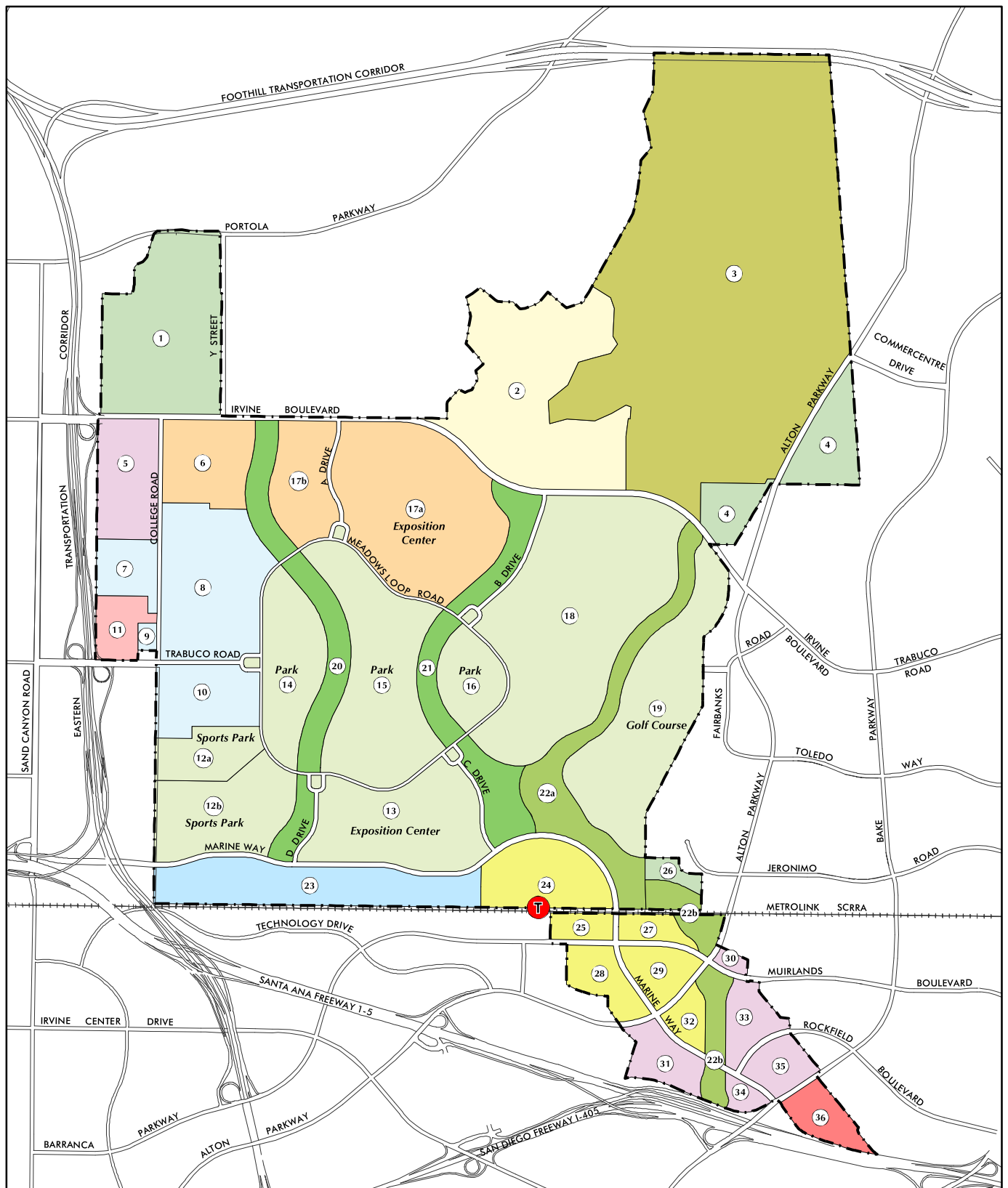
The unincorporated area would be annexed into the City. No new development is proposed for the Musick Jail and IRWD properties, though the County of Orange may decide to expand the jail according to the proposed jail expansion plans.

Land Use

Implementation of the Alternative Land Use Plan – University Village would have a similar impact as the proposed project regarding conflicts with the County of Orange Master Plan of Arterial Highways and the existing Airport Environs Land Use Plan (AELUP), Air Installation Compatible Use Zones (AICUZ), and Policy Implementation Line (PIL) since non-aviation reuse of the former base conflicts with these existing plans. As with the project, this alternative would not impact off-site land uses.

Traffic/Circulation

Implementation of the Alternative Land Use Plan – University Village would result in a greater traffic/circulation impact than the proposed project. More development would occur under this alternative than would occur under the proposed project including an increase in the student population of the university. Total vehicular trip generation would be roughly 161,000 ADT as compared to 148,000 ADT generated by the Overlay Plan.



--- Orange County Great Park Boundary

Education

Institutional

Low Density Residential

Medium Density Residential

Transit Oriented Development

Research and Development

Retail

Auto Center

Cemetery

Agriculture

Riparian Corridor

Wildlife Corridor

Habitat Preserve

Open Space

(17c) Planning Area Zone

T Irvine Transportation Center



0' 1,500'

Figure 6-3
Alternative 6.5
Increased Residential Alternative

Table 6-5
Development Data for University Village Alternative 2025

PAZ and Use Description	Acres		Dwelling Units		Square Feet		Other Details	
	Quantity	Type	Quantity	Type	Quantity	Type	Quantity	Type
1 Open Space Agriculture	200	Agriculture						
Subtotal Area 1:	200							
2 Low Density Residential	270	Low Density Residential	850	Single-Family Residential				
Subtotal Area 2:	270		850					
3 Open Space / Habitat Preserve	974	Habitat Preserve						
Subtotal Area 3:	974							
4 Agriculture	90	Agriculture						Portions may be used for low flow wildlife corrid. connection to Borrego Cyn Wash
Subtotal Area 4:	90							
5 Medium High Density Residential	79	Medium High Density Residential	1,580	Multiple-Family Residential				
Subtotal Area 5:	79		1,580					
6 Medium Density Residential	80	Medium Density Residential	800	Senior Housing				
Subtotal Area 6:	80		800					
7 Education	38	College/University			467,900	College/University (Sq. Footage expanded based on ratio (186 sf per student) and new student total)	2,512 Students 1,500 Residence Hall Rooms (Students split between zones on a size-proportional basis)	
Subtotal Area 7:	38				467,900			
8 Education	162	College/University			1,994,735	College/University	10,711 Students	
Subtotal Area 8:	162				1,994,735			
9 Education	5	College/University			61,566	College/University	331 Students	
Subtotal Area 9:	5				61,566			
10 Education	15	Medium Density Residential	60	Multiple-Family Residential	269,248	College/University	1,446 Students	
Subtotal Area 10:	70	55 College/University	60		269,248			
11 Retail	33	Retail			225,000	Retail		
Subtotal Area 11:	33				225,000			
12a Open Space Sports Park	50	Sports Park						
Subtotal Area 12a:	50							
12b Open Space Sports Park	115	Sports Park			26,000	Sports Park		
Subtotal Area 12b:	115				26,000			
13 Open Space Exposition Center	156	Cultural/Institutional			468,000	Museum/Library Facilities		
Subtotal Area 13:	156				468,000			
14 Open Space Park	103	Open Space / Park						
Subtotal Area 14:	103							
15 Open Space Park	208	Open Space / Park						
Subtotal Area 15:	208							
16 Open Space Park	56	Open Space / Park						
Subtotal Area 16:	56							
17a Open Space Exposition Center	236	Fairgrounds/Commercial Rec	165	Multiple-Family Residential	708,000	Fairgrounds/Exposition Halls	Includes Equestrian Stables	
Subtotal Area 17a:	249	13 Elementary School	165		40,000	Elementary School	650 Students	
17b Open Space Cemetery	73	Cemetery			30,000	Mausoleum		
Subtotal Area 17b:	73				20,000	Mortuary		
18 Open Space Golf Course w/ Residential Overlay	315	Golf Course	250	Single-Family Residential	25,000	Clubhouse and Driving Range	27 Golf Course Holes	
Subtotal Area 18:	365	50 Low Density Residential	250		25,000			

Table 6-5 (continued)
Development Data for University Village Alternative 2025

PAZ and Use Description	Acres		Dwelling Units		Square Feet		Other Details	
	Quantity	Type	Quantity	Type	Quantity	Type	Quantity	Type
19 Open Space Golf Course	211	Golf Course					18 Golf Course Holes	
Subtotal Area 19:	211							
20 Drainage Corridor	114	Drainage Corridor						
Subtotal Area 20:	114							
21 Drainage Corridor	115	Drainage Corridor						
Subtotal Area 21:	115							
22a Drainage / Wildlife Corridor Planning Area 51	118	Wildlife Corridor						
Subtotal Area 22a:	118							
22b Drainage / Wildlife Corridor Planning Area 30	61	Wildlife Corridor						
Subtotal Area 22b:	61							
23 Institutional	100 Institutional 35 OCTA Facility				300,000 Institutional 122,500 OCTA Facility 263,000 McKinney Act Warehousing		Includes Salvation Army (45,000 Bldg 360), St. Vincent De Paul (127,000 warehouse Bldg 319, 11,000 commercial kitchen Bldg 322), Orange County Community Housing Corporation (70,000 warehouse Bldg 360), Families Forward (10,000 admin Bldg 360)	
Subtotal Area 23:	135				685,500			
24 Transit Oriented Development	8 Station-Related Public Uses 6 TOD Open Space Amenities 6 Retail 61 Medium-High Density Residential		635 Multiple-Family Residential		45,000 Retail		375 Parking Spaces In Structure Schools are permitted uses	
Subtotal Area 24:	81		635		45,000			
25 Transit Oriented Development	7 Station-Related Public Uses 1 TOD Open Space Amenities 5 Office 5 Medium-High Density Residential		50 Multiple-Family Residential		75,000 Office		Schools are permitted uses	
Subtotal Area 25:	18		50		75,000			
26 Open Space / Agriculture	13 Agriculture							
Subtotal Area 26:	13							
27 Transit Oriented Development	2 TOD Open Space Amenities 17 Medium-High Density Residential		170 Multiple-Family Residential				Schools are permitted uses	
Subtotal Area 27:	19		170					
28 Transit Oriented Development	3 TOD Open Space Amenities 2 Retail 33 Medium-High Density Residential		345 Multiple-Family Residential		15,000 Retail		Schools are permitted uses	
Subtotal Area 28:	38		345		15,000			
29 Transit Oriented Development	3 TOD Open Space Amenities 2 Retail 29 Medium-High Density Residential		300 Multiple-Family Residential		15,000 Retail		Schools are permitted uses	
Subtotal Area 29:	34		300		15,000			
30 Research and Development	6 Research and Development				80,000 Research and Development			
Subtotal Area 30:	6				80,000			
31 Research and Development	38 Research and Development				500,000 Research and Development			
Subtotal Area 31:	38				500,000			
32 Transit Oriented Development	10 Remote Airport Terminal 10 Remote Airport Maintenance				9,000 Remote Airport Terminal 44,500 Remote Airport Maintenance		675 Parking Spaces Parking and shuttle facility for LAX and Ontario	
Subtotal Area 32:	20				53,500			
33 Research and Development	35 Research and Development				460,000 Research and Development			
Subtotal Area 33:	35				460,000			

Table 6-5 (continued)
Development Data for University Village Alternative 2025

PAZ and Use Description	Acres		Dwelling Units		Square Feet		Other Details	
	Quantity	Type	Quantity	Type	Quantity	Type	Quantity	Type
34								
Research and Development	11	Research and Development			150,000	Research and Development		
Subtotal Area 34:	11				150,000			
35								
Research and Development	31	Research and Development			410,000	Research and Development		
Subtotal Area 35:	31				410,000			
36								
Auto	34	Auto Sales, Parking and Storage			102,000	Auto Sales, Parking and Storage		
Subtotal Area 36:	34				102,000			
37								
Musick Jail and IRWD Parcel	113	Musick Jail and IRWD Parcel						
Subtotal Area 37:	113							
Net Total:	4,621		5,205		6,926,449			
Roadways:	185		-		-			
Gross Total:	4,806		5,205		6,926,449			
Planning Area 51 (Proposed annexation, General Plan Amendment, pre-Zoning and Zoning)								
Net Total:	4,150		4,340		5,065,949			
Roadways:	145		-		-			
Gross Total:	4,295		4,340		5,065,949			
Planning Area 30 (Proposed General Plan Amendment and Zone Change)								
Net Total:	358		865		1,860,500			
Roadways:	40		-		-			
Gross Total:	398		865		1,860,500			
Planning Area 35 (Proposed annexation)								
Net Total:	113		-		-			
Roadways:	-		-		-			
Gross Total:	113		-		-			
Project area currently outside the City of Irvine								
Net Total:	4,247		4,340		5,065,949			
Roadways:	145		-		-			
Gross Total:	4,392		4,340		5,065,949			
Project area currently within the City of Irvine								
Net Total:	374		865		1,860,500			
Roadways:	40		-		-			
Gross Total:	414		865		1,860,500			

Air Quality

Implementation of the Alternative Land Use Plan – University Village would result in a greater air quality impact than the project. This alternative would place housing (1,580 dwelling units) in proximity to the proposed university, thereby, potentially reducing commuter trip lengths and associated air emissions; however, the increase in permitted student population would result in an additional 13,117 vehicle trips generated within the project area. As such, the mobile emissions would be approximately eight percent higher than the proposed project.

Noise

Implementation of the Alternative Land Use Plan – University Village would result in a greater noise impact than the proposed project, as the overall amount of vehicular trips on surrounding roadways would be greater.

Public Health and Safety

Implementation of the Alternative Land Use Plan – University Village would result in a similar public health and safety impact as the proposed project. As with the proposed project, this alternative would result in all of the area within PA 51 containing existing structures to be developed, resulting in the need to demolish existing structures. Development would occur in those areas containing remediation sites and structures and population would be located adjacent to wildland fire hazard area.

Geology and Seismicity

Implementation of the Alternative Land Use Plan – University Village would result in a similar geology and seismic impact associated with seismic ground shaking, soil erosion or loss of topsoil, and expansive soils since there would generally be a similar amount of overall development within the project area.

Hydrology and Water Quality

Implementation of the Alternative Land Use Plan – University Village would result in a similar hydrology and water quality impact as the proposed project. Under this alternative, the proposed drainage corridors would be implemented as is proposed under the project.

Agricultural Resources

Implementation of the Alternative Land Use Plan – University Village would result in a similar impact as the proposed project related to the loss of agriculture. This alternative would preserve the same amount of acreage of agriculture as is proposed under the Overlay Plan.

Biological Resources

Implementation of the Alternative Land Use Plan – University Village would result in a similar impact to the proposed project in regards to potential conflicts with the City of Irvine

Urban Forestry Ordinance, since the area of the project site that is developed would be similar to the project. As with the proposed project, this alternative would allow for the creation of drainage corridors through the project site that could allow for wetland creation, and this alternative would provide the same wildlife corridor alignment as the proposed project.

Paleontological Resources

Implementation of the Alternative Land Use Plan – University Village would result in a similar impact to paleontological resources as the proposed project. Under this alternative, development would occur in the same areas as would occur under the proposed project, therefore the potential for this alternative to directly or indirectly destroy a unique paleontological resource or unique geologic feature is similar to the proposed project.

Cultural Resources

Implementation of the Alternative Land Use Plan – University Village would result in a similar impact to cultural resources as the proposed project. Under this alternative, development would occur in the same areas as would occur under the proposed project, therefore the potential for this alternative to impact cultural resources is similar to the proposed project.

Aesthetics

Implementation of the Alternative Land Use Plan – University Village would result in a similar light and glare as the project since the area of the project site that is developed would be similar. The impact related to the change in visual quality of the project area would also be similar as development would occur in the same areas as proposed under the project.

Population/Housing

Implementation of the Alternative Land Use Plan – University Village would result in less of a population/housing impact related to the jobs/housing balance than the proposed project. There would be a reduction in the overall amount of employment generating land uses, and an increase in housing units with the change in PAZ 5 to residential. In regards to inducing population growth in the area, this alternative would have a similar impact as the proposed project since it would generate jobs and new residential opportunities that would attract new residents to the area.

Public Services and Facilities

Implementation of the Alternative Land Use Plan – University Village would result in a greater impact than the project related to the construction or expansion of public facilities. This alternative would significantly increase the demand for school facilities and parks, as approximately 1,580 additional dwelling units and 1,500 dorm rooms, and the corresponding population would be allowed under this alternative as compared to the proposed project.

Utilities

Implementation of the Alternative Land Use Plan – University Village would result in similar impacts related to the construction or expansion of utilities as a similar backbone system would be required to support this alternative, although the sizing and layout may vary to reflect the alternative configuration of land uses.

Conclusion

This alternative is environmentally inferior to the proposed project. Implementation of the Alternative Land Use Plan – University Village would result in greater impacts to traffic/circulation, air quality, noise and public services and utilities. The impact to land use, public health and safety, geology and seismicity, hydrology and water quality, agricultural resources, biological resources, paleontological resources, cultural resources, and aesthetics would be similar to the proposed project. The alternative will result in less of an impact to population/housing. The alternative meets all of the following project objectives identified in Section 3.0 – Project Description of this Final Program EIR:

1. Annex the former MCAS El Toro site and adjacent lands within the City's Sphere of Influence.
2. Convert the former MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
3. Amend the General Plan and Zoning Ordinance to implement proposed Orange County Great Park land use designations.
4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.
5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.
6. Respond positively and effectively to the DON's decision to sell the property to private interests by allowing private development of some land while ensuring the implementation of park and open space amenities.

6.5 INCREASED RESIDENTIAL ALTERNATIVE

Description of Alternative

This alternative would increase the amount of residential units provided in the project area. Under this alternative, the land uses proposed within PAZs 17a and 17b would be changed as shown in Table 6-6.

**Table 6-6
Increased Residential Alternative**

PAZ/Acreage	Project Land Use	Alternative Land Use	Development Potential
17a/236	Commercial Recreation	Medium High Residential	3,540 d.u.'s
17b/73	Cemetery	Medium High Residential	1,095 d.u.'s
TOTAL/310			4,635

The medium high density residential units would be comprised of approximately 3,476 single-family residential units and 1,159 multi-family residential units. All other land uses would be the same as proposed under the Overlay Plan. Figure 6-3 depicts the Increased Residential Alternative.

Land Use

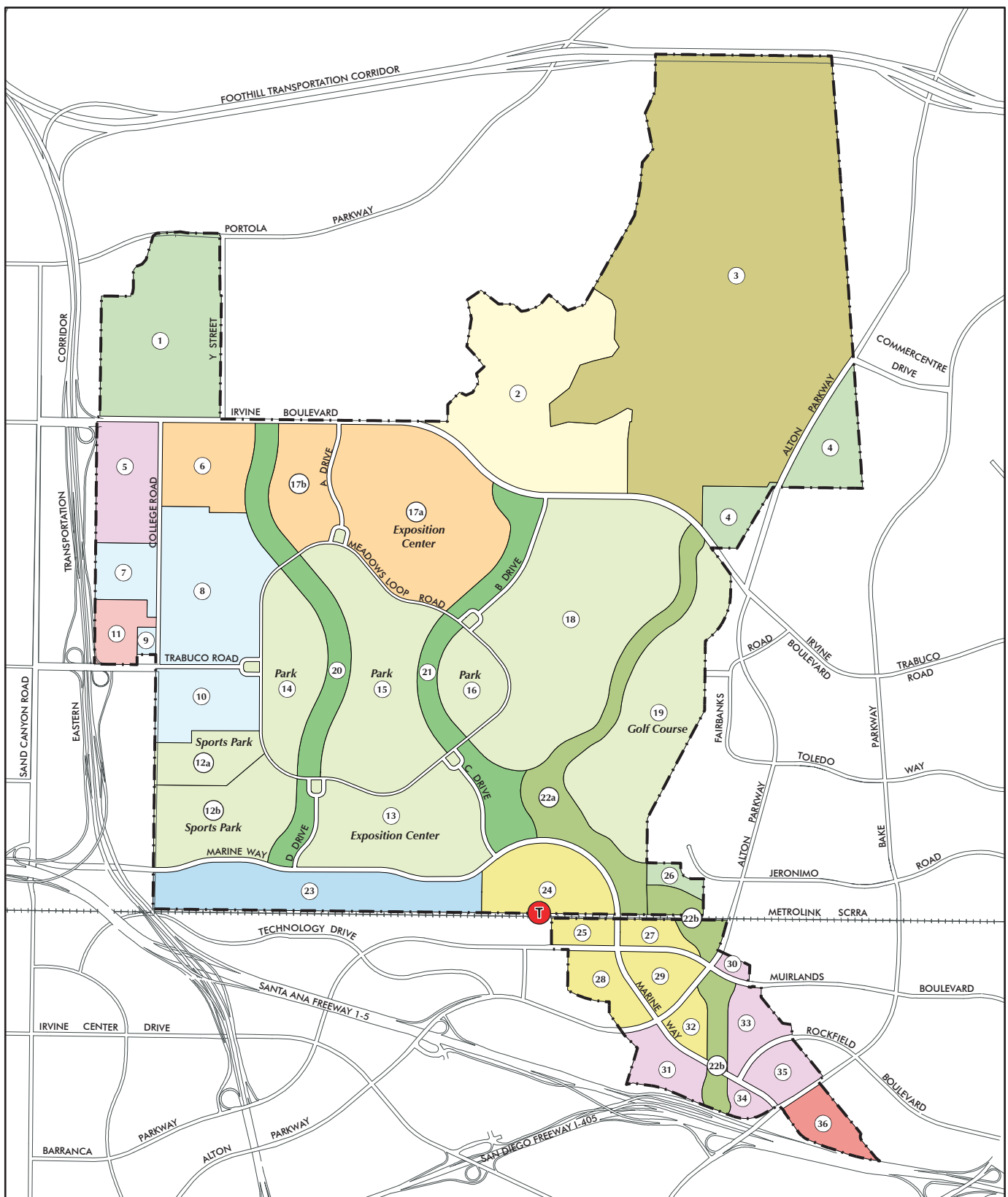
Implementation of the Increased Residential Alternative will have a similar impact as the proposed project regarding conflicts with the County of Orange Master Plan of Arterial Highways and the existing Airport Environs Land Use Plan (AELUP), Air Installation Compatible Use Zones (AICUZ), and Policy Implementation Line (PIL) since non-aviation reuse of the former base conflicts with these existing plans. As with the project, this alternative would not impact off-site land uses.

Traffic/Circulation

Implementation of the Increased Residential Alternative will result in a greater traffic/circulation impact than the proposed project. The increase of 4,635 residential dwelling units would generate approximately 37,010 daily trips (3,476 single-family dwelling units would generate approximately 28,733 daily trips and 1,159 multi-family dwelling units would generate approximately 8,277 daily trips). The commercial recreation and cemetery land uses as proposed under the project would generate approximately 5,867 daily trips. Therefore, implementation of this alternative would represent an increase in 31,143 ADT over the proposed project.

Air Quality

Implementation of the Increased Residential Alternative will result in a greater air quality impact than the proposed project as more development would occur, resulting in greater construction and operational emissions. The trip generation of this alternative is substantially greater (31,143 ADT) than the proposed project; therefore, the mobile air quality emissions generated by this alternative would be greater.



- Orange County Great Park Boundary
- Education
- Institutional
- Low Density Residential
- Medium Density Residential
- Transit Oriented Development
- Research and Development
- Retail
- Auto Center
- Cemetery
- Agriculture
- Riparian Corridor
- Wildlife Corridor
- Habitat Preserve
- Open Space

- 17c Planning Area Zone
- T Irvine Transportation Center

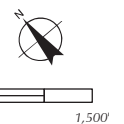


Figure 6-3
Alternative 6.5
Increased Residential Alternative

Noise

Implementation of the Increased Residential Alternative will result in a greater noise impact than the proposed project. This alternative would result in the generation of approximately 31,143 additional ADT than the proposed project, which would be distributed on the surrounding roadway system, and increasing the traffic noise levels along these roadways.

Public Health and Safety

Implementation of the Increased Residential Alternative will result in a similar public health and safety impact to the proposed project. As with the proposed project, this alternative would result in all of the area within PA 51 containing existing structures to be developed, resulting in the need to demolish existing structures. Development will occur in those areas containing remediation sites and structures and population will be located adjacent to wildland fire hazard area.

Geology and Seismicity

Implementation of the Increased Residential Alternative will result in a greater geology and seismic impact associated with seismic ground shaking, soil erosion or loss of topsoil, and expansive soils, as there will be a greater amount of overall development within the project area.

Hydrology and Water Quality

Implementation of the Increased Residential Alternative will result in a greater impact associated with hydrology and water quality than the proposed project. A greater amount of development and impervious surfaces would occur under this alternative as the proposed cemetery use in PAZ 17b would be developed with residential uses.

Agricultural Resources

Implementation of the Increased Residential Alternative will result in a similar impact to agricultural resources as the proposed project. Under this alternative, the same areas of the project site that are currently used for agricultural production would be developed with an alternative land use. Likewise, as with the proposed project, PAZ 1 would be retained for agricultural use.

Biological Resources

Implementation of the Increased Residential Alternative will result in a similar impact as the proposed project in regards to potential conflicts with the City of Irvine Urban Forestry Ordinance. Although a different land use is proposed for PAZ's 17a and 17b, the potential for disturbance to biological resources would be similar. Also, this alternative would allow for the implementation of the proposed wildlife corridor, as is proposed under the project.

Paleontological Resources

Implementation of the Increased Residential Alternative will result in a similar impact to paleontological resources as the same area of the project site would be disturbed by development activity as would occur under the proposed project. As with the proposed project, future development under this alternative has less potential to directly or indirectly destroy a unique paleontological resource or unique geologic feature.

Cultural Resources

Implementation of the Increased Residential Alternative will result in a similar impact to cultural resources as the same area of the project site would be disturbed by development activity as would occur under the proposed project.

Aesthetics

Implementation of the Increased Residential Alternative will result in a greater aesthetic impact related to light and glare than the project since there will be an overall increase in the amount of development occurring within the project area.

Population/Housing

Implementation of the Increased Residential Alternative will result in less of a population/housing impact related to the jobs/housing balance than the proposed project. This alternative would reduce the overall amount of employment generating land uses by approximately 236 acres and would increase the number of residential units by 1,010 dwelling units as compared to the project. As such, the alternative would reduce the project's contribution to the jobs housing imbalance. While the alternative would reduce the impact, it would remain significant and unavoidable.

Public Services and Facilities

Implementation of the Increased Residential Alternative will result in a greater impact related to the construction or expansion of public facilities as significantly more residential units would be constructed on the project site. The impact related to the construction of new school facilities will also be greater than the proposed project as there will be a greater amount of residential units and corresponding student generation.

Utilities

Implementation of the Increased Residential Alternative will result in a greater impact related to the construction or expansion of utilities as the increased residential uses would likely require a larger utility backbone system to support the alternative.

Conclusion

This alternative is environmentally superior to the proposed project with respect to the impact to population/housing. However, implementation of the Increased Residential

Alternative will result in a greater impact to traffic/circulation, air quality, noise, geology and seismicity, hydrology and water quality, aesthetics, and public services and facilities/utilities than the proposed project. This alternative will result in similar impacts to land use, public health and safety, agricultural resources, biological resources, paleontological resources and cultural resources as would occur under the proposed project. The alternative meets the following project objectives identified in Section 3.0 – Project Description of this Final Program EIR:

1. Annex the former MCAS El Toro site and adjacent lands within the City's Sphere of Influence.
2. Convert the former MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.
5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.
6. Respond positively and effectively to the DON's decision to sell the property to private interests by allowing private development of some land while ensuring the implementation of park and open space amenities.

Notes and References

1. City of Irvine. Annexation No. 17, General Plan Amendment 39399-GA, Zone Change/Pre-Zoning 39400-ZC, Final EIR (February 2000).
2. Ibid.
3. Ibid.
4. Ibid.
5. Ibid.

7.0 Analysis of Long-Term Effects

The CEQA requires the discussion of the cumulative impacts, growth-inducing impacts, and long-term impacts of a proposed project. The following sections address these issues as they relate to implementation of the Orange County Great Park project.

7.1 CUMULATIVE IMPACTS

The CEQA Guidelines define cumulative effects as “two or more individual effects that, when considered together, are considerable or which compound or increase other environmental impacts.” The CEQA Guidelines further state that the individual effects can be the various changes related to a single project or the changes involved in a number of other closely related past, present, and reasonable foreseeable probable future projects (Section 15355). The CEQA Guidelines allow for the use of two alternative methods to determine the scope of projects for the cumulative impact analysis:

- List Method - A list of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the control of the agency.
- Regional Growth Projections Method - A summary of projections contained in an adopted general plan or related planning document which is designed to evaluate regional or area wide conditions (Section 15130).

For the purpose of this Final Program EIR, the Regional Growth Projections Method has been utilized for analysis of cumulative impacts. The cumulative analysis is based on buildout assumptions identified in the Center for Demographic Research’s *Orange County Projections 2000*.

Orange County Projections 2000

Cumulative impacts related to the proposed project will encompass environmental changes resulting from the combined effects of the proposed project and other existing or planned land uses in and around the project area. This cumulative analysis takes into consideration buildout of local and regional general plans as well as population forecasts for the County of Orange and the region as a whole (as shown in Table 7-1 and Figure 7-1).

Major projects included within the buildout assumptions and this cumulative analysis include: Eastern Transportation Corridor (ETC); Alton Parkway Extension; Foothill Transportation Corridor North (FTC); Saddleback Meadows; Foothill Aliso Commercial Center; Natural Community Conservation Plan (NCCP); MCAS Tustin Reuse Plan; James A. Musick Facility; Planning Area 17; Planning Area 27; Planning Area 40; Northern Sphere;

Woodbridge General Plan Amendment (Planning Area 15); and the Irvine Ranch Land Reserve.

**Table 7-1
Cumulative Regional Growth Projections**

Geographic Area*	2000			2025			% Change Population	% Change Housing	% Change Employment
	Population	Housing Units**	Employment	Population	Housing Units**	Employment			
RSA A	209,759	73,625	124,387	245,103	79,126	142,069	16.9%	7.5%	14.2%
RSA B	198,069	64,980	104,377	275,920	90,233	136,783	39.3%	38.9%	31.0%
RSA C	251,981	88,480	81,146	363,236	127,490	134,528	44.2%	44.1%	65.8%
RSA D	292,366	126,509	125,880	339,012	137,557	175,477	16.0%	8.7%	39.4%
RSA E	165,226	61,095	179,046	249,044	88,441	341,921	50.7%	44.8%	91.0%
RSA F	195,024	83,930	192,196	229,557	93,066	229,040	17.7%	10.9%	19.2%
RSA G	540,157	148,326	288,149	591,152	152,228	340,318	9.4%	2.6%	18.1%
RSA H	448,855	135,552	173,702	504,219	141,808	219,477	12.3%	4.6%	26.4%
RSA I	373,958	137,174	144,173	421,566	144,868	184,309	12.7%	5.6%	27.8%
RSA J	178,362	58,333	89,378	197,228	61,006	139,743	10.6%	4.6%	56.4%
Orange County	2,853,757	978,004	1,502,434	3,416,037	1,115,823	2,043,665	19.7%	14.1%	36.0%
SCAG Region***	16,827,152	5,376,096	7,413,135	22,625,384	7,415,911	9,947,153	34.5%	37.9%	34.2%

* RSA = Regional Statistical Area as defined by OCP 2000 - See Figure 7-1.

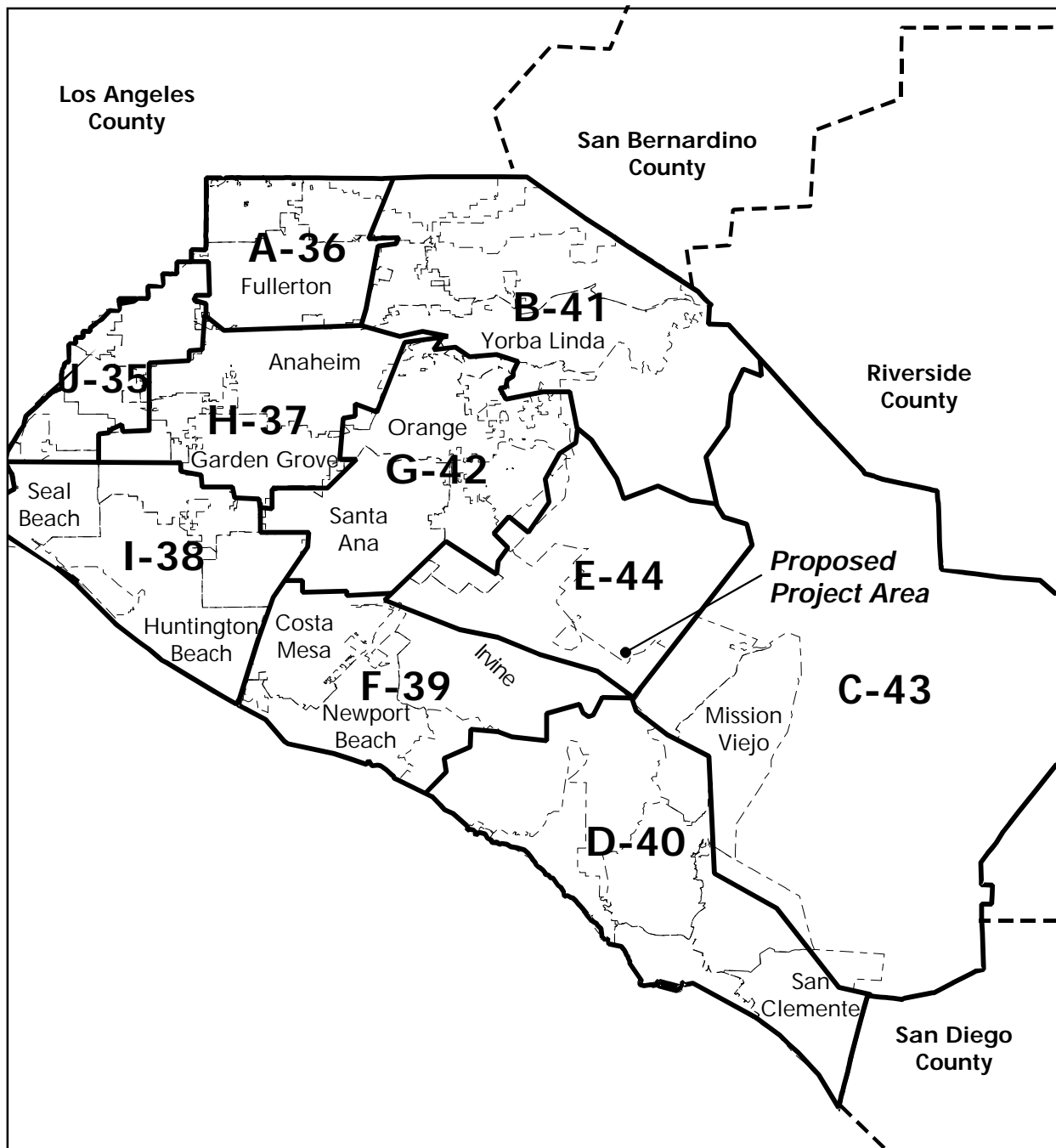
** OCP 2000 calculates housing units, while SCAG Projections calculate households.

*** SCAG region includes Orange, Los Angeles, San Bernardino, Riverside, Ventura and Imperial counties.

Since SCAG Projections for Orange County and OCP 2000 projections differ, totals may be different.

Source: *Orange County Projections 2000*. Prepared by California State University at Fullerton, Center for Demographic Research. June 22, 2000.

SCAG 2001 RTP Growth Forecast.



Source: California State University, Fullerton

- Regional Statistical Area Boundaries
- City Boundaries
- County Boundaries

D-40 RSA Number



Not to Scale

*Figure 7-1
Orange County
Regional Statistical Areas*

Cumulative Impact Analysis

Land Use

The geographic scope for land use includes Orange County as depicted on Figure 7-1, with a focus on projects occurring around the former MCAS El Toro. Development under the proposed project will occur according to the City of Irvine's Land Use Element. The proposed project is intended to result in beneficial land use impacts by providing non-aviation reuse of the former MCAS El Toro and implement a Great Park Plan. The proposed project designates the 974-acre Habitat Preserve to ensure that development within the project area is compatible with the established Orange County Natural Community Conservation Program (NCCP). Furthermore, the proposed project will not result in any land uses or circulation routes that might physically divide established communities either within the City or in other adjacent areas. Future development of cumulative projects will comply with the adopted land use standards, policies and ordinances, and will be compatible with land uses in the areas surrounding the project site. Development for related projects and areas surrounding the site will be governed by policies, implementation measures, and programs to ensure orderly urban development. This will ensure that no significant cumulative land use impact will occur. In addition, none of these projects would require the disruption or division of the physical arrangement of an existing community. As such, cumulative land use impacts are not considered significant.

Traffic

The geographic scope for traffic includes cumulative growth projections for Orange County including the projects described above. The 2025 and Post 2025 analyses contained in Section 5.2 – Transportation/Traffic assess the traffic impacts of all cumulative development anticipated by the Year 2025 and beyond. As shown in these analyses, all intersections and roadway/freeway/tollway/ramp segments will operate at acceptable levels of service with the existing or planned improvements. However, it has been assumed in the traffic analysis that the cumulative impact of project traffic along with other regional growth at the identified ramp and freeway locations will be mitigated through a combination of regional programs that are the responsibility of other agencies. If these programs are not implemented by the agencies with the responsibility to do so, the cumulative freeway/tollway ramp impacts would remain significant and unavoidable. As a result, the proposed project will result in a cumulatively significant traffic impact that may remain significant and unavoidable.

Air Quality

The geographic scope for air quality includes the South Coast Air Basin (SCAB) and the traffic study area defined in Section 5.2. The SCAB is depicted in Figure 5.3-1 in Section 5.3. In 2000, the annual maximum concentrations of ozone (O_3), carbon monoxide (CO), particulate matter (PM_{10}), and sulfates (SO_x) exceeded both Federal and State standards in some or all areas in the SCAB. However, standards for nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (Pb) were not exceeded. A summary of measured criteria pollutant concentrations at the Saddleback air quality monitoring station (located at the former MCAS El Toro) for selected years between 1995 and 2000 are shown in Table 5.3-3 in Section 5.3.

NO₂ concentrations are not measured at this station; however, no station in Orange County has recorded an exceedance of NO₂ standards since at least 1990.

Although air quality tends to vary year to year due primarily to meteorological conditions, air quality at the Saddleback monitoring station appears to be improving (which generally has been the case throughout the SCAB). The primary long-term air quality impacts from development of the proposed project will result from operational emissions from area sources and motor vehicles. Projected SCAB emission estimates for the year 2025 and the estimated average mitigated operation emissions for the proposed project for the year 2025 are presented in the table below. From the estimates presented, it is evident that emissions from the project are less than one percent of the total projected SCAB emissions.

Projected Emission Estimates For SCAB From the 1997 AQMP Compared to Emission Estimates For the Project Area

Emission Estimates (tons/day)						
Pollutant	Projected 1997 AQMP Emissions		Base Plan (2025)		Overlay Plan (2025)	
	Year 2007*	Year 2025**	Unmitigated Emissions	Mitigated Emissions	Unmitigated Emissions	Mitigated Emissions
ROG	786	591	0.47	0.42	1.25	1.15
NO _x	714	419.5	0.40	0.35	0.70	0.60
CO	3,530	1,745	3.96	3.40	7.84	6.85
PM ₁₀	456	496	0.33	0.28	0.73	0.64

* 2007 Emission estimates are linearly extrapolated based on 2000 to 2006 emission trends in 1997 AQMP.

**2025 Emission estimates are linearly extrapolated based on 2000 to 2010 emission trends in 1997 AQMP.

Source: <http://www.aqmd.gov/aqmp/97aqmp/chapters/m-chap3>

Projected Emission Estimates for Base in the 1997 AQMP and Emission Estimates for the Proposed Project

Pollutant	Base Plan		Overlay Plan	
	Year 2007* (percent)	Year 2025** (percent)	Year 2007* (percent)	Year 2025** (percent)
ROG	0.05	0.07	0.15	0.19
NO _x	0.05	0.08	0.08	0.14
CO	0.10	0.20	0.19	0.39
PM ₁₀	0.06	0.06	0.14	0.13

* 2007 Emission estimates are linearly extrapolated based on 2000 to 2006 emission trends in 1997 AQMP.

**2025 Emission estimates are linearly extrapolated based on 2000 to 2010 emission trends in 1997 AQMP.

Source: <http://www.aqmd.gov/aqmp/97aqmp/chapters/m-chap3>

Emissions due to development in the proposed project will exceed SCAQMD thresholds of significance for oxides of nitrogen and reactive organic gases during construction (short-term impact) and for oxides of nitrogen, reactive organic gases, carbon monoxide, and

particulate matter less than ten microns in diameter (PM10) during operation from area source and vehicular emissions (long-term impact for both interim year and buildout year). Together, construction and operation emissions will also exceed applicable thresholds of significance. Although construction activities for the related projects may not overlap, the environmental analysis of this Final Program EIR assumes that they would. Operation emissions in conjunction with related projects and other emissions in the SCAB will also coincide. Since air quality in the SCAB does not comply with federal or state standards, these emissions will contribute to a cumulatively significant impact on air quality. Similar to project-specific impact, no feasible mitigation measures exist to reduce this cumulative impact to a level of less than significant because any project of substantial size will result in this impact.

The proposed project is not expected to result in other unmitigable air quality impacts, such as those related to carbon monoxide hotspots (see Section 5.3). Pursuant to the CEQA Guidelines (Section 15130), no other cumulative impact related to air quality will result.

Noise

The geographic scope for noise includes growth projections for Orange County and the traffic study area defined in Section 5.2. The proposed project will contribute to vehicular-generated noise along roadways in the vicinity of the site. All future cumulative projects, including the proposed project, must take future noise levels into account when siting sensitive receptors and include appropriate mitigation for on- and off-site impacts. Existing ordinances and regulations will ensure that project-specific on- and off-site impacts will be less-than-significant.

Noise generated from activities on the proposed project site will contribute to ambient noise in the surrounding area. However, since noise energy dissipates with distance, the extent of increases in noise will be limited to areas near the site. As discussed in Section 5.4, no impact related to on- and off-site noise generation has been identified. No other noise-related impacts, such as for groundborne vibration, are identified herein. Therefore, pursuant to the CEQA Guidelines (Section 15130), no significant cumulative impact related to noise will result.

Public Health and Safety

The geographic scope for public health and safety includes growth projections for Orange County with an emphasis on the area immediately surrounding the former MCAS El Toro. As discussed in Section 5.5, structures on the project site and portions of the project site are contaminated with hazardous materials by past military activities, such as asbestos and lead-based paint. Other hazards exist on the site, such as hazardous material deposits. Although the DON is required to remediate on-site hazardous materials and other hazards prior to conveyance, the proposed project will facilitate this cleanup, resulting in a beneficial impact. Future cumulative development that utilizes hazardous materials will be required to comply with all regulations pertaining to handling, storing, and disposing hazardous materials. The development of other cumulative projects has the potential to expose persons to hazards or hazardous materials; however, as with the proposed project, mitigation measures can be implemented to address the presence of hazards and hazardous materials on a site specific basis. The combined effect of the development and operation of cumulative projects is not cumulatively significant, as potential hazards are limited to each specific site, and each

project will need to comply with City, State, and federal regulations and policies adopted to protect the public from hazards, which will ensure that the cumulative public health and safety impact remains at a level less than significant.

Geology and Seismicity

The geographic scope for geology and seismicity includes growth projections for Orange County within the framework of the regional geologic setting. Regional geology is depicted on Figure 5.6-1. Most of the soils on the site are well-suited for urban development, including construction. All on-site impacts related to soils, such as erosion, loss of topsoil and expansive soils, must be mitigated prior to development pursuant to the City's General Plan and implementing zoning ordinance.

The level of seismic activity expected in the project area will be similar to the County as well as other regions of Southern California. The exposure of people or structures to risk of loss, injury, or death will not be substantial or adverse because potential for seismic activity is similar to elsewhere in the region. All development at the former MCAS El Toro and new development in the region in general will be required to be constructed to withstand probable seismic forces, including seismic-related ground failure like liquefaction. As cumulative projects are constructed, more people and structures will be exposed to seismic hazards due to earthquakes. Other geotechnical constraints, such as expansive soils and landslides may present hazards to cumulative development. Adherence to site specific geotechnical recommendations, building codes, and applicable grading ordinances will reduce potential cumulative geotechnical impacts to a level less than significant.

Hydrology and Water Quality

The geographic scope for hydrology and water quality includes growth projections for Orange County within the context of the Santa Ana River watershed (including the San Diego Creek watershed) and the Orange County aquifer. The proposed project will result in changes to on-site land uses. Although in some areas the amount of impervious surfaces will increase, a portion of the open space provided by the Orange County Great Park Plan will be utilized for drainage facilities that would offset this increase. All on-site development will be required to analyze on-site runoff to ensure that adequate infrastructure is provided to convey that runoff to local and regional facilities. The existing Flood Control Master Plan for San Diego Creek (Master Plan) assumed certain cumulative development, including urban reuse of the former MCAS El Toro. As projects are proposed within the watershed that do not conform to the growth and land use assumptions contained in the Master Plan, detailed hydrology studies will be required to analyze additional flood control improvement that will be required for that development to proceed. The provision of drainage corridors as a component of the project as well as mitigation measures contained in this Final Program EIR will ensure that project-specific impact will be less than significant. The cumulative impact on drainage and flood control facilities within the Santa Ana River watershed and Orange County aquifer will be less than significant.

The proposed project and cumulative development will be required to comply with all local and regional plans regulating water quality, including total maximum daily loads (TMDLs) for the Newport Bay watershed, the Drainage Area Master Plan (DAMP) for Orange County, NPDES permits, and implementing ordinances adopted by the City of Irvine. Project-related water quality impacts will not differ substantially from current conditions as existing channels

are all improved/channelized and are proposed to remain the same under the Orange County Great Park Plan. Sediment loads currently carried by these channels may decrease in the future due to recently installed detention basins in Bee Canyon, Round Canyon, and the Marshburn Basin. Additionally, to improve water quality within the San Diego Creek watershed, natural drainage corridors will be included in the Great Park Plan. In addition, the Irvine Ranch Water District (IRWD) is proposing to develop water quality wetlands within the project area. The wetlands are planned to be located along the Bee Canyon Channel, Aqua Chinon Channel, Serrano Creek, and the Upper San Diego Creek. Since existing regulatory programs exist to improve local surface water quality, project-specific impacts will be less than significant. Regional BMPs such as the TMDL programs, the DAMP, the MSW Permit, the regional sediment basins, and the San Joaquin Marsh program have been designed under the assumption that the San Diego Creek watershed would continue to become more urbanized. The regional control measures anticipate a reduction in overall agricultural land uses, with their high levels of pollutant runoff, and an increase in urban uses, with an associated increase in runoff volumes. The regional control measures would absorb any cumulative adverse effects of the proposed development. To the extent that the project would improve water quality, that benefit would be shared by the watershed.

The TMDL program is designed to identify all those constituents that adversely impact the beneficial uses of a particular water body, and then to identify the appropriate reduction in pollutant concentrations and/or loadings needed so that the water body can attain its beneficial uses as identified in the Basin Plan.

Other projects in the area would be expected to be reviewed by local and regional jurisdictions regarding project approvals; therefore, they would presumably comply with the same regulatory surface water quality requirements as the proposed project. Compliance with these regulations would ensure the cumulative impact remains less than significant.

Agricultural Resources

The geographic scope for agricultural resources includes Orange County and the growth expected within the County. The encroachment of urban areas on agricultural lands is a long and continued trend in Orange County. Though it is difficult to quantify the amount of agricultural land that is under development pressure within the County, it is evident that such pressure exists and will continue to with or without implementation of the project. The rising cost of irrigation, increased land values, labor costs, and damage from vandalism have made it difficult to maintain a successful large scale agricultural operation. The conversion of agricultural land to urban uses is an important policy decision that is ultimately left to each jurisdiction. In order to address the cumulative loss of agricultural land within Irvine, the City has established an Agricultural Legacy Program, which intends to retain certain sites within Irvine for metro farming activities. Despite the fact that the project will help implement the City's Agricultural Legacy Program by retaining agricultural uses on-site, the loss of the remaining agricultural land is a cumulatively significant loss of local and regional agriculture. The project will result in a cumulatively significant and unavoidable impact associated with the loss of agriculture. For a discussion of regional mitigation measures considered to mitigate project impacts but determined to be infeasible, please see Section 5.8 – Agricultural Resources of this Final Program EIR.

Biological Resources

The geographic scope for biological resources includes the Natural Community Conservation Plan (NCCP) Planning Area in conjunction with growth projections for Orange County. The City of Irvine and jurisdictions within the NCCP Planning Area will continue to develop in accordance with the adopted General Plans of the respective jurisdictions. The primary cumulative impact on biological resources is the fragmentation of ecosystems resulting from the incremental loss of native habitats. As fragmentation continues, the remaining ecosystems will become more isolates and fragmented. The result will be that connectivity between patches of habitat and the wildlife populations they support will be lost. The proposed project designates the 974-acre Habitat Preserve to ensure that development within the project area is compatible with the established Orange County Natural Community Conservation Program (NCCP). Furthermore, the project proposes a major wildlife corridor that would connect two preservation areas in the County, the Lomas Ridge and San Joaquin Hills. This wildlife corridor is proposed where there is currently no link between these areas.

The establishment of the Nature Reserve of Orange County, a 37,000 acre reserve that was approved on July 17, 1996, will provide regional biological benefits that would be unlikely to occur with a piecemeal conservation strategy. The Nature Reserve was designed to prevent the incremental loss of native habitat and the fragmentation of ecosystems, as well as to compensate for impacts of individual projects. Establishment of the Reserve System will protect approximately forty Identified Species, including three Target Species (gnatcatcher, Cactus wren, and orange-throated whiptail lizard), which are the focus of the NCCP planning, and use the CSS and related habitat. The implementation of the NCCP, dedication of lands, and endowment by the participating landowners mitigate impacts of proposed and future development on covered habitats and identified species. The City of Irvine participates in this and the NCCP program, and requires development to be in accordance with the NCCP. As a result, cumulative biological impacts are mitigated to a level less than significant.

Paleontological Resources

The geographic scope for paleontological resources includes growth projections for Orange County with a focus on the immediate area surrounding the former MCAS El Toro. Implementation of the City's standard conditions of approval, which includes requirements to ensure that paleontological resources are not impacted from development, and mitigation required by this Final Program EIR will ensure that impacts to paleontological resources in the project area are mitigated. This mitigation includes requirements for certification of the site by a registered paleontologist prior to issuance of grading permits and measures to recover fossils if they are discovered during grading. Such procedures are generally standard in the region, and will be applied elsewhere when appropriate. Implementation of these measures as specific cumulative projects are proposed and developed will ensure the potential cumulative impact to paleontological resources is less than significant.

Cultural Resources

The geographic scope for cultural resources includes growth projections for Orange County with a focus on the immediate area surrounding the former MCAS El Toro. Implementation of mitigation measures identified in Section 5.11 – Cultural Resources will reduce potential project impacts on cultural resources to less-than-significant levels. Although other projects in the region will result in significant impacts on cultural resources, existing structures at the former MCAS El Toro do not contribute to any substantial historic or cultural district in the region. There are no features or characteristics of the project area that define or include unique ethnic cultural values and no known or documented religious or sacred uses associated with the site or the region. Development of cumulative projects has the potential to impact archaeological resources. The cumulative impact to cultural resources can be mitigated through data recovery and avoidance of important cultural resources.

Aesthetics

The geographic scope for aesthetics includes growth projections for Orange County with a focus on the immediate area surrounding the former MCAS El Toro. The proposed project site is located in a rapidly urbanizing portion of southern Orange County where changes to the aesthetic environment abound. Specifically, new development in the area will alter the natural terrain and result in artificial topography. Alteration of the natural topography from the proposed project will be limited, and mitigation measures contained in this Final Program EIR (see Section 5.12 – Aesthetics) will ensure that project-level impacts as a result of this change will be less than significant. Existing City policies regarding visual quality, such as requiring site design review, will also work to ensure high aesthetic quality of future development. Substantial amounts of open space will be retained as well. The cumulative impact is considered less than significant.

Population and Housing

The geographic scope for population and housing includes Orange County and the growth projections for the County. Figure 7-1 depicts the Orange County Regional Statistical Areas. Other cumulative projects generally have been accounted for in these growth projections; however, future unknown development may also result in an exceedance of projections. Based on future projections, the Orange County Subregion is anticipated to become increasingly jobs-rich over the next 20 years. The proposed Base Plan and Overlay Plan for the former MCAS El Toro site would substantially add to employment generation characteristics of Irvine and the region. Since, the project-related employment would exacerbate the cumulative subregional jobs/housing imbalance, the cumulative population and housing impact is considered significant and unavoidable.

Public Services and Facilities

The geographic scope for public services and facilities includes growth projections for Orange County with a focus on the immediate area surrounding the former MCAS El Toro. Future regional growth will result in increased demand for public services and facilities, including law enforcement, fire protection and emergency medical services, park and recreational facilities and programs, and schools. Service providers will continue to evaluate levels of service desired and potential funding sources to meet this demand.

The proposed project will result in increased demand for public services and facilities and will contribute to the need to construct these facilities and operate such services. The Orange County Great Park Plan includes those facilities that will need to be constructed as a result of demand from on-site development. As such, the environmental impacts of constructing and operating these public facilities and services as a result of cumulative demand has been evaluated in this Final Program EIR, and no additional impact will occur.

Utilities

The geographic scope for utilities includes growth projections for Orange County with a focus on the immediate area surrounding the former MCAS El Toro. Future regional growth will result in increased demand for utilities, including water facilities and services, wastewater facilities and services, solid waste disposal, energy utilities, and communications. Utility providers will continue to evaluate levels of service desired and potential funding sources to meet this demand. Utility services are available for the proposed project and the proposed project includes general designs for utility systems.

The proposed project will result in increased demand for utilities and will contribute to the need to construct and operate these utilities. The Orange County Great Park Plan includes those utilities that will need to be constructed as a result of demand from on-site development. As such, the environmental impacts of constructing and operating utilities as a result of cumulative demand has been evaluated in this Final Program EIR, and no further impact will occur.

7.2 GROWTH INDUCING IMPACTS

Section 15126.2(d) of the CEQA Guidelines states that the EIR address the growth-inducing impact of the proposed project. Specifically, the EIR must “discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects that would remove obstacles to population growth....[i]ncreases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects.” The EIR must also “discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.”

Impact Analysis

Growth-inducing impacts can be either direct or indirect, as described below.

Direct Impacts

Direct growth-inducing impacts are generally associated with the provision of urban services, such as utilities, improved roadways, and police protection, to an undeveloped or

rural area. The provision of these services allows new development to occur more easily, and can induce landowners to convert their property to urban or more intense urban uses. Other direct impacts include substantial economic expansion and the related multiplier effects that ripple through the economy and produce more growth and regulatory changes brought about that might result in physical changes off-site.

Infrastructure Expansion

The former MCAS El Toro site is largely developed, and changes in land uses as proposed under the proposed project will involve the demolition of existing structures, construction of new development, and the provision of new roadways and infrastructure systems to serve this development. Areas on the northern and southern sections of the site that are currently in agricultural use are planned to be developed with urban land uses. In addition, there are adjacent agricultural areas and underutilized sites near the former MCAS El Toro (to the northwest, northeast, and southeast) that may be induced by the proposed project to develop in the future. However, the proposed project is primarily conversion of the former MCAS El Toro to park/open space/recreation uses that will not contribute to conversion of adjacent agricultural areas to urban areas.

The roadway and infrastructure improvements that will accompany future development under the proposed project may improve access to nearby vacant areas (over 1,000 acres located north of the site and designated for low-density residential development) and increase pass-by traffic. The provision of infrastructure improvements under the proposed project may also decrease the costs associated with extending or improving the existing infrastructure to these vacant sites and, therefore, make future development less costly and more expedient for developers.

The proposed roadways will provide traffic access through the site. These roadways may make the surrounding area more attractive to investors, property owners and future residents and, thus, induce development in these areas. Therefore, the proposed project may facilitate development in these nearby vacant areas by making them more attractive residential sites or commercial and industrial centers.

Environmental impact associated with growth-inducing infrastructure expansion will be assessed in accordance with CEQA as such new infrastructure projects are proposed. Mitigation for significant environmental impacts associated with such projects will be the responsibility of those projects.

Economic Growth

The proposed project is designed to develop the former MCAS El Toro facility with primarily open space/recreational, commercial, research and development, and institutional uses.

The planned residential development on the site is expected to partially accommodate housing demand that will be created by employees on-site wanting to reside near their places of work. These housing units, in addition to the estimated 55,000 housing units planned, but not yet built, in the County, will increase the housing stock of Orange County.

The project is primarily focused on providing park/open space/recreation opportunities. These land uses will not generate a significant number of jobs. The planned land uses under

the proposed project that would attract jobs to the area, include research and development, institutional, and educational. With the exception of research and development, these sectors are not considered economic drivers. Thus, the proposed project promotes economic growth; however, that is not the goal of the project.

The presence of a qualified labor force in the region and the high demand for research and development and office space in Orange County led to the provision of adequate space for these sectors under the proposed project. The provision of a university campus on the site to support and develop this labor force is planned to attract high technology industries that demand a highly skilled labor force.

Environmental impact associated with growth-inducing economic development, (such as demand for industrial facilities, increased traffic, noise and air quality impacts) will be assessed in accordance with CEQA as such new projects are proposed. Since it is unclear at this time how growth-inducing economic development may affect growth in the area, it is not possible to quantify potentially significant impacts or identify mitigation measures to reduce such impacts to less-than-significant levels. Mitigation for significant environmental impacts associated with such projects will be the responsibility of those projects.

Removal of Development Restrictions

Since 1981 the recognized planning document for land use in the environs of the former MCAS El Toro has been the 1981 Air Installation Compatibility Use Zones (AICUZ) study. As part of this study, noise and accident potential zones were developed for areas surrounding the former MCAS El Toro property. A land use compatibility matrix and applicable land use and zoning strategies were developed in an effort to achieve and maintain compatible land uses near the former MCAS El Toro site. The Noise Element of the Orange County General Plan establishes the 65 dB(A) CNEL contour contained in the 1981 AICUZ as the Policy Implementation Line (PIL) in which new residential construction is not permitted, although exceptions may exist for neighborhood infill conditions. At the time of development of the 1981 AICUZ, some residential development had already occurred within what will become the 65 dB(A) CNEL contour.

Since 1973, the City of Irvine has incorporated such factors as noise and accident potential into its General Plan, zoning, and development policies. In 1980, the City and the Marine Corps entered into a Memorandum of Understanding (MOU) that established the AICUZ study as the “basic planning resource in conjunction with the amendment of the City’s adopted General plan in so far as it relates to aircraft noise and hazard.”

Consistent with the passage of Measure W by Orange County voters and the County of Orange plans for the project site, the proposed project does not include aviation uses on the site, and thus will allow removal of development restrictions associated with the aircraft clear zones and flight patterns and the noise-restricted areas around the former MCAS El Toro. Previously development-restricted areas in the City, adjacent cities, and unincorporated areas in the County of Orange could develop with residential and other land uses, at higher densities, and at higher building heights. Such a scenario could allow new development in the surrounding area that would not have been possible if the aviation uses remained on the site.

Since it is unclear at this time how the removal of these development restrictions may affect growth in the area, it is not possible to quantify potentially significant impacts or identify mitigation measures to reduce such impacts to less-than-significant levels. Furthermore, these development restrictions are imposed by a variety of jurisdictions, and the City cannot guarantee implementation of mitigation measures outside of its jurisdiction. Therefore, no feasible mitigation is available to reduce this potentially significant impact.

Indirect Impacts

Indirect or secondary growth-inducing impacts consist of growth induced by additional demand for housing, goods, and support services associated with population and employment increases caused by or attracted to the area.

The adoption and implementation of the proposed project will allow for the intensification of urban land uses on-site and will create short-term construction employment, as well as long-term employment in research and development, institutional, and educational land uses. Additional employment opportunities in the City will be partially met by the local labor force, although individuals from areas outside the region may relocate to the County to be near these jobs. These off-site employees may, in turn, create additional demand for housing. While planned residential development on the site is expected to accommodate some of this demand, adjacent residential areas are expected to experience an increase in demand due to the availability of jobs on the site. As indicated earlier, some 55,000 housing units have yet to be built in planned developments in the surrounding area. These units are expected to meet demand resulting from new jobs on-site.

The jobs and households on-site will also create demand for goods and services in the area. This demand may be met by the existing Irvine Spectrum development and new commercial, recreational, and retail uses that will be developed on-site, as well as in the surrounding area. Providing the goods and services needed to support new development on-site will lead to increases in demand for housing and support services, which in turn will induce additional growth in the City and the surrounding area. Thus, new development under the proposed project is expected to produce a multiplying pattern of development, investment, and growth in the community.

Roadway improvements, infrastructure systems, and provision of public services in the area may encourage residential, commercial, and industrial construction in adjacent areas, which will increase local population and employment bases. The intensification of land uses will foster growth and increases in utility consumption, as well as in demand for public services. Construction of capital improvements that are needed to support development will affect the pace of growth in the project area. The availability of adequate utilities and infrastructure in the area is expected to indirectly serve to promote development of adjacent areas.

The reduction of land in the project area in agricultural production, will have the indirect effect of increasing development pressure and accelerating the loss of the remainder of the agricultural land within the area. A net decrease in farmland under cultivation in an area has a consequent increase in agricultural production costs such as transportation and labor. Agricultural activities tend to be incompatible with urban and suburban neighbors because of factors such as dust, odors, pesticide use and machinery noise associated with normal farming operations. Farmers may also experience increased costs associated with garbage

dumping on their property, theft of produce and equipment, vandalism of equipment, and increased traffic on roads used to move equipment between fields. Development within the project area may reduce the attractiveness of continued production on nearby farmlands, and may increase the financial rewards of taking land out of agricultural use.

However, conversion of agricultural land to urban uses is a long and continuing trend in Orange County. Though it is difficult to quantify the amount of agricultural land that is under development pressure within the County, it is unarguable that such pressure exists and will continue with or without implementation of the proposed project. As a result, while there are existing pressures that would result in the conversion of agricultural land within and adjacent to the project area with or without implementation of the proposed project, it is expected that the conversion of agricultural land within the project area will serve to indirectly promote the conversion and development of agricultural land within the area.

7.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126 of the CEQA Guidelines states, in part, that the EIR should address “significant irreversible environmental changes which would be caused by the project should it be implemented. Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or non-use thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.”

Impact Analysis

Annexation of the former MCAS El Toro site, the Musick jail site, and the IRWD parcel will increase the land area within the jurisdictional boundaries of the City of Irvine. No new development on the Musick jail site or the IRWD parcel is proposed as part of the annexation. Thus, no irreversible environmental changes are expected with the annexation of these two sites. The following analysis focuses on the environmental changes that are anticipated with new development planned on the former MCAS El Toro site under the proposed project.

Adoption of the proposed project will result in the redevelopment of the site, including demolition of most of the existing on-site structures. The proposed project proposes construction of a variety of new structures and facilities; provision of new infrastructure systems; and provision of public facilities and other public improvements to serve future development in the area. New structures built under the proposed project will represent a long-term commitment to park/open space/recreational, research and development, and institutional uses proposed on the site. This new development at the former MCAS El Toro site will preclude aviation and military uses. Thus, irreversible and long-term effects associated with the proposed project implementation include new research and

development and institutional development on the site, as well as new roadways, storm drain facilities, water system, sewer system, and other facilities that will support planned development. Because the proposed project will be implemented over a long period (20 years or more), certain environmental impacts associated with future development projects will be incremental and cumulative over the long-term.

Primary Impacts

Implementation of the proposed project will result in an irreversible commitment of non-renewable and renewable resources, including land, construction materials, aggregate materials, water, and energy resources.

Incremental loss of agricultural land and undeveloped/underdeveloped areas on site will occur. Aside from the conversion of the agricultural areas, runways, taxiways and aprons, and underdeveloped sections of the site to more intensive urban uses, the project site does not possess significant on-site mineral, energy, oil, or cultural resources that will be adversely affected by new development under the proposed project (see Section 5). The existing runways will be recycled for use in construction project roadways and other features requiring aggregate materials. The proposed habitat reserve along the eastern edge of the site will be preserved to protect biological resources in this area.

Construction activities carried out to implement the proposed project will require a wide variety of construction materials, including such non-renewable resources as sand, gravel, and steel, and renewable resources such as lumber. Resources committed during construction are unlikely to be recovered, even after the 50- to 75-year life span of the physical structures is reached. The amount of resources that will be committed is not considered significant relative to available resources in the region and considering the incremental phasing of development within the proposed 20+-year time frame. Furthermore, this use of resources is not considered wasteful nor will it be substantial relative to other urban development at a similar scale in the region.

Water and energy resources will also be irretrievably committed during construction of various developments planned on site. Once constructed, ongoing maintenance of structures built in the project area will result in further commitment of water and energy resources in the form of fuel, natural gas, and electricity. These commitments represent long-term obligations that will accompany future development activities. Utility providers have indicated that available resources and facilities are adequate to serve future development under the proposed project.

Specific development projects that are constructed under the proposed project represent a commitment to the improvements and land uses planned in the area. The provision of new infrastructure, roadways, and public facilities on-site will also enhance the physical environment through the elimination of existing, older infrastructure systems. The City of Irvine and other affected agencies will maintain roadways, parks, and other public facilities on-site and serving the site. This will entail financial, personnel, and facility resources from service providers.

The proposed project is intended to redevelop the former MCAS El Toro site with a variety of land uses that will reflect similar development in the City and desired by the City; to ensure the adequate provision of public services and infrastructure; and to prevent the

adverse impacts associated with haphazard development. Annexation of the former MCAS El Toro site will be consistent with City policies regarding land annexation and related provision of infrastructure within its Sphere of Influence. This annexation will also allow the City of Irvine to regulate redevelopment efforts at the site.

In summary, annexation of the former MCAS El Toro site, Musick Jail site, and IRWD parcel and implementation of the proposed project will involve the following irreversible environmental changes:

- New development under the proposed project will lead to the loss of agricultural land on-site. These existing agricultural areas are planned for the development of the wildlife corridor, open space/park, and sports park uses.
- The project involves the commitment of approximately 4,738 acres (former MCAS El Toro) to land uses proposed under the proposed project, resulting in the elimination of existing on-site development. Some structures ("The Castle", former bachelor housing) and uses (golf course, habitat preserve) may be retained, and some may serve as interim facilities until permanent facilities are constructed (i.e., El Toro Marine School and some existing office buildings, some of which have been retrofitted for other uses).
- New vehicle trips on proposed and surrounding roadways will be generated by new development under the proposed project. Planned roadways on-site are expected to provide access into the site and allow changes in traffic patterns due to the alternative routes provided on-site.
- Vehicle trips generated by new development under the proposed project will result in increases in air pollutants, including criteria air pollutants, associated with vehicle exhaust. Greater pollutant emissions are also expected from new stationary sources that may be built within the project area.
- New development under the proposed project will introduce long-term noise from vehicles traveling to and from the project site. The vehicular noise will add to ambient noise levels on-site and in the surrounding area. New sources of stationary noise are also expected from future development and on-site activities.
- The project will require the commitment of energy, water, and other natural resources for the construction and operation of new development. However, existing resources are available to meet the projected demand and utility providers can serve new development under the proposed project without adverse impacts.
- Implementation of the proposed project will involve demolition of existing structures that have asbestos-containing materials and lead-based paint and the disposal of other hazardous materials on the site. Abandonment of water wells and fuel tanks will also occur, along with the remediation of identified contaminated soils. Thus, elimination of existing public health and safety hazards will accompany the proposed project.
- Implementation of the proposed project will result in an increase in the demand for utilities and will require the extension of existing infrastructure to individual lots on

the site. An increase in demand for public services and facilities operated by the City of Irvine and affected service agencies will also occur. This demand can be served by facilities and staffing of public service agencies.

- The proposed project will lead to demolition of existing structures on site, the construction of new structures, and changes in the visual quality of the site. New light sources will be introduced to the environment. These changes will not result in significant adverse impacts after mitigation.
- The preclusion of an airport and airport uses in accordance with Measure W, which was passed by Orange County voters in 2002.

Secondary Impacts

Annexation of the proposed project area and its implementation will alter the pattern of on-site development through development of a primarily park/open space in the area and demolition of existing military facilities. New development planned under the proposed project will involve the provision of new roadways and infrastructure systems to serve individual lots and projects on-site. The proposed project will provide an extensive circulation network on-site and will divide the existing site into smaller planning areas for future development. While the former MCAS El Toro is not open to public access, the proposed project will provide public access to most of the site, as well as allow vehicles and people to pass through the site.

In the post-buildout period, when planned land uses change or areas are redeveloped within the project area, public service facilities and infrastructure that are constructed under the proposed project will continue to permit on-site urban development. These public improvements will also allow the site and the surrounding area to develop and accommodate additional population growth well beyond buildout of the project area. Recycling of land uses in and around the project area will be subject to City of Irvine General Plan policies for planned growth, phased development, and provision of public facilities and services. Therefore, no environmentally significant secondary impacts are anticipated to result from project implementation.

7.4 UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL EFFECTS

Based on the data and conclusions in Section 5 of this Final Program EIR, annexation of the former MCAS El Toro, Musick Jail and IRWD parcel and new development projects that will be implemented under the proposed project may result in significant unavoidable traffic/circulation, air quality, agricultural resources and population/housing impacts that cannot be fully mitigated. Implementation of the recommended mitigation measures will reduce all other impacts to less-than-significant levels.

Traffic/Circulation

The 2025 and post 2025 analyses indicates that all intersections and roadway/freeway/tollway/ramp segments will operate acceptable levels of service with the existing or planned

improvements. However, it has been assumed in the traffic analysis that the cumulative impact of project traffic along with other regional growth at the identified ramp and freeway locations will be mitigated through a combination of regional programs that are the responsibility of other agencies. If these programs are not implemented by the agencies with the responsibility to do so, the cumulative freeway/tollway ramp impacts would remain significant and unavoidable.

Air Quality

SCAQMD thresholds for oxides of nitrogen and reactive organic gases will be exceeded during construction activities on the site. Operational emissions (stationary and vehicular) will exceed SCAQMD thresholds for criteria pollutants, including oxides of nitrogen, reactive organic gases, and carbon monoxide from year 2007 through the post 2025 development level. Given the size of the proposed project, these impacts are not surprising. No feasible mitigation measures exist to reduce these impacts to less-than-significant levels.

Agricultural Resources

The proposed project will result in the permanent loss of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance (important farmland) to non-agricultural use within the project area. The project will accelerate the permanent loss of important agricultural land to non-agricultural use in the project vicinity as well. Appropriate amounts of agricultural and open space lands to be preserved are determined through City land use policy decisions. Mitigation measures in Section 5.8 will reduce the impact of the project on agricultural resources by encouraging agriculture as an interim land use pending development. However, impacts to agricultural resources will remain significant and unavoidable.

Population and Housing

The proposed Base Plan and Overlay Plan for the former MCAS El Toro site would substantially add to employment generation characteristics of Irvine and the region. Since, the project-related employment would exacerbate the subregional jobs/housing imbalance, the population and housing impact is considered significant and unavoidable. No feasible mitigation has been identified that would reduce this impact to a level less than significant.

7.4 AREAS OF LESS THAN SIGNIFICANT IMPACT

Based on the analysis contained in Section 5, environmental impacts from the proposed project will be less than significant without mitigation or will be less than significant with mitigation for the following issue areas:

- Land Use
- Paleontological Resources
- Noise

- Cultural Resources
- Public Health and Safety
- Aesthetics
- Geology and Seismicity
- Hydrology and Water Quality
- Public Services and Facilities (includes Recreation)
- Biological Resources
- Utilities

8.0 References

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Responsibility: Preparation of an Air Quality and Noise Assessment, Orange County
Great Park, March 15, 2002.

John Olivier, Hydrology, Utilities
Fusco Engineering
16795 Von Karman, Suite 100
Irvine, California 92606

Responsibility: Preparation of Hydrology and Utilities Analysis.

Len Viejo
ASTRUM Utility Services
462 Stevens Avenue, Suite 308
Solana Beach, CA 92075

Responsibility: Preparation of Energy Analysis.

B. Persons and Organizations Contacted

1. Comment letter from the Irvine Police Department (2002).
2. Information for the fire protection section is based on information from Mick Rohde of the Orange County Fire Authority in his letter (January 7, 2002) and personal conversation (March 2002), as well as previous information provided by Nancy Foreman of the Orange County Fire Authority in her letter (January 22, 1999), Response to Comment letter (May 15, 1999), Response to Notice of Preparation (September 15, 1999), and personal conversation (September 1999).
3. Comment letter from Don Chadd, Irvine Unified School District (October 31, 2002).
4. Personal conversation with Tom Tullar, Saddleback Valley Unified School District (December 2002).
5. City of Irvine Police Department. Lieutenant Patrick Rogers Ph.D. Correspondence (February 5, 1999) and Personal Conversation (September 1999).
6. Orange County Fire Authority. Nancy Foreman. Correspondence (January 22, 1999), Response to Comment Letter (May 15, 1999), Response to Notice of Preparation (September 15, 1999), and Personal Conversation (September 1999).
7. Irvine Unified School District, Facilities Planning. Corinne Loskot. Personal Conversation. October 1999.
8. Saddleback Valley Unified School District. Tom Tullar. Personal Conversation. October 1999.

C. Documents

1. Airport Land Use Comisión for Orange County, *Airport Environs Land Use Plan*. 1995.
2. Alameda Corridor Transportation Authority. *Alameda Corridor DEIR*. January 1993.

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5. Bechtel National, Inc, *Final Interim Record of Decision, Operable Unit 2B, Landfill Sites 2 and 17, MCAS El Toro, California, 2000.*
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7. Bechtel National, Inc, *Final Record of Decision, Operable Unit 3B, No Action Sites 7 and 14, MCAS El Toro, California, 2001.*
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12. California State University Fullerton, Center for Demographic Research. *Orange County Projections - 2000.* July 1997.
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15. City of Irvine. *GPA, ZC, and Annexation of MCAS El Toro and James A. Musick Branch Jail FEIR.* June 14, 1999.
16. City of Irvine, *General Plan Monitoring Report*, November 19, 1998.
17. City of Irvine, *General Plan*, March 9, 1999.
18. City of Irvine, *Irvine Planning Area 30 General Plan Amendment/Zone Change – Final Environmental Impact Report*, November 26, 1996.
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20. City of Irvine, *Zoning Ordinance*, 1998.

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30. County of Orange, *MCAS El Toro Master Development Program Airport System Master Plan, Technical Report 6, Alternatives Definition Report*, April 1998.
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9.0 Responses to Comments

Comments and Responses to Public and Other Agency Comments

The Orange County Great Park Draft EIR was circulated for public review for a period of 45 days extending from February 19, 2003 to April 4, 2003. The Draft EIR was distributed to a variety of public agencies and individuals.

In accordance with CEQA Guidelines Section 15088, the City of Irvine has evaluated the comments on environmental issues received from those agencies/parties and has prepared written responses to each pertinent comment relating to the adequacy of the environmental analysis contained in the Draft EIR. There has been good faith, reasoned analysis in response to comments, rather than conclusionary statements unsupported by factual information.

The agencies, organizations, and interested persons listed on the “Response to Comments Index” submitted comments on the Draft EIR during the public review period. Each comment submitted in writing is included, along with a written response where determined necessary. Each comment letter is identified with a letter in the upper right corner of the first page of the letter. The individual comments have been given reference numbers, which appear in the right margin next to the bracketed comment. For example, Letter A will have comment numbers A1, A2, etc.

In response to comments received, certain revisions have been made in the Final Program EIR. All revisions are marked in ~~strikeout~~/underline format. These revisions to the Final Program EIR are generally minor text changes that do not constitute significant additional information that changes the outcome of the environmental analysis or require recirculation of the document (Guidelines Section 15088.5). All such changes are noted in the responses to comments.

The agencies, organizations, and individuals that submitted comments on the Draft EIR are identified in Table 9-1 Responses to Comments Index. The comment letters and responses are provided on the following pages.

Table 9-1
Responses to Comments Index

Commentor	Letter Reference
Federal Agencies	
US Fish and Wildlife Service	BB1 – BB21
State Agencies	
Office of Planning and Research	A1
Public Utilities Commission	C1 – C2
Department of Toxic Substances Control	L1
Regional Water Quality Control Board, Santa Ana Region	P1 – P8
Department of Transportation	S1 – S7
Department of Fish and Game	BB1 – BB21
Department of Conservation	CC1 – CC3
Department of Toxic Substances Control	DD1 – DD14
Department of Transportation	II1 – II22
Local Agencies	
City of Laguna Woods	D1 – D9
City of Mission Viejo	E1
Irvine Ranch Water District	G1 – G11
Orange County Planning and Development Services Dept.	H1 – H86
Airport Land Use Commission for Orange County	I1 – I13
Orange County Fire Authority	J1 – J26
Transportation Corridor Agencies	N1 – N4
Southern California Association of Governments	O1
Irvine Ranch Water District	Q1
Orange County Transportation Agency	V1 – V20
City of Tustin	X1 – X21
City of Lake Forest	Z1 – Z5
Irvine Unified School District	AA1 – AA8
City of Laguna Hill	EE1 – EE2
University of California, Irvine	FF1
Local Agency Formation Commission Orange County	GG1 – GG5
Metropolitan Water District of Southern California	JJ1 – JJ2
Organizations	
The New Millennium Group, Inc.	B1 – B7
North Irvine Villages Association	F1 – F71
Chevalier, Allen & Lichman, LLP	M1 – M94
Laguna Canyon Foundation	T1
The Kennedy Commission	HH1 – HH3
Public Law Center	KK1 – KK3
Individuals	
Ann Watt	K1 – K7
Donald Nyre	R1 – R19
Rae Gabelich	U1 – U2
Rex Ricks	W1 – W54
Don Stewart	Y1 – Y6

Response to Comment A1

This letter acknowledges that the City has complied with the State Clearinghouse review requirements for the EIR pursuant to the California Environmental Quality Act. No further response is required.

Response to Comment B1

The EIR is the environmental document pursuant to CEQA that identifies, analyzes and discloses potential environmental impacts and mitigation measures for the Orange County Great Park Plan. The Orange County Great Park Plan is consistent with the intent of Measure W since it allocates approximately 84 percent of the total land area of the former MCAS El Toro to open space, recreational, institutional, educational, cultural, and other public uses. Measure B was an advisory measure passed by the voters in November of 2002. The EIR does not analyze the impacts of the provisions of Measure B. Furthermore, because Measure B was passed as a County initiative, it does not have any legal effect with respect to actions taken by the City of Irvine with respect to lands within, or annexed to, the City. Section 5.5 of the EIR *Public Health and Safety* discusses the issues related to contamination on the base property and the various determinations and actions taken and planned to be taken by the responsible parties and regulatory agencies. Further, arguments for or against ballot measures published in voter pamphlets are not part of the language of the ballot measures subject to voters' action and therefore, are not in any way binding if the ballot measure passes. As such, the proponent's arguments for Measure B are not a binding mandate.

Response to Comment B2

The meteorological station used in the EIR is administered by the AQMD with wind velocity data generated, verified, and published by that public agency. The station referenced in Section 5.3 *Air Quality* is located on the project site, and is consequently represents the best source of on-site wind velocity data for air quality purposes. According to the website maintained by the AQMD (and referenced in the EIR on page 5.3-1), this data is neither erroneous nor obsolete.

Response to Comment B3

The proposed zoning regulations will allow for development on a similar scale as existing residential, industrial, office, and commercial buildings in the City of Irvine.

The objectives of the proposed project are defined on page 3-29 of the EIR. The project objectives are not to develop an aviation use at the former MCAS El Toro. As described in the EIR, the voter-approved Measure W initiative amended the County General Plan for the area of the base north of the Southern California Regional Rail Authority (SCRRA) Metrolink rail line (PA 51) to designate the unincorporated land for park, open space and other uses, removing the designation of the site as a commercial airport from the County General Plan (EIR, p. 1-2). Therefore, a detailed analysis of an aviation reuse alternative is not permitted under the Orange County General Plan and is not required under CEQA because an aviation reuse of the site does not meet the basic objectives of the project. Furthermore, on 25 February 2003, the Orange County Board of Supervisors, acting as the El Toro Local Redevelopment Authority, rescinded the Airport System Master Plan, thus removing an airport at the former MCAS El Toro from all County plans.

Response to Comment B4

As stated in Response to Comment B3, Measure W amended the County General Plan to remove the designation of the site as a commercial airport. Therefore, implementation of a commercial airport at this location is not consistent with the County General Plan nor is it consistent with most of the basic objectives of the project.

Section 6.0 Alternatives of the EIR addresses a reasonable range of alternatives to the proposed project as required by the CEQA Guidelines.

Response to Comment B5

This comment does not address the adequacy of the EIR nor does it raise an environmental issue with respect to the proposed project. While the City recognizes there are heightened security concerns regarding airports in general, there is no evidence to indicate that construction of a new airport, at any location, would alleviate security concerns at the existing John Wayne Airport.

Response to Comment B6

It is beyond the scope of the EIR to consider potential impacts of a non-aviation plan on existing residential communities contiguous to the Los Angeles International Airport, Ontario International Airport, Long Beach International Airport and Santa Ana (John Wayne) International Airport. As stated in Response to Comment B3, the proposed project objectives meet the spirit and intent of Measure W, which changed the County General Plan designation for the former MCAS El Toro from airport to non-aviation uses. This EIR analyzes the potential impacts of Annexation, General Plan Amendment and Zoning of the former base property and not those of Measure W. Furthermore, on 25 February 2003, the Orange County Board of Supervisors, acting as the El Toro Local Redevelopment Authority, rescinded the Airport System Master Plan, thus removing an airport at the former MCAS El Toro Airport from all County plans.

Refer to Final Environmental Impact Report No. 573 *For the Civilian Reuse of MCAS El Toro and the Airport System Master Plan for John Wayne Airport and Proposed Orange County International Airport* for information pertaining to reports and supporting data from studies conducted for that EIR.

Response to Comment B7

The Orange County Great Park plan proposes several features that will address on-site water quality control and flood protection. These project features provide a unique opportunity for water quality and flood protection to be addressed on a regional level and in a comprehensive manner. The proposed water quality and flood control concept plan is shown on Figure 5.7-2 of the EIR. A description of the concept plan is provided on pages 5.7-16 through 5.7-22 of the EIR. The EIR identifies future potential permit requirements for project implementation, including Section 404 Permit(s) from the U.S. Army Corps of Engineers (EIR, p. 3-30). A Section 404 permit(s) will be obtained as necessary, as future projects are proposed within the project area. In the context of the size of the entire site, there is a relatively small amount of existing wetland habitat which is generally limited to the Borrego channel and San Diego Creek. The mitigation of potential impacts to wetland habitat as a result of project implementation will be addressed through the Section 404 permit process. The construction of the proposed 179-acre wildlife corridor will provide significant opportunity for the creation and enhancement of viable wetland habitats within the project area. Drainage improvements and flood control facilities will also be created on-site through the daylighting of the Bee Canyon and Agua Chinon channels.

Response to Comment C1

Page 3-31 of the EIR has been revised to include the California Public Utilities Commission under "Actions and Approvals of Other Agencies." The modified text reads:

- California Department of Fish and Game-Approvals related to wildlife corridor and habitat areas
- Federal Department of the Interior (DOI) Fish and Wildlife Agency
- Southern California Regional Rail Authority (SCRRA)
- Orange County Transportation Authority (OCTA) – Revisions to the County Master Plan of Arterial Highways (MPAH)
- Irvine Unified School District
- Saddleback Unified School District
- California Public Utilities Commission – Highway Rail Crossings

Response to Comment C2

Comment noted. The City will notify and coordinate with the CPUC as appropriate, with respect to any future trails planning on or adjacent to the railroad right-of-way.

Response to Comment D1

The traffic analysis is based on the most current regional growth projections that have been adopted by the County of Orange which incorporates the most current projections for all the cities in the County. The concept of trip banking in Laguna Woods, related to available trips on Moulton Parkway, was not considered, as the traffic model addresses regional traffic impacts.

Response to Comment D2

The difference in daily traffic volumes cited in this comment is most likely due to the collection of traffic count data at different times. The 20 percent variation is quite possibly due to day to day variation in traffic conditions or changes in traffic patterns that occur as various roadway improvements are implemented. It does not affect the findings and conclusions of the Traffic Impact Analysis because project impacts and resulting mitigation are all based on more detailed analysis of peak hour conditions.

Response to Comment D3

The traffic analysis is based on the most current regional growth projections that have been adopted by the County of Orange which incorporates the most current projections for all the cities in the County. No roadway or intersection improvements attributable to the Laguna Hills Mall were included in the Great Park traffic study. Therefore, the analysis is inherently conservative, as any additional improvements may result in a decrease in the Great Park project traffic impacts that were identified. Mitigation Measure Trans. 6 is consistent with the El Toro Roadway and Landscape Improvement project.

Response to Comment D4

Concurrently with the proposed project, the City of Irvine is considering adoption of the North Irvine Transportation Improvement (NITM) program. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events. Traffic mitigation improvements within the City of Laguna Woods and other areas outside of Irvine will receive fair-share funding from the NITM program.

The City of Irvine recognizes that as the agency with jurisdiction over the intersections and as the lead agency for the construction of intersection improvements must concur with the proposed mitigation measures if those mitigation measures are to be implemented.

Response to Comment D5

The DON intends to incorporate temporary institutional controls in remediating IRP Sites 16 and 24 on the base. The Record of Decision for Site 24 states that “the Environmental Restriction Covenant and Agreement(s) will include information summarizing the remedial actions at Site 24 and provisions for terminating or modifying the Environmental Restriction Covenant and Agreement(s) when cleanup levels established in this ROD have been achieved and the remedial equipment has been removed.” Refer to the *Final Record of Decision, Operable Unit 1, Site 18 – Regional Volatile Organic Compound Groundwater Plume, Operable Unit 2A, Site 24 – VOC Source Area, Former MCAS El Toro, California* (Bechtel National, Inc. 2002) for additional information. The Record of Decision for Site 16 is expected to contain a similar process for removal of temporary restrictions. Responsibility for development and enforcement of the temporary restrictions rests exclusively with the DON and the applicable state agencies depending on the nature of the controls. The City has no authority over the federal process to implement Institutional Controls at the former

MCAS EL Toro regardless of mitigation measures proposed in the EIR. See also the attached letter from the DON dated 25 April 2003, describing the public sale plan, including Findings of Suitability to Transfer and Lease in Furtherance of Conveyance processes as well as the methodology of imposing, monitoring, and removing environmental remediation restrictions.

Response to Comment D6

The City will adopt rules, policies, and regulations as needed that will supplement the implementation of the temporary institutional controls by the DON and other agencies. The City's approach will be similar to and consistent with rules, policies, and regulations in use to control development and construction activities and enforced in a similar manner. Until the institutional controls are adopted by the DON via an Environmental Restriction Covenant and Agreement(s), the City cannot identify with certainty the specific rules, policies, and regulations that will be needed. Refer to Response to Comment D5 for an example of regulations that control development and construction activities.

Response to Comment D7

The City is cognizant of the potential for stormwater impacts from contaminated sites. However, at both Sites 16 and 24, the remediation activities are focused on treating contaminated groundwater. Because hazardous materials are not present at the surface of the site, there is minimal potential for stormwater to create a hazardous materials runoff. At Site 16, remediation of subsurface soil may be required, but it is expected to be completed prior to a fee conveyance to another party. Also refer to Response to Comment D8.

Response to Comment D8

Individual projects within the project area will be responsible for the development and implementation of specific Storm Water Pollution Prevention Plans (SWPPPs) and Water Quality Management Plans (WQMPs) to address the potential pollutants of concern based on the location, size, and type of development and proposed operations. Site specific BMPs and structural controls will be identified for each individual project based on the need to target specific potential sources of pollution. Implementation of Mitigation Measures H/WQ 1 and H/WQ 2 (EIR, pages 5.7-24, 25) will ensure that these uses are implemented in accordance with local and state regulatory requirements.

Response to Comment D9

The City of Irvine agrees that implementation of a regional approach to stormwater management is preferred. To further this goal, the City's proposed Orange County Great Park drainage plan concept provides for the creation of large, natural drainage features that are designed to address regional water quality and flood control in a comprehensive manner. The proposed natural drainage corridors will function in a manner so as to control surface water flows and maintain and/or improve surface water quality, for stormwaters that emanate from both on-site development and development that occurs in surrounding areas. As described in the EIR, the drainage corridor concept is consistent with and facilitates the regional flood control master plan adopted by the Orange County Public Facilities and Resources Department, The Irvine Company, and the cities of Tustin and Irvine. In addition, regional water quality issues are proposed to be addressed by the project through the construction of "natural treatment system" (NTS) basins within the proposed natural drainage corridors. The IRWD has issued a draft Master Plan and draft EIR on this program. Figure 5.7-2 of the EIR identifies the location of the proposed drainage corridors and potential NTS water quality basins.

Response to Comment E1

Comment noted.

Response to Comment F1

This comment does not note any specific sections or tables requiring revision. The references to appendices and volumes identified in the EIR Section 5.2 *Traffic/Circulation* have been reviewed and revised appropriately. Additionally, the other EIR sections have been updated to correspond the correct lettering of appendices, as appropriate.

Response to Comment F2

The Jeffrey Road extension is not part of this project. Both the Jeffrey Road extension and the SR 133/Trabuco Road interchange are included in the North Irvine Transportation Model (NITM) program and are prioritized for construction in the NITM program based on the comprehensive NITM program traffic study. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events.

Response to Comment F3

The normal practice in the City of Irvine has been a threshold criterion of 0.02 for major arterials, not 0.01 as stated in the comment. The 0.03 threshold is used for Congestion Management Plan (CMP) roadways to ensure consistency with the Orange County Congestion Management Plan.

Response to Comment F4

The freeway mainline and ramp peak hour analysis is included in the EIR pages 5.2-35, 5.2-36 and Appendix G. Furthermore, freeway congestion does in fact influence the traffic volume forecasts in the Traffic Impact Analysis. The Irvine Transportation Analysis Model (ITAM) takes congestion effects into account and distributes traffic to the most desirable/least congested route. Also refer to Response to Comment F24.

Response to Comment F5

Improvements associated with Trabuco Road and Irvine Boulevard have been included in the Great Park Traffic Impact Analysis and the NITM program, along with the Northern Sphere development itself. The mitigation measures for the Northern Sphere have been adopted by the City of Irvine as required mitigation measures. These improvements will also be conditions of approval for subdivisions processed within the Northern Sphere.

The financial difficulties of the State do not affect the funding source for the I-5 Freeway/Culver Drive interchange improvements. The funding source is Measure "M" funds derived from County tax revenue resulting from a sales tax increase approved by Orange County voters; as a result, the Measure M funds are not controlled by the State.

Response to Comment F6

The phasing listed is correct. The Portola Parkway to SR-241 segment should not be included. Refer to Response to Comment F2. Since the Trabuco Road/SR-133 interchange is funded but may not be completed until after 2025, it is appropriate to show the improvement operational in the post-2025 timeframe.

Response to Comment F7

The EIR correctly states that unfunded buildout roadway segment improvements are summarized in Table 4-3 of Appendix G. Regardless of the title of the table, the table accurately identifies unfunded future roadway improvements.

Response to Comment F8

The traffic associated with the unfunded, full expansion of the Musick Jail site is not included in the City of Irvine's current ITAM. However, based on the Musick Jail final EIR traffic analysis, the proposed expansion is expected to generate 4,253 additional trips on a daily basis. The additional 4,253 trips represent an increase of less than one percent compared to the other known development projects (e.g., Northern Sphere and Planning Area 40/Spectrum 8) that were explicitly included in the traffic analysis. The percentage is even smaller when all development anticipated within the study area (both within the City of Irvine and adjacent jurisdictions) is considered. Therefore, these additional trips are not considered significant. In addition, the Musick Jail expansion project is also required to mitigate any significant traffic impacts it may cause or contribute to.

Response to Comment F9

The segment of the I-5 Freeway referenced in the comment carries seven percent of the project traffic, not 10 percent as stated in the comment. The results contained in the Figure 5.2-17 take into account traffic redistribution effects. For instance, trips that leave the project site may be balanced by the South County work trips that now go to project provided employment opportunities rather than further north to the Irvine Business Complex.

Response to Comment F10

Within the EIR Section 5.2 *Traffic/Circulation*, references to Volume III Appendix K have been updated to references to Volume II Appendix G, where appropriate.

Response to Comment F11

The assumption that other mitigation measures are possible and not undesirable is based upon information from Caltrans, OCTA, and SCAG as embodied in the Regional Transportation Plan, wherein alternative improvements such as enhanced traffic service, TGM programs, etc. will serve to reduce freeway congestion. An example of an alternative improvement would be to provide additional mainline capacity.

Response to Comment F12

As shown in the EIR and supporting Traffic Impact Analysis (Appendix G, Tables 7-12 through 7-25), the project related traffic drops below the significance threshold at the Jeffrey Road interchange.

Response to Comment F13

The NITM Program includes engineering concept plans for freeway and corridor improvements. The engineering and right of way analysis completed as part of the NITM program has determined that the proposed mitigation measures are feasible.

Response to Comment F14

The comment suggests that Irvine Boulevard or Bryan Road might be impacted further west than the western limit of the study area. The traffic study analysis shows that neither the Culver Drive at Irvine Boulevard nor the Culver Drive at Bryan Avenue intersections are impacted by the project as shown on Tables 7-34, 7-37, and 7-40 of Appendix G of the EIR.

Response to Comment F15

The Traffic Impact Analysis includes all of the locations identified in the comment. The I-5 Freeway Northbound on- and off-ramps at Trabuco Road are analyzed as a single

intersection in the traffic study rather than two separate locations as implied in the comment. The second intersection is located at Trabuco Road/Culver Drive.

Response to Comment F16

Irvine Center Drive and Irvine Boulevard within the study area are examples of CMP roadways. Exhibit 9-A in Appendix G of the EIR specifically identifies CMP facilities within the study area.

Response to Comment F17

Irvine Boulevard within the study area is a CMP roadway and was analyzed using a significance threshold of three percent in the traffic study.

Response to Comment F18

The performance threshold for Irvine Boulevard is LOS "E" rather than LOS "D". Using the 2000 Highway Capacity Manual, the additional roadway performance increase in delay allowed is up to 25-seconds in the peak hour.

Response to Comment F19

The City of Irvine's approved analysis methodology is the intersection capacity utilization (ICU) methodology. Although the ICU methodology does not specifically include any provision for the effects of pedestrian activities, the assumed capacity of 1,700 vehicles per lane per hour (vphpl) is less than the ideal capacity of 1,900 vphpl that are used in more detailed analysis methodologies. One factor that could account for the more conservative capacity per lane is the effect of pedestrian activities.

Response to Comment F20

There is no Table 2-23 in the Traffic Impact Analysis (Appendix G of this EIR). It is assumed that the comment refers to Table 2-1 (Daily Roadway Capacity Assumptions). The capacities for freeways greater than 10 lanes were not explicitly listed on Table 2-1. However, the following capacities were identified in the analysis contained in Section 7:

<u>Lanes</u>	<u>Capacity (vehicles per day)</u>
12	250,000
14	290,000
16	330,000
18	370,000

Response to Comment F21

The traffic count data throughout the City of Irvine was collected in 2002. Only a small amount of traffic count data in the already developed areas of the adjacent cities to the east of the City of Irvine utilized existing conditions data from 2000 or 2001. Furthermore, such daily data has no effect on the future conditions traffic volume forecasts or analysis. Finally, the project impacts are identified and mitigation has been developed on the basis of the more detailed peak hour traffic data and analysis.

Response to Comment F22

The volume refers to the segment from the I-5 Freeway northbound on- and off-ramps to Yale Avenue.

Response to Comment F23

The capacity listed is a general planning capacity and reflects three northbound lanes and four southbound lanes (for a total of seven lanes). It is appropriate to use this capacity in the analysis, as the fourth southbound through-lane has most likely been constructed in response to actual traffic patterns and presumably serves the requirements of the greatest traffic volume. The Traffic Impact Analysis peak hour assessment of conditions at the actual intersection of Culver Drive at Trabuco Road takes into account merging into three southbound lanes.

Response to Comment F24

The traffic forecasts have been developed using the Irvine Transportation Analysis Model (ITAM), Version 3.01. The ITAM takes congestion effects into account, and congestion influences the assignment of traffic to the freeway and surrounding roadway system. It should be noted the generalized planning level freeway mainline capacities in the ITAM model are far lower than the volumes (exceeding 2,300 vehicles per hour) that have been observed on busy freeways in southern California.

Response to Comment F25

This data was inadvertently omitted from the existing conditions summary table only. The analysis results are included in Appendix F of the Traffic Impact Analysis (Page F-5) which is included as Appendix G of this EIR and indicate that the existing ICU values at this location are 0.58 in the AM peak hour and 0.82 (LOS "D") in the PM peak hour.

Response to Comment F26

The footnote means that the SR-133/Trabuco Road interchange was not treated as a funded 2007-2025 improvement in the EIR and was not included in the primary Traffic Impact Analysis. A special issues analysis examining the benefits/impacts of including this interchange for 2025 conditions was also included in the Traffic Impact Analysis.

Response to Comment F27

There is no change in the number of lanes shown on the I-5 Freeway north of Sand Canyon on the exhibits in the EIR or the supporting Traffic Impact Analysis. The segment of the I-5 Freeway north of Sand Canyon is shown as a 14-lane freeway ("14F") for existing conditions (Exhibit 3-A in the Traffic Impact Analysis and Figure 5.2-4 in the EIR); 2007 Conditions (Exhibit 4-A in the Traffic Impact Analysis and Figure 5.2-10 in the EIR); 2025 Conditions (Exhibit 4-C in the Traffic Impact Analysis and Figure 5.2-12 in the EIR); and Post-2025 Conditions (Exhibit 4-E in the Traffic Impact Analysis and Figure 5.2-15 in the EIR).

Response to Comment F28

It is incorrect to assume that the use of socioeconomic data (SED) rates results in generally lower traffic volumes. Traffic models validated using land use data or SED have both been shown to match (validate to) existing traffic volumes quite well. The adopted ITAM, version 3.01, uses socioeconomic data as a basis for analysis.

Response to Comment F29

The students included in the Great Park Traffic Impact Analysis were all treated as commuter students, thus generating the highest possible number of trips to and from the project. The model can handle both commuter students and resident (non-institutionalized group quarters) students. The analysis assumed 4,000 students in the 2007 analysis for both the Base Plan and the Overlay Plan. The analysis assumed 7,637 students in 2025 for the Base Plan and 7,800 students in 2025 for the Overlay Plan. This represents a change of 3,637

(Base Plan) to 3,800 (Overlay Plan) students from 2007 to 2025. The source of this data is the Great Park project description.

Response to Comment F30

The types of activities described in the comment are accounted for in the trip rates for residential land uses (see Table 5-10). These types of activities are potentially included as non-home based productions (Other-to-Other or O-O) or as attractions (Home-to-Work/H-W or Other-to-Other/O-O).

Response to Comment F31

The numbers of students are based on the Great Park project description. The hours of travel have been derived from the regional travel demand model and correspond closely to home-work trips, which exhibit a heavy concentration in the peak hours of traffic. Staff and maintenance workers were derived directly from the number of students (see Table 5-9 of Appendix G to the EIR, land use to socioeconomic data conversion factors). There is no distinction between residents and commuter students made in the ITE Trip Generation Manual. ITAM does differentiate between commuter and resident students, and the Traffic Impact Analysis assumed the worse case scenario of all commuter students.

The trip generation rate for students is reasonable. The project was assumed to include only commuter students. Not every student travels to a college campus everyday. Nor does every student drive a single occupant vehicle to school. Finally, the data being referenced is land use based student trip generation, which was provided for informational purposes only and does not relate to the primary traffic impact analysis.

Response to Comment F32

The comment refers to the trip distribution exhibits. These exhibits present the percentage of project traffic, not actual traffic volumes. The percentage of trips oriented to the west is likely to drop over time, as the largest undeveloped areas of Orange County are located east of the project and will be more likely to interact with the Great Park project further out in time (e.g., 2025 versus 2007). The second part of the comment also mistakes the project trip distribution percentages for actual project volumes.

Response to Comment F33

The extents of the study area are appropriate. The study clearly identifies areawide congestion on the freeway system. The Traffic Impact Analysis has verified that the project's potentially significant impacts extend no further west than Jeffrey Road. The Traffic Impact Analysis (Appendix G of the EIR) informs the reader of the project impacts. The ITAM model, version 3.01, takes into account on-going development.

Response to Comment F34

Although the Great Park traffic study included all Northern Sphere roadway improvements identified as mitigation measures, improvements that were "project features" (including the referenced improvement) were inadvertently omitted. This does not affect the findings and conclusions of the Great Park traffic study, other than to potentially reduce the required mitigation. The NITM Program does take the referenced improvement into account.

Response to Comment F35

In accordance with the adopted City Traffic Study Guidelines, the subject roadway segment is not long enough to warrant separate analysis as a roadway segment. The more detailed peak hour analysis completed for the intersections of Culver Drive at Trabuco Road and

Culver Drive at the I-5 Freeway southbound ramps more accurately depicts the actual lane requirements for the segment of Culver Drive between these two intersections. The reason no peak hour segment analysis was performed for Culver Drive from Trabuco Drive to Walnut is that the daily roadway segment analysis for the subject segments was below the 0.02 impact significance criteria.

Response to Comment F36

The mainline freeways are already deficient under existing conditions. It is the responsibility of the regional agencies to address these deficiencies. Pursuant to City policy, the City of Irvine is working in close coordination with Caltrans regarding the improvements needed to mitigate identified project impacts. The City of Irvine does not control freeway improvements and cannot guarantee the implementation of the identified mitigation measures. For that reason, the EIR conservatively concludes that the impacts remain significant and unmitigated. Refer to Response to Comment F24 regarding the impact of freeway congestion on trip distribution.

Response to Comment F37

In accordance with the Caltrans standards, the Type 7 ramp most accurately defines the subject ramp. The Traffic Impact Analysis has identified a deficiency and mitigation to reduce the project impact to insignificant levels has also been identified, regardless of the initial ramp configuration.

Response to Comment F38

The geometric configuration referred to in the comment is actually shown in the ITAM model as Walnut Avenue. The ramp itself conforms to Caltrans standards and the analysis has been completed at an appropriate level of detail and accuracy. The movement of trucks is explicitly considered in Caltrans design standards.

Response to Comment F39

Refer to Response to Comment F24. The NITM Program is the implementing mechanism for the freeway ramp mitigation at the proposed SR-133/Trabuco Road interchange. This improvement will reduce traffic congestion at the I-5 Freeway/Sand Canyon Avenue interchange by providing an alternative means of freeway access. Therefore, no additional traffic diversions as theorized in the comment are anticipated.

Response to Comment F40

Refer to Response to Comment F36. The City of Irvine is working with Caltrans to implement mitigation related to the Great Park project where project impacts have been identified. The commentor is addressing areawide congestion issues. Because the City of Irvine does not control freeway improvements and cannot guarantee the implementation of the identified mitigation measures, the impacts remain significant and unmitigated, as described in the Traffic Impact Analysis.

Response to Comment F41

Comment noted. In accordance with the City's adopted traffic study guidelines, the threshold for significance of traffic impacts is a 0.02 increase in the volume-to-capacity ratio caused by the project. The identified roadway segment was measured to have a volume-to-capacity increase of less than 0.02 and thus no further analysis was required.

Response to Comment F42

No mitigation is required because the project does not worsen the ICU value by 0.02 or more. In fact, the Great Park project actually results in a decrease in ICU in some instances.

Response to Comment F43

Comment noted. The discussion in the Great Park traffic study is intended to address pedestrian and bicycle circulation issues directly related to the project site. Future bicycle connections through PA9A or within the SCRRA right-of-way are not a part of this project. Refer to Response to Comment F59.

Response to Comment F44

Although the westbound approach (Bryan Avenue) currently has two lanes in each direction, the table referenced in the comment (Table 3 in Appendix G of the EIR) incorrectly indicates three westbound through lanes and will be corrected in the final EIR. The City's Traffic Impact Analysis for existing and buildout conditions assumed the existing two lanes in each direction. Table F-44 is included in the Appendix to this Response to Comments document; this table shows the corrected 2007 and 2025 traffic conditions and indicates that no significant traffic impacts occur.

Response to Comment F45

The comment is correct, the ">" symbol indicates a right turn "overlap" or green arrow that allows simultaneous movement with the associated left turn movement (e.g., northbound right turns and westbound left turns, etc.).

Response to Comment F46

Based on the NITM Program engineering concept drawings, the east-side of Yale Avenue would be widened by 6 feet or less to accommodate the proposed improvement. No widening on the west-side of Yale Avenue, where the landscape is located, is anticipated.

Response to Comment F47

The NITM analysis has further investigated this location and the improvement noted in the EIR has been modified. The improvement required will be funded by NITM. The current engineered proposal to provide acceptable levels of service at this location would not include a free westbound right turn lane at this location. A dual westbound right turn lane configuration would be accomplished by widening the north side of Trabuco Road approximately 12 feet. Slight widenings of Culver Drive will also be required to accommodate the 3rd northbound through lane. The improvement required will be funded by NITM.

Response to Comment F48

The third EB-through lane identified for Irvine Boulevard at Jeffrey Road could be accomplished by widening the north side of Irvine Boulevard.

Response to Comment F49

Comment noted. The timing of these improvements may in fact occur in conjunction with the PA-8A development, but is not related to the Great Park impacts or mitigation requirements.

Response to Comment F50

Based on the Orange County Public Library (OCPL) capacity standards and an anticipated population of 7,681, under the Great Park overlay an additional 1,536 square feet of floor space and 11,522 volumes will be required to serve the project. Since the average size of a library facility is 10,000, construction of a new facility would not be warranted. To meet the

demand the Heritage Park facility could possibly be expanded in conjunction with demand created by other projects. The project area will continue to be served by the El Toro Branch facility and the new Foothill Ranch facility. Since a portion of property taxes are specifically allocated for capital improvement and operating costs for the County public library system, additional residents will make a financial contribution to expand and/or construct new library facilities.

Response to Comment F51

The Foothill and Eastern Transportation corridors are currently used by a substantial number of commuters. It is expected that tolls will be removed from the Foothill and Eastern Transportation Corridors in the future (i.e., post 2025). Also, buildout of the region would not occur for another 20-25 years. Regardless of whether or not tolls are collected, the completion of the Foothill and Eastern Transportation corridors will improve accessibility to new distant residential developments. Traffic impacts are addressed in the Traffic Impact Analysis in Appendix G of this EIR.

Response to Comment F52

New development within the surrounding area, including but not limited to, the Spectrum 8 and Northern Sphere projects, will include the development of additional residential dwelling units and provide housing opportunities. Therefore, a portion of future housing demand will be absorbed by these developments. The EIR does not premise the conclusions regarding population and housing impacts on the ability of other developments to provide housing. The EIR has concluded that the proposed project will result in a significant unavoidable impact associated with jobs/housing balance. Also refer to Response to Comment HH1.

The City agrees that, in general, residential uses create a greater demand on city services while generating less revenue, whereas non-residential uses (commercial and employment based uses) create less of a demand on services and generate more revenue for the City. These basic fiscal principles are evaluated for each General Plan amendment proposed within the City, including the Orange County Great Park plan and the information is provided to the City Council.

A white paper was developed to further evaluate key issues raised by the Spectrum 8 draft EIR population and housing analysis. The *Population/Housing Issues in Planning Area 40* (Carla Walecka, March 2003) concludes that, in a broader context, southern Orange County is a housing-rich community and the jobs/housing imbalance is not the only methodology that applies to regional growth forecasts. Growth impacts resulting from the proposed project have been substantially anticipated by adopted city, county, and regional growth forecasts. The referenced document states that:

“Professional literature and research customarily examine jobs/housing relationships at a subregional or county scale, not at the project or city scale...the [Spectrum 8] project is very beneficial because it balances the housing-rich nature of southern Orange County. Without jobs [in central Orange County], south Orange County residents would have to travel farther north or east for job opportunities. This would result in greater imbalance between jobs and housing opportunities, and exacerbate congestion and associated air pollution.”

The City of Irvine concurs with the conclusions stated in the Spectrum 8 EIR and further evaluated in the *Population/Housing in Planning Area 40* document (Carla Walecka, March 2003).

Response to Comment F53

As stated on page 5.14-2 of this EIR, the standard response times promoted by the City of Irvine Police Department are considered appropriate for the community. As stated in the EIR on page 5.14-2, the City of Irvine's Police Department response guidelines state:

- Responding to "emergency" events within six minutes, 85 percent of the time.
- Responding to "crimes in progress" events within 10 minutes, 85 percent of the time.
- Responding to "less serious crimes occurring now" events within 20 minutes, 90 percent of the time.
- Responding to "routine calls for service" events within 60 minutes, 85 percent of the time.

These response times are established by the City's Strategic Business Plan to ensure that appropriate resource levels are required for the Public Safety Department.

Response to Comment F54

Estimates of police personnel required for the Great Park are based upon current demand levels coupled with anticipated call for service based on the specific land uses in the plan rather than an officer-per-resident standard. Based on the City of Irvine's Police Department current staffing formula, the proposed project would require between 17 and 22 sworn police officers, three to five sworn police supervisors, and eight to 11 non-sworn support staff. Funding required for these new police personnel would be provided through a special assessment levied against the property owners within the project area.

Response to Comment F55

Following annexation, the entire project area will be within the City's corporate boundary and within the jurisdiction of the City of Irvine Police Department. Sharing the cost of policing the Great Park with the County of Orange is a policy issue. The fiscal plan for the OCGP Plan proposes fees and assessments to fund police services for the public park portions (i.e., Sportspark, Meadows Park, Exposition Area South, and the drainage and wildlife corridors). Special assessments will be applied to new development within the project area remaining on the tax rolls after the dedication of public use areas identified in the Great Park Plan.

Response to Comment F56

Refer to Response to Comment F53. Proposed additional police personnel numbers are based on the City of Irvine Police Department's staffing formula; anticipated calls for service to the project area are determined by the Police Department based on historical data regarding the proposed land uses.

Response to Comment F57

The comment regarding "mitigation measures" refers to the construction and/or operation of public facilities within the project area. Construction impacts related to the development of public facilities within the project area are likely to be short-term events; operation impacts are considered long-term events. Construction and operation impacts associated

with public facilities are considered under in Sections 5.1 *Land Use*; 5.2 *Traffic and Circulation*; 5.3 *Air Quality*; and 5.4 *Noise*.

Response to Comment F58

Comment noted. Section 5.14.2.1 *Public Services and Facilities Environmental Setting* has been amended to read:

“OCFA is planning two additional fire stations. Station No. 55 will be located ~~in Northwood~~ on the north side of Portola Parkway between Yale and Jeffrey, and Station No. 47 will be located near Sand Canyon and Interstate 405.”

Response to Comment F59

The final alignment of the Venta Spur connection through PA9, specifically in the area east of Sand Canyon, has not been determined. Figure 3-7 has been corrected to show a Class I trail along the north side of Trabuco Road, from the Eastern Transportation Corridor to the Meadows Loop Road.

Response to Comment F60

Comment noted. The actual parkland dedication requirement will be calculated during the review of subdivision maps for future residential developments, using the most current City of Irvine standard. It should be noted that community parkland dedication requirements will be deemed satisfied with the commitment to participate in the Development Agreement. The total amount of parkland in the project far exceeds the minimum required by the existing or proposed standard.

Response to Comment F61

Refer to Response to Comment F50. The square footage assigned to PAZ13 for museum/library facilities is necessary to determine traffic and other environmental impacts of the proposed project. The determination of how that square footage will ultimately be developed is dependent upon future opportunities and funding sources for these types of public facilities.

Response to Comment F62

The EIR bases its water demand analysis on the greatest demand, which is the Overlay Plan, as it proposes the greatest level of development under the proposed project. Refer to the attached IRWD comment letter (specifically comment G4) which confirms that the water district would utilize the Overlay Plan as representing the “worst case scenario” for water demand. Refer also to the IRWD Water Supply Assessment (Appendix C of the EIR) for further information about water supply.

Response to Comment F63

The Orange County IWMD’s CIWMP was approved in 1996 and shows that sufficient solid waste disposal capacity is available in the County for approximately 25 years, based on population projections for the area. Considering the potential for expansion by the County does not imply that current and near-future capacity is lacking.

The Regional Landfill Options for Orange County (RELOOC) is a long-term 40-year plan that is part of the County’s effort to assure that the countywide landfill system remains adequate, solvent, and efficient in the long term. Sufficient local capacity for Irvine at Bowerman

Landfill and the other County disposal sites is not in doubt in the short to mid-term even without implementation of RELOOC. In the longer term, RELOOC provides sufficient contingencies should they become necessary to manage additional solid waste from future anticipated countywide development. Refer to Response to Comment H49.

Response to Comment F64

Refer to Responses to Comments F63 and H48. Although the IWMD system has capacity for approximately 25 years, the District anticipates that the Bowerman Landfill will reach capacity by 2022. The ability to accommodate waste at other facilities is being planned by the IWMD.

Response to Comment F65

Comment noted. A primary goal of City policy will continue to be maintaining compliance with the California Integrated Waste Management Act (AB939), requiring good faith effort to divert 50 percent of total solid waste from landfills. Contrary to the assertion that recycling goals for the project are “unambitious and meaningless,” the specific goal of this project to recycle 75 percent of construction and demolition debris commits the City to a much more ambitious effort than the minimum required by state law.

Regarding recycling (diversion) rate calculations, the City cannot exclude any materials generated by the project that, if landfilled, would be counted as disposal and therefore detrimental to the City’s overall diversion rate and its compliance with AB939. Any material that would be counted as disposal at the landfill should be calculated and credited to the City as diversion if it is recycled.

Response to Comment F66

Comment noted. Mitigation Measure SW 5 (page 5.15-24 of the EIR) has been amended to read:

“For green waste, the project applicant must submit a written plan to the City and implement such a plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City-authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50 percent of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.”

Response to Comment F67

As with the development of any new project, modifications to existing electric systems would be necessary. Such is the case with the proposed project. As stated in Section 5.15.5.3 *Utilities Environmental Impact*:

“...the proposed project would consume 59.1 million kilowatt hours per year....The proposed project would have a peak load of 14,771 kilowatts. Sufficient available capacity exists at the Irvine and Limestone Substations to serve the proposed project’s load estimates. However, the existing overhead 4 kilovolt distribution system currently serving the former MCAS El Toro would be replaced with an underground 12 kilovolt distribution system....The additional electrical load imposed by the proposed project is within the capacity of SCE.”

The EIR states on page 5.15-27 that the Base and Overlay Plans propose to replace the existing electrical system in its entirety, complying with modern design methods, performance standards, and specifications. The new system will be installed to generally coincide with the routing of new and existing roadways. Electrical lines will be required to be underground pursuant to City standards. The specifics of the new electric distribution system and the necessary environmental evaluation will be determined as site specific plans for the installation are prepared.

Response to Comment F68

The proposed project will be served from the 12kV distribution lines that interconnect with the existing SCE 66/12kV Irvine Substation, directly outside the gate of the former MCAS El Toro. This substation has sufficient capacity to serve the proposed project. Sub-transmission lines interconnect this substation to the existing SCE 230/66kV Santiago substation and the 66/12 kV Bryan Substation. SCE has indicated that no additional sub-transmission lines are planned to increase the capacity at the Irvine substation.

Refer to Response to Comment F67 for information pertaining to the modification of existing electrical systems resulting from implementation of the proposed project. Modifications deemed necessary to the electrical system will be considered as specific development proposals are initiated. Section 5.15.5.3 *Utilities Environmental Impact* states:

“...new [electrical] system will be installed to generally coincide with the routing of new and existing roadways circulating throughout the project. Electrical lines will be required to be underground pursuant to City standards.”

The EIR states on page 5.15-29 that sufficient available capacity exists at the substations serving the proposed project and “that the existing overhead 4kV distribution system currently serving the MCAS El Toro would be replaced with an underground 12 kV distribution system.” No analysis has indicated that a new transmission line greater than 12 kV will be required to serve the proposed project. The specifics of the new electric distribution system and the necessary environmental evaluation will be determined as site specific plans for the installation are prepared.

Response to Comment F69

SCE generally uses a peak load standard of 50,000 kW for "significant impact". The proposed project's maximum estimated electrical demand is 35,000 kW.

The CEQA Environmental Checklist, Appendix G, outlines the Thresholds for Determining Significance for energy. As stated in Section 5.15.5.2 *Utilities Threshold for Determining Significance*:

“Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered energy and communication transmission facilities, need for new or physically altered energy and communication transmission facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable levels of service?”

The City defines a significant impact to the current level of electric service for the project to be requiring more electrical energy than SCE has the stated ability to provide. The Threshold for Determining Significance is answered in full in Section 5.15.5.3 *Utilities Environmental Impact*.

Section 5.15.5.3 *Utilities Electrical Facilities and Service* discusses the expansion of the electrical system to serve the project. The EIR states on page 5.15-30 that the proposed project's consumption of electricity is 0.05 percent and peak demand is 0.06 percent of the California Energy Commission's forecast for Southern California Edison (SCE) in 2012. Furthermore, SCE has indicated its ability to serve the projected project in accordance with all applicable tariff schedules.

Response to Comment F70

Section 5.15.5.3 *Utilities Electrical Facilities and Service* discusses the expansion of the electrical system to serve the project. The comment discusses the adequacy of generation and transmission systems and incentives and disincentives to investment in electrical system infrastructure on a statewide basis. These comments are considered beyond the scope of the proposed project. SCE indicates that there is no transmission congestion within the project area.

Response to Comment F71

SCE has sufficient transmission capacity to provide power to the project. Refer to Responses to Comments F67 through F69 for information pertaining to the modification of existing electrical systems resulting from implementation of the proposed project. Analysis indicates that a new transmission line greater than 12 kV will not be required to serve the proposed project. Any other SCE system enhancements would be required to obtain the necessary licensing/regulatory approvals and would not impact the proposed project.

Response to Comment G1

Comment noted.

Response to Comment G2

The first paragraph on EIR page 5.15-5 is amended to read:

“The proposed project’s impact on water supply and the ability of the water provider to provide a water source to the project site has been assessed by the IRWD in accordance with the requirement of ~~SB901~~ SB610 and SB221, both effective 2 January 2002, and the water supply assessment (WSA) contained in Appendix C complies with the most recent statutory requirements and concludes that adequate supplies are available to serve the proposed project.”

Response to Comment G3

Comment noted. The record is hereby incorporated by reference.

Response to Comment G4

Comments noted.

Response to Comment G5

Comment noted.

Response to Comment G6

Comment noted.

Response to Comment G7

Comment noted.

Response to Comment G8

The assumption should be clarified that only existing infrastructure that meets IRWD standards will be preserved for future use.

Response to Comment G9

The EIR is amended to correctly indicate that potable water is and will be used to irrigate the IRWD parcel.

Response to Comment G10

Comments noted.

Response to Comment G11

Comment noted.

Response to Comment H1

The proposed zoning for the property consisting of the Base Plan and the Overlay Plan is fully described in the “Introduction”, “Project Description” and “Land Use” sections of the EIR. As described in those sections, the proposed zoning consists of a Base Plan which provides a lower intensity and density of development and a higher proportion of land dedicated to open space and public uses. The Overlay Plan provides a higher intensity and density of development if the property owners enter into a Development Agreement with the City of Irvine (Appendix D of the EIR) requiring, among other provisions, dedication of land for open space and public uses and payment of fees for the provision and maintenance of the public infrastructure.

The parcels to be dedicated to the County of Orange through the Development Agreement are labeled as PAZ23 with General Plan and zoning designation of Institutional (Inst/Inst – 6.1/6.1) and PAZ4 with General Plan and zoning designation of Agriculture in both Base and Overlay plans. The development intensity for these sub-areas is also identical under both Base and Overlay plans. This information is provided in Tables 3-3 and 3-4 of the EIR.

The EIR provides a clear description of the “project” stating that the commonly used overlay zoning tool has been utilized for the project site. The EIR also clearly states that the Overlay Plan represents the maximum density and intensity of development proposed. All sections of the EIR analyze the potential impacts of both the Base Plan and the Overlay Plan and identify mitigation measures for each plan.

Response to Comment H2

The Great Park EIR assesses potential impacts of proposed uses for the entire former MCAS El Toro owned by the federal government and administered by the DON. The DON has been supplied with the proposed land plan and the EIR. The DON agreed that the land plan is consistent with their Record of Decision and their intent to sell the property at public auction. The DON has also agreed with the provision of the Great Park Development Agreement that requires, among other things, the dedication of 100-acres of property from the property owner to the County upon the election of receiving the development rights of the Overlay Plan. The EIR assumes certain development intensities that are consistent with the intentions of the landowner (DON) and the expectations of the City of Irvine. The EIR also assumes development intensities for the 100-acres that may be dedicated to the County, consistent with the list of uses provided in the Property Tax Transfer and Pre-Annexation Agreement in Section 2.2.4. Although the County refers to previously proposed land plans and the County’s 1996 EIR, these documents are not consistent with the current intentions of the landowner (DON) or the City of Irvine and are not relevant to this EIR. If the County becomes the owner of the 100-acres, it can then assess development intensities provided in the program EIR and evaluate its specific development plans for the site. No specific development plans for the site by the County have been provided to the City, nor is the County a landowner of the property. Any development proposed by the County, if it becomes a landowner in the future, which is not consistent with the proposed plan and EIR, will require additional environmental evaluation.

The City recognizes that the County’s development of governmental uses on the 100-acres is not subject to City zoning or building controls. The City also recognizes that its land use assumptions for the 100-acres are an estimate based upon no current County plan, and that any trip limits used in the Traffic Impact Analysis for the Great Park project do not restrict the County’s use of the 100-acres for governmental purposes. Finally, the City recognizes

that, as the County defines its project and proposed uses for the 100-acres, the County will analyze traffic and other impacts from this project as required by law.

Response to Comment H3

Comment noted. While the EIR evaluated the Musick Jail Facility for its contribution of impacts to the project, the Final EIR will reflect that the Musick Jail Facility will not be included in the City of Irvine's annexation proposal.

Response to Comment H4

Comment noted. Mitigation Measure H/WQ 3 (EIR page 5.7-26) has been amended to read:

"Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrology and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department."

Response to Comment H5

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in "accordance with OCFCD Methodologies...as well as any additional guidelines in effect at the time of the project design" which includes utilizing the appropriate Manning's "n" value for the conveyance type. Approval from the OCFCD will be obtained prior to any construction activity on the proposed drainage corridors.

Response to Comment H6

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in "accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design" would include analyzing as applicable the effects of sediment deposition, meandering, scour, erosion and bank stability with appropriate recommendations for slope protection. Approval from the OCFCD will be obtained prior to any construction activity on the proposed drainage corridors.

Response to Comment H7

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in "accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design" includes addressing drainage/flooding issues related to proposed development. Approval from the OCFCD will be obtained prior to any construction activity on the proposed Bee Canyon and Agua Chinon drainage corridors.

Response to Comment H8

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in "accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design" would include studying diversions with appropriate justification and mitigation. Approval from the OCFCD will be obtained prior to any construction activity on the proposed Agua Chinon drainage corridor and the proposed Borrego wildlife corridor.

Response to Comment H9

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in “accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design” would include addressing the concerns raised in this comment. Approval from the OCFCD will be obtained prior to any construction activity on the proposed Borrego Channel and Serrano Creek corridors.

Response to Comment H10

Comment noted. Prior to concept design or preliminary engineering it will be necessary to receive approval from the Manager, Flood Control Division. Initial meetings have occurred regarding the drainage plan.

Response to Comment H11

Maintenance responsibility for the proposed flood control facilities has not been determined. The question of maintenance responsibility will need to be addressed during the preliminary design process. Maintenance will be, in part, the County of Orange’s responsibility for some facilities, and the City of Irvine’s responsibility for other facilities, depending on the ultimate design solution implemented.

Response to Comment H12

Mitigation Measure H/WQ 3 addresses preparing detailed studies in accordance with...“the Flood Control Master Plan for San Diego Creek (FCMPSD).” Refer to Response to Comment H4.

Response to Comment H13

Refer to Response to Comment H11.

Response to Comment H14

Refer to Response to Comment H11.

Response to Comment H15

Mitigation Measure H/WQ 4 addresses the potential impact of project construction and flood control improvements occurring in tandem. Approval from the OCFCD will be obtained prior to any construction activity.

Response to Comment H16

The Natural Treatment System (NTS) basin proposed to be placed in Marshburn Basin is a part of the Irvine Ranch Water District NTS system and not of this proposed project. Because the basin will be upstream of the development area, the basin is not a part of the project design.

Response to Comment H17

The hydrologic and hydraulic analysis referenced in mitigation measure H/WQ 03/B3 are to be performed in “accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design” includes reconciling Master Plan facilities (e.g., raceway stormdrain) in relationship to the project requirements.

Response to Comment H18

Adequacy of existing facilities should be analyzed based on ultimate discharges as provided by the OCFCD. Mitigation Measure H/WQ 3 would include this type of analysis. Refer to Response to Comment H4.

Response to Comment H19

Mitigation Measure H/WQ 4 addresses the LOMR process.

Response to Comment H20

Any work within OCFCD or County of Orange right of way will require encroachment permits. The submittal process for an encroachment permit would occur at the time construction drawings are available for submittal.

Response to Comment H21

A significant amount of open space and recreational opportunities comparable to the type of activities associated with County regional parks will be provided within PA 51 of the project site. As described in Section 3.0 and illustrated on Figure 3-1 of the EIR, PA 51 is proposed to be annexed into the City. Upon annexation, this portion of the project area will be subject to City of Irvine General Plan land use and zoning designations. There is no equivalent “regional park” land use designation or zoning district in the City. Therefore, no portion of the project site has been designated as “regional park” although the functionality of proposed park areas will be very similar to various existing parks in the County’s regional parks system. Tables 3-3 and 3-4 of the EIR provide a statistical summary of open space and recreational acreage proposed within the project area.

Response to Comment H22

Refer to Response to Comment T1. As described in Section 5.9 *Biological Resources*, a wildlife corridor is proposed where one currently does not exist. Figures 1-2, 1-3 and 5.9-2 of the EIR depict the proposed wildlife corridor alignment. As shown, a majority of the wildlife corridor traverses passive uses, such as the golf course and park uses which are not anticipated to generate significant noise levels. In fact, the alignment of the wildlife corridor was shifted west, away from existing industrial uses located immediately east of the base, in part with consideration of potential indirect effects from these existing off-site uses. Within PA 30, the alignment of the corridor is fixed between the underpass of the SCRRRA railroad tracks and the I-5 Freeway/I-405 Freeway undercrossing. In this area, indirect effects are likely to be of more concern to the functionality of the wildlife corridor.

The EIR describes guidelines that will be incorporated into the implementation of the corridor. Specifically, as described in Section 5.9 *Biological Resources*:

“The revegetation/restoration plan would need to address various issues to increase the viability of the proposed corridor and will need to be prepared based on the following criteria:

Reduce the amount of noise pollution and urban influence. Sight and sound barriers need to be constructed at the edges of the corridor to help create a secluded, natural setting. Barriers may range from artificial sound walls to natural diversions such as hedges and tree lines” (EIR, page 5.9-22).

With respect to Planning Area Zone 2, under the proposed Overlay Plan PAZ 2 is proposed for residential development; however, this portion of the project site is currently developed with residential uses associated with the former base (refer to Figure 1-4 of the EIR). Any

reuse or redevelopment of PAZ 2 with residential uses would not likely increase the level of noise impacts on the adjacent habitat preserve.

Response to Comment H23

Implementation of the proposed project will not create an impact to any existing wildlife corridors. Therefore, the provision of a linear corridor through Planning Area Zone 2 (PAZ 2) is not a mitigation measure required to mitigate any significant impact associated with the proposed project.

The City agrees that maintaining connectivity to regional habitat preserve areas is desirable. As such, the City has proposed the wildlife corridor as a major feature of the proposed project. The primary goal of the wildlife corridor is to provide a viable connection between the Habitat Preserve Area (which, in turn, is connected to the NCCP Preserve Area) with the Laguna Coast Wilderness Park to the south. The alignment of the corridor has been carefully planned with significant input from various wildlife entities and stakeholders.

Response to Comment H24

With respect to Planning Area Zone 2, under the proposed Overlay Plan PAZ 2 is proposed for residential development; however, this portion of the project site is currently developed with residential uses associated with the former base (refer to Figure 1-4 of the EIR). Any reuse or redevelopment of PAZ 2 with residential uses would not likely increase the level of lighting impacts on the adjacent habitat preserve.

Response to Comment H25

The proposed Conservation Zone widths have been planned to achieve the maximum widths feasible. However, the proposed wildlife corridor is constrained in several areas as a result of many factors including existing development, roadways, and topographical conditions. The functionality of the wildlife corridor is not solely dependent upon width, and in areas where the width becomes more restrictive more care would need to be taken to implement measures to reduce the potential for edge effects and ensure that the corridor is attractive for wildlife.

Response to Comment H26

Tables 3-3 and 3-4 of the EIR depict a statistical summary of potential project development, including park acreages. Page 5.9-16 of the EIR has been corrected as follows:

“In addition, under the Base Plan, low to moderate quality foraging habitat (comparable to the existing agricultural fields) in the form of the approximately 576 acres of proposed golf course, ~~988~~ 716 acres of parkland, 438 acres of agriculture, 179 acres of wildlife corridor, and 229 acres of drainage/riparian corridor (~~2,410~~ 2,138 acres total) will be available after the completion of the project.”

Response to Comment H27

Tables 3-3 and 3-4 of the EIR depict a statistical summary of potential project development, including park acreages. Page 5.9-16 of the EIR has been corrected as follows:

“Under the Overlay Plan, low to moderate quality foraging habitat (comparable to existing agricultural fields) in the form of approximately 526 acres of proposed golf course, ~~547~~ 382 acres of parkland, 303 acres of agriculture, 179 acres of wildlife corridor, and 229 acres of drainage/riparian corridor (~~4,784~~ 1,619 acres total) will be available after the completion of the project.”

Response to Comment H28

Page 5.9-18 of the EIR has been corrected as follows:

“The wildlife corridor provides connection to the ~~995~~ 975-acre habitat preserve, as well as the Limestone-Whiting Wilderness Park.”

Response to Comment H29

The City has a policy of encouraging alternative modes of transportation, including bicycling. The City of Irvine General Plan Circulation Element Policies establish various goals and implementation measures for this purpose. As such, the City of Irvine has one of the most advanced bike trails systems in Orange County. The proposed plan links the entire Planning Area 51 through Class I and II bicycle trails as well as a hiking and riding trail system. The Class I trails have been designed to link the recreational, educational and culture uses within the Great Park. In addition, the City’s Bicycle Transportation Plan is scheduled to be updated in 2005. Bike trail alignments, amenities, and grade separations will be discussed in that update.

Response to Comment H30

The County Master Plan of Regional Riding and Hiking Trails does not show the connection between the Serrano Creek and Hicks Canyon Trails alluded to in the comment. The Riding and Hiking Trail link that is being deleted is shown on the City of Irvine Trails Network Plan only. The link being deleted has been determined to be infeasible due to existing industrial development along the proposed route through PA 35, the inability to use the existing flood control improvement at Bake Parkway for the trail undercrossing, and other route specific impediments.

Response to Comment H31

The County of Orange’s proposed Borrego Canyon bikeway traverses the NCCP/HCP that remains in federal control and is considered to be habitat for sensitive and endangered species. As such, the City has chosen not to show the proposed connection. The project does not propose to add this trail connection. A Class I off-street bikeway will be located in the proposed drainage swale that carries Agua Chinon drainage between Irvine Boulevard and the Irvine Transportation Center. The County should consider realigning its proposed Borrego Canyon bikeway to join this trail or using the proposed Class II bikeway along the future Alton Parkway extension as an alternate route for bicyclists.

Response to Comment H32

Page 5.14-18 of the EIR has been revised as follows:

“Both on-road (~~Class I~~ Class II) and off-road (Class I ~~Class II~~) bikeways are planned for the site, linking the site with the regional bikeway system.”

Refer to Responses to Comments H35 through H38 with respect to regional trail connections.

Response to Comment H33

The EIR does address policies and programs supporting alternative modes of transportation. This EIR has followed CEQA Guidelines (Appendix G) as the guide to select Significance Thresholds. While the proposed trail system may differ in some areas with other plans, it

does propose an extensive bike trail system that links the project internally and to the regional system. On page 5.2-63, the EIR presents the opportunities offered by the proposed project's recreational, educational, and transit-oriented uses for an enhanced bike trail network. The EIR also states that connections should be considered to Portola Parkway as well as encouraging additional trails for a more extensively linked network. As the project reaches its implementation stages, there will be opportunities for these considerations. Refer to Responses to Comments H29 through H31.

Response to Comment H34

The subheading "Trails and Bikeways" has been added between the fourth and fifth paragraphs on page 5.2-62 of the EIR.

Response to Comment H35

Cyclists of all levels will be able to use the proposed trail system for recreational and transportation purposes within the opportunities that the network will provide. As a community with an extensively designed and used bike trail system, the City of Irvine continually plans and develops additional trails, as well as linkages and amenities to enhance these opportunities. As stated in the EIR, the City of Irvine will continue to encourage such enhancements through the planning and implementation stages of the project. Refer to Response to Comment H29.

Response to Comment H36

Comment noted. The design of the Irvine Transportation Center includes the opportunity to link to Barranca and ultimately Alton Parkway via bicycle.

Response to Comment H37

The City of Irvine General Plan Circulation Element has established policies to connect the City's trails to the regional trail network. The Great Park plan will provide opportunities for the expansion of the trail system. As stated in the EIR, the City will continue to encourage such enhancements throughout the planning and implementation stages of the project.

Response to Comment H38

Figure 3-7 (EIR page 3-23) represents the trail system envisioned in the proposed project. The Great Park Plan includes vast areas of open space, recreational uses, as well as institutional and educational uses which will require detailed planning and design during the subsequent phases of the project. The enhancement of the trail system will be part of the detailed planning process for those land uses, and can be integrated with the opportunities offered by those plans.

Response to Comment H39

Comment noted. Refer to Responses to Comments H29 and H38.

Response to Comment H40

The suggestion for inclusion of the Class I bikeway network into the Transportation Management Plan (TMP) will be considered. The TMP is not, however, intended to construct or maintain bikeways. The City of Irvine will coordinate with the County of Orange's Harbors, Beaches, and Parks during the implementation phase of the project for information about the bike trails that could be included in the TMP.

Response to Comment H41

Comment noted. The potential for grade-separated crossings will be identified during the later phases of more specific planning and implementation of the project.

Response to Comment H42

Figure 3-7 (EIR page 3-23) depicts the Great Park Plan Trail Network. Staging areas and details will be identified during the later phases of more specific planning and implementation of the project.

Response to Comment H43

The EIR addresses the proposed General Plan and zoning for the project site. At this time, the Equestrian Center is a permitted land use within the proposed General Plan and zoning designation for the existing site. The property will transfer to private ownership through the DON sale. The future property owner will determine the viability of an equestrian use at that time.

Response to Comment H44

The City of Irvine appreciates the offer to make a presentation on bikeways and trails planning to the County of Oranges, Harbors, Beaches, and Parks and the Orange County Regional Recreational Trails Advisory Committee.

Response to Comment H45

Mitigation Measures C1 through C4 address cultural resources; Mitigation Measure P1 (see Section 5.10 Paleontological Resources) addresses the potential for paleontological resource finds.

Any cultural resources discovered as a result of implementation of Mitigation Measures C1 through C3 would be curated at an acceptable archaeological repository within the County. Fees for storage and curation would be the responsibility of the developer/applicant for individual projects.

Response to Comment H46

Because 95 percent of PA 30 has not been surveyed, Mitigation Measure C1 requires an initial survey report which would include a records search, literature review, and walkover survey. A testing report will be required if the results of the initial survey report indicate the potential for cultural resources to be present on that portion of the project site subject to the cultural survey.

Response to Comment H47

Refer to Response to Comment H45.

Response to Comment H48

As described in the EIR, the County of Orange IWMD owns and operates three landfills to serve the solid waste disposal needs of the County. The City disposes the majority of its solid wastes at the Bowerman landfill. When the daily tonnage limit of one of the three IWMD landfills is exceeded, waste imported to that facility is reduced accordingly, and the excess tonnage is disposed of at one of the other facilities. The IWMD accepts wastes from outside of Orange County. Project refuse can be disposed of within any one of the three landfills in the County landfill system. The currently permitted maximum daily tonnage at the Bowerman landfill is 7,263, which is adjusted to increase by 1.75 percent per year with a maximum of 8,500 tons per day. Currently, the landfill accepts approximately 6,700 tons

per day. Under the proposed Overlay Plan, the project would generate approximately 35 tons per day of solid waste. Thus the project would increase the tonnage received by the Bowerman landfill to approximately 6,735 tons per day, which is well below the existing 7,263 tons per day and the future 8,500 tons per day limit of the landfill.

Response to Comment H49

The Bowerman currently accepts additional landfill waste from outside Orange County. Should the cumulative effect of development within the Central Region watershed cause the daily tonnage ceiling to be exceeded, the waste being imported will be reduced by an amount sufficient to stay within tonnage limits.

Additionally, the California Integrated Waste Management Board requires that all counties have an approved Countywide Integrated Waste Management Plan (CIWMP). To be approved, the CIWMP must demonstrate sufficient solid waste disposal capacity for at least 15 years, or identify additional available capacity outside the County's jurisdiction. Orange County's CIWMP, approved in 1995, estimates future solid waste disposal demand based on countywide population projections adopted by the Board of Supervisors. IWMD's database estimates that the Orange County landfill system has capacity for approximately 25-years; therefore no significant cumulative solid waste impacts are anticipated. Continuation of local government efforts required under AB 939 to divert wastes from the County's landfills will also reduce the magnitude of cumulative impacts.

RELOOC is an acronym for "Regional Landfill Options for Orange County." The RELOOC program is a 40-year strategic plan under preparation by the County IWMD, and is proposed to ensure that waste generated by the County is safely disposed of and that the County's future disposal needs are met. The County IWMD is currently in the process of conducting the environmental review for the RELOOC program, with the EIR anticipated to be released in spring 2003.

The County's waste disposal system includes three landfills, 20 former refuse disposal stations, and four household regional hazardous waste collection centers. The RELOOC implementation strategy is based on a "Phased Option" approach to managing solid waste disposal in the County, consisting of Phase 1 Short Term Strategies and Phase 2 Long-Term Strategies. Phase 1 strategies include, among others, fully utilizing the capacity of existing landfills before seeking new site or alternative waste disposal methods. This would be achieved by maximizing operational efficiency at existing landfills (e.g., compacting refuse), increasing landfill capacity of the Frank R. Bowerman and Olinda Alpha landfills, and proactively encouraging recycling. Phase 2 strategies include determining if there is a need to increase the daily amount of solid waste permitted at the Prima Deschecha landfill, identification of strategies, including new technology, to maximize solid waste disposal capacity, and completion of a feasibility study of expanding the Bowerman landfill into the adjacent Round Canyon after the Bowerman landfill reaches capacity.

Response to Comment H50

Refer to Response to Comment H49.

Response to Comment H51

Refer to Responses to Comments F65, F66, and H49.

Response to Comment H52

Refer to Response to Comment H49.

Response to Comment H53

For both the Base Plan and Overlay Plan, only future roadway improvements with an identified funding source have been included for 2007 and 2025 conditions. Only the post-2025 (General Plan buildout) scenario includes unfunded improvements. This reflects circulation needs and development levels consistent with and required for General Plan buildout conditions only and is appropriate in this context.

Response to Comment H54

All of the intersections identified in the comment were in fact included in the Great Park Traffic Impact Analysis.

Response to Comment H55

Refer to Response to Comment H2. The “trip cap” approach is an appropriate mechanism for ensuring that future development conforms to the Great Park project description. As part of the North Irvine Transportation Improvement Program (NITM), each development proposal must submit a traffic analysis demonstrating consistency with the planned trip cap. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events.

Response to Comment H56

This is unnecessary since the minor differences in the ICU assumptions between the City of Irvine and other jurisdictions, if any, would not affect the findings and conclusions of the Great Park Traffic Impact Analysis.

Response to Comment H57

Refer to Response to Comment H55.

Response to Comment H58

The Traffic Impact Analysis evaluates peak hour mainline freeway conditions for all land use scenarios. The peak hour mainline freeway conditions are presented in the EIR on pages 5.2-35 and 5.2-36 (Base Plan) and pages 5.2-53 and 5.2-54 (Overlay Plan) (see specific references to Appendix G).

Response to Comment H59

Ongoing studies and analysis (monitoring) in accordance with the NITM program will continue to ensure that mitigation measures are implemented in a timely and appropriate manner.

Response to Comment H60

Comment noted. The MPAH amendment process has been specifically identified as a required project mitigation measure. The City of Irvine has initiated a request to OCTA for the review of the proposed MPAH amendments.

Response to Comment H61

Although an industrial reuse was contemplated during the initial efforts to clean up the base, the remediation strategies put in place allow for other reuses. The DON, with the concurrence of the other members of the Base Cleanup Team, considers all “no further action” sites and all remediated sites at the base to be available for unrestricted uses. Therefore, the use of such sites is consistent with the land uses proposed in the Great Park Plan. At locations that are to be used for schools (K-12), additional evaluation of the sites by DTSC is required by law.

Considerations for remedial actions objectives are provided in 40 CFR 300.430(e)(2)(i) that states, “remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response.” The Department of the Navy (DON) will be responsible for remediation of the former MCAS El Toro to these exposure levels. The DON has stated that some land-use controls (i.e., easements, covenants, institutional controls, ordinances, etc.) will be required in order to restrict public access on approximately seven Installation Restoration Plan (IRP) sites. The DON will employ limited land use controls at IRP sites 2, 3, 5, 16, 17, 18, 24; the use of such controls has yet to be determined for IRP sites 1, 8, 11, and 12. This action has been deemed necessary until the IRP sites in question can be remediated to the above mentioned acceptable exposure levels.

Section 3.0 *Project Description Actions and Approvals of Other Agencies* has been amended to reflect the requirement that DTSC approve the acquisition and/or development of property for public schools. The added additional language reads as follows:

“California Department of Toxic Substances Control (DTSC) – Approval of acquisition and/or development of property for public schools based on hazardous materials evaluation.”

Response to Comment H62

In the April 2003 Draft Final EBS, the DON identifies approximately 84 percent of the base as suitable for transfer through a fee conveyance. The DON considers areas that are suitable for transfer to be available for unrestricted uses. The percentage of transferable property has increased since 1995 due to additional investigation and sampling performed in 2002 and 2003 as part of the EBS update. Additionally, numerous areas have received “no further action” concurrence from the site regulators since 1995, thus increasing the acreage suitable for transfer from the original estimate of 67 percent. Refer to the *Final Environmental Baseline Survey, Former MCAS El Toro, California* (Earth Tech, Inc. April 2003) for additional information.

Approximately 84 percent of the former air station property is suitable for transfer by deed without remediation or land-use controls. Most of the remaining 16 percent of the former air station consists of areas with subsurface groundwater contamination and may be transferred to private control through a lease in furtherance of conveyance until the remediation is complete and fee title can be conveyed. Land-use controls, as defined in Response to Comment H61, for such groundwater contamination will be limited to prohibitions on the extraction and use of groundwater and limited surface controls to protect monitoring and remediation equipment.

Response to Comment H63

Additional remediation plans are not required, as specific land use designations (i.e., residential, industrial, park, or recreation) are irrelevant. Per 40 CFR 300.430(e)(2)(i), "remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response." The DON is required to remediate the site to these exposure levels. Analysis of supplemental remediation costs, if any, are not required by CEQA. The cost and responsibility of remediation rests with the DON. Refer to Response to Comment H61.

Response to Comment H64

Refer to Responses to Comments H61 and H63.

Response to Comment H65

The City of Irvine's Solvent Study identified a potential conduit of contamination, the base sanitary sewer system, and analyzed the maximum potential releases that could have occurred based on a review of historical records and engineering practices. The City submitted the report to the DON for consideration of alternate sources for contamination on the base. In response, the DON gave careful consideration to the rationale and logic of the report, conducted extensive testing of a likely source (Building 307, the base laundry and dry cleaning facility located within IRP Site 24), and concluded that the potential releases were most likely very limited. While the City of Irvine concurs with the DON's conclusions, based on its evaluation of Building 307, the City recognizes that there is a potential, albeit small, for hidden releases of solvents and other hazardous substances. Mitigation Measure HH 5 puts in place a process for responding to potential unidentified contamination when it is encountered during any construction activities on the base. The April 2003 Draft Final EBS released by the DON addresses concerns brought up in the City of Irvine's Solvent Study. Refer to the City of Irvine's letter of response dated 21 March 2003 attached in the Appendix.

Response to Comment H66

It is the responsibility of the DON along with the rest of the members of the Base Cleanup Team (including USEPA, DTSC, and RWQCB) to review evidence of contamination presented by any and all parties, including those identified by the commentor. In the April 2003 Draft Final EBS, the DON reviews all of the evidence presented by other parties for potential additional locations of concern, including the City of Irvine's Solvent Study. The DON performed studies to address issues raised in the Solvent Study and the conclusions are presented in the April 2003 Draft Final EBS. While many potential locations of concern do not warrant further investigation, the DON considers 76 locations to require evaluation for potential releases. Those sites that pose a significant risk to health and safety will be subject to remediation sufficient to allow a fee conveyance of the site for unrestricted uses.

Response to Comment H67

Refer to Response to Comment H65. The EIR will be revised to note that the DON evaluated potential soil contamination adjacent to runways and under certain runway extensions in the April 2003 Draft Final EBS. There date is no evidence that there are significant levels of unknown contaminants in these areas. The City of Irvine believes that the DON's April 2003 Draft Final EBS addresses all concerns brought up in the GeoSyntech report and the City of Irvine's Solvents Study. Refer to the City of Irvine's letter of response dated 21 March 2003 attached in the Appendix.

Response to Comment H68

The April 2003 Draft Final EBS released by the DON addresses and responds to concerns brought up in the County's environmental site assessment (the GeoSyntech report). Per the Base Realignment and Closure Business Plan for MCAS El Toro (March 2000) and the April 2003 Draft Final EBS, the DON states that approximately 84 percent of the former air station is environmentally suitable for transfer by deed without remediation or land use restriction. Most of the remaining 16 percent consists of areas with subsurface groundwater contamination and may be transferred through a lease in furtherance of conveyance. Some portions of the land area remaining to be remediated will have restricted public access via land use controls until remediation is complete. The DON does not propose to remediate the site to a specific land use designation (i.e., industrial, residential, park, or recreation) as the federal regulations codified under 40 CFR 300.430(e)(2)(i) designate acceptable exposure levels regardless of proposed land use. Refer to Response to Comment H66.

Response to Comment H69

At the time of the review of the County's EIR 563 and 573 processes, the clean-up of the former MCAS El Toro was not far along, therefore the City identified a number of issues that it believed should be addressed prior to going forward with reuse. Subsequently, the DON completed a substantial portion of its investigations and decisions about remediation such that there are relatively few unknowns regarding contamination at this time. Consequently, it is not necessary to revisit issues that the DON has addressed.

Response to Comment H70

The DON recently released an updated baseline environmental analysis of the former air station (Draft Final EBS April 2003). There is no evidence to date indicating the presence of pools of solvents in the bedding of the existing sewer alignments. Refer to Response to Comment H65.

Response to Comment H71

Refer to Responses to Comments H65 and H70. Air quality and traffic impacts attributable to construction activities for both the Base Plan and Overlay Plan, including grading activities, were modeled using the URBEMIS 2001 and the Irvine Transportation Analysis Model (presented in Section 5.3 *Air Quality* and Section 5.4 *Traffic/Circulation*), respectively.

Response to Comment H72

Comment noted. Mitigation Measure HH5 requires that applicants for grading permits within the boundaries of Site 24 prepare a worker health and safety plan that acknowledges the presence of residual VOCs in soil and groundwater at Site 24 and provides adequate measures to protect worker health and safety. Land use controls, as outlined in Response to Comment H61, will be employed at IRP Site 24 in order to prevent extraction or use of contaminated groundwater without prior approval, to protect the integrity of the remedial actions (e.g., protect extraction and treatment equipment and monitoring wells), and to allow access to the site for equipment operation, maintenance, and monitoring. Also refer to Responses to Comments H65 and H77.

Response to Comment H73

The DON evaluated the potential for contamination associated with the piping that ran between an on-base plating shop and an industrial wastewater treatment facility and determined that contamination did not exist. Refer to Responses to Comments H65 and H66.

Response to Comment H74

The vast majority of tanks have been removed under the supervision of the appropriate regulatory agencies. The few tanks that have been or will be abandoned in place will be rendered inert under the supervision of the appropriate regulatory agencies. The information on the status of the storage tanks located on the project site has been updated to reflect the April 2003 Draft Final EBS. Section 5.5.1 *Public Health and Safety Environmental Setting* (5.5-9) has been amended to read:

"Based on the April 2003 Draft Final EBS, a total of 404 USTs were in use at the former air station. Of these USTs, 357 have been remediated and received findings of "no further action." Of a total of 39 ASTs used in support of the military mission at the former MCAS El Toro, 36 have been remediated and received findings of "no further action."

Response to Comment H75

Comment noted. Access to monitoring wells will be protected by restrictions placed on the property prior to sale by the DON. Mitigation Measure HH 6 will be added to Section 5.5.5 *Public Health and Safety Mitigation Measures* to read as follows:

"The City or Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells located on the former MCAS El Toro in a geographic information systems database (GIS). The City will review all permit applications on the former air station for well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to wells will be limited to authorized personnel."

Response to Comment H76

The use of significant quantities of CFC/HCFC refrigerants is not required for implementation of the proposed project. Compliance with SCAQMD rule 1415 requires the capture and recovery of refrigerants resulting in insignificant impacts to the environment.

Response to Comment H77

Although grading operations are not expected to result in the release or disturbance of asbestos or lead, demolition of existing structures may result in such releases. Section 5.5.5 *Public Health and Safety Mitigation Measures* (5.5-27) states:

"Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities."

Response to Comment H78

The DON is required to complete all necessary remedial actions before fee title to the former MCAS El Toro is transferred from federal ownership. The DON may transfer control of those portions of the property not found suitable for transfer of fee title though a lease in furtherance of conveyance. Even after the fee title is transferred, the federal government is required to conduct further remediation if additional contamination caused by DON actions is discovered or if a remedy fails to perform adequately. Federal law also provides that the

DON may be required to indemnify the new owners or certain other parties for liabilities arising from claims for personal injury or property damage resulting from the release or threatened release of any hazardous substances, pollutants or contaminants, or petroleum or petroleum derivatives attributable to DON activities on military installations. Refer to the following letters that are attached in the Appendix to this Response to Comments document: H.T. Johnson, Assistant Secretary of the Navy, Installations and Environment, Letter to the Editor, Los Angeles Times, 5 August 2002; and the letter to the City of Irvine from the DON dated 25 April 2003. Also see the "DOD Policy on Responsibility for Additional Environmental Cleanup after Transfer of Real Property" electronically at: [http://www.dtic.mil/envirodod/Policies/BRAC/brac_flu.htm].

Response to Comment H79

All hazardous wastes generated in the course of the proposed project will be managed in compliance with regulatory requirements and sent to a licensed hazardous waste facility, thereby minimizing risks and rendering impacts to public health and safety less than significant.

Response to Comment H80

Section 5.3 *Air Quality* and Section 5.4 *Traffic/Circulation* of the EIR address the issue of human health impacts resulting from diesel exhaust particulates.

Response to Comment H81

Existing users of pesticides and fertilizers at the base, agricultural leaseholders and landscape maintenance staff, must meet regulatory requirements for the storage, application, and disposal of registered pesticides. Proposed uses will be similar. Compliance with regulatory requirements will minimize both exposures to pesticides and the potential risk of accidental releases resulting in less than significant impacts to public health and safety.

Response to Comment H82

Only SCAQMD-compliant paints and coatings are legally available for use in the proposed project. Compliant coatings minimize the use and release of VOCs resulting in less than significant impacts to public health and safety.

Response to Comment H83

Non-point source pollution and related TMDLs are addressed in Section 5.7 *Hydrology/Water Quality*. Mitigation Measures H/WQ 1 states:

"A Storm Water Pollution Prevention Plan and Water Quality Management Plan are to be prepared [prior to project implementation]. A Notice of Intent for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project areas. This requirement will be met to the satisfaction of the City Engineer for: a) any disturbance of one-acre or more of soil...b) General Dewatering NPDES Permit of the Santa Ana RWQCB, and c) provisions of the Countywide Permit....As future projects are planned, designed, and constructed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed."

Monitoring protocols implemented as part of the BMPs and other Permits identified in this Mitigation Measure would require quantification of non-point source pollution loading as part of the TMDLs identified for the Newport Bay watershed.

Response to Comment H84

Refer to Response to Comment H83.

Response to Comment H85

Air quality emissions are presented and analyzed in Section 5.3 *Air Quality*. Growth inducement due to the proposed project is addressed in Section 7.2 *Growth Inducing Impacts*.

Response to Comment H86

Information pertaining to the consistency between the proposed project and the SCAQMD's AQMP and SIP is presented in Section 5.3 *Air Quality*.

Response to Comment I1

This comment recites the primary components of the proposed project.

Response to Comment I2

Refer to Responses to Comments I3 through I13.

Response to Comment I3

Page 3-30 of the EIR has been corrected as follows:

~~Orange County~~ Airport Land Use Commission (ALUC) ~~for Orange County -~~
~~Amendment Revision~~ of the Airport Environs Land Use Plan (AELUP), dated 1995.

This correction has also been made in other applicable sections of the document.

Response to Comment I4

Page 5.1-5 of the EIR has been modified to include the text of Policy J-1.d as follows:

Policy J-1.d address hazards associated with aircraft operations. Policy J-1.d states, "Use the most current available Airport Environs Land Use Plan (AELUP) as a planning resource for evaluating aircraft operations, land use compatibility and land use intensity."

Response to Comment I5

Page 5.1-6 of the EIR has been modified as follows:

The Airport Land Use Commission for Orange County Airport Land Use Commission (ALUC) prepares a comprehensive land use plan and regulates land uses for each public and military airport. The ALUC adopted the has Airport Environs Land Use Plans for (AELUP) covering the former MCAS El Toro, the former MCAS Tustin, John Wayne Airport (JWA) (adopted 2002), Armed Forces Reserve Center Los Alamitos, and Fullerton Municipal Airport (2002), Joint Forces Training Base Los Alamitos (2002), Heliports projects (2002) and for MCAS El Toro (adopted 1995) ... Figures found in Appendix D of the 1995 AELUP depict the noise and safety zones for MCAS El Toro. Figure 5.1-1 depicts the APZs for the former MCAS El Toro as shown in the 1995 AELUP.

The MCAS El Toro property is still owned by the Federal government. The 1995 AELUP applicable to that property remains in effect and has not been amended. California Public Utilities Code Section 21670, et. seq. requires that local General Plans and Zoning be consistent with the land use compatibility plan (AELUP). The Public Utilities Code provides a method whereby a local jurisdiction may override an Airport Land Use Commission finding of inconsistency with the AELUP.

Response to Comment I6

Page 5.1-15 of the EIR has been revised as follows:

The land use, safety, and noise restricted areas as identified in the AELUP, AICUZ, and the PIL for the former MCAS El Toro facility are no longer impacted by aircraft noise from military air operations now that the base has closed for military use. The MCAS El Toro property is still owned by the Federal government. The 1995 AELUP applicable to that property remains in effect and has not been amended. California Public Utilities Code Section 21670, et. seq. requires that local General Plans and

Zoning be consistent with the land use compatibility plan (AELUP). The Public Utilities Code provides a method whereby a local jurisdiction may override an Airport Land Use Commission (ALUC) finding of inconsistency with the AELUP.

Response to Comment I7

Refer to Responses to Comments I9 and I10.

Response to Comment I8

Reference 6 on page 5.1-27 of the EIR has been revised as follows:

Orange County Airport Land Use Commission for Orange County. Airport Environs Land Use Plan, adopted November 1995. 1975-90.

Response to Comment I9

Page 5.1-15 of the EIR states that the proposed project, “would not result in a significant land use compatibility impact, even though it would conflict with the adopted AELUP.” This language is consistent with the language contained in Section 6.0 Alternatives.

Response to Comment I10

On 17 April 2003, the ALUC formally acknowledged that the ALUC has no statutory jurisdiction over the proposed project. Further, according to the ALUC’s 17 April 2003 staff report, ALUC staff has reviewed the project and finds no AELUP issues.

In the 17 April 2003 staff report the ALUC has also stated that the ALUC does have jurisdiction within the AELUP surrounding the former military airfield. The Orange County Great Park EIR recognizes the potential for growth-inducing impacts as a result of the removal of development restrictions within the AELUP areas surrounding the former base (e.g., EIR, page 7-13). However, Measure W changed the County of Orange’s General Plan to delete any airport development opportunity at the former MCAS El Toro and the DON, in its Record of Decision, chose a non-aviation reuse plan. Consequently, changes in land use restrictions are based on that voter-approved initiative and subsequent DON decisions, not on this project, which modifies the Irvine General Plan designations from a more intensive non-aviation use (known as “Millennium Plan II, adopted in February 2000) to the less intensive, park-oriented non-aviation use proposed by the Great Park project. Many of the areas referenced by the commentor are located within other jurisdictions (primarily the City of Lake Forest and newly incorporated Aliso Viejo). The City of Lake Forest is currently in the preliminary stages of preparing a land use study of the subject area. The City of Aliso Viejo has just recently initiated preparation of a General Plan. It is anticipated that any future proposal by any jurisdiction with lands currently located within the AELUP would be required to evaluate, with specificity, the potential environmental impacts associated with adoption of any proposed land use changes. This information would then be available to the ALUC when amending the AELUP as it relates to that jurisdiction.

Response to Comment I11

Refer to Response to Comment I10. There is no need to include growth-inducing impacts as a significant unavoidable impact of the proposed project.

Response to Comment I12

Page 8-5 of the EIR has been corrected as follows:

~~Orange County~~ Airport Land Use Commission for Orange County, Airport Environs
Land Use Plan, 1995. ~~1975-1990~~.

Response to Comment I13

The documentation referenced by the commentor will be provided to the Airport Land Use Commission as requested.

Response to Comment J1

Comment noted.

Response to Comment J2

Coordination between project developers and the Fire Authority, as with other service providers, is a requirement of development of this type and magnitude. Any necessary agreements regarding fire protection services will occur in accord with established procedures.

Response to Comment J3

Refer to Response to Comment J2.

Response to Comment J4

Comment noted.

Response to Comment J5

Comment noted. See Section 5.5 *Public Health and Safety* for information pertaining to hazardous materials related to agricultural and military activities.

Response to Comment J6

Comments noted. See Section 5.5 *Public Health and Safety* for information pertaining to wildland fires.

Response to Comment J7

Development standards of the type noted are either legal requirements or will be negotiated and established during the review and approval process for the master development plans or other approvals given by the City.

Response to Comment J8

Any further reduction of the surplus area will be determined by the General Services Administration. The effect of future government ownership and operations in areas proposed to remain in government control will need to be assessed once the specific areas are established.

Response to Comment J9

Refer to Response to Comment H65. The commitment by the DON is to convey land based on the federal regulations codified under 40 CFR 300.430(e)(2)(i); the regulations designate acceptable exposure levels suitable for the proposed reuse of the former air station. If an unknown hazard appears during construction, appropriate responses will be taken by the City in coordination with the DON and the Fire Authority and other responsible agencies. Refer to the April 2003 Draft Final EBS for additional information on the status of underground storage tanks, pipelines, and other specified information. See Section 5.5 *Public Health and Safety* for information pertaining to hazardous materials and wastes. Mitigation Measure HH 5 states:

“Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. The applicant and/or property owner that discovers

contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director Community Development of the City of Irvine in a timely manner.”

Response to Comment J10

Comment noted.

Response to Comment J11

Comment noted.

Response to Comment J12

Comment noted.

Response to Comment J13

Comment noted.

Response to Comment J14

Comments noted.

Response to Comment J15

The location of IRP sites are identified on Figure 5.5-1 (EIR page 5.5-8).

Response to Comment J16

The project is a General Plan amendment, zone change, development agreement, and annexation. The detailed information discussed in the comment will be available in the design phase.

Response to Comment J17

Coordination with OCFA will occur during the design phase and during the project approval process, consistent with City standard procedures.

Response to Comment J18

Refer to Response to Comment J17.

Response to Comment J19

Comment unclear due to partial sentence provided as comment.

Response to Comment J20

Regulation of agricultural chemicals application and storage will continue for land proposed to be retained for agricultural use.

Response to Comment J21

Comment noted.

Response to Comment J22

Fire protection agreements are a requirement prior to development. This issue is also referenced in the Urban Services Plan (provided as an attachment to this document).

Response to Comment J23

Comment noted. Fire service was considered in establishing maximum water demand and subsequent backbone infrastructure sizing.

Response to Comment J24

OCFA will be listed as an Action Agency in the EIR on pages 3-30/3-31.

Response to Comment J25

Corrections will be made in the final EIR as noted.

Response to Comment J26

Refer to Responses to Comments J1 through J25.

Response to Comment K1

The elements and development characteristics of the proposed project are specifically defined in Section 3.0 *Project Description*. The analysis of potential environmental impacts is based on the development and operation of the project as defined in Section 3.0.

The City has proposed a concept plan that will meet the spirit and intent of Measure W while maintaining a fiscally-balanced plan. Annexation of PA 51 is proposed in order to ensure the City can control the logical development of the property, and to maintain high service levels for public service and utility providers. Although the project site will be incorporated into the City of Irvine, the proposed uses are regional in nature and are intended to benefit and serve all residents of the County.

Response to Comment K2

This comment references the adequacy of the DON's Environmental Impact Statement (EIS) and the Record of Decision for the Disposal of the former MCAS El Toro issued by the DON and co-signers of the Federal Facilities Agreement. This comment does not address the adequacy of the Orange County Great Park EIR.

Response to Comment K3

The DON has analyzed a non-aviation alternative in its EIS for the Disposal and Reuse of the former MCAS El Toro. The Orange County Great Park project, however, is proposed by the City of Irvine. The City is designated as the "lead agency" under CEQA, and in this capacity, is responsible for preparation and certification of an EIR that addresses the potential environmental impacts associated with implementation of the proposed project as defined in Section 3.0 of the EIR. The DON is not required to prepare an EIR for the proposed project as a range of alternatives were previously addressed in the DON's EIS for the federal action. The Orange County Great Park project is proposed by the City of Irvine and does not involve a federal action beyond the disposal of the property which is addressed in the federal EIS.

Response to Comment K4

Section 7.1 *Cumulative Impacts* of the EIR analyzes the potential environmental impacts associated with the development of the proposed project in conjunction with the projected growth in the region, including the Northern Sphere. This cumulative impact analysis includes analyses of impacts to traffic, air quality and energy.

With respect to aviation, implementation of the proposed project does not involve a use that would impact existing airports and aviation activity. The proposed project is the reuse of a former military air base which is currently not utilized for any type of aviation use. The Measure W initiative changed the County of Orange's General Plan and deleted the airport designation for the former MCAS El Toro. Furthermore, on 25 February 2003 the Orange County Board of Supervisors, acting as the El Toro Local Redevelopment Authority, rescinded the El Toro Airport System Master Plan, thus removing an airport at MCAS El Toro from all County plans.

Response to Comment K5

This comment addresses the adequacy of the Final Environmental Impact Statement and Record of Decision issued by the DON for the closure of the former MCAS El Toro. This comment does not address the adequacy of the Orange County Great Park EIR and no further response is necessary.

Response to Comment K6

As described in Section 5.5 *Public Health and Safety* of the EIR, the DON will be responsible for clean-up and remediation activities on the base. Page 5.5-11 of the EIR states, "Under CERCLA, contaminated federal property cannot be transferred until all necessary remedial actions have been taken or a remediation system is operating properly and successfully. Cleanup responsibility remains with the DOD until the property is fully remediated. Therefore, some of the former air station property cannot be transferred immediately." Additionally, "As established by BRAC III, the DON will continue its environmental restoration activities after installation disposal. Sites that require continuing monitoring and remediation will receive continuing investigation/remediation beyond installation closure, which occurred in July 1999." (EIR, page 5.5-15) Additionally, Mitigation Measures HH1 through HH5 are proposed to ensure that no significant impact associated with the presence of hazardous materials or contamination occurs with implementation of the proposed project. Refer to Responses to Comments H61 and M26 for information pertaining to the DON's remediation requirements.

Response to Comment K7

Refer to Response to Comment K1.

Response to Comment L1

Refer to Responses to Comments DD1 through DD14, which respond to the Department of Toxic Substances Control comment letter on the EIR.

Response to Comment M1

Refer to Responses to Comments M2 through M95 which respond to each comment raised by the commentor.

Response to Comment M2

This comment correctly summarizes the primary components of the proposed project, as described in the EIR. However, the City does not agree with the commentor's statement that the Great Park is not a feasible reuse of the project site and that the magnitude of the proposed land uses are understated. The proposed uses are considered feasible in terms of constructability as well as a fiscal standpoint. Proposed uses have been carefully considered so as to achieve a fiscally balanced plan while maintaining the spirit and intent of Measure W.

The proposed project characteristics are described in detail in Section 3.0 *Project Description*. The EIR focuses on the Overlay Plan as it presents the highest level of potential impact in order to ensure mitigation at the highest level. Tables 3-3 and 3-4 provide a detailed summary of the potential maximum development potential of the project according to both the Base Plan and Overlay Plan.

Response to Comment M3

The proposed Orange County Great Park land uses are proposed within City of Irvine Planning Areas (PAs) 30 and 51. Lands within PA 51 are not subject to Measure W while they remain under the jurisdiction of the County of Orange. To the extent that these lands are not annexed under the Great Park Plan, there will be no impact to the County's General Plan and zoning. However, PA 30 is located within the jurisdictional boundary of the City, and is not subject to Measure W. Generally, the more intensive land uses are proposed within PA 30. Comparatively, the Overlay Plan is more intense than the Base Plan, which are clearly depicted in Tables 3-3 and 3-4 of the EIR. However, the Overlay Plan allows for a similar amount of the open space, park, recreational and public uses within PA 51 as could occur under the Base Plan.

The City does not concur that the Overlay Plan constitutes "massive development" as inferred by the commentor. Regardless of whether land uses are developed according to the Base Plan or the Overlay Plan, the spirit and intent of Measure W will be met with implementation of the proposed project, for that portion of the project site currently subject to Measure W. In either case, the development potential of the Base Plan and the Overlay Plan are clearly illustrated in Tables 3-3 and 3-4 of the EIR.

Response to Comment M4

As stated in the EIR, "the purpose of the project is to assure that reuse of El Toro is consistent with the intent of Measure W approved by the voters in March, 2002 while responding to the decision of the federal government to sell the land". The proposed zoning with the Base Plan and Overlay Plan assures the fulfillment of this purpose, regardless of the option chosen by the buyers of the property. While the option of the Overlay Plan provides a potential higher return to the developers in exchange for providing the land and infrastructure for the public uses, the Base Plan, through the regulation of the permitted land uses, also assures that the land will be developed for open space, recreation, educational, and cultural facilities, agriculture, and other park-like uses. Project applicants may opt to develop under the Base Plan and forego the increased intensity and development rights that are available through the Development Agreement and Overlay Plan.

Response to Comment M5

The former air station will be divided into four parcels for sale by the DON. The requirement through the Development Agreement for land dedication and maintenance fee participation under the Overlay Plan option assures that the public uses are implemented. Conversely, under the Base Plan the land use regulations will be the mechanism for the implementation of the park and open space uses. Under the Base Plan, public funding is not required because park and open space lands are not required to be dedicated.

Response to Comment M6

The zoning allows the development of the Great Park under both options. With the Overlay Plan the Great Park will be implemented through land dedication and fee contributions, and the City (or its designee), in turn, will be the developer of those public uses. Under the Base Plan, the owner of the property will develop the land based on the designated land uses, including the open space, recreational, educational and cultural facilities, agriculture, and other park-like uses, since those are the permitted land uses provided by the Base Plan option.

Response to Comment M7

The EIR analyzed the potential impacts of the Overlay Plan as the maximum buildout of the Plan, including the Development Agreement as an integral part of the Overlay Plan option. If a buyer declines to enter into the Development Agreement, the property would have the General Plan and zoning designation provided in the Base Plan. Any subsequent increase in the density and intensity would require the preparation of a General Plan Amendment, zone change, and the required environmental documentation addressing both project-specific and cumulative impacts.

Response to Comment M8

The City of Irvine is not involved with the sale of land parcels; the DON has publicly stated that it will sell all parcels of the former MCAS El Toro concurrently. As the owner of the property, the DON has indicated that it will divide the land into the four parcels as indicated on the attached figures. The EIR provides an analysis of the project's potential impacts based upon the maximum amount of development allowed under the Base Plan and Overlay Plan regardless of the manner in which the DON sells the property. (Note: The four referenced parcel figures are included in the Appendix to this Response to Comments document).

Response to Comment M9

The proposed maximum development intensity of the project is defined in Section 3.0 *Project Description*. The City does not propose to exceed the level of development beyond that defined in Section 3.0 and analyzed in the EIR. The development potential is based on densities and intensities achievable under the proposed General Plan land uses and zoning designations, subject to the specific density and intensity caps that are explicit in the proposed project. Any proposed increase in the level of development beyond that described and analyzed in the EIR would require the preparation of subsequent or supplemental environmental documentation to address the potential environmental impacts of such a proposal. The land use densities of the proposed project, as with land use densities for all similar proposed projects in Irvine, are based on and controlled by the maximum allowable development intensity. As such, the density range establishes the framework for analysis within the limits of the maximum development intensity.

Response to Comment M10

The proposed project sets specific maximum levels of density and intensity and the City of Irvine has no intention of changing these levels. Refer to Response to Comment M9.

Response to Comment M11

Comment noted.

Response to Comment M12

The EIR discusses all potential environmental effects of the Overlay Plan which is the maximum buildout scenario as defined in the project description. The City of Irvine has no intention of adding development intensity beyond that which is presented in the EIR. Refer to Responses to Comments M9 and M10.

Response to Comment M13

Refer to Responses to Comments M9 and M10

Response to Comment M14

Per the Overlay Plan, the maximum number of dwelling units in PAZ2 is set at 850, notwithstanding the number of units that could be calculated using the maximum range of the zoning designation. The maximum intensity of development for both the Base and Overlay Plans is specifically depicted in Tables 3-3 and 3-4 of the EIR. Refer to Response to Comment M9.

Response to Comment M15

Refer to Response to Comment M9.

Response to Comment M16

Comment noted.

Response to Comment M17

The air quality impact analysis contained in Section 5.3.3 *Air Quality Environmental Impacts* adequately assesses the air quality impacts of runway removal as part of the overall project construction. In order to confirm the validity of the initial URBEMIS 2001 model, additional analysis of the airport runway model was completed. As part of this additional analysis, it was determined that the URBEMIS 2001 site grading PM₁₀ fugitive emissions calculations are based on the emission factor prepared by the CARB for construction activities, that include: limited-to-heavy trenching activities; limited-to-heavy earth moving activities by scrapers; road pre-paving activities; paving activities; road grading; scraper excavations; general construction of pads, framing, landscaping, etc.; and drilling, blasting, compaction, and trucking of excavated and fill material. The secondary set of URBEMIS 2001 model runs were performed with the demolition tab enabled. The results of the initial URBEMIS 2001 model run and the secondary URBEMIS 2001 calculations are presented as Table M-1 in the Appendix of this Response to Comments document. The results of the secondary URBEMIS 2001 calculations show that unmitigated PM₁₀ emissions increased to approximately 458-tons per year as compared to 451-tons per year using the initial URBEMIS 2001 data. This represents an increase of less than seven tons, or 1.4 percent of the total unmitigated PM₁₀ emissions. The difference is statistically insignificant and the additional analysis is provided to confirm that the initial analysis adequately assesses the air quality impacts of runway removal as part of the overall project construction. Section 5.3.3 will be amended with the addition of the secondary URBEMIS 2001 calculations and qualitative description.

The Mitigation Measures proposed will apply to all construction activities, including demolition and removal of the runways as well as grading and excavation. Mitigation Measure AQ2 has been amended to read:

“Prior to the commencement of construction activities required to demolish and/or remove existing DON infrastructure, including runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plans ~~plan~~ shall identify implementation procedures for each of the following emission reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.”

Response to Comment M18

Refer to Response to Comment M17. Section 5.3.3 *Air Quality Environmental Impacts* states:

“Both the Base Plan and Overlay Plan propose the development of the entire 4,693-acre base within a 19-year (2007-2025) time frame. For estimation of air emissions, it was assumed that either plan is subdivided into two phases based on utility and extent of the development...For the estimation of air quality emissions from construction of the various facilities, construction activity is assumed to last for a period of three years during each phase. This assumption conservatively accounts for both demolition and grading/excavation activities as major sources of construction-related emissions. The URBEMIS 2001 model is used for estimating construction emissions for all stages of development...Due to the limited availability of specific data regarding construction activities and equipment requirements, the URBEMIS 2001 model default options were used.”

Response to Comment M19

The DON will not transfer fee title to the property of the former MCAS El Toro until the parcels have been remediated to acceptable exposure levels; property not meeting acceptable exposure levels will not transfer or may be transferred to private control through a lease in furtherance of conveyance until the remediation is complete. The EIR will be revised to note that the DON, in the April 2003 Draft Final EBS, evaluated potential soil contamination adjacent to runways and underneath certain runway extensions. In addition, Mitigation Measure HH 5 puts in place a process for responding to potential unidentified contamination were it to be encountered during any construction activity on the former MCAS El Toro. Also refer to Response to Comment M24.

Response to Comment M20

Refer to Responses to Comments M17 and M19 for potential contamination issues associated with runways. Potential impacts to air quality related to the removal of runways, tarmac, and related infrastructure were modeled using URBEMIS 2001 and is presented in Section 5.3 *Air Quality*.

Response to Comment M21

Refer to Responses to Comments M16 through M20. Referenced analysis has been conducted and findings presented in the EIR.

Response to Comment M22

This comment incorrectly assumes that the proposed project provides the authority to develop an additional 14,000 acres of land. Even if the proposed project is not approved and implemented, based on Measure W, the Orange County General Plan precludes development of an airport on the former MCAS El Toro and thereby removes previous land use restrictions due to aircraft operations. Even in the absence of the proposed project development would have to adhere to the non-aviation designation of the site based on the provisions of Measure W. The project proposes to change the City of Irvine General Plan and zoning designations for the project site from one non-aviation land use plan (e.g., the Millennium Plan, adopted in February 2000) to another non-aviation land use plan, designated the Great Park Plan.

The cumulative analysis provided in Section 7.1 of the EIR is consistent with the provisions of CEQA and the CEQA Guidelines. As stated in the EIR, the CEQA Guidelines allow for the analysis of cumulative impacts to utilize the Regional Growth Projections Method. According to CEQA Guidelines Section 15130, the Regional Growth Projections Method can be a summary of projections contained in an adopted general plan or related planning document which is designed to evaluate regional or area wide conditions. As described in the EIR (EIR, page 7-1), the Regional Growth Projections Method has been utilized for analysis of cumulative impacts. The cumulative analysis is based on buildout assumptions identified in the Center for Demographic Research's *Orange County Projections 2000*. This cumulative analysis takes into consideration buildout of local and regional general plans as well as population forecasts for the County of Orange and the region as a whole (as shown in Figure 7-1 and Table 7-1) (EIR, page 7-1). The EIR is consistent with the CEQA Guidelines provisions for the use of the Regional Growth Projections Method in the evaluation of cumulative impacts, as the OCP-2000 projections are adopted based on regional growth estimates utilized by various jurisdictions throughout the County.

Furthermore, the commentor appears to confuse the intent of CEQA Guideline Section 15130(b)(1)(B)(2) with respect to "probable future projects." CEQA Guideline Section 15130(b)(1)(B)(2) addresses the list approach for analysis of cumulative impacts. As previously stated, the Orange County Great Park EIR does not rely on the list approach for the analysis of cumulative impacts. Also, CEQA Guideline Section 15130(b)(1)(B)(2) does not apply to the 14,000 acres of land referenced by the commentor as it does not meet the criteria of the Guideline. Specifically: 1) the 14,000 acres is not the subject of an application requiring an agency approval which has been received at the time the notice of preparation was released; 2) the 14,000 acres is not a project identified in an adopted capital improvements program, general plan, regional transportation plan, or other similar plan; 3) the 14,000 acres is not a project anticipated at a later phase of a previously approved project; and 4) the 14,000 acres is not a public agency project for which money has been budgeted." Also refer to Response to Comment I10.

With respect to the City of Lake Forest, the City's adopted General Plan was both reviewed and has been included in the preparation of the Orange County Great Park EIR. Land use assumptions for cumulative growth include the adopted land uses of the City of Lake Forest General Plan. The City of Lake Forest has recently amended its General Plan to remove references to the aviation-use of the airport, and to delete references to the noise contours and AICUZ boundaries formerly associated with the base operations. However, no land use changes were adopted as part of this recently approved General Plan amendment. Also, no land use changes have been identified or are proposed by the City at this time. The City has just recently solicited proposals to initiate a land use study that would examine potential land use changes within the areas previously restricted by aviation use of the

former base. No formal land use change recommendations are expected until sometime in 2004. Because the nature, extent, and timing of potential land use changes that could occur in this area have not been determined, any additional analysis, beyond that provided in the EIR, would be speculative.

With respect to the City of Aliso Viejo, the City is a newly incorporated City and does not have an adopted General Plan. The City is currently in the preliminary stages of preparing a General Plan, which is expected to be adopted in late 2003 or 2004, well beyond the timeframe associated with the Orange County Great Park EIR. Rather than engage in speculation as to the nature, extent, and timing of potential land use changes that could occur in this newly incorporated jurisdiction, the Orange County Great Park EIR relies upon adopted growth projections as allowed by the CEQA Guidelines for the Regional Growth Projections Method.

The analysis of the 14,000-acres is addressed in the EIR, to the degree that the project would cause growth-inducing impacts in the City of Irvine and surrounding jurisdictions (EIR, page 7-13). The EIR concludes that the growth-inducing impacts are significant.

Response to Comment M23

The EIR describes the project's potential contribution to regional air emissions and provides a comparison of these emissions to the projected air emissions within the basin as a whole. The EIR does not rely upon this comparison as the basis for determining the significance of the project's air quality impacts. Rather, this comparison is made to assess the magnitude of the proposed project's impact on the region as a whole. While the EIR states that the project will have a negligible impact on the overall air quality within the SCAB, the EIR concludes that, "due to the size of the project, certain impacts that result from development will be "unavoidable" as these impacts cannot be completely mitigated and most of these changes are irreversible. This is considered a significant unavoidable impact, although the overall effect on air quality within the Basin for the life of the proposed project is estimated at less than one half of one percent." (EIR, page 5.3-55).

With respect to the EIR's conclusion of cumulative air quality impacts, the EIR's conclusion of significance is based on the cumulative impact associated with the regional growth projected pursuant to OCP-2000. The EIR concludes that area-wide emissions as a result of cumulative development pursuant to OCP-2000 projections are considered significant. As stated in the EIR, "operation emissions in conjunction with related projects and other emissions in the Basin will also coincide. Since air quality in the SCAB does not comply with federal or state standards, these emissions will contribute to a cumulatively significant impact on air quality," (EIR, page 7-6). The tables provided in the discussion of cumulative air quality impacts provide a quantification of pollutant emissions estimates for the year 2025 based on the adopted 1997 Air Quality Management Plan. Also, regional emissions projections are graphically depicted in Figure 5.3-2 of the EIR.

The potential cumulative impacts with respect to CO hotspots are also quantified and evaluated in Section 5.3 *Air Quality*. Table 5.3-29 depicts the CALINE 4.0 8-hour Carbon Monoxide Modeling Results for Post-2025, and demonstrates that no project-specific or cumulative Carbon Monoxide Hot Spot will result.

Response to Comment M24

The EIR includes data and analysis from the DON and other sources of information and uses these sources to draw conclusions for potential impacts to public health and safety. The

federal government is required to remediate the site to acceptable exposure levels. As part of its obligation to remediate, the DON continues to monitor the site and publish results of its monitoring and remediation efforts. The April 2003 Draft Final EBS is the most relevant evaluation of continuing remediation efforts; it identifies an additional 76 new potential release locations, all of which require further evaluation for potential releases to the environment and subsequent remediation, if required. The April 2003 Draft Final EBS catalogs the types of sites and distinguishes between those that require no further action, those that require further evaluation, those that require implementation of response actions, and those that require completion of ongoing response actions. The DON will not transfer fee title to the property of the former MCAS El Toro until the parcels have been remediated to acceptable exposure levels; property not meeting acceptable exposure levels will not transfer or may be transferred to private control through a lease in furtherance of conveyance until the remediation is complete. Property not transferred in fee title by the DON can only be developed with institutional controls established by the DON until remediation is complete and the fee title is complete. The April 2003 Draft Final EBS concludes that of the 3,738-acres of base property that are expected to become available for transfer, approximately 84 percent are environmentally suitable for transfer of fee title at the present time. The EIR will be revised to incorporate the latest information available in the April 2003 Draft Final EBS.

Response to Comment M25

Refer to Response to Comment M24.

Response to Comment M26

There is no indication that recordkeeping by the DON differed significantly from recordkeeping in private industry during the period the base was in operation. Uses of hazardous materials are well-documented, as are facility plans and operating procedures. While quantities of wastes may not have been well-documented in the period prior to the advent and enforcement of RCRA at the base, that is also the case in the private sector. The extensive process of records reviews, visual inspections, and interviews has created as thorough a record of hazardous materials use and disposal practices as exists. The DON and the regulatory agencies participating in the Federal Facilities Agreement concur that the protocol for investigating the base is sound, that the vast majority of potential contamination locations at the base have been identified, and that significant areas of unidentified contamination are not likely to be found. The City is concerned that there may be small areas of unidentified contamination and that these may be encountered during grading and construction activities. Mitigation Measure HH 5 addresses this potential by requiring applicants for grading permits to prepare a protocol plan that will guide responses to the discovery of unknown contamination. Furthermore, the DON is required to complete all necessary remedial actions before title to the former MCAS El Toro is transferred from federal ownership. Even after the title is transferred, the federal government is required to conduct further remediation if additional contamination caused by DON actions is discovered or if a remedy fails to perform adequately. Federal law also provides that DON may be required to indemnify the new owners or certain other parties for liabilities arising from claims for personal injury or property damage resulting from the release or threatened release of any hazardous substances, pollutants or contaminants, or petroleum or petroleum derivatives attributable to DON activities on military installations. Refer to the following letters that are attached in the Appendix to this Response to Comments document: H.T. Johnson, Assistant Secretary of the Navy, Installations and Environment, Letter to the Editor, Los Angeles Times, 5 August 2002; and the letter to the City of Irvine from the DON dated

25 April 2003. Also see the "DOD Policy on Responsibility for Additional Environmental Cleanup after Transfer of Real Property" electronically at:
[http://www.dtic.mil/envirodod/Policies/BRAC/brac_flu.htm].

GeoSyntec based its evaluation on the use of PRGs (preliminary remediation goals) for identified contaminants. As the U.S. Environmental Protection Agency notes:

"Preliminary Remediation Goals (PRGs) are tools for evaluating and cleaning up contaminated sites. They are risk-based concentrations that are intended to assist risk assessors and others in initial screening-level evaluations of environmental measurements. The PRGs contained in the Region 9 PRG Table are generic; they are calculated without site specific information. However, they may be re-calculated using site specific data.

PRGs should be viewed as Agency guidelines, not legally enforceable standards. They are used for site "screening" and as initial cleanup goals if applicable. PRGs are not de facto cleanup standards and should not be applied as such. However, they are helpful in providing long-term targets to use during the analysis of different remedial alternatives. By developing PRGs early in the decision-making process, design staff may be able to streamline the consideration of remedial alternatives. " EPA, Region 9, Superfund Program:
[<http://www.epa.gov/region09/waste/sfund/prg/index.htm>].

The City supports the use of PRGs in the screening process, but recognizes that site specific characteristics may result in the adoption and implementation of cleanup goals that protect public health and safety without achieving the PRGs. The City will review the specific sites mentioned in the comment and address them in the final EIR.

Considerations for remedial actions objectives are provided in 40 CFR 300.430(e)(2)(i) that states, "remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response." This means that the DON will be responsible for remediation of the former MCAS El Toro to these exposure levels prior to the transfer of the fee title to the property. The DON has stated that some land-use controls (i.e., easements, covenants, institutional controls, ordinances, etc.) will be required in order to restrict public access on approximately seven Installation Restoration Plan (IRP) sites if those properties are transferred through a lease in furtherance of conveyance. The DON will employ limited land use controls at IRP sites 2, 3, 5, 16, 17, 18, 24; the use of such controls has yet to be determined for IRP sites 1, 8, 11, and 12. This action has been deemed necessary until the IRP sites in question can be remediated to the above mentioned acceptable exposure levels.

Response to Comment M27

Refer to Response to Comment H65. The DON has conducted a revised EBS of the remaining acreage at the former air station (April 2003 Draft Final EBS). The DON has sufficiently analyzed the existing locations of concern and has addressed recommendations for additional potential locations of concern set forth in the City of Irvine's Solvents Study (January 2000) and the GeoSyntec report commissioned by the County of Orange (November 2001). The Solvents Study and GeoSyntec report predate the March 2003

letter from the City of Irvine; the April 2003 Draft Final EBS conducted by the DON sufficiently addresses environmental concerns at former MCAS EL Toro. The City of Irvine has concluded that the assessment of the potential release locations is fair and appropriate.

Response to Comment M28

While the DON did not identify any specific spills or releases prior to 1983 (documentation of waste management practices improved dramatically following the implementation of RCRA beginning in the early 1980s), it acknowledged practices that resulted in releases that most likely caused the contamination problems at the base. These practices included disposal of hazardous materials and wastes to sewers, primarily storm sewer drains, disposal of hazardous wastes in base landfills, use of hazardous materials and wastes in controlling dust on roads and impermeable surfaces, uncontrolled runoff of hazardous wastes, lack of monitoring of underground storage tanks and storage facilities, and the use of hazardous materials and wastes for training of emergency response personnel. The DON's analysis of these practices led to its list of potential locations of concern (LOCs), evaluation of the LOCs, and responses where required. Where other parties, including the City of Irvine, the Restoration Advisory Board, the County of Orange, and the regulatory agencies involved in the base cleanup, have identified other potential locations of concerns, the Navy has responded with additional investigation. In some cases, the Navy, with the concurrence of the regulatory agencies, has concluded that releases did not occur or were not of sufficient magnitude to warrant further evaluation or remediation. For example, in response to the City's Solvent Study, the DON investigated Building 307, the Laundry and Dry Cleaning facility for the base. In its Final Technical Memorandum, the DON concluded that significant releases did not occur at that location and further investigation was not needed. In other cases, the DON has pursued additional evaluation as in the case of the discovery of radium dials at IRP Site 2, which prompted a thorough historical radiological analysis and a radiological survey of much of the base. This evaluation is ongoing. In sum, the City of Irvine considers the DON's process to be responsive to input from interested parties and to be sufficiently comprehensive.

Response to Comment M29

The DON responded to the GeoSyntec report in the April 2003 Draft Final EBS and concurred with seven of the 339 sites recommended for further action or assessment. The remaining 332 sites were either previously assessed, are currently being assessed, or will be assessed in the near future, have closure NFA letters signed by a regulatory agency or are recommended for NFA and are pending regulatory concurrence, or are considered to not require further action or assessment. Regulatory agencies concur with the DON's assessment of the GeoSyntec Report. The DON's April 2003 Draft Final EBS identifies new potential release locations that require further investigation, but does not identify conclusively any significant new risks to public health and safety, nor does it substantially alter conclusions drawn in the EIR.

Response to Comment M30

Refer to Responses to Comments M27 and M29 for information regarding the DON's April 2003 Draft Final EBS and information pertinent to the GeoSyntec report.

Response to Comment M31

Refer to Response to Comment M26. The City of Irvine will continue to review and monitor the base cleanup as it progresses. The City expects the DON to evaluate the seven

GeoSyntec recommended new sites with which it concurs regarding the need for further evaluation, along with the other 69 new locations of concern, in a manner that follows regulatory requirements and guidelines and meets the highest of professional standards. At any sites that require remediation to protect public health and safety, the City expects that the DON will meet agreed upon remediation goals that will ultimately result in the transfer of fee title to the property in a condition suitable for unrestricted use.

Response to Comment M32

The DON has publicly stated that it will indemnify new land owners of former air station property in order to mitigate potential soil contamination that is attributable to historic DON operations. Refer to Response to Comment H67. Also refer to Responses to Comments M27 and M29 for information regarding the DON's April 2003 Draft Final EBS and information pertinent to the GeoSyntec report.

Response to Comment M33

Refer to Response to Comment M26. Also refer to Responses to Comments M27 and M29 for information regarding the DON's April 2003 Draft Final EBS and information pertinent to the GeoSyntec report.

Response to Comment M34

Refer to Response to Comment M26. There is no evidence that the Overlay Plan, due to its greater development, will result in greater human contact with contaminated or potentially contaminated soil. For both the Base Plan and the Overlay Plan, the greatest potential impact to public health and safety is the risk of exposure to unidentified contamination, rather than the risk of contact with known contaminated soil or groundwater. Whether currently identified or not, the DON is obligated to remediate the former MCAS El Toro to acceptable exposure levels. Mitigation Measure HH 5 addresses the potential for exposure and reduces the risk to below a threshold of significance.

Response to Comment M35

Refer to Response to Comment M34. The two examples cited in the letter are addressed through Mitigation Measure HH 5. The radiological anomaly found at IRP Site 2 (radium dial) was found on the surface of the site. Perchlorates were identified as part of the required regular groundwater monitoring at the base. In the case of the radiological anomaly, HH 5 requires the preparation of a protocol plan to guide responses to the discovery of unexpected contamination. The plan must include a response to the discovery of a radiological entity as well as more common toxic contaminants. Were the DON to identify additional contaminants of concern in particular geographic locations, protocol plans may be revised. Mitigation Measure HH 5 is amended to read:

"Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities."

While the DON is reasonably certain that they have identified all potential locations of concern at the former MCAS El Toro, they are prepared to respond to any future

identification of potential contamination following transfer of the fee title to the property. This is a prudent approach where complete certainty is not possible.

Response to Comment M36

Refer to Responses to Comments H65, H67, and M27 for information regarding the City of Irvine's Solvents Study. Refer to Response to Comment M26 for information pertaining to protection of human health and the environment from known or suspected carcinogens, including TCE.

Response to Comment M37

Refer to Responses to Comments H65, H67, and M26 for information regarding the City of Irvine's Solvents Study.

Response to Comment M38

See Response to Comment H65. The DON responded to the City of Irvine Solvent Study in the April 2003 Draft Final EBS. In its response, the DON concludes that the City of Irvine Solvent's Study methodology was faulty in regards to the magnitude of solvent use and potential releases via the sanitary sewer system and that the likelihood of releases was small. The DON concluded that the lack of significant releases associated with Building 307, the Laundry and Dry Cleaning Facility, supported its prior conclusion that the sanitary sewer system is not a significant conduit of contamination to subsurface soil or groundwater.

Response to Comment M39

See Responses to Comments H65 and M38.

Response to Comment M40

See Responses to Comments H65 and M38. The April 2003 Draft Final EBS specifically evaluated the City of Irvine Solvent's Study and concluded that the methodology presented in the study was faulty. Upon review of the April 2003 Draft Final EBS, the City of Irvine now accepts this assessment.

Response to Comment M41

See Response to Comment H65, M38, and M40.

Response to Comment M42

There is no evidence to suggest that unknown contaminated soils are likely to be discovered during excavation of the project site. Refer to Response to Comment M26 for information pertaining to the protection of human health and the environment from known or suspected carcinogens. Per the Mitigation Measures outlined in Section 5.6.5 *Geology and Seismicity Mitigation Measures*:

"Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site...The purpose of the subsurface evaluation is to further evaluate the subsurface conditions in the area..."

In the unlikely event that unidentified contaminants are discovered, the EIR provides an appropriate Mitigation Measure to deal with this scenario. Section 5.5.5 *Public Health and Safety Mitigation Measures* has been amended and read as follows:

“Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities.”

Response to Comment M43

Refer to Responses to Comments M35 and M42. There is no evidence to suggest that unknown contaminated soils are likely to be discovered during excavation of the project site. The former MCAS El Toro will be remediated to an exposure level acceptable to human health and the environment. Mitigation Measure HH 5 addresses this potential issue by requiring grading permit applicants to prepare a protocol plan that responds to unidentified contamination. Refer to the document *Reusing Cleaned Up Superfund Sites: Recreational Use of Land Above Hazardous Waste Contaminant Areas* – EPA Office of Emergency Response (March 2001) for technical information on how sites with waste contaminated areas have been safely reused for recreational purposes while ensuring the integrity and protectiveness of the remedy are maintained.

Response to Comment M44

Refer to Responses to Comments H65, M35, M38, M40, M42, and M43.

Response to Comment M45

Refer to Responses to Comments H65, M35, M38, M40, M42, and M43. The City of Irvine accepts the DON’s conclusion in the April 2003 Draft Final EBS that widespread unidentified contamination is not likely to exist at the base. However, if unidentified contamination is discovered, Mitigation Measure HH 5 has been amended and responds to the potential for such localized unidentified contamination to exist and be encountered during grading activities.

Response to Comment M46

Refer to Responses to Comments H65, M35, M38, M40, M42, and M43. The DON is required to complete all necessary remedial actions before the fee title to the former MCAS El Toro is transferred from federal ownership. Even after the title is transferred, the federal government is required to conduct further remediation if additional contamination caused by DON actions is discovered or if a remedy fails to perform adequately. Federal law also provides that DON may be required to indemnify the new owners or certain other parties for liabilities arising from claims for personal injury or property damage resulting from the release or threatened release of any hazardous substances, pollutants or contaminants, or petroleum or petroleum derivatives attributable to DON activities on military installations. Refer to the following letters that are attached in the Appendix to this Response to Comments document: H.T. Johnson, Assistant Secretary of the Navy, Installations and Environment, Letter to the Editor, Los Angeles Times, 5 August 2002; and the letter to the City of Irvine from the DON dated 25 April 2003. Also see the “DOD Policy on Responsibility for Additional Environmental Cleanup after Transfer of Real Property” electronically at:

[http://www.dtic.mil/envirodod/Policies/BRAC/brac_flu.htm]. Using the proposed Mitigation Measure GS2 will require geotechnical assessment for specific development prior to construction; construction delays using this methodology will likely not occur.

Response to Comment M47

Refer to Response to Comment M46.

Response to Comment M48

Refer to Responses to Comments H78 and M46. The DON is required to complete all necessary remedial actions before the fee title to the former MCAS El Toro is transferred from federal ownership. Even after the title is transferred, the federal government is required to conduct further remediation if additional contamination caused by DON actions is discovered or if a remedy fails to perform adequately. Federal law also provides that DON may be required to indemnify the new owners or certain other parties for liabilities arising from claims for personal injury or property damage resulting from the release or threatened release of any hazardous substances, pollutants or contaminants, or petroleum or petroleum derivatives attributable to DON activities on military installations. Refer to the following letters that are attached in the Appendix to this Response to Comments document: H.T. Johnson, Assistant Secretary of the Navy, Installations and Environment, Letter to the Editor, Los Angeles Times, 5 August 2002; and the letter to the City of Irvine from the DON dated 25 April 2003. Also see the "DOD Policy on Responsibility for Additional Environmental Cleanup after Transfer of Real Property" electronically at: [http://www.dtic.mil/envirodod/Policies/BRAC/brac_flu.htm].

Response to Comment M49

Refer to Response to Comment M46. The comment acknowledges that federal law requires the DON to remediate any contamination attributable to their actions and indemnify the community from its effects; there is no basis to speculate that the DON will not comply with the law. While the purpose of an EIR is to evaluate environmental and not economic impacts, no economic consequences would result due to the DON's indemnification.

Response to Comment M50

Refer to Responses to Comments H65, M26, M35, M43, and M46.

Response to Comment M51

Refer to Responses to Comments H65, M35, M38, M40, M42, M43, and M46.

Response to Comment M52

Refer to Responses to Comments H65, M26, M35, M43, M44, and M46. The DON's initial 1995 EBS and April 2003 Draft Final EBS outline specific areas of soil contamination that will require remediation prior to ownership transfer. The DON has stated that some land-use controls (i.e., easements, covenants, institutional controls, ordinances, etc.) will be required in order to restrict public access on approximately seven Installation Restoration Plan (IRP) sites. The DON will employ limited land use controls at IRP Sites 2, 3, 5, 16, 17, 18, 24; the use of such controls has yet to be determined for IRP Sites 1, 8, 11, and 12. This action has been deemed necessary until the IRP Sites in question can be remediated to the above mentioned acceptable exposure levels.

Response to Comment M53

Refer to Responses to Comments M54 through M58.

Response to Comment M54

The study included explicit phase and analysis for 2007 conditions (short-term), 2025 (long-term), and post-2025 (General Plan buildout) conditions. This is consistent with

requirements of the City of Irvine Traffic Impact Analysis guidelines. The 2007 analysis was included specifically to identify necessary phasing of short-term and long-term improvements. The City of Irvine has also developed an implementing mechanism in the form of the North Irvine Transportation improvement Mitigation (NITM) program. Ongoing monitoring of study area conditions, as a feature of the NITM program, is in the form of an interim and 5-year review.

Response to Comment M55

The EIR, in conjunction with NITM, provides significant detail regarding the timing of construction of necessary roadways, and links development to the completion of the roadways. The information regarding the timing of construction of facilities presented in the referenced tables was obtained directly from the agency responsible for each improvement or the environmental document that required associated with each improvement. Construction of those improvements in the subject tables that are related to future development is tied to the development as required mitigation measures, and/or conditions of approval, that must be constructed in conjunction with the specified development. The tables referred to in the comment represent the best knowledge available regarding the timing of future development and anticipated roadway improvements.

Response to Comment M56

Refer to Responses to Comments M54 and M55. The EIR and NITM provide for comprehensive phasing for all necessary traffic improvement. For non-NITM improvements, Mitigation Measure Trans 4 specifically requires their construction by the developers of the Great Park, with construction phased in relation to Great Park development. The non-NITM improvements are designed to mitigate the specific impacts for which these improvements are required in the EIR. With respect to NITM improvements, the NITM program allocates funding responsibility for all improvements on a proportioned basis between Great Park and other properties generating traffic that necessitate the improvement. NITM also sets forth a phasing program for construction.

Response to Comment M57

Refer to Response to Comment M56.

Response to Comment M58

Refer to Response to Comment M56.

Response to Comment M59

The statement that no peak hour impacts were identified is incorrect. The segment of University Drive between the I-405 southbound ramps and Michelson Drive was identified for 2025 conditions as a roadway segment where an additional southbound through lane was required. The results of the daily and peak roadway segment analysis, in conjunction with the peak hour intersection analysis, did in fact accurately and adequately identify potential project impacts and required mitigation measures (mid-block or through travel lanes).

The key difference between the roadway segment daily and peak hour analysis is that the daily capacities assume a variety of impediments to capacity, including the presence of cross-street intersections that consume a substantial proportion of available capacity. The peak hour capacities are focused on identifying the potential need for mid-block travel lanes based on unimpeded mid-block conditions.

The basic assumptions of the daily segment analysis and the peak hour segment analysis are different, corresponding to the different purposes of the two types of analysis. The daily segment analysis is intended to be utilized as a very general measure of roadway performance and includes the potential capacity reductions due to mid-block intersections. The peak hour segment analysis is intended to evaluate the specific need for mid-block travel lanes in the absence of cross-street interference.

Response to Comment M60

Refer to Response to Comment M59.

Response to Comment M61

The policy addressed in the comment is an already existing rather than proposed General Plan policy. The proposed project merely makes PA 30 subject to Policy B-1 of the General Plan Circulation Element. The application of the existing policy to PA 30 has been specifically analyzed in the EIR and the analysis concludes that the application of this policy allows for LOS E at two intersections (EIR Page 5.2-58). It is the prerogative of the City of Irvine to establish appropriate performance standards within its local jurisdiction.

Response to Comment M62

Refer to Response to Comment M61. The issue of thresholds of significance (impact) is separate from the concept of the local jurisdiction's right to establish the appropriate performance standard for the community.

Response to Comment M63

The comment deals with additional analysis provided by the EIR to examine future conditions if the City approves the General Plan Amendment and Zone Change for PA 40 (the "probably future project"). This project was previously approved but subjected to a litigation challenge. The PA 40 impacts and PA 40's responsibility to fund its proportionate share of traffic mitigation are set forth in the NITM program. Application of the NITM program will generate sufficient fees to timely fund construction of all traffic improvements necessary for the development of the Great Park, PA 40, and the remainder of undeveloped north Irvine.

Response to Comment M64

The Great Park Traffic Impact Analysis does take into account all anticipated growth in traffic for surrounding communities and the entire region, based on adopted growth forecasts for the entire County of Orange and surrounding region. The area model (ITAM) includes existing development and regional growth projections for Orange County and the relevant portions of Los Angeles County, Riverside County, San Bernardino County, and Ventura County, as well as projected increases in interactions with the surrounding areas via the regional roadway system.

Response to Comment M65

The Traffic Impact Analysis executive summary is simply a summary of the proposed mitigation program; they are discussed in greater detail on page 5.2-71 of the EIR. That analysis concludes that if such programs were not implemented by the responsible regional agencies the cumulative impacts would be significant and unavoidable. Also refer to Responses to Comments F36 and S6.

Response to Comment M66

The sources referenced in the comment represent specific funding sources that are responsible for implementing the roadway improvements identified in the Traffic Impact Analysis developed for the EIR. The funding sources generally fall into two categories; the first funding source category is development projects that have been approved. The implementation mechanism/assurance of funding is the specific condition of approval requiring that the improvement be constructed in conjunction with the approved development project. The second funding source category is local agencies that have included specific improvements within their capital improvement program. Projects are only included in the local agency capital improvement program when they are associated with a specific funding source identified by the local agency.

Response to Comment M67

Land use based trip rates and socioeconomic data (SED) based trip rates simply reflect two different but commonly accepted approaches to evaluating traffic. There are underlying differences in the ways that land use based models and SED based models are used to forecast future traffic. Traffic models validated using land use data or SED have both been shown to match (validate to) existing traffic volumes quite well. Traffic forecasts for the Great Park Traffic Impact Analysis that match the regional SED driven forecasts are now a mandatory modeling consistency requirements based on stated and federal legislation. The ITAM model incorporates the conversion from one approach to the other and has been validated to existing traffic volumes.

Response to Comment M68

A key difference between land use based and SED based models is how they treat “linked” trips. A land use based model treats linked trips as two shorter individual trips. A SED based model treats the same linked trip as a longer single trip. The land use model has higher trip generation because it assumes that longer trips have stops and computes one longer trip as multiple shorter trips. As a result, the 6,256 trips under the land use model is a different way of expressing the same number of trips under the SED because they are both based on the same vehicle miles traveled per day.

Response to Comment M69

Refer Responses to Comments M54 to M58.

Response to Comment M70

Both direct and indirect potentially significant noise impacts are discussed in detail in the EIR. Section 5.4.3 *Noise Environment Impacts* discusses noise impacts relating to project construction activities, post-construction, traffic noise, project land use noise, and off-project area noise. Refer to the EIR, pages 5.3-22 through 5.3-34, as well as the Environmental Noise Assessment technical report (Appendix H of the EIR), for presentation of noise data and a comprehensive discussion of potential noise impacts. Traffic noise impacts were analyzed and determined based on current, accepted FHWA and Caltrans modeling methods, as well as compatibility guidelines established by the local county and city jurisdictions. Beyond this program level analysis, more detailed traffic noise assessments may be conducted as specific projects are developed.

Response to Comment M71

Noise impacts related to traffic generated by the project both on- and off-site are discussed in Section 5.4.3 *Noise Environmental Impacts* from traffic volume data presented in Section 5.2.3 *Traffic/Circulation Environmental Impacts*. The potential traffic noise impacts on noise-

sensitive receptors due to the Great Park Plan were evaluated in accordance with methodologies established by the FHWA and CALTRANS, as well as compatibility guidelines established by the local county and city jurisdictions. Beyond this program level analysis, more detailed traffic noise assessments may be conducted as specific projects are developed. Mitigation Measure Trans 1 does not indirectly confirm the conclusion surmised in Comment M71; part of the purpose of requiring a project applicant to apply for annexation to the Irvine Spectrum TMA is to address traffic, air and noise impacts. Mitigation Measure Trans 1 further states that should this annexation application not be approved, a TMA shall be developed and implemented for the project. Additionally, the EIR concludes that traffic impacts resulting from the proposed project would be reduced to a less than significant level with implementation of the identified Mitigation Measures.

Response to Comment M72

The comment is in reference to residential development located in the transit-oriented development area which is designed to be in close proximity to the Urban Transportation Center and railway. Section 5.4.1 *Noise Environmental Setting* states:

“The Irvine Transportation Center, a major multi-modal transit center linking bus, commuter rail, and Amtrak rail services, is located along the southern edge of the project area, adjacent to the Southern California Regional Rail Authority railroad.”

California Building Standards establish uniform minimum noise insulation performance standards to protect persons from the effects of excessive noise in multi-family dwellings. Furthermore, as stated in Section 5.4 *Noise California Building Standards*:

“Interior noise levels attributable to exterior noise source must not exceed 45dBA in an habitable room...When the exterior noise levels cause interior noise levels to exceed 45dBA, the building must be designed to prevent the transmission of exterior noise....The California Building Standards will apply to...habitable dwellings other than detached single-family homes within the project site.”

Response to Comment M73

Refer to Responses to Comments M70 through M72.

Response to Comment M74

Comment 74 is responded to in Responses to Comments M75 through M79.

Response to Comment M75

Refer to Figure 5.7-1 for drainage areas and topography information. Per the EIR, a Flood Control Master Plan has been adopted by the City of Irvine, the City of Tustin, the Irvine Company, and the Orange County Environmental Management Agency and is currently being implemented in phases by these agencies. The phasing of flood control system improvements in PAs 51 and 30 will be coordinated with street-phasing schedule so that stormdrains are installed prior to or in concert with road construction. The City's DAMP requires that BMPs be implemented in order to reduce increased runoff to stormdrains. The EIR concludes that the potential for flooding to occur both on- and off-site as a result of future development of the project area is considered a significant impact. To this end, Mitigation Measure H/WQ4 is provided to reduce that potential impact to one of less than significant.

Response to Comment M76

As described in the EIR, the project site is located within the San Diego Creek watershed. No formal delineation of the 100-year flood plain has been prepared by FEMA for the project site as it has been under federal ownership. However, as described in the EIR, the "Flood Control Master Plan for San Diego Creek" (John M. Tettemer and Associates, 1989) identified a range of flood control improvements for the San Diego Creek watershed that would control flood peaks based on a 100-year flood (EIR page 5.7-4). The proposed project will provide for the construction of drainage improvements that are consistent with the Flood Control Master Plan. While the EIR states that some flood control deficiencies remain in the existing condition, any potential flood control deficiencies would be corrected through the implementation of the drainage improvements identified on Figure 5.7-2 Proposed Drainage System of the EIR and through implementation of Mitigation Measures H/WQ 3 and H/WQ 4.

As described in the EIR, developers with property located in the newly delineated 100-year floodplain will be required to construct such improvements as necessary to remove the property from the 100-year floodplain and to prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the flood control facilities.

Response to Comment M77

Refer to Response to Comment M76.

Response to Comment M78

This comment incorrectly recites text from EIR page 5.7-6. The EIR does analyze the potential impacts resulting from stormwater volume, identifies appropriate mitigation measures, and addresses how well they will reduce the impacts to a level less than significant (see EIR pages 5.7-13 through 5.7-26).

As described in the EIR, as part of site planning for the reuse of the former MCAS El Toro, a hydrology study for the 100-year storm event was prepared. Design discharges were developed, and Table 5.7-3 of the EIR provides a quantified summary of the peak flows. (EIR, page 5.7-15, 16) A drainage concept plan has been prepared for the project which addresses stormwater flows on the project site. The locations and sizes of drainage pipes and the proposed drainage channels were determined based upon the level of anticipated runoff from various land uses so as to maintain and improve the existing level of flood control service within the project area.

Response to Comment M79

The requirement for Section 404 Permit and related wetlands and dredge/fill permits are a component of the project; the EIR identifies future potential permit requirements for project implementation, including the potential need to obtain a Section 404 Permit from the US Army Corps of Engineers (EIR, p. 3-30). Issues related to dredge and fill of regulated waters is also addressed on 5.9-17 with specific mitigation cited on page 5.9-25. Permits will be obtained as necessary as future projects are proposed within the project area. There is only a small amount of wetland habitat located on the project site. The provision of large "daylighted" earthen drainage corridors in addition to the proposed wildlife corridor will provide ample opportunity for the development of viable wetland habitats within the project area.

Response to Comment M80

Refer to Response to Comment M22. The development of the 14,000-acres previously contained in the AICUZ is not affected by this project.

Response to Comment M81

Refer to Response to Comment M22.

Response to Comment M82

The proposed project will accommodate regional drainage control facilities. The project does not rely upon flood control systems already in place to mitigate potential impacts; rather, the EIR analyzes water quality impacts and the project proposes a comprehensive approach to addressing drainage control through the provision of drainage and flood control facilities on-site that will accommodate both project-specific runoff volumes as well as provide for regional flood control facilities. Refer to EIR pages 5.7-13 through 5.7-26.

Response to Comment M83

This comment introduces Comments M17 and M87 through M94.

Response to Comment M84

Refer to Response to Comment M17.

Response to Comment M85

Refer to Response to Comment M17. The existing analysis in the EIR evaluates both demolition and construction impacts.

Response to Comment M86

Refer to Responses to Comments M17 and M85.

Response to Comment M87

To provide a reasonable means to estimate air construction emissions in the EIR, it was assumed that either plan (Base and Overlay Plan) is divided into two phases based on the reasonable utility and extent of development being considered at this stage of the project. The first phase is assumed to last ten years (2007-2016) and the second phase is assumed to last the remaining nine years (2017-2025). For each phase, construction activity was assumed to last for a period of three-years, but spread out over a four-year schedule for emission estimation purposes. At this stage of the project, the aforementioned phased methodology of estimating air construction emissions is a reasonable approach considering the level of broad environmental impact analysis. The air quality impact remains the same whether demolition and construction occurs over two, three-year time periods or a single twenty-year time period; the quantity of the construction-related air emissions does not change whether the construction occurs over a shorter or longer timeframe. By analyzing over a shorter time period the EIR evaluates the more intense development scenario for these emissions.

Response to Comment M88

Refer to Response to Comment M87.

Response to Comment M89

The comment misapprehends the restrictions set forth in the proposed General Plan amendment; the numerical limits for allowable uses within the Great Park are the maximum allowed intensity level. Refer to Responses to Comments M9 and M87. The air quality analysis presented in the EIR is based on the buildout limits of the Overlay Plan and the Base Plan.

Response to Comment M90

Refer to Response to Comment M89.

Response to Comment M91

Section 5.3.5 of the EIR outlines several proposed construction and operational air quality impact mitigation measures that are recommended by the South Coast Air Quality Management District (SCAQMD) that may be implemented during the various phases of the project. Mitigation Measures AQ1 through AQ4 are outlined on pages 5.3-53 through 5.3-55 and will be implemented during various phases of the project.

Response to Comment M92

The comment is in error; see Mitigation Measures AQ1 and AQ2 on pages 5.3-53 and 5.3-54 in the EIR. Refer to Response to Comment M91.

Response to Comment M93

Refer to Responses to Comments H67, H77, and M87.

Response to Comment M94

Refer to Responses to Comments H67, H77, and M19.

Response to Comment N1

Comment noted. Traffic studies prepared in conjunction with specific development applications within the project site will be forwarded to the TCA for review as appropriate.

Response to Comment N2

Comment noted.

Response to Comment N3

Comment noted.

Response to Comment N4

Comment noted.

Response to Comment O1

Comment noted. This letter concludes that the EIR includes a discussion of the proposed project's consistency with SCAG policies and applicable regional plans, which were outlined in the SCAG's November 6, 2002 letter on the Notice of Preparation for the EIR.

Response to Comment P1

The City of Irvine proposes the construction of natural drainage corridors as a major project feature in order to achieve drainage control as well as water quality, biological, and aesthetic benefits associated with wetland/riparian restoration. To that extent the City anticipates restoration efforts will involve, among other disciplines, urban stream restoration specialists. The City envisions that these areas will be planted with native species to the extent practicable.

Response to Comment P2

The City of Irvine recognizes that site-specific best management practices (BMPs) implemented for each specific construction project will need to comply with RWQCB NPDES requirements. As required by Mitigation Measure H/WQ 2, prior to issuance of a grading permit for site specific development, evidence shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TMDL) Implementation Plan adopted for this watershed.

Response to Comment P3

The City of Irvine intends to reconstruct the currently underground Bee Canyon Channel and Agua Chinon Channel into natural drainage corridors. However, it is not likely that any new flood plain delineations prepared for the project area will reflect historic zones of flooding, as they will need to reflect the existing and proposed hydrological condition within the project area, not historic conditions.

Response to Comment P4

As depicted in Figure 5.7-2 of the EIR, four potential Irvine Ranch Water District (IRWD) NTS Water Quality Basins are proposed within the project area. One basin is proposed at the northern portion of the project site (PAZ 1) within the Marshburn Basin, while the remaining three are proposed at the “downstream” end of the two drainage corridors, and the wildlife corridor. The placement of the NTS facilities allow for regional water quality to be addressed by the IRWD in its environmental assessment of their NTS project. However, the City of Irvine will also provide, as necessary to meet NPDES requirements, structural and non-structural BMPs on a site-specific basis to ensure that polluted runoff is minimized.

Response to Comment P5

Development is not proposed within the Serrano Creek; however, some drainage improvements are proposed within this area as part of the overall drainage concept plan. While implementation of the proposed project will result in some isolated wetland impacts, the overall quality and value of wetland habitat is anticipated to be significantly enhanced by the proposed natural drainage corridors.

Response to Comment P6

It is anticipated that the “Q” will change as a result of project development. For example, currently undergrounded drainage systems that are proposed to be daylighted and restored as part of the project would experience a change in Q as these areas will become vegetated, with a meandering alignment and varying topographic conditions. Also, these drainages will be designed to accommodate additional runoff created by new development within the project area. However, all drainage facilities are proposed so as to avoid impacts to downstream and/or off-site facilities.

Response to Comment P7

Comment noted.

Response to Comment P8

Comment noted.

Response to Comment Q1

For the Final EIR, the IRWD letter dated 4 April 2003 will be added to Appendix C of the EIR along with the supplemental material provided as part of this document. This supplement confirms the validity and does not materially affect the conclusions reached in the WSA prepared for the subject project.

Response to Comment R1

A traffic study area for the purpose of assessing the project's potential traffic impacts has been defined, and is illustrated in Figure 5.2-1 of the EIR. The limits of the study area are defined by the amount of trips resulting from the proposed project and the potential to impact circulation systems. As shown in Figure 5.2-1, the trip distribution of the proposed project would not extend into areas of Newport Beach and Huntington Beach, and a significant amount of traffic is not expected to utilize Pacific Coast Highway.

Response to Comment R2

Refer to Response to Comment R1.

Response to Comment R3

Estimating the number of airline passengers generated by the proposed project and determining which airports these passengers would utilize is speculative. Additionally, this information does not represent a potential environmental impact.

Response to Comment R4

The amount of urban runoff generated by the project that will be recycled or used for irrigation has not been quantified. Normally, urban runoff is not recycled and directly utilized for irrigation purposes. Reclaimed water, which is sewage that has been substantially treated, is the primary water source utilized for irrigation purposes in the City. However, the proposed project will provide unique project features that will offer opportunity for recharge of groundwater from runoff in the form of the construction of two major natural drainage corridors – the Bee Canyon Channel and Agua Chinon Channel. Both of these channels currently traverse the project site underground and do not contribute to recharge in the area. Reclaimed water will be provided to the project area to serve a majority of the landscaping needs on-site.

Response to Comment R5

Analysis of project impacts to public services as well as public health and safety is included in the EIR. There is no evidence to provide a link between homelessness, infectious disease, and lawlessness.

Response to Comment R6

There is no provision in the Orange County Great Park plan that dictates where residents should live and work. The Transit Oriented Development (TOD) land use designation proposed within the project area is intended to encourage the use of alternative modes of transportation by locating housing units in proximity to major public transit systems (e.g., the Metrolink station), employment centers, and shopping. Under the TOD designation, more refined TOD principles will be employed in this area as specific developments are proposed, such as the provision of pedestrian connections, to encourage the use of alternative modes of transportation.

Response to Comment R7

The Orange County Great Park plan does not dictate where employees working within the project site shall live. It is anticipated that persons residing in other communities will commute to the project site. This issue has been factored into the trip generation assumptions of the traffic analysis of the EIR.

Response to Comment R8

It is anticipated that the Orange County Great Park will be visited and used by a variety of people, who both live and work in the area, as well as tourists from other areas. The Orange County Great Park is envisioned to provide a variety of uses that will attract a large cross-section of people.

Response to Comment R9

Public transportation will be available to the project site. No determination has been made as to whether or not there will be a charge for parking in any portion of the project site, and if so, what that amount would be.

Response to Comment R10

The City has not determined the number of picnic tables that will be provided at the Orange County Great Park. This will be determined as site-specific park and recreational improvements are implemented within the various portions of the project site.

Response to Comment R11

No determination has been made whether the Orange County Great Park will provide a petting zoo feature, although this type of use is considered compatible with the type of uses envisioned for the park.

Response to Comment R12

No determination has been made whether the Orange County Great Park will provide a carousel, although this type of use is considered compatible with the type of uses envisioned for the park.

Response to Comment R13

The potential air quality impacts of the proposed are analyzed in Section 5.3 *Air Quality*. Table 5.3-12 depicts the Mitigated Construction Emissions for the development of the project area. These emission estimates conservatively account for demolition and grading/excavation activities as major sources of construction emissions.

Response to Comment R14

Construction noise, including the demolition of runways, is evaluated in Section 5.4 *Noise*. Table 5.4-8 depicts Typical Noise Levels for Construction Equipment. As shown, the noise level associated with the operation of unquieted jack hammers ranges between 75 and 85 dBA measured at 50 feet.

Response to Comment R15

The runway debris is proposed to be recycled onsite for use in constructing roadways and other supporting infrastructure for the project. As described on page 3-28 of the EIR, the runways can be removed in a sequential manner with stockpiling of materials onsite as required to permit maximum economy of scale in the operation.

Response to Comment R16

The runways will not be available for emergency landings once removal activities have been initiated.

Response to Comment R17

The demolition activities and runway removal will be phased with development onsite. Most of the supporting infrastructure will be constructed in the early phases of the

development of the project site, which is expected in the first 3 to 5 years of project site development.

Response to Comment R18

Specific activities of any federal agency, including the Federal Aviation Administration (FAA) and Federal Bureau of Investigation (FBI) are subject to federal environmental regulations, including review under the National Environmental Policy Act (NEPA). Potential land use compatibility impacts would need to be evaluated based on the specific activity proposed by the federal agency. There is no information that indicates the FAA will use one-fourth of the former air station for aviation purposes, as such use is inconsistent with the Record of Decision adopted by the DON.

Response to Comment R19

Refer to Response to Comment R18.

Response to Comment S1

The comment states that the assumptions used in the analysis are theoretically within reason. The ITAM tool used to develop the future forecasts is consistent with the OCTAM travel demand forecasting tool, which is the regionally (County of Orange) adopted tool for developing future traffic forecasts on the regional roadway system, including the freeways and transportation corridors. Both ITAM and OCTAM have been validated against existing conditions including the freeways and transportation corridors.

Response to Comment S2

The planning level capacities used in the analysis (2,000 vehicles per hour per lane) are reduced to below their operational level capacities as observed in southern California (2,300 vehicles per hour per lane). It is reasonable to assume that including the additional capacity provided by an additional (truck climbing lane) offsets the loss of capacity that is already reflected in the planning level capacities used in this analysis. Regardless of capacity, the project contributes less than 0.03 to the volume capacity ration on the subject segments and accordingly does not exceed the CMP impact threshold for further analysis.

Response to Comment S3

Caltrans staff was contacted regarding ramp metering practices within the study area. No quantitative ramp metering plan was available for inclusion in the analysis and Caltrans could not provide a consistent schedule of ramp meter operations so it is impossible to determine where ramp metering will occur or when any given ramp meter will be operational. Therefore, it is appropriate to utilize the existing unmetered condition as the basis for projecting future traffic conditions and potential deficiencies. Storage of vehicles for a metered condition would of necessity utilize the arterial roadway system approaching the ramps to provide storage.

Response to Comment S4

The comment does not refer to any specific location(s) such that no site-specific response is possible. The Traffic Impact Analysis indicates that future traffic volumes are generally expected to increase over time. Isolated cases where improved future levels of service are projected to occur are most likely related to planned/funded improvements at the location in question.

Response to Comment S5

Proposed mitigation measures are based on environmental factors; the City of Irvine has no control over agreements entered into between Caltrans and other governmental agencies. The non-compete clause, for example, could result in one or more of the City of Irvine's mitigation measures not being implemented, but this is outside of the City of Irvine's control. To the extent that the non-compete clause interferes with implementation of mitigation measures proposed by the EIR, cumulative impacts would not be mitigated and thus remain significant and unavoidable. The following text has been added to Mitigation Measure Trans 7 on page 5.2-70 of the EIR:

"The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-compete clause or any similar agreement restricting a public agency's authority to construct improvement."

Response to Comment S6

The regional funding programs referenced in the EIR are not used as project mitigation. Rather, these programs are recognized as the regional approach to addressing cumulative impacts. The EIR mitigation measures address all project impacts that were identified in the Traffic Impact Analysis, subject to constraints such as those identified in Response to Comment S5 (TCA non-compete agreements).

Response to Comment S7

Comment noted.

Response to Comment T1

The EIR recognizes that the proposed Great Park project area currently and historically has had some wildlife movement; however, the project area does not currently serve as a significant wildlife movement corridor between the habitat preserve and the coastal habitat preserves. Additionally, by definition, a corridor is a linear habitat whose primary wildlife function is to connect significant habitat areas. Therefore, by definition, no wildlife corridor currently exists within the project area.

The Wildlife Corridor planning efforts are on-going, and the Orange County Great Park Plan land use concepts will accommodate this on-going planning effort to ensure that the proposed route of the new wildlife corridor is a viable one. Previously, as a part of the wildlife corridor feasibility study, preliminary "fatal-flaw" analysis was conducted on 15 August 1999, which has been examined on several subsequent occasions by wildlife biologists. The biologists examined the proposed route and its feasibility as a wildlife movement corridor. Additionally, a focused survey of the biological conditions along the proposed corridor was conducted on 7 September 1999. The biologists surveyed the extent of the route including the adjacent connective habitat at the start and end of the proposed corridor. Serrano Creek and Borrego Canyon Wash were also surveyed for use/potential use as wildlife corridors. Subsequent to these initial surveys, the proposed wildlife corridor has been informally surveyed by wildlife biologists and members of conservation groups.

As depicted in the Section 3.0 *Project Description* Figure 3-7 of this EIR, the riding and hiking trail is proposed to parallel Irvine Boulevard until it reaches the Habitat Preserve. At this point, the riding and hiking trail will extend north toward SR 241 and the Agua Chino Reservoir. The biking and hiking trail does not enter the Wildlife Corridor.

As described in Figure 5.9-2, the proposed development within Planning Area 18 includes a golf course with a clubhouse and some residential uses. To ensure the compatibility with the Wildlife Corridor, the clubhouse and residential units will be subject to development regulations that will be created as part of a wildlife corridor master plan.

The City of Irvine will continue to work with State and federal agencies to implement the revegetation/restoration plan necessary to create a viable wildlife corridor within the project area.

Response to Comment U1

Considerations for remedial actions objectives are provided in 40 CFR 300.430(e)(2)(i) that states, "remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response." The DON will be responsible for remediation of the former MCAS El Toro to these exposure levels regardless of the land use designation or the population that resides there. The DON has publicly stated that it will indemnify new land owners of former air station property in order to mitigate potential soil contamination that is attributable to historic DON operations.

Response to Comment U2

The objectives of the proposed project are defined in Section 3.0 *Project Description* of the EIR. As described, Measure W amended the County of Orange General Plan to remove the designation of the project site as a commercial airport. Therefore, implementation of a commercial airport would not be consistent with Measure W.

Response to Comment V1

Comment noted. Refer to Responses to Comments V2 through V20 for a detailed response to each of the comments raised by the commentor.

Response to Comment V2

Page 5.2-41 of the EIR, under the heading Master Plan of Arterial Highways Amendment, discusses the issues of consistency with the MPAH and the proposed amendments. The EIR also recognizes that typically, a cooperative study would occur prior to the City amending its General Plan. However, since OCTA cannot recognize the City of Irvine's jurisdiction on the former MCAS El Toro until the annexation is complete, the EIR states that the City of Irvine will enter into a cooperative agreement as soon as possible following the annexation of the property to the City of Irvine.

Mitigation Measure Tran 8 addresses this issue:

"Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of any building permits within the base property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdiction to amend the Orange County Master Plan of Arterial Highways. Marine Way, Trabuco Road from the SR-133 tollway to College Road, and Y Street should be included on the MPAH."

Response to Comment V3

The post year 2025 roadway network is depicted in Figure 5.2-23. The assumed roadway network does not include the extension of Culver Drive north of Portola Parkway.

Response to Comment V4

The discrepancy is a typographical error on Table 5.2-11 (Table 5-15 of the Traffic Impact Analysis). These tables have been amended to reflect the correct figure of 9,732 trips. The figure of 9,732 trips was correctly utilized in both the air quality analysis and the actual traffic impact analysis.

Response to Comment V5

Refer to Response to Comment S6. Although the City of Irvine intends that the project will contribute its fair share towards mitigation/improvements on impacted freeway segment, the City of Irvine does not control the implementation process. Therefore a statement of overriding considerations is necessary if certain mitigation measures are not implemented by the responsible agency (Caltrans). Caltrans comments on the EIR, for instance, specifically identified their non-compete agreement with the Transportation Corridor Agency(ies) (TCA) as a potential impediment. The regional funding programs referenced in the EIR are not used as project mitigation. Rather, these programs are recognized as the regional approach to address cumulative impacts. The impact of OCTA providing extra-peak and off-peak train service was not evaluated in the Traffic Impact Analysis, thereby making the analysis more conservative with regard to future traffic impacts.

Response to Comment V6

Refer to Responses to Comments H2 and V4. The City of Irvine has made every effort to accurately reflect anticipated project land uses and trip intensities in preparing the Great Park plan. However, in the event that the OCTA facility generates more traffic than was analyzed in the EIR, additional and separate environment analysis may be required for the OCTA facility. Any development proposed by OCTA, if it becomes a landowner in the

future, which is not consistent with the proposed plan and EIR will require additional environmental evaluation.

Response to Comment V7

The explanatory variable of employment is intended to capture both actual employee trips and ancillary traffic, such as buses entering and leaving the facility, maintenance vehicles etc. Regarding any traffic not anticipated in the Great Park project description, refer to the Response to Comment V6.

Response to Comment V8

The City of Irvine intends to coordinate closely with OCTA regarding the realignment of Marine Way and any impact to the existing OCTA Bus Operations and Maintenance facility. Meetings have already taken place with regard to the realignment issue.

Response to Comment V9

The City of Irvine standard street design manual specifies transit amenities such as concrete bus pads, bus turnouts, layover areas, benches, and other amenities. All streets in the Great Park will be designed in compliance with the City of Irvine standard street design manual. The specifics of the transit system will be determined prior to the implementation of the project. As stated in Mitigation Measure Tran 7:

"Prior to issuance of any building permits on the Great Park property, the City of Irvine shall coordinate with the Orange County Transportation Authority to restructure transit service plans to provide effective service to the project area."

Mitigation Measure Tran 2 states:

"Prior to the first building permit, the City shall prepare a transit system/infrastructure fee program to fund improvements identified as mitigation measures for the project area."

The implementation of these two Mitigation Measures will provide the necessary detailed transit service and the associated funding which would subsequently be used for detailed identification of transit amenities.

Response to Comment V10

Comment noted. If development of the project requires temporary use of OCTA's right-of-way, appropriate agreements will be entered into prior to entry.

Response to Comment V11

During implementation phases of the proposed project, the City of Irvine will evaluate the demand for additional park and ride facilities to serve the project area. Additional parking area at the Irvine Transportation Center is included in the Overlay Plan.

Response to Comment V12

The various public uses and educational facilities may create the need for an internal shuttle service. This will be addressed during the implementation phases of the project as more detail on the operational aspects of the various land uses are known and the ability to finance an internal shuttle service is evaluated.

Response to Comment V13

The comment appears to refer to the extension of Marine Way as an at-grade crossing. Marine Way is intended to be a grade-separated over-crossing of the SCRRRA rail lines.

Response to Comment V14

The traffic analysis of the EIR has addressed the Level of Service of the entire network serving the Great Park Plan, including all the streets mentioned in the comment.

Response to Comment V15

Refer to Responses to Comments C1 and V13.

Response to Comment V16

Use of the term “major event” in the comment is unclear. The operators of facilities located in the referenced location would be required to submit traffic and parking management plans as part of their master plans for the City of Irvine’s approval. This EIR addresses the impacts and identifies mitigation measures for the Great Park Plan and zoning designations for the proposed project. Operational issues will be part of the future permit processing of those facilities.

Response to Comment V17

Comment noted.

Response to Comment V18

The City of Irvine General Plan Circulation Element has established policies to connect the City’s trails to the regional trail network. The Great Park Plan will provide opportunities for the expansion of the trail system. As stated in the EIR, the City will continue to encourage such enhancement throughout the planning and implementation stages of the project. The Class II bike trail will remain along Irvine Boulevard and link to the Class I bike trails in the drainage corridors that traverse the Great Park.

Response to Comment V19

Refer to Responses to Comments C2 and H29. The City of Irvine is adding the County of Orange’s proposed bike trail to its Trail Network. Were funding to become available through the County, or were the City to initiate the specific design of the Class I bike trail mentioned in the comment, coordination with OCTA would be required.

Response to Comment V20

Comment noted.

Response to Comment W1

Measure W was drafted in response to evidence that the citizens of Orange County opposed a commercial airport at El Toro and preferred a non-aviation reuse of the base property with public benefit uses such as open space, recreational, educational and cultural amenities. In order to change the airport designation of the former MCAS El Toro in the County's General Plan, Measure W also had to specifically override Measure A which had established the airport designation for the former MCAS El Toro in the Orange County General Plan. Until the annexation of the former MCAS El Toro is completed, the base property remains within the County jurisdiction. A ballot measure amending the County's General Plan does not apply to the City of Irvine.

Response to Comment W2

The first two websites cited dealt with the estimated number of homes during plan preparation; the third website deals with the actual project in the EIR of which 3,625 is the correct number in the Overlay Plan.

Response to Comment W3

The maximum number of dwelling units allowed under the Overlay Plan is 3,625.

Response to Comment W4

The maximum number of dwelling units (3,625) is established by the proposed General Plan and zoning standards within the project area. Any increase in the total number of residential units would require a General Plan amendment, zone change, and associated environmental review.

Response to Comment W5

Refer to Responses to Comments M3 and M4. It should also be noted that the majority of development intensity is located in PA30, the portion of the project area already in the City of Irvine and not affected by Measure W.

Response to Comment W6

The Measure W land use plan did not show a lake. Some conceptual drawings published by the proponents of Measure W included a lake in the Great Park. This EIR covers the annexation, General Plan Amendment and Zoning of the El Toro property. The detail design of the Great Park and its amenities, including landscaping, water features, hardscape design and materials and other such details will be prepared in the subsequent phases of the implementation of the project, subject to all applicable development and environmental policies and standards.

Response to Comment W7

The advertisements and commercials discussed in this comment were disseminated by the proponents of Measure W and not by the City of Irvine. Those materials depicted a conceptual representation of a future countywide park with an array of natural and manmade amenities. Neither Measure W nor the Orange County Great Park Plan identify or specify any particular species of animals to be included in their project description.

Response to Comment W8

The comment does not address environmental issue relating to the EIR.

Response to Comment W9

The comment does not address environmental issue relating to the EIR.

Response to Comment W10

As required by CEQA, this EIR identifies, analyzes and discloses the potential environmental impacts of the proposed project and identifies feasible mitigation measures to minimize those impacts. CEQA does not require an economic analysis or a financing plan as a component of an EIR. Projections for economic and financial fluctuations are beyond the scope of this EIR.

Response to Comment W11

Refer to Response to Comment W10. The funding and financing strategy for the implementation of the proposed project are discussed in Section 3.0 *Project Description* and in the draft Development Agreement.

Response to Comment W12

The comment represents anecdotal information which is not relevant to the subject matter and scope of this EIR.

Response to Comment W13

The issues related to population, employment, and housing affordability are discussed extensively in Section 5.13 *Population and Housing*. As stated in Section 5.13.4, the jobs to housing imbalance will remain a significant impact and a statement of overriding consideration will have to be developed.

Response to Comment W14

Refer to Response to Comment W13.

Response to Comment W15

The future traffic impacts of the proposed project are based on the Irvine Transportation Analysis Model (ITAM 3.01). This model provides a quantitative and objective framework for projecting and analyzing future traffic conditions in the City of Irvine and roadways immediately adjacent to the City. The ITAM databases have been continually updated as new knowledge about development patterns and the circulation network has become available. The model is derived from the Orange County Transportation Analysis Model (OCTAM), which is a travel demand forecasting tool used by OCTA to evaluate circulation system needs throughout the County. The ITAM structure allows for the analysis of land use and roadway network alternatives using the data provided as input. For more information regarding land use assumptions and other parameters used in the traffic model, refer to ITAM 3.01 Technical Documentation and ITAM 3.01 Primary Study Area Database Expansion Technical Supplement.

Response to Comment W16

Refer to Responses to Comments H71, H77, and M18. The air quality impact analysis is contained in Section 5.3 of the EIR.

Response to Comment W17

Refer to Responses to Comments H71, H77, and M20.

Response to Comment W18

Per page 5.4-24 of the EIR:

“The main noise producing activities are anticipated to occur primarily during the early phases of construction. Portions of the infrastructure construction activities

and runway demolition may occur simultaneously. The sound levels associated with this worst case scenario were evaluated at the nearest off-project area residences. The combined sound level was estimated for: 20 pieces of large mobile equipment operating at a distance of 5,000 feet; five concrete breakers operating at a distance of 6,000 feet; and two crusher plants operating at a distance of 10,000 feet. These distances represent the closest possible location of the construction equipment to the nearest off-project area residences. Based on these equipment types and quantities, the combined effect of this equipment would result in a sound level of approximately 56dBA at the nearest off-project area residential locations during the heaviest construction period."

General construction noise impacts, including runway demolition, are discussed in Section 5.4.3 of the EIR based on the program level analysis. As specific projects are developed and specific construction activities are planned, more detailed analysis of potential construction noise impacts may be conducted.

Response to Comment W19

Refer to Response to Comment M91. Per Section 5.3.4 *Air Quality Mitigation Measures*, prior to the start of demolition and construction within the project area adjacent sensitive receptors shall be informed of the planned demolition and construction activities. The erection of fences around construction areas, staggered use of equipment near sensitive receptors, diversion of trucks away from sensitive receptors shall be employed. Additional mitigation measures will be used as determined appropriate and necessary when greater detail is known regarding the exact construction phasing methodology and logistics are determined.

Response to Comment W20

Erection of fences such as wind fences or partial temporary barriers and enclosures provide a wind-sheltered region in the vicinity of the disturbed area. The wind-shelter area reduces the mechanical turbulence generated by ambient winds, thus reducing the entrainment and wind erosion of small particulate matter.

Response to Comment W21

Construction would not be allowed to occur until contaminated soils are remediated to acceptable levels; therefore, it is not anticipated that the use of wash off stations for construction trucks will result in the generation of toxic water runoff.

Response to Comment W22

City inspectors, using professional judgment, will determine if the quantity of soil carried over to the streets constitutes substantial material. Street sweeping will be regularly practiced during construction activity to ensure soils are not washed into storm drains.

Response to Comment W23

Soil materials collected as a result of street sweeping will be recycled and disposed of on-site.

Response to Comment W24

Refer to Response to Comment H48. As described on page 5.15-20 of the EIR, demolition activities, including the removal of existing runways and buildings, at PA 51 will generate debris materials that will need to be disposed at local landfills. Additionally, green waste will be produced as a result of on-going park and landscaping maintenance. The City requires

construction and demolition debris recycling for new development projects. This will allow the reuse of building materials and reduce waste volume requiring disposal. Additionally, Mitigation Measure SW2 is proposed that requires 75 percent reduction of solid waste of those materials that cannot be recycled. Mitigation Measure SW2 states:

“For solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant must submit a written plan to the City and implement such plan to ensure that 75 percent of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.”

The construction waste is anticipated to consist primarily of green waste and recyclable concrete. There will be very little solid waste sent to landfills; furthermore it is anticipated that this material will be significantly less when the project has been fully implemented.

Response to Comment W25

A substantial portion of the runway materials are proposed to be recycled on-site to the maximum extent feasible. It is anticipated that the remainder will be recycled in development projects located within the region. As a result, the truck hauling from the former MCAS El Toro will displace other truck hauling that would occur with no anticipated net increase in materials hauling.

Response to Comment W26

Refer to Response to Comment W25. Local construction hauling is assumed in the Traffic Impact Analysis. The anticipated quantity of traffic resulting from material hauling, which would only occur for materials not used on-site, is expected to be less than the volume of traffic resulting from the project itself.

Response to Comment W27

Refer to Responses to Comments M17 and M87. The total emission estimates from construction of the proposed project are presented in Tables 5.3-19 and 5.3-20 (page 5.3-25) of the EIR. As compared to the total projected emissions for the SCAB, the mitigated emissions after Base Plan implementation constitutes 0.05 percent (for ROG) to 0.20 percent (for CO) of the total SCAB emissions. The mitigated emissions after implementation of the Overlay Plan would constitute from 0.09 percent (for NOx) to 0.39 percent (for CO) for the total SCAB emissions.

Response to Comment W28

AQMD Rule 1196(d) lists the requirements for new fleet vehicles. A link to the AQMD fleet vehicles rule is: [http://www.aqmd.gov/news1/fleet_rule_home.htm].

These rules do not impose any emission limits but rather require the use of alternative fuel vehicles, dual-fuel vehicles and use of low emission vehicles. AQMD Rule 1620 provides emission credits for clean off-road mobile equipment.

The AQMD is seeking to gradually shift to low emissions and alternative fuel vehicles in order reduce air pollution from motor vehicles pursuant to air quality management plans. Overall program direction for managing and reducing motor vehicle emissions is based on technology needs identified in AQMD's Air Quality Management Plan; state and federal rules and regulations; annual research and development coordination meetings with the

California Air Resources Board; periodic meetings with various technology, clean fuel, and industry working groups, and annual meetings with the Technology Advancement Advisory Group.

Response to Comment W29

Although there is ample opportunity for a substantial amount of recycled runway materials to be utilized on-site, there will be some recycled runway materials that will be sold for construction purposes outside of the project area. The effect on the concrete recycling market cannot be predicted as the quantity and timing of sales is not known. CEQA requires analysis of environmental not economic impacts.

Response to Comment W30

Refer to Response to Comment W29.

Response to Comment W31

Base Plan intersections were included in the EIR Traffic Impact Analysis and considered in the CO air quality impact analysis based on the following criteria (refer to Table 5.3-26 in the EIR). Since localized CO air quality impacts generally reach their peak in the vicinity of traffic congestion, only those intersections and roadways with the highest traffic congestion level of service (LOS) designations were considered in the air quality analysis. The high congestion intersections naturally represent the highest potential for localized air quality impact resulting from the project.

Roadway system performance with respect to traffic and congestion is generally described in terms of a LOS scale that ranges from designations of "A" to "F". Level of Service "A" represents the highest or best LOS, while LOS "F" represents the lowest or worst LOS. During peak hours, LOS A, B, C, and D are generally (at a minimum) considered acceptable, while LOS E and F represent degrees of deteriorating traffic system performance. Intersections with LOS designations of D, E, and F were included in the CO air quality impact analysis, while intersections and road way systems with LOS designations of A, B, and C were not.

Response to Comment W32

Refer to Response to Comment W31.

Response to Comment W33

Section 5.5 *Public Health and Safety* states:

"The Norwalk Pipeline was used as a jet fuel distribution system in support of the military mission at the former MCAS El Toro. The pipeline originates in Norwalk, California, enters the project site near the existing commissary located adjacent to Irvine Boulevard, and runs through the former air station housing to the former storage tank facilities. In May 1999, all the jet fuel was purged from the pipeline from Norwalk to the former air station using a pigging process and replaced with inert gas (nitrogen). The Defense Energy Support Center currently maintains the pipeline."

Response to Comment W34

Section 5.5 *Public Health and Safety* states:

“The County of Orange, in coordination with all other local jurisdictions and emergency response providers in the County, is responsible for the preparation, maintenance, and implementation of emergency response plans...for the County. The Orange County Emergency Plan is the official emergency plan for the County. The plan is a basic reference and training document for emergency preparedness, response, recovery, mitigation, and provides the authority and basis for the development of more detailed departmental and functional standard operating procedures”

Response to Comment W35

New air traffic routes in the vicinity of the former El Toro MCAS due to the lifting of air-space restrictions are not a function of the proposed Great Park Plan but rather the closing of the former air station. It is anticipated that these routes would remain whether or not the Great Park Plan was developed. Noise sampling of existing conditions recorded existing aircraft overflights as part of the existing ambient noise.

Response to Comment W36

The FAA may maintain some existing ancillary facilities within the 4,700-acre base property. The largest presence of the FAA will be in the +/-970-acre habitat area (which will remain in federal ownership) and where the FAA may continue to use some of its communication relay facilities. VORs are used as navigational devices within the National Airspace System (NAS). The VOR purpose is to provide azimuth (direction) and is transmitted in all directions and each signal can be considered a course or route, referred to as a radial. It works much like a road map when you're attempting to get from a departure point to a destination. For example, a hypothetical VOR at El Toro may be used by aircraft traveling from Los Angeles to San Diego, without the aircraft ever flying at such altitudes over the area where the VOR is located to generate additional aircraft noise impacts as a result of the existence of the device. In any event, the discussions about maintaining the existing VOR within the base property are still on-going between the FAA and the DON. However, since the operational closure of El Toro in 1999, that VOR has not been used and currently is not included in the navigational charts used by the FAA. Nor is El Toro's VOR on any approach/departures charts. In addition, historically, the VOR at El Toro was used for aircraft operations for the former MCAS El Toro only. As such, the subject VOR is not used as a navigation aid supporting the current flow of traffic in the Southern California area of operations.

Response to Comment W37

Based on Response to Comment W36, the existing VOR at the former MCAS El Toro is not used as a navigational device within the Southern California Airspace and discussions about its removal or relocation are underway. Radio wave transmissions from other FAA facilities may remain on the former air station. Detailed land use restrictions would accompany any sale that involved lands adjacent to and impacted by FAA radio waves.

Response to Comment W38

Refer to Response to Comment R18. It is likely that there will be use of live ammunition at the FBI training facility.

Response to Comment W39

Refer to Response to Comment R18.

Response to Comment W40

Refer to Response to Comment R18.

Response to Comment W41

The proposed acreage designated for agricultural activities under both the Base Plan and Overlay Plan represents a net decrease in acreage currently available for agricultural activities at the project site. Local water supplies would not be strained by these proposed reductions in agricultural activity; refer to the Irvine Ranch Water District Water Supply Assessment in Appendix C of the EIR.

Response to Comment W42

Refer to Response to Comment W41.

Response to Comment W43

The Irvine Ranch Water District will be the designated provider for domestic, recycled, and wastewater services for the proposed project.

Response to Comment W44

Agricultural producers that hire labors for agricultural activities are required to pay California Minimum Wages.

Response to Comment W45

Refer to Responses to Comments W13 and W14. Assessing the potential impacts to local traffic requires specific information regarding the future commuting options for day laborers; this information is not available and would prove speculative.

Response to Comment W46

The area proposed for agricultural use is currently being utilized for agricultural purposes. Any use of pesticides will need to be in compliance with US Department of Agriculture regulations. The City of Irvine envisions the proposed agricultural areas to become components of the City's Agricultural Legacy Program. To that extent, agricultural farming activities onsite may include organic farming activities, which would also reduce the amount of pesticides and fertilizers utilized in these agricultural areas.

Response to Comment W47

Refer to Response to Comment W46.

Response to Comment W48

Refer to Response to Comment W46.

Response to Comment W49

Refer to Response to Comment W46.

Response to Comment W50

Organic farming is a component of the City of Irvine's proposed agricultural heritage program which may be implemented, in part, in the portions of the project site designated for agricultural use.

Response to Comment W51

The City of Irvine is not aware of any claims by Native Americans as to any ancestral use of any portion of the project site.

Response to Comment W52

No specific development project is proposed; however, there will be opportunity for collaboration and involvement of Native Americans groups, should cultural facilities be constructed that involve Native American heritage.

Response to Comment W53

Comment noted.

Response to Comment W54

The Orange County Great Park will be served by the City of Irvine Police Department at the same level of service as other portions of the City.

Response to Comment X1

Following the passage of Measure W, and the subsequent issuance of a federal Record of Decision (ROD), on 23 April 2002, the Orange County Board of Supervisors acting as the Local Redevelopment Authority (LRA) with a majority vote decided to cease all further planning for El Toro by the County and to defer all further planning for El Toro to the City of Irvine and support the City's annexation of the property. In addition, on 25 February 2003, the Orange County Board of Supervisors adopted a resolution rescinding the Airport System Master Plan for El Toro in recognition of the fact that the future reuse of El Toro would be for non-aviation uses.

In addition to action taken by the County of Orange Board of Supervisors, the DON has been working with the City on the sale of property since April 2002.

Response to Comment X2

The intent of Measure W was to repeal Measure A and amend the Orange County General Plan by eliminating the airport land use designation for El Toro and to redesignate the property for a mix of non-aviation uses with a vast portion allocated to open space, recreational, educational and cultural uses.

Section Two B of Measure W states:

"Purpose. This Initiative will allow for the creation of one of America's greatest parks, with open space, sports and recreation facilities, museums, libraries, arts and cultural attractions, and a home for major universities and research centers. It will also not generate the traffic, congestion, noise, and air pollution associated with the development of a commercial airport."

Section Two J of Measure W states:

"Replaces the aviation use designation with non-aviation designations to ensure that the property will become a multi-use center for education, park, recreation, cultural and other public-oriented uses. These designations permit the development of El Toro over time, thus allowing future generations to determine specific uses consistent with this Initiative."

As such, the proposed project is consistent with the intent of Measure W by providing a non-aviation mixed use plan with a substantial portion allocated to open space and public uses.

Response to Comment X3

Measure W is an alternative that was analyzed in Alternative 6.1, the No Project/Measure W in PA 51 and Millennium Plan II in PA 30 alternative. This alternative is considered superior from an environmental analysis perspective.

When Measure W qualified for the ballot, it was assumed that the DON would transfer the property at no cost or very low cost to the public agency conducting the reuse of the property. Shortly after the Measure W election in March 2002, the DON announced its intention to sell virtually all of the former MCAS El Toro to the highest bidder. To the extent that the implementation of Measure W would require substantially greater governmental funding than if the land was provided at no cost, Measure W is less feasible today under the DON's chosen conveyance program.

Response to Comment X4

The Eastern Transportation Corridor is not identified as State Route (SR) 55 on EIR pages 1-5 and 5.1-8.

Response to Comment X5

In Figure 1-3 on page 1-7, Planning Area Zone 6 is proposed as Medium Density Residential development.

Response to Comment X6

Figures 1-2 and 1-3 depict the land use for each of the Planning Area Zone (PAZs). Furthermore, each PAZ has more detailed development data not shown in Figures 1-2 and 1-3. For example, the Project Description Table 3-3 of this EIR describes the development data for the Base Plan. Table 3-3 specifies that 60 Multiple-family residential units are proposed within the PAZ 10, and 165 multiple-family residential units are proposed within the PAZ 17a. Additionally, Table 3-4 describes the development data for the Overlay Plan. Table 3-4 proposes 850 single-family residential units for PAZ 2, 800 senior housing units for PAZ 6, 60 multiple-family residential units for PAZ 10, 165 multiple-residential units for PAZ 17a, 250 single-family residential units for PAZ 18, 635 multiple-family residential units for PAZ 24, 50 multiple-family residential units for PAZ 25, 170 multiple-family residential units for PAZ 27, 345 multiple-family residential units for PAZ 28, and 300 multiple-family residential units for PAZ 29.

Response to Comment X7

The County Counsel's impartial analysis of Measure W published in the voter pamphlets stated:

“This measure would amend the Orange County General Plan (“General Plan”) with respect to unincorporated land within the El Toro Marine Corps Air Station (“MCAS El Toro”), and repeal Measure A, which was adopted by the voters on 8 November 1994, designating much of MCAS El Toro for civil aviation and related uses.”

Therefore, Measure W was a voter approved General Plan Amendment of the County's General Plan via the initiative process. As such, Measure W applies only to the El Toro property while the property remains within the unincorporated county area and under the jurisdiction and land use authority of the County of Orange. There are no provisions in the Measure W language mandating adherence by any other jurisdiction to the provisions of the measure. The proposed project includes the Annexation, General Plan Amendment, Pre-Zoning and Zoning of the unincorporated portion of the Planning Area 51.

Response to Comment X8

As described on page 5.1-15, the land use, safety, and noise restricted areas as identified in the AELUP, AICUZ, and the PIL for the former MCAS EL Toro facility are no longer impacted by aircraft noise from military operations now that the air station has closed for military use. The military mission at the former air station has been terminated and there are no actual noise or safety hazards generated by aircraft flight which would threaten the proposed development; implementation of the proposed project would not result in a significant land use compatibility impact, even though it would conflict with the adopted AELUP. Implementation of the Base Plan or Overlay Plan would result in a non-aviation reuse of the former MCAS El Toro property. On 17 April 2003 the ALUC formally acknowledged that the ALUC has no statutory jurisdiction over the proposed project.

Response to Comment X9

The Great Park Traffic Impact Analysis demonstrates that no measurable impacts to streets or intersections within the City of Tustin will occur as a result of the proposed Great Park project. The methodology applied to determine the extent of the study area is to examine the increase in intersection capacity utilization (ICU) value and determine whether or not the increase exceeds the impact significance threshold (0.02). This method of determining traffic impacts and hence the study area boundary is employed by jurisdictions throughout California, including many jurisdictions in Orange County. The analysis included in the EIR demonstrates that the increase in ICU value attributable to the project is less than 0.02 west of Culver Drive. Therefore it was not necessary for the EIR to analyze the roadway segments and intersections listed in the comment. The roadway segments and intersections listed in the Response to the NOP were analyzed. The analysis completed in the EIR showed steadily decreasing traffic impacts at an increasingly greater distance from the project. The increase in traffic caused an ICU increase of less than 0.02 prior to reaching the City of Tustin. It should be noted that the Great Park project is several miles from any part of the City of Tustin and no project impacts were identified beyond Culver Drive in the City of Irvine.

Concurrently with the proposed project, the City of Irvine is considering adoption of the North Irvine Transportation Improvement (NITM) program. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events. NITM aggregates the traffic mitigation requirements for Northern Sphere, Great Park, and PAs 1, 2, and 40 and allocates funding proportionately among the projects. The NITM program provides fair share funding for four intersections within or at the border with the City of Tustin; Irvine Boulevard/Tustin Ranch Boulevard, Jamboree Road/Irvine Boulevard, Jamboree Road/El Camino Real, and Red Hill Boulevard/Irvine Boulevard.

Response to Comment X10

All of the projects identified in the comment were incorporated in the Traffic Impact Analysis. PAs 1 and 2 are included in the City's General Plan. As a result, traffic generation from these already approved projects or land uses were analyzed as the future conditions for purposes of analyzing Great Park traffic impacts.

Response to Comment X11

As stated in the comment, the direct contribution of the project to increased traffic on the I-5 Freeway is already minimized by the existing congestion on that roadway, and the resulting impacts to the arterial roadway system have been identified and analyzed.

Response to Comment X12

Refer to Responses to Comments M64 and X9. Application of traditional study area boundary determination methodologies concludes that project traffic is not contributing significantly to future traffic volume increases in the City of Tustin. Increased traffic volumes result from regional growth including, but not limited to, City of Tustin's plan for the reuse and urbanization of MCAS Tustin.

Response to Comment X13

Refer to Responses to Comment X9 and X12.

Response to Comment X14

Substantial improvements to parallel routes (Irvine Boulevard and Trabuco Road), funded by north Irvine developers and the Great Park, are expected to reduce the future traffic volumes on Bryan Avenue.

Response to Comment X15

Refer to Response to Comment X9. The project contributes fair share funding to four intersections that have been identified by the NITM program. No project impacts are anticipated in the City of Tustin. However, the NITM program does identify very small traffic shares (approximately 1.5 percent) towards which the project will be contributing at locations significantly impacted by other projects (e.g., Northern Sphere) located in closer proximity to the City of Tustin.

Response to Comment X16

The ITAM traffic forecasting tool has been developed explicitly in response to modeling consistency requirements and is the most appropriate tool for use in the Great Park traffic study. The OCTAM 2.8 tool referred to in the comment was “retired” by the Orange County Transportation Authority (OCTA) several years ago and is no longer appropriate for any type of regional or subregional analysis.

Response to Comment X17

Mitigation measures aimed at reducing significant impact to sensitive receptors from air quality impacts are described in Section 5.3.5 *Air Quality Mitigation Measures*. Mitigation Measure AQ1 states:

“Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of trucks away from receptors; etc., shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.”

Response to Comment X18

Comment noted. Mitigation Measure AQ4 and AQ5 will be located underneath a subheader that reads: “Operational Emissions Mitigation.” Mitigation Measure AQ5 has been amended to read:

“Future employment generating non-residential development shall include measures to reduce vehicle trips, including: the promotion of carpool incentives and alternative work schedules; easy access to public transit systems; trail linkages between uses; low-emissions vehicle fleets; the provision of on-site facilities, such as banking machines, food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.”

Response to Comment X19

Refer to Response to Comment M17. Section 5.3.3 *Air Quality Environmental Impacts* states:

“The URBEMIS 2001 model is used for estimating construction emissions for all stages of development. Estimates of land use and acreage absorbed are obtained for the plan proposal and modification for the development. Due to the limited availability of specific data regarding construction activities and equipment requirements, the URBEMIS 2001 model default options were used.”

Response to Comment X20

Disposition of the fuel line outside of PA 51 is not part of the proposed project and beyond the City’s legal authority and jurisdiction. The portion of the pipeline referenced in the comment is under the authority of the federal government. The EIR discusses information from the DON on that portion of the pipeline. Refer to Section 5.5.1 *Public Health and Safety Environmental Setting* (page 5.5-19) for a detailed discussion of the status of the jet fuel distribution system.

Response to Comment X21

Comment noted.

Response to Comment Y1

The project impacts to Jeffrey Road have been thoroughly and completely evaluated in the Great Park Traffic Impact Analysis and EIR and all project impacts have been mitigated to a level of insignificance.

Response to Comment Y2

The analysis of the traffic impacts of the Great Park project have been analyzed in the EIR and supporting Traffic Impact Analysis and there has been no reliance on other environmental documents. The North Irvine Transportation improvement Program (NITM) is a mechanism for implementing the required mitigation for the Great Park and other significant development projects located in close proximity to the Great Park.

Response to Comment Y3

Refer to Response to Comment F50.

Response to Comment Y4

Refer to Response to Comment F50.

Response to Comment Y5

Refer to Response to Comment F50.

Response to Comment Y6

Refer to Response to Comment F50.

Response to Comment Z1

The intersection referenced in the comment is not an intersection of two arterial roadways. Towne Center Drive is not shown on the Orange County Master Plan of Arterial Highways. The analysis of required lanes at adjacent intersections included in the Great Park Traffic Impact Analysis does not indicate the need for additional through lanes on Alton Parkway at Town Centre Drive.

Response to Comment Z2

The cumulative impacts and resulting roadway infrastructure needs of the Great Park project and surrounding development are analyzed under typical weekday conditions. Substantially lower overall traffic conditions can be expected on a weekend (Saturday). Therefore, no additional weekend analysis is required to evaluate areawide traffic impacts. The Sportspark would be required to prepare and submit traffic and parking management plans as part of their master plans for the City of Irvine's approval. This EIR addresses the impacts and identifies mitigation measures for the Great Park Plan and zoning designations for the proposed project. Operational issues will be part of the future permit processing of those facilities.

Response to Comment Z3

Concurrently with the proposed project, the City of Irvine is considering adoption of the NITM program. This program includes concrete, feasible mitigation measures that, if fully funded, will bring intersections back to the appropriate level of service. The EIR Traffic Impact Analysis includes an entire chapter (Chapter 9 of the Traffic Impact Analysis) devoted to CMP compliance. As part of this analysis, the EIR Traffic Impact Analysis and NITM identified all intersections in the City of Lake Forest to which project traffic contributed to an unacceptable level of service. The NITM program imposes fair share fee obligations on the project and other properties in the City of Irvine and its sphere of influence to fund their proportionate share of the mitigation to bring that intersection to an acceptable or pre-project level of service, based upon the extent of the properties' contribution of traffic. The City of Irvine recognizes that as the agency with jurisdiction over the intersections and as the lead agency for the construction of intersection improvements, the City of Lake Forest must concur with the proposed mitigation measures if those mitigation measures are to be implemented.

Response to Comment Z4

The extensions of Portola Parkway and Alton Parkway have been analyzed in the post-2025 Great Park Traffic Impact Analysis. The extensions were not included in the scenarios analyzing conditions prior to 2025.

Response to Comment Z5

Comment noted.

Response to Comment AA1

Comment noted.

Response to Comment AA2

Per this comment, the following has been added to Section 5.14 *Public Services and Facilities* page 5.14-25:

“Based on Table 5.14-6, the IUSD estimated the cost for typical District elementary, middle, and high schools. According to the District, the estimated acreage needed for an elementary school is 10-acres with a total building area of 45,000 square feet and the estimated acreage for a middle school is 15-acres with a total building area of 65,000 square feet. The District also estimated that an acre of land would cost \$1-1.5million, resulting in a total building cost of \$218 per square foot for elementary and middle schools (not including land for Oak Creek Elementary School in 2000). According to the District, the total building area needed for a high school expansion would be 20,000 to 30,000 square feet, resulting in an estimated total cost of \$3.2million.”

Response to Comment AA3

The EIR states that at this General Plan analysis it is unknown where exactly the housing units will be placed within each individual planning area (i.e., whether the new units will be in IUSD or SVUSD). For analysis purposes, the highest number of potential units was used to estimate the “worse-case” scenario for both districts. As a result, the analysis overestimated the amount of new or expanded school facilities that would be needed to serve the project. Therefore, the number of new students generated by the project is most likely overestimated and the number of new students will most likely be well under the estimated number of 1,525.

In regard to this comment requesting the shifts in the school attendance boundaries, the EIR states the following on page 5.14-26:

“In the event that a new school is not built, IUSD may consider shifts in the school attendance boundaries for existing elementary, middle, and high schools. This could result in existing communities within IUSD to change from their current school assignment to another District school in order to better accommodate new growth within PAs 51 and 30.”

Response to Comment AA4

The following sentence has been added to Section 5.14 *Public Services and Facilities* page 5.14-25:

“The District’s consultants are currently analyzing the land bordering the existing El Toro Elementary site for purposes of realigning the property lines and/or expanding the site from approximately 10-acres to 13-acres in order to better accommodate a K-8 school.”

Response to Comment AA5

The EIR states on page 5.14-25:

“To accommodate the expected student growth from the project during buildout of the proposed project and prior to final construction of the new elementary school,

IUSD may re-open the El Toro Marine Elementary School and/or assign students residing in the project area to various schools with available capacity."

Response to Comment AA6

In order to obtain development rights under the Overlay Plan the landowner must enter into a Development Agreement that requires, among other things, the dedication of a 13-acre school site at no cost to IUSD. State law (Government Code Section 65995 and following) establishes the exclusive means of obtaining developer impact mitigation for public school construction.

Response to Comment AA7

Comment noted.

Response to Comment AA8

Comment noted.

Response to Comment BB1

This comment generally recites the major components of the proposed project and the responsibilities of the US Fish and Wildlife Service.

Response to Comment BB2

This comment summarizes the responsibilities of the California Department of Fish and Game.

Response to Comment BB3

Comment noted. The portion of the project site designated for habitat preserve is consistent with the NCCP/HCP. This property will remain under the ownership of the Federal Aviation Administration (FAA).

Response to Comment BB4

The City of Irvine is a participant in the Special Area Management Plan/Master Streambed Alteration Agreement (SAMP/MSAA) process. The City anticipates continued participation and coordination with the wildlife agencies in constructing the proposed natural drainages on-site.

Response to Comment BB5

Refer to Responses to Comments BB6 through BB18 for a response to each of these issues.

Response to Comment BB6

A portion of PAZ 4 is sage scrub habitat that will be designated as agriculture under the OCGP. Habitat preservation is a permitted use in the agricultural land use designation. The EIR did quantify an impact to this area. The City of Irvine is a participant in the NCCP/HCP program and will ensure that adequate protections are implemented in accordance with those programs.

Response to Comment BB7

Comment noted. Original biological surveys have not indicated the presence of the sensitive species identified by the commentor. No development is proposed within the Habitat Preserve portion of the Great Park plan; therefore, sensitive resources that may be located in this area would not be impacted by proposed development activities.

Any future development activity within the project area will be reviewed to ensure potential impacts have been adequately addressed. In order to ensure that potential biological impacts of proposed development are addressed, Mitigation Measure Bio.1 has been modified as follows:

“Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl, shall be conducted. Prior to approval of a subdivision map for development within, or in proximity to Serrano Creek a focused survey shall be conducted for the least Bell’s vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell’s vireo, or southwestern willow flycatcher, of this species in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).”

Response to Comment BB8

Comment noted. As described in the EIR, a significant amount of open space and foraging areas will remain under the project's proposed land use plan.

Response to Comment BB9

Refer to Response to Comment BB7.

Response to Comment BB10

Refer to Response to Comment BB7.

Response to Comment BB11

Refer to Response to Comment BB7.

Response to Comment BB12

Mitigation Measure Bio 1 is proposed to address potential impacts to sensitive species potentially occurring onsite, and not covered by the NCCP. Any subsequent development project within the project area will be reviewed as to its potential environmental impacts, including biological resources. The City of Irvine will require additional biological surveys as appropriate to address any potential impacts to biological resources as a result of subsequent development activity.

Response to Comment BB13

Comment noted.

Response to Comment BB14

The comment pertains to a separate report entitled *Draft Wildlife Corridor Plan*. The City of Irvine appreciates the input from the US Fish and Wildlife Service and the California Department of Fish and Game and will evaluate and address these comments as it proceeds to process the *Draft Wildlife Corridor Plan* separately from this EIR.

Response to Comment BB15

Refer to Response to Comment B14.

Response to Comment BB16

Comment noted. Refer to Response to Comment B14.

Response to Comment BB17

Refer to Response to Comment B14. It is anticipated that these details related to the proposed wildlife corridor will be resolved after the general wildlife corridor concept has been adopted, and more detailed aspects of implementation are initiated.

Response to Comment BB18

Comment noted. Refer to Response to Comment B14.

Response to Comment BB19

Comment noted. Refer to Response to Comment B14.

Response to Comment BB20

Comment noted. Refer to Response to Comment B14.

Response to Comment BB21

Comment noted.

Response to Comment CC1

Under the Overlay Plan, the Agriculture designation is proposed within PAZ 1 and PAZ 4. As stated on page 5.8-10 of the EIR, the proposed project will help to implement the City's proposed Agricultural Legacy Program by proposing agricultural land uses in the portion of PA 51 that is identified by the Irvine Agricultural Legacy Program Preliminary Sites Assessment (City of Irvine 26 November 2002). The City of Irvine recently amended its General Plan Objective L-10 with the purpose of addressing the cumulative loss of agricultural resources in Irvine and Orange County as a whole. The amendment shifts the emphasis from retention of agriculture for open space relief, to retention of smaller scale agricultural operations for heritage value. To that extent, the City of Irvine has committed to preservation of agriculture in these areas of the project site both by designating these areas for agriculture use and through the recently amended General Plan policy, which commits the City of Irvine to implementation of the Agricultural Legacy Program.

Response to Comment CC2

An Agricultural Preservation Program, as described in this comment, has been determined to be infeasible. No agricultural preserves or Williamson Act contracts exist within the City of Irvine or the project site. As stated in the EIR, (page 5.8-15), the County of Orange has not yet initiated the evaluation of such a program, and has no plans to implement such a program.

Response to Comment CC3

Comment noted.

Response to Comment DD1

Section 3.0 *Project Description Actions and Approvals of Other Agencies* has been amended to reflect the requirement that DTSC approve the acquisition and/or development of property for public schools. The added additional language reads as follows:

“California Department of Toxic Substances Control (DTSC) – Approval of acquisition and/or development of property for public schools based on hazardous materials evaluation.”

Response to Comment DD2

Section 5.5 *Public Health and Safety Environmental Setting* has been amended with the following wording:

“Certain LBP abatement and hazard disclosure requirements must be complied with prior to the transfer of the former MCAS El Toro site from federal responsibility. Housing units constructed prior to 1960 must be abated of LBP and LBP hazards. The presence of LBP and LBP hazards must be disclosed for housing units constructed between 1960 and 1978. Occupation of housing units scheduled for demolition due to the presence of LBP or LBP hazards is prohibited. Post-demolition sampling and response actions for any hazards due to lead in soil shall be conducted, consistent with regulatory requirements, prior to the occupancy of any newly constructed housing units to ensure public health and safety.”

This language has also been added to Section 5.5.3.

Response to Comment DD3

Per the regulations outlined in 40 CFR 300.430(e)(2)(i), “remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response.” The DON will be responsible for remediation of the former MCAS El Toro to these exposure levels. The DON has publicly stated that it will indemnify new land owners of former air station property in order to mitigate potential soil contamination that is attributable to historic DON operations.

Response to Comment DD4

Comment noted. Revisions will be made as referenced.

Response to Comment DD5

Section 5.5 *Public Health and Safety Environmental Regulations Affecting MCAS El Toro* has been amended to reflect the comment. Added wording is as follows:

“The Resource Conservation and Recovery Act (RCRA), adopted in 1976, provides the basic framework for federal regulation of hazardous waste. The State of California Department of Toxic Substances Control (DTSC) is authorized to implement the state hazardous waste program in lieu of federal RCRA regulations.”

Response to Comment DD6

Section 5.5 *Public Health and Safety Compliance Program Sites and Other Locations of Concern* has been amended with the following language:

"The DTSC states that the former MCAS El Toro contains two hazardous waste management units (HWMU). The HWMUs include a hazardous waste container storage area and an open burn/open detonation (OB/OD) hazardous waste treatment unit. A hazardous waste facility permit (a RCRA-equivalent permit) to operate the hazardous waste container storage area designated as Building 673-T3 was issued in August 1993 by the DTSC. The permit allowed the storage of hazardous wastes for longer than 90-days at Building 673-T3. In March 1996, the closure certification report was accepted by the DTSC and the container storage area was considered closed."

Response to Comment DD7

Refer to Response to Comment DD6.

Response to Comment DD8

Comment noted. The City of Irvine has coordinated with the DON and concurs with the DON's determination that corrective action at the former MCAS El Toro can overlap with other remediation or response actions. EIR text will be amended to read:

"The State of California considered any site from which hazardous constituents may migrate to be a SWMU, but corrective action can be addressed through the Federal Facilities Agreement for MCAS EL Toro or responses to petroleum releases with oversight provided by the Regional Water Quality Control Board."

Response to Comment DD9

The EIR clearly states that Site 24 contains VOC contaminated soil; Site 18 is a groundwater plume, contaminated by VOCs leaching from Site 24, that is located both on- and off-site. Language has been added to the referenced section to read:

"In addition to an interim Record of Decision (ROD) for the contaminated soil of Site 24, a final ROD for groundwater contamination at Sites 18 and 24 was signed in June 2002. Please refer to the Final Record of Decision, Operable Unit 1, Site 18 - Regional Volatile Organic Compound Groundwater Plume, Operable Unit 2A, Site 24 - VOC Source Area, Former MCAS El Toro, California (Bechtel National, Inc. 2002) for additional information."

Response to Comment DD10

The referenced section has been amended with the following added language:

"An interim ROD was signed in July 2000 for Site 2 and 17 to allow for the design of the landfill caps to proceed. However, construction of the landfill caps will not proceed until radiological survey/sampling is complete and the data have been evaluated to determine potential impact on the remedial design. Please refer to the Final Interim ROD, Operable Unit 2B, Landfill Sites 2 and 17, MCAS El Toro, California (Bechtel National, Inc. 2000) for additional information."

Response to Comment DD11

The referenced section has been amended with the following added language:

"The draft version of the ROD for Sites 3 and 5 was issued in March 1999. The draft final ROD will be issued following evaluation of the results from radiological survey/sampling. Please refer to the Draft ROD, Operable Unit 2C, Landfill Sites 3 and 5, MCAS El Toro, California (Bechtel National, Inc. 1999) for additional information."

Response to Comment DD12

The referenced section has been amended with the following added language:

"Site 7, Drop Tank Drainage Are No.2, and Site 14, Battery Acid Disposal Area, received concurrence for no further action in the final ROD signed June 2001. Please refer to the Final ROD, Operable Unit 3B, No Action Sites 7 and 14, MCAS El Toro, California (Bechtel National, Inc. 2001) for additional information."

Response to Comment DD13

The referenced section has been amended with the following added language:

"Monitored natural attenuation is the selected remediation procedure for Site 16. A ROD is being prepared to document the selected remediation process. Please refer to the Proposed Plan for Site 16, Crash Crew Training Pit No.2 at MCAS El Toro (Bechtel National, Inc. 2002a) for additional information."

Response to Comment DD14

The referenced section has been amended with the following added language:

"The DON is in the process of completing a remedial investigation to determine the nature and extent of contamination at Site 1. Please refer to the Final Work Plan, Phase II Remedial Investigation, IRP Site 1, Explosive Ordinance Disposal Range, MCAS El Toro, California (Earth Tech, Inc. 2001) for additional information."

Response to Comment EE1

The Traffic Impact Analysis has been reviewed and revised in accordance with the new significance thresholds provided by the City of Laguna Hills. The additional analysis is provided as it confirms that the initial analysis adequately assesses the project's traffic impacts. A total of 16 intersections are located within the jurisdiction of the City of Laguna Hills or are shared with other local jurisdictions, including the City of Irvine.

Table EE-1 summarizes the 2007 intersection capacity utilization (ICU) analysis for the City of Laguna Hills intersections. As shown on Table EE-1, two intersections are impacted. Table EE-2 summarizes the 2025 intersection capacity utilization (ICU) analysis for the City of Laguna Hills intersections. As shown on Table EE-2, six intersections are impacted by either the Base Plan or the Overlay Plan. Table EE-3 summarizes the post-2025 intersection capacity utilization (ICU) analysis for the City of Laguna Hills intersections. As shown on Table EE-3, eight intersections are impacted for post-2025 conditions. Table EE-4 summarizes the proposed improvements at the intersections that are impacted by the Base Plan project alternative. Table EE-5 summarizes the proposed improvements at the intersections that are impacted by the Overlay Plan project alternative. The only intersection where additional impacts have been identified based on the revised impact criteria is Laguna Hills Drive at Paseo De Valencia, where very minimal mitigation improvements (modifying the traffic signal to provide an eastbound right turn overlap concurrent with the northbound left turns) would be required. (Note: All of the following referenced tables are included in the Appendix to this Response to Comments document.)

Response to Comment EE2

(Note: All of the following referenced tables are included in the Appendix to this document.) Cost estimates and the plan for funding the project fair share of improvements are included in the implementing mechanism (the NITM program) currently being developed by the City of Irvine as the next logical step in the development process. Funding for right of way acquisition, engineering, and construction is included in the NITM program. The City of Irvine recognizes that as the agency with jurisdiction over the intersections and as the lead agency for the construction of intersection improvements, the City of Laguna Hills must concur with the proposed mitigation measures if those mitigation measures are to be implemented. Table EE-6 summarizes the fair share traffic contributions and resulting cost share related to mitigation at the one intersection not specifically addressed in the NITM Program (Laguna Hills Drive at Paseo De Valencia). Table EE-7 then summarizes the project fair share traffic contribution at all of the locations impacted by the Base Plan alternative, along with the estimated cost contribution attributable to all NITM projects. Table EE-8 provides a similar summary for the Overlay Plan alternative.

Response to Comment FF1

Comment noted.

Response to Comment GG1

The comment regarding Irvine's urban water management plan is assumed to be in reference to the Irvine Ranch Water District's water supply assessment. The water supply assessment (WSA) contained in Appendix C complies with the most recent statutory requirements and concludes that adequate supplies are available to serve the proposed project. As noted in Response to Comment G2, the EIR is amended to reflect the statutory compliance of the water supply assessment prepared by the Irvine Ranch Water District.

Response to Comment GG2

The mitigation for loss of agricultural lands within the City of Irvine and surrounding areas was analyzed on a cumulative basis by the City when the General Plan agricultural policies contained in Objective L-10 were amended on 4 June 2002. The Great Park plan is full consistent with Objective L-10.

The EIR provides a comprehensive analysis of the feasibility of Mitigation Measures designed to reduce the project's impact to agricultural resources (see EIR pages 5.8-7 through 5.8-15). The EIR also identifies three feasible Mitigation Measures that will be implemented as part of the project (see Mitigation Measures AG 1 through AG 3 on pages 5.8-15 and 5.8-16). In this discussion, a variety of Mitigation Measures have been thoroughly analyzed including retention of agricultural uses. EIR pages Page 5.8-7 and 5.8-8 provide economic data to support the basis of conclusion of infeasibility of Mitigation Measures. Additionally, the City of Irvine's Legacy Program (as described in EIR page 5.8-14) promotes the preservation of agricultural resources city-wide, acreage from the Great Park of which are included in this program. On-site preservation of all existing agricultural lands on the Great Park property, to the exclusion of other City goals such as the provision of new open space through the park, job opportunities, and new housing would be inconsistent with the Objective L-10 as amended by the City of Irvine.

Response to Comment GG3

On page 5.13-9 of the EIR, the sections on long-term impacts for both the Base Plan and Overlay Plan indicate that the imbalance between jobs and housing will worsen and the impact is considered significant and unavoidable. This conclusion is repeated on pages 5.13-12 and 5.13-17. Also refer to Response to Comment KK1.

Response to Comment GG4

The base projections for the RHNA were completed in 1998 and assumed federal/military ownership of the site and it is likely that no RHNA allocation specific to the El Toro property was assigned. However, it is assumed that the upcoming 2004 RHNA, required under Government Code Section 65584 to allow the City of Irvine (and other jurisdictions) to undertake its required Housing Element updates, will reflect an appropriate allocation of future and existing regional housing need to the project site.

Response to Comment GG5

The City of Irvine has striven to integrate the Great Park with other planned development in the region, including the extension of public services. Preparation and planning with environmental documents such as this EIR is an important step in ensuring that this integration is seamless and coordinated. Section 5.14, *Public Services and Utilities*, considers potential impacts related to the extension of public services to the proposed project. Specific examples of planned development integration are considered in Section 7.1 *Cumulative Impacts*. The City of Irvine's Urban Services Plan will be made available to LAFCO as part of the annexation process undertaken with the Great Park. All impacts

discussions in the EIR assume growth and development in the Northern Sphere as allocated in the Orange County Projection 2000 prepared by the Center for Demographic Research. (Note: The Urban Services Plan is included in the Appendix to this Response to Comments document).

Response to Comment HH1

Section 5.15.3 *Population and Housing Environmental Impacts* (5.13-12) states:

“Since the Orange County Subregion is anticipated to become increasingly jobs-rich over the next 20 years, the project-related employment would exacerbate the subregional jobs/housing imbalance. As a result, the proposed project will not improve and would only exacerbate the Orange County’s overall jobs/housing imbalance and the impact is considered significant and unavoidable.”

No mitigation is available to rectify conflicts with the numerical objectives of regional planning documents including the jobs/housing ratio. The imbalance between jobs and housing in Orange County may result in increased vehicle miles traveled since part of the work force consists of commuters who are drawn to the County for employment purposes. The EIR supports the SCAG objectives to reduce VMT and related congestion and air pollution. A CARB-commissioned report, entitled *Transportation-Related Land Use Strategies to Minimize Motor Vehicle Emissions: An Indirect Source Research Study*, analyzes the efficiency of numerous land use planning factors that have the greatest potential for reducing VMT and mobile source emissions. The study is outlined in the EIR, contains a list of recommended strategies, many of which have been incorporated into the Base Plan and Overlay Plan.

A portion of the project’s housing growth will be absorbed in residential projects currently being developed or planned in the surrounding area. Substantial new areas of residential development will be opened for development with the completion of several planned transportation improvement in the County. Housing projects developed under the Base Plan or Overlay Plan will be consistent with the City of Irvine’s Housing Element Affordable Housing Goal.

The Base Plan and the Overlay Plan were developed to reflect the intent of the voters of Orange County through the passage of Measure W. A higher development intensity alternative was analyzed (Alternative 6.5) in the EIR which evaluated 4,635 housing units. Alternative 6.5 concludes that a greater impact would occur on the following environmental elements: traffic/circulation; air quality; noise; geology and seismicity; hydrology and water quality; aesthetics; public services and facilities and utilities. Refer to the Alternatives (Section 6.0) in the EIR for further discussion. Moreover, the selection of an alternative that would include more housing and less commercial development would be infeasible since it would be in conflict with the City’s fiscal balance requirement for new planning areas and prevent the City from having the financial resources to implement the Great Park plan.

Response to Comment HH2

Under the proposed Base Plan 225 multi-family housing units would be developed; implementation of the Overlay Plan would result in the construction of 3,625 housing units. Implementation of either plan would be consistent with the affordable housing goals stated in the City of Irvine’s General Plan Housing Element.

Response to Comment HH3

The EIR provides for a mix of housing densities in the residentially zoned areas. Implementation of the Base Plan would result in the construction of 225 multi-family housing units. It is beyond the scope of this EIR to “set-aside (future) City-owned sites for affordable housing sooner rather than later,” increase densities in the transit areas from 40- to 60-units per acre, all farm-worker housing on or near agricultural areas, and include

housing as an allowable use in all commercial, institutional, and industrial areas. These are policy matters that must be considered by the City of Irvine. Also refer to Response to Comment KK2.

Response to Comment II1

The Highway Capacity Manual (HCM) methodologies are most appropriate for near-term engineering and operational analysis. The many input data and factors required by HCM methodologies are not available for the long-range planning horizon addressed in this Traffic Impact Analysis. The planning level analysis in the Great Park Traffic Impact Analysis is an appropriate approach that has been utilized in various other traffic studies that have also been submitted to Caltrans.

The ITAM tool used to develop the future forecasts is consistent with the OCTAM travel demand forecasting tool, which is the regionally (County of Orange) adopted tool for developing future traffic forecasts on the regional roadway system, including the freeways and transportation corridors. The OCTAM model has been validated at both the peak hour and daily traffic volume levels of detail for freeway and transportation corridor mainline conditions. Use of a consistent modeling tool is a mandatory requirement, based on state and federal legislation.

Response to Comment II2

The lane assumptions for the I-5 Freeway corridor are correct and are based on existing field inventory and anticipated long-range improvements. The analysis may be inconsistent with OCTAM 3.1 because of the more accurate lane assumptions compared to the generalized OCTAM 3.1 inputs. The lane assumptions utilized in the Traffic Impact Analysis for the transportation corridors are based on the long-range capital improvement program (CIP) developed by the Transportation Corridor Authority(ies) (TCA).

Response to Comment II3

The analysis contained in the EIR and supporting Traffic Impact Analysis is unaffected by the status of the projects referenced in the comment. The ITAM model used in the Traffic Impact Analysis is based on a year 2000 validation scenario; therefore, all of the future forecasts included in the Traffic Impact Analysis accurately reflect the validation year conditions.

Response to Comment II4

The HOV lanes are identified in the TCA CIP. Ms. Macie Cleary-Milan of the Transportation Corridor Agency provided the following information on 7 May 2003 regarding the funding for HOV lanes on the transportation corridors:

The TCA has a list of all the projects that have been identified as part of the long-range concept plans for the various transportation corridors. Improvements are funded as the money is available, and as the need for the improvements is identified to provide acceptable traffic operations for the system. Priorities are set based on congestion or operational issues. If future traffic volumes result in a deterioration of levels of service, the TCA is dedicated to providing the improvements needed to provide the levels of service their patrons expect.

Therefore, it is reasonable to assume that the TCA would fund HOV improvements necessary to provide acceptable levels of service.

Response to Comment II5

Refer to Response to Comment S5.

Response to Comment II6

As demonstrated in the EIR and supporting Traffic Impact Analysis, adequate access to the Great Park is being provided. Major roadway improvements within and outside of the proposed park area include the widening of Trabuco Road, Bryan Avenue, Irvine Boulevard, and Sand Canyon Avenue. In addition, the Great Park project roadway system proposes a number of new arterial roadways, including Marine Way, College Road, and Y Street. The project also proposes substantial new or modified freeway/transportation corridor interchange improvements, including the I-5 Freeway/Bake Parkway interchange, the I-5 Freeway/Sand Canyon Avenue interchange, and the SR133 tollway/Trabuco Road interchange.

Concurrently with the proposed project, the City of Irvine is considering adoption of the North Irvine Transportation Improvement (NITM) program. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events. The NITM program also includes numerous other ramp improvements commensurate with other cumulative project impacts. In summary, the project has adequate access.

The EIR and supporting Traffic Impact Analysis have addressed both the changes in land use and the circulation system as a result of the proposed project. The issue raised in this comment is addressed either by the EIR analysis itself, or through the proposed mitigation measures. The key mitigation measure with respect to this comment is the requirement to enter into a cooperative Master Plan of Arterial Highways amendment study per the Orange County Transportation Authority (OCTA).

The portion of the comment related to the extension of Marine Way to Bake Parkway at the I-5 Freeway northbound ramps is noted. The City of Irvine is working closely with Caltrans to resolve the design issues related to the I-5 Freeway/Bake Parkway interchange.

Response to Comment II7

Refer to Response to Comment S6. The programs referenced in the comment will address ongoing regional traffic growth and are not related to the anticipated project impacts. The EIR mitigation measures address all project impacts that were identified in the Traffic Impact Analysis, subject to constraints such as those identified in Response to Comment S5 (TCA non-compete agreements).

The second part of the comment relates to the detailed implementation mechanism for mitigating project impacts. The City of Irvine is actively developing an implementation mechanism (NITM) for proposed Great Park (and other nearby) project mitigation measures/improvements. The NITM program includes conceptual engineering, cost estimates, and fair share contribution calculations as requested in this comment.

Response to Comment II8

Refer to Response to Comment II7. The City has created a pro rata fair share program (NITM program) that includes projects that mitigate impacts to the State facilities, including freeway mainline and ramp improvements.

Response to Comment II9

Refer to Responses to Comments II7 and II8.

Response to Comment II10

The comment pertains to a separate report entitled *Draft Wildlife Corridor Plan*. The City appreciates Caltrans input and will evaluate and address these comments as it proceeds to process the *Draft Wildlife Corridor Plan* separately from this EIR.

Response to Comment II11

Refer to Response to Comment II10.

Response to Comment II12

Refer to Response to Comment II10.

Response to Comment II13

Refer to Response to Comment II10.

Response to Comment II14

Refer to Response to Comment II10.

Response to Comment II15

Refer to Response to Comment II10.

Response to Comment II16

Refer to Response to Comment II10.

Response to Comment II17

Refer to Response to Comment II10.

Response to Comment II18

Refer to Response to Comment II10.

Response to Comment II19

Refer to Response to Comment II10.

Response to Comment II20

Refer to Response to Comment II10.

Response to Comment II21

Refer to Response to Comment II10.

Response to Comment II22

Comment noted.

Response to Comment JJ1

Comment noted.

Response to Comment JJ2

Comment noted.

Response to Comment KK1

Section 5.15.3 *Population and Housing Environmental Impacts* (5.13-12) states:

“Since the Orange County Subregion is anticipated to become increasingly jobs-rich over the next 20 years, the project-related employment would exacerbate the subregional jobs/housing imbalance. As a result, the proposed project will not improve and would only exacerbate the Orange County’s overall jobs/housing imbalance and the impact is considered significant and unavoidable.”

No mitigation is available to rectify conflicts with the numerical objectives of regional planning documents including the jobs/housing ratio. A portion of the project’s housing growth will be absorbed in residential projects currently being developed or planned in the surrounding area. Substantial new areas of residential development will be opened for development with the completion of several planned transportation improvement in the County. Housing projects developed under the Base Plan or Overlay Plan will be consistent with the City of Irvine’s Housing Element Affordable Housing Goal.

The Base Plan and the Overlay Plan were developed to reflect the will of the voters per Measure W. A higher development intensity alternative was analyzed (Alternative 6.5) in the EIR which evaluated 4,635 housing units. Alternative 6.5 concludes that a greater impact would occur on the following environmental elements: traffic/circulation; air quality; noise; geology and seismicity; hydrology and water quality; aesthetics; public services and facilities and utilities. Refer to the Alternatives (Section 6.0) in the EIR for further discussion.

Response to Comment KK2

While the number of multi-use residential units has been reduced from 2,313 to 1,500, the overall level of multi-use residential development has been increased from 3,261 to 3,625. The EIR examines two formulated plans: the Base Plan and the Overlay Plan. The EIR analyzes the environmental impacts from these plans and proposes mitigation measures to reduce impacts to levels less than significant. The current General Plan allows a maximum 3,261 dwelling units in Planning Areas 30 and 51 combined. Under the proposed Base Plan 225 multi-family housing units would be developed; implementation of the Overlay Plan would result in the construction of 3,625 housing units. Implementation of either plan would be consistent with the affordable housing goals stated in the City of Irvine’s General Plan Housing Element. As a result, the project provides for a mix of housing densities in the residentially zoned areas.

Section 5.13.3 *Population and Housing Environmental Impact* states:

“...housing project developed on the site under either the Base Plan or Overlay Plan will be required to be consistent with the City’s Housing Element Affordable Housing Goal, which states that:

- Five percent of units should be affordable to households earning less than 50 percent of the County Median Family Income through rental housing.
- Five percent of the actual number of units built should be affordable as either rental or ownership housing for households earning between 51 and 80 percent of the County Median Family Income.

- Five percent of the units should be affordable to household earning between 81 and 121 percent of the County Median Family Income, satisfied through the development of ownership housing.”

Response to Comment KK3

Refer to Response to Comment KK2.

Response to Comment A1

This letter acknowledges that the City has complied with the State Clearinghouse review requirements for the EIR pursuant to the California Environmental Quality Act. No further response is required.

Response to Comment B1

The EIR is the environmental document pursuant to CEQA that identifies, analyzes and discloses potential environmental impacts and mitigation measures for the Orange County Great Park Plan. The Orange County Great Park Plan is consistent with the intent of Measure W since it allocates approximately 84 percent of the total land area of the former MCAS El Toro to open space, recreational, institutional, educational, cultural, and other public uses. Measure B was an advisory measure passed by the voters in November of 2002. The EIR does not analyze the impacts of the provisions of Measure B. Furthermore, because Measure B was passed as a County initiative, it does not have any legal effect with respect to actions taken by the City of Irvine with respect to lands within, or annexed to, the City. Section 5.5 of the EIR *Public Health and Safety* discusses the issues related to contamination on the base property and the various determinations and actions taken and planned to be taken by the responsible parties and regulatory agencies. Further, arguments for or against ballot measures published in voter pamphlets are not part of the language of the ballot measures subject to voters' action and therefore, are not in any way binding if the ballot measure passes. As such, the proponent's arguments for Measure B are not a binding mandate.

Response to Comment B2

The meteorological station used in the EIR is administered by the AQMD with wind velocity data generated, verified, and published by that public agency. The station referenced in Section 5.3 *Air Quality* is located on the project site, and is consequently represents the best source of on-site wind velocity data for air quality purposes. According to the website maintained by the AQMD (and referenced in the EIR on page 5.3-1), this data is neither erroneous nor obsolete.

Response to Comment B3

The proposed zoning regulations will allow for development on a similar scale as existing residential, industrial, office, and commercial buildings in the City of Irvine.

The objectives of the proposed project are defined on page 3-29 of the EIR. The project objectives are not to develop an aviation use at the former MCAS El Toro. As described in the EIR, the voter-approved Measure W initiative amended the County General Plan for the area of the base north of the Southern California Regional Rail Authority (SCRRA) Metrolink rail line (PA 51) to designate the unincorporated land for park, open space and other uses, removing the designation of the site as a commercial airport from the County General Plan (EIR, p. 1-2). Therefore, a detailed analysis of an aviation reuse alternative is not permitted under the Orange County General Plan and is not required under CEQA because an aviation reuse of the site does not meet the basic objectives of the project. Furthermore, on 25 February 2003, the Orange County Board of Supervisors, acting as the El Toro Local Redevelopment Authority, rescinded the

Airport System Master Plan, thus removing an airport at the former MCAS El Toro from all County plans.

Response to Comment B4

As stated in Response to Comment B3, Measure W amended the County General Plan to remove the designation of the site as a commercial airport. Therefore, implementation of a commercial airport at this location is not consistent with the County General Plan nor is it consistent with most of the basic objectives of the project.

Section 6.0 Alternatives of the EIR addresses a reasonable range of alternatives to the proposed project as required by the CEQA Guidelines.

Response to Comment B5

This comment does not address the adequacy of the EIR nor does it raise an environmental issue with respect to the proposed project. While the City recognizes there are heightened security concerns regarding airports in general, there is no evidence to indicate that construction of a new airport, at any location, would alleviate security concerns at the existing John Wayne Airport.

Response to Comment B6

It is beyond the scope of the EIR to consider potential impacts of a non-aviation plan on existing residential communities contiguous to the Los Angeles International Airport, Ontario International Airport, Long Beach International Airport and Santa Ana (John Wayne) International Airport. As stated in Response to Comment B3, the proposed project objectives meet the spirit and intent of Measure W, which changed the County General Plan designation for the former MCAS El Toro from airport to non-aviation uses. This EIR analyzes the potential impacts of Annexation, General Plan Amendment and Zoning of the former base property and not those of Measure W. Furthermore, on 25 February 2003, the Orange County Board of Supervisors, acting as the El Toro Local Redevelopment Authority, rescinded the Airport System Master Plan, thus removing an airport at the former MCAS El Toro Airport from all County plans.

Refer to Final Environmental Impact Report No. 573 *For the Civilian Reuse of MCAS El Toro and the Airport System Master Plan for John Wayne Airport and Proposed Orange County International Airport* for information pertaining to reports and supporting data from studies conducted for that EIR.

Response to Comment B7

The Orange County Great Park plan proposes several features that will address on-site water quality control and flood protection. These project features provide a unique opportunity for water quality and flood protection to be addressed on a regional level and in a comprehensive manner. The proposed water quality and flood control concept plan is shown on Figure 5.7-2 of the EIR. A description of the concept plan is provided on pages 5.7-16 through 5.7-22 of the EIR. The EIR

identifies future potential permit requirements for project implementation, including Section 404 Permit(s) from the U.S. Army Corps of Engineers (EIR, p. 3-30). A Section 404 permit(s) will be obtained as necessary, as future projects are proposed within the project area. In the context of the size of the entire site, there is a relatively small amount of existing wetland habitat which is generally limited to the Borrego channel and San Diego Creek. The mitigation of potential impacts to wetland habitat as a result of project implementation will be addressed through the Section 404 permit process. The construction of the proposed 179-acre wildlife corridor will provide significant opportunity for the creation and enhancement of viable wetland habitats within the project area. Drainage improvements and flood control facilities will also be created on-site through the daylighting of the Bee Canyon and Agua Chinon channels.

Response to Comment C1

Page 3-31 of the EIR has been revised to include the California Public Utilities Commission under "Actions and Approvals of Other Agencies." The modified text reads:

- California Department of Fish and Game-Approvals related to wildlife corridor and habitat areas
- Federal Department of the Interior (DOI) Fish and Wildlife Agency
- Southern California Regional Rail Authority (SCRRA)
- Orange County Transportation Authority (OCTA) – Revisions to the County Master Plan of Arterial Highways (MPAH)
- Irvine Unified School District
- Saddleback Unified School District
- *California Public Utilities Commission – Highway Rail Crossings*

Response to Comment C2

Comment noted. The City will notify and coordinate with the CPUC as appropriate, with respect to any future trails planning on or adjacent to the railroad right-of-way.

Response to Comment D1

The traffic analysis is based on the most current regional growth projections that have been adopted by the County of Orange which incorporates the most current projections for all the cities in the County. The concept of trip banking in Laguna Woods, related to available trips on Moulton Parkway, was not considered, as the traffic model addresses regional traffic impacts.

Response to Comment D2

The difference in daily traffic volumes cited in this comment is most likely due to the collection of traffic count data at different times. The 20 percent variation is quite possibly due to day to day variation in traffic conditions or changes in traffic patterns that occur as various roadway improvements are implemented. It does not affect the findings and conclusions of the Traffic Impact Analysis because project impacts and resulting mitigation are all based on more detailed analysis of peak hour conditions.

Response to Comment D3

The traffic analysis is based on the most current regional growth projections that have been adopted by the County of Orange which incorporates the most current projections for all the cities in the County. No roadway or intersection improvements attributable to the Laguna Hills Mall were included in the Great Park traffic study. Therefore, the analysis is inherently conservative, as any additional improvements may result in a decrease in the Great Park project traffic impacts that were identified. Mitigation Measure Trans. 6 is consistent with the El Toro Roadway and Landscape Improvement project.

Response to Comment D4

Concurrently with the proposed project, the City of Irvine is considering adoption of the North Irvine Transportation Improvement (NITM) program. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events. Traffic mitigation improvements within the City of Laguna Woods and other areas outside of Irvine will receive fair-share funding from the NITM program.

The City of Irvine recognizes that as the agency with jurisdiction over the intersections and as the lead agency for the construction of intersection improvements must concur with the proposed mitigation measures if those mitigation measures are to be implemented.

Response to Comment D5

The DON intends to incorporate temporary institutional controls in remediating IRP Sites 16 and 24 on the base. The Record of Decision for Site 24 states that “the Environmental Restriction Covenant and Agreement(s) will include information summarizing the remedial actions at Site 24 and provisions for

terminating or modifying the Environmental Restriction Covenant and Agreement(s) when cleanup levels established in this ROD have been achieved and the remedial equipment has been removed.” Refer to the *Final Record of Decision, Operable Unit 1, Site 18 – Regional Volatile Organic Compound Groundwater Plume, Operable Unit 2A, Site 24 – VOC Source Area, Former MCAS El Toro, California* (Bechtel National, Inc. 2002) for additional information. The Record of Decision for Site 16 is expected to contain a similar process for removal of temporary restrictions. Responsibility for development and enforcement of the temporary restrictions rests exclusively with the DON and the applicable state agencies depending on the nature of the controls. The City has no authority over the federal process to implement Institutional Controls at the former MCAS El Toro regardless of mitigation measures proposed in the EIR. See also the attached letter from the DON dated 25 April 2003, describing the public sale plan, including Findings of Suitability to Transfer and Lease in Furtherance of Conveyance processes as well as the methodology of imposing, monitoring, and removing environmental remediation restrictions.

Response to Comment D6

The City will adopt rules, policies, and regulations as needed that will supplement the implementation of the temporary institutional controls by the DON and other agencies. The City’s approach will be similar to and consistent with rules, policies, and regulations in use to control development and construction activities and enforced in a similar manner. Until the institutional controls are adopted by the DON via an Environmental Restriction Covenant and Agreement(s), the City cannot identify with certainty the specific rules, policies, and regulations that will be needed. Refer to Response to Comment D5 for an example of regulations that control development and construction activities.

Response to Comment D7

The City is cognizant of the potential for stormwater impacts from contaminated sites. However, at both Sites 16 and 24, the remediation activities are focused on treating contaminated groundwater. Because hazardous materials are not present at the surface of the site, there is minimal potential for stormwater to create a hazardous materials runoff. At Site 16, remediation of subsurface soil may be required, but it is expected to be completed prior to a fee conveyance to another party. Also refer to Response to Comment D8.

Response to Comment D8

Individual projects within the project area will be responsible for the development and implementation of specific Storm Water Pollution Prevention Plans (SWPPPs) and Water Quality Management Plans (WQMPs) to address the potential pollutants of concern based on the location, size, and type of development and proposed operations. Site specific BMPs and structural controls will be identified for each individual project based on the need to target specific potential sources of pollution. Implementation of Mitigation Measures

H/WQ 1 and H/WQ 2 (EIR, pages 5.7-24, 25) will ensure that these uses are implemented in accordance with local and state regulatory requirements.

Response to Comment D9

The City of Irvine agrees that implementation of a regional approach to stormwater management is preferred. To further this goal, the City's proposed Orange County Great Park drainage plan concept provides for the creation of large, natural drainage features that are designed to address regional water quality and flood control in a comprehensive manner. The proposed natural drainage corridors will function in a manner so as to control surface water flows and maintain and/or improve surface water quality, for stormwaters that emanate from both on-site development and development that occurs in surrounding areas. As described in the EIR, the drainage corridor concept is consistent with and facilitates the regional flood control master plan adopted by the Orange County Public Facilities and Resources Department, The Irvine Company, and the cities of Tustin and Irvine. In addition, regional water quality issues are proposed to be addressed by the project through the construction of "natural treatment system" (NTS) basins within the proposed natural drainage corridors. The IRWD has issued a draft Master Plan and draft EIR on this program. Figure 5.7-2 of the EIR identifies the location of the proposed drainage corridors and potential NTS water quality basins.

Response to Comment E1
Comment noted.

Response to Comment F1

This comment does not note any specific sections or tables requiring revision. The references to appendices and volumes identified in the EIR Section 5.2 *Traffic/Circulation* have been reviewed and revised appropriately. Additionally, the other EIR sections have been updated to correspond the correct lettering of appendices, as appropriate.

Response to Comment F2

The Jeffrey Road extension is not part of this project. Both the Jeffrey Road extension and the SR 133/Trabuco Road interchange are included in the North Irvine Transportation Model (NITM) program and are prioritized for construction in the NITM program based on the comprehensive NITM program traffic study. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events.

Response to Comment F3

The normal practice in the City of Irvine has been a threshold criterion of 0.02 for major arterials, not 0.01 as stated in the comment. The 0.03 threshold is used for Congestion Management Plan (CMP) roadways to ensure consistency with the Orange County Congestion Management Plan.

Response to Comment F4

The freeway mainline and ramp peak hour analysis is included in the EIR pages 5.2-35, 5.2-36 and Appendix G. Furthermore, freeway congestion does in fact influence the traffic volume forecasts in the Traffic Impact Analysis. The Irvine Transportation Analysis Model (ITAM) takes congestion effects into account and distributes traffic to the most desirable/least congested route. Also refer to Response to Comment F24.

Response to Comment F5

Improvements associated with Trabuco Road and Irvine Boulevard have been included in the Great Park Traffic Impact Analysis and the NITM program, along with the Northern Sphere development itself. The mitigation measures for the Northern Sphere have been adopted by the City of Irvine as required mitigation measures. These improvements will also be conditions of approval for subdivisions processed within the Northern Sphere.

The financial difficulties of the State do not affect the funding source for the I-5 Freeway/Culver Drive interchange improvements. The funding source is Measure "M" funds derived from County tax revenue resulting from a sales tax increase approved by Orange County voters; as a result, the Measure M funds are not controlled by the State.

Response to Comment F6

The phasing listed is correct. The Portola Parkway to SR-241 segment should not be included. Refer to Response to Comment F2. Since the Trabuco Road/SR-133 interchange is funded but may not be completed until after 2025, it is appropriate to show the improvement operational in the post-2025 timeframe.

Response to Comment F7

The EIR correctly states that unfunded buildout roadway segment improvements are summarized in Table 4-3 of Appendix G. Regardless of the title of the table, the table accurately identifies unfunded future roadway improvements.

Response to Comment F8

The traffic associated with the unfunded, full expansion of the Musick Jail site is not included in the City of Irvine's current ITAM. However, based on the Musick Jail final EIR traffic analysis, the proposed expansion is expected to generate 4,253 additional trips on a daily basis. The additional 4,253 trips represent an increase of less than one percent compared to the other known development projects (e.g., Northern Sphere and Planning Area 40/Spectrum 8) that were explicitly included in the traffic analysis. The percentage is even smaller when all development anticipated within the study area (both within the City of Irvine and adjacent jurisdictions) is considered. Therefore, these additional trips are not considered significant. In addition, the Musick Jail expansion project is also required to mitigate any significant traffic impacts it may cause or contribute to.

Response to Comment F9

The segment of the I-5 Freeway referenced in the comment carries seven percent of the project traffic, not 10 percent as stated in the comment. The results contained in the Figure 5.2-17 take into account traffic redistribution effects. For instance, trips that leave the project site may be balanced by the South County work trips that now go to project provided employment opportunities rather than further north to the Irvine Business Complex.

Response to Comment F10

Within the EIR Section 5.2 *Traffic/Circulation*, references to Volume III Appendix K have been updated to references to Volume II Appendix G, where appropriate.

Response to Comment F11

The assumption that other mitigation measures are possible and not undesirable is based upon information from Caltrans, OCTA, and SCAG as embodied in the Regional Transportation Plan, wherein alternative improvements such as enhanced traffic service, TGM programs, etc. will serve to reduce freeway congestion. An example of an alternative improvement would be to provide additional mainline capacity.

Response to Comment F12

As shown in the EIR and supporting Traffic Impact Analysis (Appendix G, Tables 7-12 through 7-25), the project related traffic drops below the significance threshold at the Jeffrey Road interchange.

Response to Comment F13

The NITM Program includes engineering concept plans for freeway and corridor improvements. The engineering and right of way analysis completed as part of the NITM program has determined that the proposed mitigation measures are feasible.

Response to Comment F14

The comment suggests that Irvine Boulevard or Bryan Road might be impacted further west than the western limit of the study area. The traffic study analysis shows that neither the Culver Drive at Irvine Boulevard nor the Culver Drive at Bryan Avenue intersections are impacted by the project as shown on Tables 7-34, 7-37, and 7-40 of Appendix G of the EIR.

Response to Comment F15

The Traffic Impact Analysis includes all of the locations identified in the comment. The I-5 Freeway Northbound on- and off-ramps at Trabuco Road are analyzed as a single intersection in the traffic study rather than two separate locations as implied in the comment. The second intersection is located at Trabuco Road/Culver Drive.

Response to Comment F16

Irvine Center Drive and Irvine Boulevard within the study area are examples of CMP roadways. Exhibit 9-A in Appendix G of the EIR specifically identifies CMP facilities within the study area.

Response to Comment F17

Irvine Boulevard within the study area is a CMP roadway and was analyzed using a significance threshold of three percent in the traffic study.

Response to Comment F18

The performance threshold for Irvine Boulevard is LOS "E" rather than LOS "D". Using the 2000 Highway Capacity Manual, the additional roadway performance increase in delay allowed is up to 25-seconds in the peak hour.

Response to Comment F19

The City of Irvine's approved analysis methodology is the intersection capacity utilization (ICU) methodology. Although the ICU methodology does not specifically include any provision for the effects of pedestrian activities, the assumed capacity of 1,700 vehicles per lane per hour (vphpl) is less than the ideal capacity of 1,900 vphpl that are used in more detailed analysis

methodologies. One factor that could account for the more conservative capacity per lane is the effect of pedestrian activities.

Response to Comment F20

There is no Table 2-23 in the Traffic Impact Analysis (Appendix G of this EIR). It is assumed that the comment refers to Table 2-1 (Daily Roadway Capacity Assumptions). The capacities for freeways greater than 10 lanes were not explicitly listed on Table 2-1. However, the following capacities were identified in the analysis contained in Section 7:

<u>Lanes</u>	<u>Capacity (vehicles per day)</u>
12	250,000
14	290,000
16	330,000
18	370,000

Response to Comment F21

The traffic count data throughout the City of Irvine was collected in 2002. Only a small amount of traffic count data in the already developed areas of the adjacent cities to the east of the City of Irvine utilized existing conditions data from 2000 or 2001. Furthermore, such daily data has no effect on the future conditions traffic volume forecasts or analysis. Finally, the project impacts are identified and mitigation has been developed on the basis of the more detailed peak hour traffic data and analysis.

Response to Comment F22

The volume refers to the segment from the I-5 Freeway northbound on- and off-ramps to Yale Avenue.

Response to Comment F23

The capacity listed is a general planning capacity and reflects three northbound lanes and four southbound lanes (for a total of seven lanes). It is appropriate to use this capacity in the analysis, as the fourth southbound through-lane has most likely been constructed in response to actual traffic patterns and presumably serves the requirements of the greatest traffic volume. The Traffic Impact Analysis peak hour assessment of conditions at the actual intersection of Culver Drive at Trabuco Road takes into account merging into three southbound lanes.

Response to Comment F24

The traffic forecasts have been developed using the Irvine Transportation Analysis Model (ITAM), Version 3.01. The ITAM takes congestion effects into account, and congestion influences the assignment of traffic to the freeway and surrounding roadway system. It should be noted the generalized planning level freeway mainline capacities in the ITAM model are far lower than the volumes (exceeding 2,300 vehicles per hour) that have been observed on busy freeways in southern California.

Response to Comment F25

This data was inadvertently omitted from the existing conditions summary table only. The analysis results are included in Appendix F of the Traffic Impact Analysis (Page F-5) which is included as Appendix G of this EIR and indicate that the existing ICU values at this location are 0.58 in the AM peak hour and 0.82 (LOS "D") in the PM peak hour.

Response to Comment F26

The footnote means that the SR-133/Trabuco Road interchange was not treated as a funded 2007-2025 improvement in the EIR and was not included in the primary Traffic Impact Analysis. A special issues analysis examining the benefits/impacts of including this interchange for 2025 conditions was also included in the Traffic Impact Analysis.

Response to Comment F27

There is no change in the number of lanes shown on the I-5 Freeway north of Sand Canyon on the exhibits in the EIR or the supporting Traffic Impact Analysis. The segment of the I-5 Freeway north of Sand Canyon is shown as a 14-lane freeway ("14F") for existing conditions (Exhibit 3-A in the Traffic Impact Analysis and Figure 5.2-4 in the EIR); 2007 Conditions (Exhibit 4-A in the Traffic Impact Analysis and Figure 5.2-10 in the EIR); 2025 Conditions (Exhibit 4-C in the Traffic Impact Analysis and Figure 5.2-12 in the EIR); and Post-2025 Conditions (Exhibit 4-E in the Traffic Impact Analysis and Figure 5.2-15 in the EIR).

Response to Comment F28

It is incorrect to assume that the use of socioeconomic data (SED) rates results in generally lower traffic volumes. Traffic models validated using land use data or SED have both been shown to match (validate to) existing traffic volumes quite well. The adopted ITAM, version 3.01, uses socioeconomic data as a basis for analysis.

Response to Comment F29

The students included in the Great Park Traffic Impact Analysis were all treated as commuter students, thus generating the highest possible number of trips to and from the project. The model can handle both commuter students and resident (non-institutionalized group quarters) students. The analysis assumed 4,000 students in the 2007 analysis for both the Base Plan and the Overlay Plan. The analysis assumed 7,637 students in 2025 for the Base Plan and 7,800 students in 2025 for the Overlay Plan. This represents a change of 3,637 (Base Plan) to 3,800 (Overlay Plan) students from 2007 to 2025. The source of this data is the Great Park project description.

Response to Comment F30

The types of activities described in the comment are accounted for in the trip rates for residential land uses (see Table 5-10). These types of activities are

potentially included as non-home based productions (Other-to-Other or O-O) or as attractions (Home-to-Work/H-W or Other-to-Other/O-O).

Response to Comment F31

The numbers of students are based on the Great Park project description. The hours of travel have been derived from the regional travel demand model and correspond closely to home-work trips, which exhibit a heavy concentration in the peak hours of traffic. Staff and maintenance workers were derived directly from the number of students (see Table 5-9 of Appendix G to the EIR, land use to socioeconomic data conversion factors). There is no distinction between residents and commuter students made in the ITE Trip Generation Manual. ITAM does differentiate between commuter and resident students, and the Traffic Impact Analysis assumed the worse case scenario of all commuter students.

The trip generation rate for students is reasonable. The project was assumed to include only commuter students. Not every student travels to a college campus everyday. Nor does every student drive a single occupant vehicle to school. Finally, the data being referenced is land use based student trip generation, which was provided for informational purposes only and does not relate to the primary traffic impact analysis.

Response to Comment F32

The comment refers to the trip distribution exhibits. These exhibits present the percentage of project traffic, not actual traffic volumes. The percentage of trips oriented to the west is likely to drop over time, as the largest undeveloped areas of Orange County are located east of the project and will be more likely to interact with the Great Park project further out in time (e.g., 2025 versus 2007). The second part of the comment also mistakes the project trip distribution percentages for actual project volumes.

Response to Comment F33

The extents of the study area are appropriate. The study clearly identifies areawide congestion on the freeway system. The Traffic Impact Analysis has verified that the project's potentially significant impacts extend no further west than Jeffrey Road. The Traffic Impact Analysis (Appendix G of the EIR) informs the reader of the project impacts. The ITAM model, version 3.01, takes into account on-going development.

Response to Comment F34

Although the Great Park traffic study included all Northern Sphere roadway improvements identified as mitigation measures, improvements that were "project features" (including the referenced improvement) were inadvertently omitted. This does not affect the findings and conclusions of the Great Park traffic study, other than to potentially reduce the required mitigation. The NITM Program does take the referenced improvement into account.

Response to Comment F35

In accordance with the adopted City Traffic Study Guidelines, the subject roadway segment is not long enough to warrant separate analysis as a roadway segment. The more detailed peak hour analysis completed for the intersections of Culver Drive at Trabuco Road and Culver Drive at the I-5 Freeway southbound ramps more accurately depicts the actual lane requirements for the segment of Culver Drive between these two intersections. The reason no peak hour segment analysis was performed for Culver Drive from Trabuco Drive to Walnut is that the daily roadway segment analysis for the subject segments was below the 0.02 impact significance criteria.

Response to Comment F36

The mainline freeways are already deficient under existing conditions. It is the responsibility of the regional agencies to address these deficiencies. Pursuant to City policy, the City of Irvine is working in close coordination with Caltrans regarding the improvements needed to mitigate identified project impacts. The City of Irvine does not control freeway improvements and cannot guarantee the implementation of the identified mitigation measures. For that reason, the EIR conservatively concludes that the impacts remain significant and unmitigated. Refer to Response to Comment F24 regarding the impact of freeway congestion on trip distribution.

Response to Comment F37

In accordance with the Caltrans standards, the Type 7 ramp most accurately defines the subject ramp. The Traffic Impact Analysis has identified a deficiency and mitigation to reduce the project impact to insignificant levels has also been identified, regardless of the initial ramp configuration.

Response to Comment F38

The geometric configuration referred to in the comment is actually shown in the ITAM model as Walnut Avenue. The ramp itself conforms to Caltrans standards and the analysis has been completed at an appropriate level of detail and accuracy. The movement of trucks is explicitly considered in Caltrans design standards.

Response to Comment F39

Refer to Response to Comment F24. The NITM Program is the implementing mechanism for the freeway ramp mitigation at the proposed SR-133/Trabuco Road interchange. This improvement will reduce traffic congestion at the I-5 Freeway/Sand Canyon Avenue interchange by providing an alternative means of freeway access. Therefore, no additional traffic diversions as theorized in the comment are anticipated.

Response to Comment F40

Refer to Response to Comment F36. The City of Irvine is working with Caltrans to implement mitigation related to the Great Park project where project impacts

have been identified. The commentor is addressing areawide congestion issues. Because the City of Irvine does not control freeway improvements and cannot guarantee the implementation of the identified mitigation measures, the impacts remain significant and unmitigated, as described in the Traffic Impact Analysis.

Response to Comment F41

Comment noted. In accordance with the City's adopted traffic study guidelines, the threshold for significance of traffic impacts is a 0.02 increase in the volume-to-capacity ratio caused by the project. The identified roadway segment was measured to have a volume-to-capacity increase of less than 0.02 and thus no further analysis was required.

Response to Comment F42

No mitigation is required because the project does not worsen the ICU value by 0.02 or more. In fact, the Great Park project actually results in a decrease in ICU in some instances.

Response to Comment F43

Comment noted. The discussion in the Great Park traffic study is intended to address pedestrian and bicycle circulation issues directly related to the project site. Future bicycle connections through PA9A or within the SCRRA right-of-way are not a part of this project. Refer to Response to Comment F59.

Response to Comment F44

Although the westbound approach (Bryan Avenue) currently has two lanes in each direction, the table referenced in the comment (Table 3 in Appendix G of the EIR) incorrectly indicates three westbound through lanes and will be corrected in the final EIR. The City's Traffic Impact Analysis for existing and buildout conditions assumed the existing two lanes in each direction. The attached table (F44-1) shows that the corrected 2007 and 2025 traffic conditions and indicates that no significant traffic impacts occur.

Response to Comment F45

The comment is correct, the ">" symbol indicates a right turn "overlap" or green arrow that allows simultaneous movement with the associated left turn movement (e.g., northbound right turns and westbound left turns, etc.).

Response to Comment F46

Based on the NITM Program engineering concept drawings, the east-side of Yale Avenue would be widened by 6 feet or less to accommodate the proposed improvement. No widening on the west-side of Yale Avenue, where the landscape is located, is anticipated.

Response to Comment F47

The NITM analysis has further investigated this location and the improvement noted in the EIR has been modified. The improvement required will be funded by

NITM. The current engineered proposal to provide acceptable levels of service at this location would not include a free westbound right turn lane at this location. A dual westbound right turn lane configuration would be accomplished by widening the north side of Trabuco Road approximately 12 feet. Slight widenings of Culver Drive will also be required to accommodate the 3rd northbound through lane. The improvement required will be funded by NITM.

Response to Comment F48

The third EB-through lane identified for Irvine Boulevard at Jeffrey Road could be accomplished by widening the north side of Irvine Boulevard.

Response to Comment F49

Comment noted. The timing of these improvements may in fact occur in conjunction with the PA-8A development, but is not related to the Great Park impacts or mitigation requirements.

Response to Comment F50

Based on the Orange County Public Library (OCPL) capacity standards and an anticipated population of 7,681, under the Great Park overlay an additional 1,536 square feet of floor space and 11,522 volumes will be required to serve the project. Since the average size of a library facility is 10,000, construction of a new facility would not be warranted. To meet the demand the Heritage Park facility could possibly be expanded in conjunction with demand created by other projects. The project area will continue to be served by the El Toro Branch facility and the new Foothill Ranch facility. Since a portion of property taxes are specifically allocated for capital improvement and operating costs for the County public library system, additional residents will make a financial contribution to expand and/or construct new library facilities.

Response to Comment F51

The Foothill and Eastern Transportation corridors are currently used by a substantial number of commuters. It is expected that tolls will be removed from the Foothill and Eastern Transportation Corridors in the future (i.e., post 2025). Also, buildout of the region would not occur for another 20-25 years. Regardless of whether or not tolls are collected, the completion of the Foothill and Eastern Transportation corridors will improve accessibility to new distant residential developments. Traffic impacts are addressed in the Traffic Impact Analysis in Appendix G of this EIR.

Response to Comment F52

New development within the surrounding area, including but not limited to, the Spectrum 8 and Northern Sphere projects, will include the development of additional residential dwelling units and provide housing opportunities. Therefore, a portion of future housing demand will be absorbed by these developments. The EIR does not premise the conclusions regarding population and housing impacts on the ability of other developments to provide housing.

The EIR has concluded that the proposed project will result in a significant unavoidable impact associated with jobs/housing balance. Also refer to Response to Comment HH1.

The City agrees that, in general, residential uses create a greater demand on city services while generating less revenue, whereas non-residential uses (commercial and employment based uses) create less of a demand on services and generate more revenue for the City. These basic fiscal principles are evaluated for each General Plan amendment proposed within the City, including the Orange County Great Park plan and the information is provided to the City Council.

A white paper was developed to further evaluate key issues raised by the Spectrum 8 draft EIR population and housing analysis. The *Population/Housing Issues in Planning Area 40* (Carla Walecka, March 2003) concludes that, in a broader context, southern Orange County is a housing-rich community and the jobs/housing imbalance is not the only methodology that applies to regional growth forecasts. Growth impacts resulting from the proposed project have been substantially anticipated by adopted city, county, and regional growth forecasts. The referenced document states that:

“Professional literature and research customarily examine jobs/housing relationships at a subregional or county scale, not at the project or city scale...the [Spectrum 8] project is very beneficial because it balances the housing-rich nature of southern Orange County. Without jobs [in central Orange County], south Orange County residents would have to travel farther north or east for job opportunities. This would result in greater imbalance between jobs and housing opportunities, and exacerbate congestion and associated air pollution.”

The City of Irvine concurs with the conclusions stated in the Spectrum 8 EIR and further evaluated in the *Population/Housing in Planning Area 40* document (Carla Walecka, March 2003).

Response to Comment F53

As stated on page 5.14-2 of this EIR, the standard response times promoted by the City of Irvine Police Department are considered appropriate for the community. As stated in the EIR on page 5.14-2, the City of Irvine's Police Department response guidelines state:

- Responding to “emergency” events within six minutes, 85 percent of the time.
- Responding to “crimes in progress” events within 10 minutes, 85 percent of the time.
- Responding to “less serious crimes occurring now” events within 20 minutes, 90 percent of the time.

- Responding to “routine calls for service” events within 60 minutes, 85 percent of the time.

These response times are established by the City’s Strategic Business Plan to ensure that appropriate resource levels are required for the Public Safety Department.

Response to Comment F54

Estimates of police personnel required for the Great Park are based upon current demand levels coupled with anticipated call for service based on the specific land uses in the plan rather than an officer-per-resident standard. Based on the City of Irvine’s Police Department current staffing formula, the proposed project would require between 17 and 22 sworn police officers, three to five sworn police supervisors, and eight to 11 non-sworn support staff. Funding required for these new police personnel would be provided through a special assessment levied against the property owners within the project area.

Response to Comment F55

Following annexation, the entire project area will be within the City’s corporate boundary and within the jurisdiction of the City of Irvine Police Department. Sharing the cost of policing the Great Park with the County of Orange is a policy issue. The fiscal plan for the OCGP Plan proposes fees and assessments to fund police services for the public park portions (i.e., Sportspark, Meadows Park, Exposition Area South, and the drainage and wildlife corridors). Special assessments will be applied to new development within the project area remaining on the tax rolls after the dedication of public use areas identified in the Great Park Plan.

Response to Comment F56

Refer to Response to Comment F53. Proposed additional police personnel numbers are based on the City of Irvine Police Department’s staffing formula; anticipated calls for service to the project area are determined by the Police Department based on historical data regarding the proposed land uses.

Response to Comment F57

The comment regarding “mitigation measures” refers to the construction and/or operation of public facilities within the project area. Construction impacts related to the development of public facilities within the project area are likely to be short-term events; operation impacts are considered long-term events. Construction and operation impacts associated with public facilities are considered under in Sections 5.1 *Land Use*; 5.2 *Traffic and Circulation*; 5.3 *Air Quality*; and 5.4 *Noise*.

Response to Comment F58

Comment noted. Section 5.14.2.1 *Public Services and Facilities Environmental Setting* has been amended to read:

“OCFA is planning two additional fire stations. Station No. 55 will be located in Northwood on the north side of Portola Parkway between Yale and Jeffrey, and Station No. 47 will be located near Sand Canyon and Interstate 405.”

Response to Comment F59

The final alignment of the Venta Spur connection through PA9, specifically in the area east of Sand Canyon, has not been determined. Figure 3-7 has been corrected to show a Class I trail along the north side of Trabuco Road, from the Eastern Transportation Corridor to the Meadows Loop Road.

Response to Comment F60

Comment noted. The actual parkland dedication requirement will be calculated during the review of subdivision maps for future residential developments, using the most current City of Irvine standard. It should be noted that community parkland dedication requirements will be deemed satisfied with the commitment to participate in the Development Agreement. The total amount of parkland in the project far exceeds the minimum required by the existing or proposed standard.

Response to Comment F61

Refer to Response to Comment F50. The square footage assigned to PAZ13 for museum/library facilities is necessary to determine traffic and other environmental impacts of the proposed project. The determination of how that square footage will ultimately be developed is dependent upon future opportunities and funding sources for these types of public facilities.

Response to Comment F62

The EIR bases its water demand analysis on the greatest demand, which is the Overlay Plan, as it proposes the greatest level of development under the proposed project. Refer to the attached IRWD comment letter (specifically comment G4) which confirms that the water district would utilize the Overlay Plan as representing the “worst case scenario” for water demand. Refer also to the IRWD Water Supply Assessment (Appendix C of the EIR) for further information about water supply.

Response to Comment F63

The Orange County IWMD’s CIWMP was approved in 1996 and shows that sufficient solid waste disposal capacity is available in the County for approximately 25 years, based on population projections for the area. Considering the potential for expansion by the County does not imply that current and near-future capacity is lacking.

The Regional Landfill Options for Orange County (RELOOC) is a long-term 40-year plan that is part of the County’s effort to assure that the countywide landfill system remains adequate, solvent, and efficient in the long term. Sufficient local

capacity for Irvine at Bowerman Landfill and the other County disposal sites is not in doubt in the short to mid-term even without implementation of RELOOC. In the longer term, RELOOC provides sufficient contingencies should they become necessary to manage additional solid waste from future anticipated countywide development. Refer to Response to Comment H49.

Response to Comment F64

Refer to Responses to Comments F63 and H48. Although the IWMD system has capacity for approximately 25 years, the District anticipates that the Bowerman Landfill will reach capacity by 2022. The ability to accommodate waste at other facilities is being planned by the IWMD.

Response to Comment F65

Comment noted. A primary goal of City policy will continue to be maintaining compliance with the California Integrated Waste Management Act (AB939), requiring good faith effort to divert 50 percent of total solid waste from landfills. Contrary to the assertion that recycling goals for the project are “unambitious and meaningless,” the specific goal of this project to recycle 75 percent of construction and demolition debris commits the City to a much more ambitious effort than the minimum required by state law.

Regarding recycling (diversion) rate calculations, the City cannot exclude any materials generated by the project that, if landfilled, would be counted as disposal and therefore detrimental to the City’s overall diversion rate and its compliance with AB939. Any material that would be counted as disposal at the landfill should be calculated and credited to the City as diversion if it is recycled.

Response to Comment F66

Comment noted. Mitigation Measure SW 5 (page 5.15-24 of the EIR) has been amended to read:

“For green waste, the project applicant must submit a written plan to the City and implement such a plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City-authorized waste hauler or recycling agent, *that the maximum feasible amount of that collected green waste is recycled*, and that a minimum of 50 percent of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.”

Response to Comment F67

As with the development of any new project, modifications to existing electric systems would be necessary. Such is the case with the proposed project. As stated in Section 5.15.5.3 *Utilities Environmental Impact*:

“...the proposed project would consume 59.1 million kilowatt hours per year....The proposed project would have a peak load of 14,771 kilowatts. Sufficient available capacity exists at the Irvine and Limestone Substations to serve the proposed project’s load estimates. However, the existing overhead 4 kilovolt distribution system currently serving the former MCAS El Toro would be replaced with an underground 12 kilovolt distribution system....The additional electrical load imposed by the proposed project is within the capacity of SCE.”

The EIR states on page 5.15-27 that the Base and Overlay Plans propose to replace the existing electrical system in its entirety, complying with modern design methods, performance standards, and specifications. The new system will be installed to generally coincide with the routing of new and existing roadways. Electrical lines will be required to be underground pursuant to City standards. The specifics of the new electric distribution system and the necessary environmental evaluation will be determined as site specific plans for the installation are prepared.

Response to Comment F68

The proposed project will be served from the 12kV distribution lines that interconnect with the existing SCE 66/12kV Irvine Substation, directly outside the gate of the former MCAS El Toro. This substation has sufficient capacity to serve the proposed project. Sub-transmission lines interconnect this substation to the existing SCE 230/66kV Santiago substation and the 66/12 kV Bryan Substation. SCE has indicated that no additional sub-transmission lines are planned to increase the capacity at the Irvine substation.

Refer to Response to Comment F67 for information pertaining to the modification of existing electrical systems resulting from implementation of the proposed project. Modifications deemed necessary to the electrical system will be considered as specific development proposals are initiated. Section 5.15.5.3 *Utilities Environmental Impact* states:

“...new [electrical] system will be installed to generally coincide with the routing of new and existing roadways circulating throughout the project. Electrical lines will be required to be underground pursuant to City standards.”

The EIR states on page 5.15-29 that sufficient available capacity exists at the substations serving the proposed project and “that the existing overhead 4kV distribution system currently serving the MCAS El Toro would be replaced with an underground 12 kV distribution system.” No analysis has indicated that a new transmission line greater than 12 kV will be required to serve the proposed project. The specifics of the new electric distribution system and the necessary environmental evaluation will be determined as site specific plans for the installation are prepared.

Response to Comment F69

SCE generally uses a peak load standard of 50,000 kW for "significant impact". The proposed project's maximum estimated electrical demand is 35,000 kW.

The CEQA Environmental Checklist, Appendix G, outlines the Thresholds for Determining Significance for energy. As stated in Section 5.15.5.2 Utilities Threshold for Determining Significance:

"Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered energy and communication transmission facilities, need for new or physically altered energy and communication transmission facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable levels of service?"

The City defines a significant impact to the current level of electric service for the project to be requiring more electrical energy than SCE has the stated ability to provide. The Threshold for Determining Significance is answered in full in Section 5.15.5.3 *Utilities Environmental Impact*.

Section 5.15.5.3 *Utilities Electrical Facilities and Service* discusses the expansion of the electrical system to serve the project. The EIR states on page 5.15-30 that the proposed project's consumption of electricity is 0.05 percent and peak demand is 0.06 percent of the California Energy Commission's forecast for Southern California Edison (SCE) in 2012. Furthermore, SCE has indicated its ability to serve the projected project in accordance with all applicable tariff schedules.

Response to Comment F70

Section 5.15.5.3 *Utilities Electrical Facilities and Service* discusses the expansion of the electrical system to serve the project. The comment discusses the adequacy of generation and transmission systems and incentives and disincentives to investment in electrical system infrastructure on a statewide basis. These comments are considered beyond the scope of the proposed project. SCE indicates that there is no transmission congestion within the project area.

Response to Comment F71

SCE has sufficient transmission capacity to provide power to the project. Refer to Responses to Comments F67 through F69 for information pertaining to the modification of existing electrical systems resulting from implementation of the proposed project. Analysis indicates that a new transmission line greater than 12 kV will not be required to serve the proposed project. Any other SCE system enhancements would be required to obtain the necessary licensing/regulatory approvals and would not impact the proposed project.

Response to Comment G1

Comment noted.

Response to Comment G2

The first paragraph on EIR page 5.15-5 is amended to read:

“The proposed project’s impact on water supply and the ability of the water provider to provide a water source to the project site has been assessed by the IRWD in accordance with the requirement of ~~SB904~~ SB610 and SB221, both effective 2 January 2002, and the water supply assessment (WSA) contained in Appendix C complies with the most recent statutory requirements and concludes that adequate supplies are available to serve the proposed project.”

Response to Comment G3

Comment noted. The record is hereby incorporated by reference.

Response to Comment G4

Comments noted.

Response to Comment G5

Comment noted.

Response to Comment G6

Comment noted.

Response to Comment G7

Comment noted.

Response to Comment G8

The assumption should be clarified that only existing infrastructure that meets IRWD standards will be preserved for future use.

Response to Comment G9

The EIR is amended to correctly indicate that potable water is and will be used to irrigate the IRWD parcel.

Response to Comment G10

Comments noted.

Response to Comment G11

Comment noted.

Response to Comment H1

The proposed zoning for the property consisting of the Base Plan and the Overlay Plan is fully described in the “Introduction”, “Project Description” and “Land Use” sections of the EIR. As described in those sections, the proposed zoning consists of a Base Plan which provides a lower intensity and density of development and a higher proportion of land dedicated to open space and public uses. The Overlay Plan provides a higher intensity and density of development if the property owners enter into a Development Agreement with the City of Irvine (Appendix D of the EIR) requiring, among other provisions, dedication of land for open space and public uses and payment of fees for the provision and maintenance of the public infrastructure.

The parcels to be dedicated to the County of Orange through the Development Agreement are labeled as PAZ23 with General Plan and zoning designation of Institutional (Inst/Inst – 6.1/6.1) and PAZ4 with General Plan and zoning designation of Agriculture in both Base and Overlay plans. The development intensity for these sub-areas is also identical under both Base and Overlay plans. This information is provided in Tables 3-3 and 3-4 of the EIR.

The EIR provides a clear description of the “project” stating that the commonly used overlay zoning tool has been utilized for the project site. The EIR also clearly states that the Overlay Plan represents the maximum density and intensity of development proposed. All sections of the EIR analyze the potential impacts of both the Base Plan and the Overlay Plan and identify mitigation measures for each plan.

Response to Comment H2

The Great Park EIR assesses potential impacts of proposed uses for the entire former MCAS El Toro owned by the federal government and administered by the DON. The DON has been supplied with the proposed land plan and the EIR. The DON agreed that the land plan is consistent with their Record of Decision and their intent to sell the property at public auction. The DON has also agreed with the provision of the Great Park Development Agreement that requires, among other things, the dedication of 100-acres of property from the property owner to the County upon the election of receiving the development rights of the Overlay Plan. The EIR assumes certain development intensities that are consistent with the intentions of the landowner (DON) and the expectations of the City of Irvine. The EIR also assumes development intensities for the 100-acres that may be dedicated to the County, consistent with the list of uses provided in the Property Tax Transfer and Pre-Annexation Agreement in Section 2.2.4. Although the County refers to previously proposed land plans and the County’s 1996 EIR, these documents are not consistent with the current intentions of the landowner (DON) or the City of Irvine and are not relevant to this EIR. If the County becomes the owner of the 100-acres, it can then assess development intensities provided in the program EIR and evaluate its specific development plans for the site. No specific development plans for the site by the County have

been provided to the City, nor is the County a landowner of the property. Any development proposed by the County, if it becomes a landowner in the future, which is not consistent with the proposed plan and EIR, will require additional environmental evaluation.

The City recognizes that the County's development of governmental uses on the 100-acres is not subject to City zoning or building controls. The City also recognizes that its land use assumptions for the 100-acres are an estimate based upon no current County plan, and that any trip limits used in the Traffic Impact Analysis for the Great Park project do not restrict the County's use of the 100-acres for governmental purposes. Finally, the City recognizes that, as the County defines its project and proposed uses for the 100-acres, the County will analyze traffic and other impacts from this project as required by law.

Response to Comment H3

Comment noted. While the EIR evaluated the Musick Jail Facility for its contribution of impacts to the project, the Final EIR will reflect that the Musick Jail Facility will not be included in the City of Irvine's annexation proposal.

Response to Comment H4

Comment noted. Mitigation Measure H/WQ 3 (EIR page 5.7-26) has been amended to read:

"Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrology and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department."

Response to Comment H5

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in "accordance with OCFCD Methodologies...as well as any additional guidelines in effect at the time of the project design" which includes utilizing the appropriate Manning's "n" value for the conveyance type. Approval from the OCFCD will be obtained prior to any construction activity on the proposed drainage corridors.

Response to Comment H6

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in "accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design" would include analyzing as applicable the effects of sediment deposition, meandering, scour,

erosion and bank stability with appropriate recommendations for slope protection. Approval from the OCFCD will be obtained prior to any construction activity on the proposed drainage corridors.

Response to Comment H7

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in “accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design” includes addressing drainage/flooding issues related to proposed development. Approval from the OCFCD will be obtained prior to any construction activity on the proposed Bee Canyon and Agua Chinon drainage corridors.

Response to Comment H8

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in “accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design” would include studying diversions with appropriate justification and mitigation. Approval from the OCFCD will be obtained prior to any construction activity on the proposed Agua Chinon drainage corridor and the proposed Borrego wildlife corridor.

Response to Comment H9

The hydrologic and hydraulic analysis referenced in Mitigation Measure H/WQ 3 are to be performed in “accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design” would include addressing the concerns raised in this comment. Approval from the OCFCD will be obtained prior to any construction activity on the proposed Borrego Channel and Serrano Creek corridors.

Response to Comment H10

Comment noted. Prior to concept design or preliminary engineering it will be necessary to receive approval from the Manager, Flood Control Division. Initial meetings have occurred regarding the drainage plan.

Response to Comment H11

Maintenance responsibility for the proposed flood control facilities has not been determined. The question of maintenance responsibility will need to be addressed during the preliminary design process. Maintenance will be, in part, the County of Orange’s responsibility for some facilities, and the City of Irvine’s responsibility for other facilities, depending on the ultimate design solution implemented.

Response to Comment H12

Mitigation Measure H/WQ 3 addresses preparing detailed studies in accordance with...“the Flood Control Master Plan for San Diego Creek (FCMPSD).” Refer to Response to Comment H4.

Response to Comment H13

Refer to Response to Comment H11.

Response to Comment H14

Refer to Response to Comment H11.

Response to Comment H15

Mitigation Measure H/WQ 4 addresses the potential impact of project construction and flood control improvements occurring in tandem. Approval from the OCFCD will be obtained prior to any construction activity.

Response to Comment H16

The Natural Treatment System (NTS) basin proposed to be placed in Marshburn Basin is a part of the Irvine Ranch Water District NTS system and not of this proposed project. Because the basin will be upstream of the development area, the basin is not a part of the project design.

Response to Comment H17

The hydrologic and hydraulic analysis referenced in mitigation measure H/WQ 03/B3 are to be performed in “accordance with OCFCD Methodologies, as well as any additional guidelines in effect at the time of the project design” includes reconciling Master Plan facilities (e.g., raceway stormdrain) in relationship to the project requirements.

Response to Comment H18

Adequacy of existing facilities should be analyzed based on ultimate discharges as provided by the OCFCD. Mitigation Measure H/WQ 3 would include this type of analysis. Refer to Response to Comment H4.

Response to Comment H19

Mitigation Measure H/WQ 4 addresses the LOMR process.

Response to Comment H20

Any work within OCFCD or County of Orange right of way will require encroachment permits. The submittal process for an encroachment permit would occur at the time construction drawings are available for submittal.

Response to Comment H21

A significant amount of open space and recreational opportunities comparable to the type of activities associated with County regional parks will be provided within PA 51 of the project site. As described in Section 3.0 and illustrated on Figure 3-1 of the EIR, PA 51 is proposed to be annexed into the City. Upon annexation, this portion of the project area will be subject to City of Irvine General Plan land use and zoning designations. There is no equivalent “regional park” land use designation or zoning district in the City. Therefore, no portion of the project site has been designated as “regional park” although the functionality of proposed

park areas will be very similar to various existing parks in the County's regional parks system. Tables 3-3 and 3-4 of the EIR provide a statistical summary of open space and recreational acreage proposed within the project area.

Response to Comment H22

Refer to Response to Comment T1. As described in Section 5.9 *Biological Resources*, a wildlife corridor is proposed where one currently does not exist. Figures 1-2, 1-3 and 5.9-2 of the EIR depict the proposed wildlife corridor alignment. As shown, a majority of the wildlife corridor traverses passive uses, such as the golf course and park uses which are not anticipated to generate significant noise levels. In fact, the alignment of the wildlife corridor was shifted west, away from existing industrial uses located immediately east of the base, in part with consideration of potential indirect effects from these existing off-site uses. Within PA 30, the alignment of the corridor is fixed between the underpass of the SCRRA railroad tracks and the I-5 Freeway/I-405 Freeway undercrossing. In this area, indirect effects are likely to be of more concern to the functionality of the wildlife corridor.

The EIR describes guidelines that will be incorporated into the implementation of the corridor. Specifically, as described in Section 5.9 *Biological Resources*:

“The revegetation/restoration plan would need to address various issues to increase the viability of the proposed corridor and will need to be prepared based on the following criteria:

- **Reduce the amount of noise pollution and urban influence.** Sight and sound barriers need to be constructed at the edges of the corridor to help create a secluded, natural setting. Barriers may range from artificial sound walls to natural diversions such as hedges and tree lines.” (EIR, p. 5.9-22)

With respect to Planning Area Zone 2, under the proposed Overlay Plan PAZ 2 is proposed for residential development; however, this portion of the project site is currently developed with residential uses associated with the former base (refer to Figure 1-4 of the EIR). Any reuse or redevelopment of PAZ 2 with residential uses would not likely increase the level of noise impacts on the adjacent habitat preserve.

Response to Comment H23

Implementation of the proposed project will not create an impact to any existing wildlife corridors. Therefore, the provision of a linear corridor through Planning Area Zone 2 (PAZ 2) is not a mitigation measure required to mitigate any significant impact associated with the proposed project.

The City agrees that maintaining connectivity to regional habitat preserve areas is desirable. As such, the City has proposed the wildlife corridor as a major

feature of the proposed project. The primary goal of the wildlife corridor is to provide a viable connection between the Habitat Preserve Area (which, in turn, is connected to the NCCP Preserve Area) with the Laguna Coast Wilderness Park to the south. The alignment of the corridor has been carefully planned with significant input from various wildlife entities and stakeholders.

Response to Comment H24

With respect to Planning Area Zone 2, under the proposed Overlay Plan PAZ 2 is proposed for residential development; however, this portion of the project site is currently developed with residential uses associated with the former base (refer to Figure 1-4 of the EIR). Any reuse or redevelopment of PAZ 2 with residential uses would not likely increase the level of lighting impacts on the adjacent habitat preserve.

Response to Comment H25

The proposed Conservation Zone widths have been planned to achieve the maximum widths feasible. However, the proposed wildlife corridor is constrained in several areas as a result of many factors including existing development, roadways, and topographical conditions. The functionality of the wildlife corridor is not solely dependent upon width, and in areas where the width becomes more restrictive more care would need to be taken to implement measures to reduce the potential for edge effects and ensure that the corridor is attractive for wildlife.

Response to Comment H26

Tables 3-3 and 3-4 of the EIR depict a statistical summary of potential project development, including park acreages. Page 5.9-16 of the EIR has been corrected as follows:

“In addition, under the Base Plan, low to moderate quality foraging habitat (comparable to the existing agricultural fields) in the form of the approximately 576 acres of proposed golf course, ~~988~~ 716 acres of parkland, 438 acres of agriculture, 179 acres of wildlife corridor, and 229 acres of drainage/riparian corridor (~~2,410~~ 2,138 acres total) will be available after the completion of the project.”

Response to Comment H27

Tables 3-3 and 3-4 of the EIR depict a statistical summary of potential project development, including park acreages. Page 5.9-16 of the EIR has been corrected as follows:

“Under the Overlay Plan, low to moderate quality foraging habitat (comparable to existing agricultural fields) in the form of approximately 526 acres of proposed golf course, ~~547~~ 382 acres of parkland, 303 acres of agriculture, 179 acres of wildlife corridor, and 229 acres of drainage/riparian corridor (~~1,784~~ 1,619 acres total) will be available after the completion of the project.”

Response to Comment H28

Page 5.9-18 of the EIR has been corrected as follows:

“The wildlife corridor provides connection to the ~~995~~ 975-acre habitat preserve, as well as the Limestone-Whiting Wilderness Park.”

Response to Comment H29

The City has a policy of encouraging alternative modes of transportation, including bicycling. The City of Irvine General Plan Circulation Element Policies establish various goals and implementation measures for this purpose. As such, the City of Irvine has one of the most advanced bike trails systems in Orange County. The proposed plan links the entire Planning Area 51 through Class I and II bicycle trails as well as a hiking and riding trail system. The Class I trails have been designed to link the recreational, educational and culture uses within the Great Park. In addition, the City's Bicycle Transportation Plan is scheduled to be updated in 2005. Bike trail alignments, amenities, and grade separations will be discussed in that update.

Response to Comment H30

The County Master Plan of Regional Riding and Hiking Trails does not show the connection between the Serrano Creek and Hicks Canyon Trails alluded to in the comment. The Riding and Hiking Trail link that is being deleted is shown on the City of Irvine Trails Network Plan only. The link being deleted has been determined to be infeasible due to existing industrial development along the proposed route through PA 35, the inability to use the existing flood control improvement at Bake Parkway for the trail undercrossing, and other route specific impediments.

Response to Comment H31

The County of Orange's proposed Borrego Canyon bikeway traverses the NCCP/HCP that remains in federal control and is considered to be habitat for sensitive and endangered species. As such, the City has chosen not to show the proposed connection. The project does not propose to add this trail connection. A Class I off-street bikeway will be located in the proposed drainage swale that carries Agua Chionon drainage between Irvine Boulevard and the Irvine Transportation Center. The County should consider realigning its proposed Borrego Canyon bikeway to join this trail or using the proposed Class II bikeway along the future Alton Parkway extension as an alternate route for bicyclists.

Response to Comment H32

Page 5.14-18 of the EIR has been revised as follows:

Both on-road (~~Class I~~ Class II) and off-road (Class I ~~Class II~~) bikeways are planned for the site, linking the site with the regional bikeway system.

Refer to Responses to Comments H35 through H38 with respect to regional trail connections.

Response to Comment H33

The EIR does address policies and programs supporting alternative modes of transportation. This EIR has followed CEQA Guidelines (Appendix G) as the guide to select Significance Thresholds. While the proposed trail system may differ in some areas with other plans, it does propose an extensive bike trail system that links the project internally and to the regional system. On page 5.2-63, the EIR presents the opportunities offered by the proposed project's recreational, educational, and transit-oriented uses for an enhanced bike trail network. The EIR also states that connections should be considered to Portola Parkway as well as encouraging additional trails for a more extensively linked network. As the project reaches its implementation stages, there will be opportunities for these considerations. Refer to Responses to Comments H29 through H31.

Response to Comment H34

The subheading "Trails and Bikeways" has been added between the fourth and fifth paragraphs on page 5.2-62 of the EIR.

Response to Comment H35

Cyclists of all levels will be able to use the proposed trail system for recreational and transportation purposes within the opportunities that the network will provide. As a community with an extensively designed and used bike trail system, the City of Irvine continually plans and develops additional trails, as well as linkages and amenities to enhance these opportunities. As stated in the EIR, the City of Irvine will continue to encourage such enhancements through the planning and implementation stages of the project. Refer to Response to Comment H29.

Response to Comment H36

Comment noted. The design of the Irvine Transportation Center includes the opportunity to link to Barranca and ultimately Alton Parkway via bicycle.

Response to Comment H37

The City of Irvine General Plan Circulation Element has established policies to connect the City's trails to the regional trail network. The Great Park plan will provide opportunities for the expansion of the trail system. As stated in the EIR, the City will continue to encourage such enhancements throughout the planning and implementation stages of the project.

Response to Comment H38

Figure 3-7 (EIR page 3-23) represents the trail system envisioned in the proposed project. The Great Park Plan includes vast areas of open space, recreational uses, as well as institutional and educational uses which will require detailed planning and design during the subsequent phases of the project. The

enhancement of the trail system will be part of the detailed planning process for those land uses, and can be integrated with the opportunities offered by those plans.

Response to Comment H39

Comment noted. Refer to Responses to Comments H29 and H38.

Response to Comment H40

The suggestion for inclusion of the Class I bikeway network into the Transportation Management Plan (TMP) will be considered. The TMP is not, however, intended to construct or maintain bikeways. The City of Irvine will coordinate with the County of Orange's Harbors, Beaches, and Parks during the implementation phase of the project for information about the bike trails that could be included in the TMP.

Response to Comment H41

Comment noted. The potential for grade-separated crossings will be identified during the later phases of more specific planning and implementation of the project.

Response to Comment H42

Figure 3-7 (EIR page 3-23) depicts the Great Park Plan Trail Network. Staging areas and details will be identified during the later phases of more specific planning and implementation of the project.

Response to Comment H43

The EIR addresses the proposed General Plan and zoning for the project site. At this time, the Equestrian Center is a permitted land use within the proposed General Plan and zoning designation for the existing site. The property will transfer to private ownership through the DON sale. The future property owner will determine the viability of an equestrian use at that time.

Response to Comment H44

The City of Irvine appreciates the offer to make a presentation on bikeways and trails planning to the County of Oranges, Harbors, Beaches, and Parks and the Orange County Regional Recreational Trails Advisory Committee.

Response to Comment H45

Mitigation Measures C1 through C4 address cultural resources; Mitigation Measure P1 (see Section 5.10 Paleontological Resources) addresses the potential for paleontological resource finds.

Any cultural resources discovered as a result of implementation of Mitigation Measures C1 through C3 would be curated at an acceptable archaeological repository within the County. Fees for storage and curation would be the responsibility of the developer/applicant for individual projects.

Response to Comment H46

Because 95 percent of PA 30 has not been surveyed, Mitigation Measure C1 requires an initial survey report which would include a records search, literature review, and walkover survey. A testing report will be required if the results of the initial survey report indicate the potential for cultural resources to be present on that portion of the project site subject to the cultural survey.

Response to Comment H47

Refer to Response to Comment H45.

Response to Comment H48

As described in the EIR, the County of Orange IWMD owns and operates three landfills to serve the solid waste disposal needs of the County. The City disposes the majority of its solid wastes at the Bowerman landfill. When the daily tonnage limit of one of the three IWMD landfills is exceeded, waste imported to that facility is reduced accordingly, and the excess tonnage is disposed of at one of the other facilities. The IWMD accepts wastes from outside of Orange County. Project refuse can be disposed of within any one of the three landfills in the County landfill system. The currently permitted maximum daily tonnage at the Bowerman landfill is 7,263, which is adjusted to increase by 1.75 percent per year with a maximum of 8,500 tons per day. Currently, the landfill accepts approximately 6,700 tons per day. Under the proposed Overlay Plan, the project would generate approximately 35 tons per day of solid waste. Thus the project would increase the tonnage received by the Bowerman landfill to approximately 6,735 tons per day, which is well below the existing 7,263 tons per day and the future 8,500 tons per day limit of the landfill.

Response to Comment H49

The Bowerman currently accepts additional landfill waste from outside Orange County. Should the cumulative effect of development within the Central Region watershed cause the daily tonnage ceiling to be exceeded, the waste being imported will be reduced by an amount sufficient to stay within tonnage limits.

Additionally, the California Integrated Waste Management Board requires that all counties have an approved Countywide Integrated Waste Management Plan (CIWMP). To be approved, the CIWMP must demonstrate sufficient solid waste disposal capacity for at least 15 years, or identify additional available capacity outside the County's jurisdiction. Orange County's CIWMP, approved in 1995, estimates future solid waste disposal demand based on countywide population projections adopted by the Board of Supervisors. IWMD's database estimates that the Orange County landfill system has capacity for approximately 25-years; therefore no significant cumulative solid waste impacts are anticipated. Continuation of local government efforts required under AB 939 to divert wastes from the County's landfills will also reduce the magnitude of cumulative impacts.

RELOOC is an acronym for “Regional Landfill Options for Orange County.” The RELOOC program is a 40-year strategic plan under preparation by the County IWMD, and is proposed to ensure that waste generated by the County is safely disposed of and that the County’s future disposal needs are met. The County IWMD is currently in the process of conducting the environmental review for the RELOOC program, with the EIR anticipated to be released in spring 2003.

The County’s waste disposal system includes three landfills, 20 former refuse disposal stations, and four household regional hazardous waste collection centers. The RELOOC implementation strategy is based on a “Phased Option” approach to managing solid waste disposal in the County, consisting of Phase 1 Short Term Strategies and Phase 2 Long-Term Strategies. Phase 1 strategies include, among others, fully utilizing the capacity of existing landfills files before seeking new site or alternative waste disposal methods. This would be achieved by maximizing operational efficiency at existing landfills (e.g., compacting refuse), increasing landfill capacity of the Frank R. Bowerman and Olinda Alpha landfills, and proactively encouraging recycling. Phase 2 strategies include determining if there is a need to increase the daily amount of solid waste permitted at the Prima Deschecha landfill, identification of strategies, including new technology, to maximize solid waste disposal capacity, and completion of a feasibility study of expanding the Bowerman landfill into the adjacent Round Canyon after the Bowerman landfill reaches capacity.

Response to Comment H50

Refer to Response to Comment H49.

Response to Comment H51

Refer to Responses to Comments F65, F66, and H49.

Response to Comment H52

Refer to Response to Comment H49.

Response to Comment H53

For both the Base Plan and Overlay Plan, only future roadway improvements with an identified funding source have been included for 2007 and 2025 conditions. Only the post-2025 (General Plan buildout) scenario includes unfunded improvements. This reflects circulation needs and development levels consistent with and required for General Plan buildout conditions only and is appropriate in this context.

Response to Comment H54

All of the intersections identified in the comment were in fact included in the Great Park Traffic Impact Analysis.

Response to Comment H55

Refer to Response to Comment H2. The “trip cap” approach is an appropriate mechanism for ensuring that future development conforms to the Great Park project description. As part of the North Irvine Transportation Improvement Program (NITM), each development proposal must submit a traffic analysis demonstrating consistency with the planned trip cap. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events.

Response to Comment H56

This is unnecessary since the minor differences in the ICU assumptions between the City of Irvine and other jurisdictions, if any, would not affect the findings and conclusions of the Great Park Traffic Impact Analysis.

Response to Comment H57

Refer to Response to Comment H55.

Response to Comment H58

The Traffic Impact Analysis evaluates peak hour mainline freeway conditions for all land use scenarios. The peak hour mainline freeway conditions are presented in the EIR on pages 5.2-35 and 5.2-36 (Base Plan) and pages 5.2-53 and 5.2-54 (Overlay Plan) (see specific references to Appendix G).

Response to Comment H59

Ongoing studies and analysis (monitoring) in accordance with the NITM program will continue to ensure that mitigation measures are implemented in a timely and appropriate manner.

Response to Comment H60

Comment noted. The MPAH amendment process has been specifically identified as a required project mitigation measure. The City of Irvine has initiated a request to OCTA for the review of the proposed MPAH amendments.

Response to Comment H61

Although an industrial reuse was contemplated during the initial efforts to clean up the base, the remediation strategies put in place allow for other reuses. The DON, with the concurrence of the other members of the Base Cleanup Team, considers all “no further action” sites and all remediated sites at the base to be available for unrestricted uses. Therefore, the use of such sites is consistent with the land uses proposed in the Great Park Plan. At locations that are to be used for schools (K-12), additional evaluation of the sites by DTSC is required by law.

Considerations for remedial actions objectives are provided in 40 CFR 300.430(e)(2)(i) that states, “remediation goals shall establish acceptable

exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response.” The Department of the Navy (DON) will be responsible for remediation of the former MCAS El Toro to these exposure levels. The DON has stated that some land-use controls (i.e., easements, covenants, institutional controls, ordinances, etc.) will be required in order to restrict public access on approximately seven Installation Restoration Plan (IRP) sites. The DON will employ limited land use controls at IRP sites 2, 3, 5, 16, 17, 18, 24; the use of such controls has yet to be determined for IRP sites 1, 8, 11, and 12. This action has been deemed necessary until the IRP sites in question can be remediated to the above mentioned acceptable exposure levels.

Section 3.0 *Project Description Actions and Approvals of Other Agencies* has been amended to reflect the requirement that DTSC approve the acquisition and/or development of property for public schools. The added additional language reads as follows:

“California Department of Toxic Substances Control (DTSC) – Approval of acquisition and/or development of property for public schools based on hazardous materials evaluation.”

Response to Comment H62

In the April 2003 Draft Final EBS, the DON identifies approximately 84 percent of the base as suitable for transfer through a fee conveyance. The DON considers areas that are suitable for transfer to be available for unrestricted uses. The percentage of transferable property has increased since 1995 due to additional investigation and sampling performed in 2002 and 2003 as part of the EBS update. Additionally, numerous areas have received “no further action” concurrence from the site regulators since 1995, thus increasing the acreage suitable for transfer from the original estimate of 67 percent. Refer to the *Final Environmental Baseline Survey, Former MCAS El Toro, California* (Earth Tech, Inc. April 2003) for additional information.

Approximately 84 percent of the former air station property is suitable for transfer by deed without remediation or land-use controls. Most of the remaining 16 percent of the former air station consists of areas with subsurface groundwater contamination and may be transferred to private control through a lease in furtherance of conveyance until the remediation is complete and fee title can be conveyed. Land-use controls, as defined in Response to Comment H61, for such groundwater contamination will be limited to prohibitions on the extraction and use of groundwater and limited surface controls to protect monitoring and remediation equipment.

Response to Comment H63

Additional remediation plans are not required, as specific land use designations (i.e., residential, industrial, park, or recreation) are irrelevant. Per 40 CFR 300.430(e)(2)(i), "remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response." The DON is required to remediate the site to these exposure levels. Analysis of supplemental remediation costs, if any, are not required by CEQA. The cost and responsibility of remediation rests with the DON. Refer to Response to Comment H61.

Response to Comment H64

Refer to Responses to Comments H61 and H63.

Response to Comment H65

The City of Irvine's Solvent Study identified a potential conduit of contamination, the base sanitary sewer system, and analyzed the maximum potential releases that could have occurred based on a review of historical records and engineering practices. The City submitted the report to the DON for consideration of alternate sources for contamination on the base. In response, the DON gave careful consideration to the rationale and logic of the report, conducted extensive testing of a likely source (Building 307, the base laundry and dry cleaning facility located within IRP Site 24), and concluded that the potential releases were most likely very limited. While the City of Irvine concurs with the DON's conclusions, based on its evaluation of Building 307, the City recognizes that there is a potential, albeit small, for hidden releases of solvents and other hazardous substances. Mitigation Measure HH 5 puts in place a process for responding to potential unidentified contamination when it is encountered during any construction activities on the base. The April 2003 Draft Final EBS released by the DON addresses concerns brought up in the City of Irvine's Solvent Study. Refer to the City of Irvine's letter of response dated 21 March 2003 attached in the Appendix.

Response to Comment H66

It is the responsibility of the DON along with the rest of the members of the Base Cleanup Team (including USEPA, DTSC, and RWQCB) to review evidence of contamination presented by any and all parties, including those identified by the commentor. In the April 2003 Draft Final EBS, the DON reviews all of the evidence presented by other parties for potential additional locations of concern, including the City of Irvine's Solvent Study. The DON performed studies to address issues raised in the Solvent Study and the conclusions are presented in the April 2003 Draft Final EBS. While many potential locations of concern do not warrant further investigation, the DON considers 76 locations to require evaluation for potential releases. Those sites that pose a significant risk to health

and safety will be subject to remediation sufficient to allow a fee conveyance of the site for unrestricted uses.

Response to Comment H67

Refer to Response to Comment H65. The EIR will be revised to note that the DON evaluated potential soil contamination adjacent to runways and under certain runway extensions in the April 2003 Draft Final EBS. There date is no evidence that there are significant levels of unknown contaminants in these areas. The City of Irvine believes that the DON's April 2003 Draft Final EBS addresses all concerns brought up in the GeoSyntech report and the City of Irvine's Solvents Study. Refer to the City of Irvine's letter of response dated 21 March 2003 attached in the Appendix.

Response to Comment H68

The April 2003 Draft Final EBS released by the DON addresses and responds to concerns brought up in the County's environmental site assessment (the GeoSyntech report). Per the Base Realignment and Closure Business Plan for MCAS El Toro (March 2000) and the April 2003 Draft Final EBS, the DON states that approximately 84 percent of the former air station is environmentally suitable for transfer by deed without remediation or land use restriction. Most of the remaining 16 percent consists of areas with subsurface groundwater contamination and may be transferred through a lease in furtherance of conveyance. Some portions of the land area remaining to be remediated will have restricted public access via land use controls until remediation is complete. The DON does not propose to remediate the site to a specific land use designation (i.e., industrial, residential, park, or recreation) as the federal regulations codified under 40 CFR 300.430(e)(2)(i) designate acceptable exposure levels regardless of proposed land use. Refer to Response to Comment H66.

Response to Comment H69

At the time of the review of the County's EIR 563 and 573 processes, the clean-up of the former MCAS El Toro was not far along, therefore the City identified a number of issues that it believed should be addressed prior to going forward with reuse. Subsequently, the DON completed a substantial portion of its investigations and decisions about remediation such that there are relatively few unknowns regarding contamination at this time. Consequently, it is not necessary to revisit issues that the DON has addressed.

Response to Comment H70

The DON recently released an updated baseline environmental analysis of the former air station (Draft Final EBS April 2003). There is no evidence to date indicating the presence of pools of solvents in the bedding of the existing sewer alignments. Refer to Response to Comment H65.

Response to Comment H71

Refer to Responses to Comments H65 and H70. Air quality and traffic impacts attributable to construction activities for both the Base Plan and Overlay Plan, including grading activities, were modeled using the URBEMIS 2001 and the Irvine Transportation Analysis Model (presented in Section 5.3 *Air Quality* and Section 5.4 *Traffic/Circulation*), respectively.

Response to Comment H72

Comment noted. Mitigation Measure HH5 requires that applicants for grading permits within the boundaries of Site 24 prepare a worker health and safety plan that acknowledges the presence of residual VOCs in soil and groundwater at Site 24 and provides adequate measures to protect worker health and safety. Land use controls, as outlined in Response to Comment H61, will be employed at IRP Site 24 in order to prevent extraction or use of contaminated groundwater without prior approval, to protect the integrity of the remedial actions (e.g., protect extraction and treatment equipment and monitoring wells), and to allow access to the site for equipment operation, maintenance, and monitoring. Also refer to Responses to Comments H65 and H77.

Response to Comment H73

The DON evaluated the potential for contamination associated with the piping that ran between an on-base plating shop and an industrial wastewater treatment facility and determined that contamination did not exist. Refer to Responses to Comments H65 and H66.

Response to Comment H74

The vast majority of tanks have been removed under the supervision of the appropriate regulatory agencies. The few tanks that have been or will be abandoned in place will be rendered inert under the supervision of the appropriate regulatory agencies. The information on the status of the storage tanks located on the project site has been updated to reflect the April 2003 Draft Final EBS. Section 5.5.1 *Public Health and Safety Environmental Setting* (5.5-9) has been amended to read:

“Based on the April 2003 Draft Final EBS, a total of 404 USTs were in use at the former air station. Of these USTs, 357 have been remediated and received findings of “no further action.” Of a total of 39 ASTs used in support of the military mission at the former MCAS El Toro, 36 have been remediated and received findings of “no further action.”

Response to Comment H75

Comment noted. Access to monitoring wells will be protected by restrictions placed on the property prior to sale by the DON. Mitigation Measure HH 6 will be added to Section 5.5.5 *Public Health and Safety Mitigation Measures* to read as follows:

“The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells located on the former MCAS El Toro in a geographic information systems database (GIS). The City will review all permit applications on the former air station for well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to wells will be limited to authorized personnel.”

Response to Comment H76

The use of significant quantities of CFC/HCFC refrigerants is not required for implementation of the proposed project. Compliance with SCAQMD rule 1415 requires the capture and recovery of refrigerants resulting in insignificant impacts to the environment.

Response to Comment H77

Although grading operations are not expected to result in the release or disturbance of asbestos or lead, demolition of existing structures may result in such releases. Section 5.5.5 *Public Health and Safety Mitigation Measures* (5.5-27) states:

“Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities.”

Response to Comment H78

The DON is required to complete all necessary remedial actions before fee title to the former MCAS El Toro is transferred from federal ownership. The DON may transfer control of those portions of the property not found suitable for transfer of fee title through a lease in furtherance of conveyance. Even after the fee title is transferred, the federal government is required to conduct further remediation if additional contamination caused by DON actions is discovered or if a remedy fails to perform adequately. Federal law also provides that the DON may be required to indemnify the new owners or certain other parties for liabilities arising from claims for personal injury or property damage resulting from the release or threatened release of any hazardous substances, pollutants or contaminants, or petroleum or petroleum derivatives attributable to DON activities on military installations. Refer to the following letters that are attached in the Appendix to this Response to Comments document: H.T. Johnson, Assistant Secretary of the Navy, Installations and Environment, Letter to the Editor, Los Angeles Times, 5 August 2002; and the letter to the City of Irvine from the DON dated 25 April 2003. Also see the “DOD Policy on Responsibility for Additional Environmental Cleanup after Transfer of Real Property” electronically at:

[http://www.dtic.mil/envirodod/Policies/BRAC/brac_flu.htm].

Response to Comment H79

All hazardous wastes generated in the course of the proposed project will be managed in compliance with regulatory requirements and sent to a licensed hazardous waste facility, thereby minimizing risks and rendering impacts to public health and safety less than significant.

Response to Comment H80

Section 5.3 *Air Quality* and Section 5.4 *Traffic/Circulation* of the EIR address the issue of human health impacts resulting from diesel exhaust particulates.

Response to Comment H81

Existing users of pesticides and fertilizers at the base, agricultural leaseholders and landscape maintenance staff, must meet regulatory requirements for the storage, application, and disposal of registered pesticides. Proposed uses will be similar. Compliance with regulatory requirements will minimize both exposures to pesticides and the potential risk of accidental releases resulting in less than significant impacts to public health and safety.

Response to Comment H82

Only SCAQMD-compliant paints and coatings are legally available for use in the proposed project. Compliant coatings minimize the use and release of VOCs resulting in less than significant impacts to public health and safety.

Response to Comment H83

Non-point source pollution and related TMDLs are addressed in Section 5.7 *Hydrology/Water Quality*. Mitigation Measures H/WQ 1 states:

“A Storm Water Pollution Prevention Plan and Water Quality Management Plan are to be prepared [prior to project implementation]. A Notice of Intent for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project areas. This requirement will be met to the satisfaction of the City Engineer for: a) any disturbance of one-acre or more of soil...b) General Dewatering NPDES Permit of the Santa Ana RWQCB, and c) provisions of the Countywide Permit....As future projects are planned, designed, and constructed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed.”

Monitoring protocols implemented as part of the BMPs and other Permits identified in this Mitigation Measure would require quantification of non-point source pollution loading as part of the TMDLs identified for the Newport Bay watershed.

Response to Comment H84

Refer to Response to Comment H83.

Response to Comment H85

Air quality emissions are presented and analyzed in Section 5.3 *Air Quality*. Growth inducement due to the proposed project is addressed in Section 7.2 *Growth Inducing Impacts*.

Response to Comment H86

Information pertaining to the consistency between the proposed project and the SCAQMD's AQMP and SIP is presented in Section 5.3 *Air Quality*.

Response to Comment I1

This comment recites the primary components of the proposed project.

Response to Comment I2

Refer to Responses to Comments I3 through I13.

Response to Comment I3

Page 3-30 of the EIR has been corrected as follows:

Orange County Airport Land Use Commission (ALUC) for Orange County – Amendment Revision of the Airport Environs Land Use Plan (AELUP), dated 1995.

This correction has also been made in other applicable sections of the document.

Response to Comment I4

Page 5.1-5 of the EIR has been modified to include the text of Policy J-1.d as follows:

Policy J-1.d address hazards associated with aircraft operations. Policy J-1.d states, “Use the most current available Airport Environs Land Use Plan (AELUP) as a planning resource for evaluating aircraft operations, land use compatibility and land use intensity.”

Response to Comment I5

Page 5.1-6 of the EIR has been modified as follows:

The Airport Land Use Commission for Orange County Airport Land Use Commission (ALUC) prepares a comprehensive land use plan and regulates land uses for each public and military airport. The ALUC adopted the has Airport Environs Land Use Plans for (AELUP) covering the former MCAS El Toro, the former MCAS Tustin, John Wayne Airport (JWA) (adopted 2002), Armed Forces Reserve Center Los Alamitos, and Fullerton Municipal Airport (2002), Joint Forces Training Base Los Alamitos (2002), Heliports projects (2002) and for MCAS El Toro (adopted 1995) ... Figures found in Appendix D of the 1995 AELUP depict the noise and safety zones for MCAS El Toro. Figure 5.1-1 depicts the APZs for the former MCAS El Toro as shown in the 1995 AELUP.

The MCAS El Toro property is still owned by the Federal government. The 1995 AELUP applicable to that property remains in effect and has not been amended. California Public Utilities Code Section 21670, et. seq. requires that local General Plans and Zoning be consistent with the land use compatibility plan (AELUP). The Public Utilities Code provides a method whereby a local jurisdiction may override an Airport Land Use Commission finding of inconsistency with the AELUP.

Response to Comment I6

Page 5.1-15 of the EIR has been revised as follows:

The land use, safety, and noise restricted areas as identified in the AELUP, AICUZ, and the PIL for the former MCAS El Toro facility are no longer impacted by aircraft noise from military air operations now that the base has closed for military use. The MCAS El Toro property is still owned by the Federal government. The 1995 AELUP applicable to that property remains in effect and has not been amended. California Public Utilities Code Section 21670, et. seq. requires that local General Plans and Zoning be consistent with the land use compatibility plan (AELUP). The Public Utilities Code provides a method whereby a local jurisdiction may override an Airport Land Use Commission (ALUC) finding of inconsistency with the AELUP.

Response to Comment I7

Refer to Responses to Comments I9 and I10.

Response to Comment I8

Reference 6 on page 5.1-27 of the EIR has been revised as follows:

Orange County Airport Land Use Commission for Orange County. Airport Environs Land Use Plan, adopted November 1995. 1975-90.

Response to Comment I9

Page 5.1-15 of the EIR states that the proposed project, “would not result in a significant land use compatibility impact, even though it would conflict with the adopted AELUP.” This language is consistent with the language contained in Section 6.0 Alternatives.

Response to Comment I10

On 17 April 2003, the ALUC formally acknowledged that the ALUC has no statutory jurisdiction over the proposed project. Further, according to the ALUC’s 17 April 2003 staff report, ALUC staff has reviewed the project and finds no AELUP issues.

In the 17 April 2003 staff report the ALUC has also stated that the ALUC does have jurisdiction within the AELUP surrounding the former military airfield. The Orange County Great Park EIR recognizes the potential for growth-inducing impacts as a result of the removal of development restrictions within the AELUP areas surrounding the former base (e.g., EIR, page 7-13). However, Measure W changed the County of Orange’s General Plan to delete any airport development opportunity at the former MCAS El Toro and the DON, in its Record of Decision, chose a non-aviation reuse plan. Consequently, changes in land use restrictions are based on that voter-approved initiative and subsequent DON decisions, not on this project, which modifies the Irvine General Plan designations from a more

intensive non-aviation use (known as “Millennium Plan II, adopted in February 2000) to the less intensive, park-oriented non-aviation use proposed by the Great Park project. Many of the areas referenced by the commentor are located within other jurisdictions (primarily the City of Lake Forest and newly incorporated Aliso Viejo). The City of Lake Forest is currently in the preliminary stages of preparing a land use study of the subject area. The City of Aliso Viejo has just recently initiated preparation of a General Plan. It is anticipated that any future proposal by any jurisdiction with lands currently located within the AELUP would be required to evaluate, with specificity, the potential environmental impacts associated with adoption of any proposed land use changes. This information would then be available to the ALUC when amending the AELUP as it relates to that jurisdiction.

Response to Comment I11

Refer to Response to Comment I10. There is no need to include growth-inducing impacts as a significant unavoidable impact of the proposed project.

Response to Comment I12

Page 8-5 of the EIR has been corrected as follows:

~~Orange County~~ Airport Land Use Commission for Orange County, Airport Environs Land Use Plan, 1995. ~~1975-1990~~.

Response to Comment I13

The documentation referenced by the commentor will be provided to the Airport Land Use Commission as requested.

Response to Comment J1

Comment noted.

Response to Comment J2

Coordination between project developers and the Fire Authority, as with other service providers, is a requirement of development of this type and magnitude. Any necessary agreements regarding fire protection services will occur in accord with established procedures.

Response to Comment J3

Refer to Response to Comment J2.

Response to Comment J4

Comment noted.

Response to Comment J5

Comment noted. See Section 5.5 *Public Health and Safety* for information pertaining to hazardous materials related to agricultural and military activities.

Response to Comment J6

Comments noted. See Section 5.5 *Public Health and Safety* for information pertaining to wildland fires.

Response to Comment J7

Development standards of the type noted are either legal requirements or will be negotiated and established during the review and approval process for the master development plans or other approvals given by the City.

Response to Comment J8

Any further reduction of the surplus area will be determined by the General Services Administration. The effect of future government ownership and operations in areas proposed to remain in government control will need to be assessed once the specific areas are established.

Response to Comment J9

Refer to Response to Comment H65. The commitment by the DON is to convey land based on the federal regulations codified under 40 CFR 300.430(e)(2)(i); the regulations designate acceptable exposure levels suitable for the proposed reuse of the former air station. If an unknown hazard appears during construction, appropriate responses will be taken by the City in coordination with the DON and the Fire Authority and other responsible agencies. Refer to the April 2003 Draft Final EBS for additional information on the status of underground storage tanks, pipelines, and other specified information. See Section 5.5 *Public Health and Safety* for information pertaining to hazardous materials and wastes. Mitigation Measure HH 5 states:

“Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director Community Development of the City of Irvine in a timely manner.”

Response to Comment J10

Comment noted.

Response to Comment J11

Comment noted.

Response to Comment J12

Comment noted.

Response to Comment J13

Comment noted.

Response to Comment J14

Comments noted.

Response to Comment J15

The location of IRP sites are identified on Figure 5.5-1 (EIR page 5.5-8).

Response to Comment J16

The project is a General Plan amendment, zone change, development agreement, and annexation. The detailed information discussed in the comment will be available in the design phase.

Response to Comment J17

Coordination with OCFA will occur during the design phase and during the project approval process, consistent with City standard procedures.

Response to Comment J18

Refer to Response to Comment J17.

Response to Comment J19

Comment unclear due to partial sentence provided as comment.

Response to Comment J20

Regulation of agricultural chemicals application and storage will continue for land proposed to be retained for agricultural use.

Response to Comment J21

Comment noted.

Response to Comment J22

Fire protection agreements are a requirement prior to development. This issue is also referenced in the Urban Services Plan (provided as an attachment to this document).

Response to Comment J23

Comment noted. Fire service was considered in establishing maximum water demand and subsequent backbone infrastructure sizing.

Response to Comment J24

OCFA will be listed as an Action Agency in the EIR on pages 3-30/3-31.

Response to Comment J25

Corrections will be made in the final EIR as noted.

Response to Comment J26

Refer to Responses to Comments J1 through J25.

Response to Comment K1

The elements and development characteristics of the proposed project are specifically defined in Section 3.0 *Project Description*. The analysis of potential environmental impacts is based on the development and operation of the project as defined in Section 3.0.

The City has proposed a concept plan that will meet the spirit and intent of Measure W while maintaining a fiscally-balanced plan. Annexation of PA 51 is proposed in order to ensure the City can control the logical development of the property, and to maintain high service levels for public service and utility providers. Although the project site will be incorporated into the City of Irvine, the proposed uses are regional in nature and are intended to benefit and serve all residents of the County.

Response to Comment K2

This comment references the adequacy of the DON's Environmental Impact Statement (EIS) and the Record of Decision for the Disposal of the former MCAS El Toro issued by the DON and co-signers of the Federal Facilities Agreement. This comment does not address the adequacy of the Orange County Great Park EIR.

Response to Comment K3

The DON has analyzed a non-aviation alternative in its EIS for the Disposal and Reuse of the former MCAS El Toro. The Orange County Great Park project, however, is proposed by the City of Irvine. The City is designated as the "lead agency" under CEQA, and in this capacity, is responsible for preparation and certification of an EIR that addresses the potential environmental impacts associated with implementation of the proposed project as defined in Section 3.0 of the EIR. The DON is not required to prepare an EIR for the proposed project as a range of alternatives were previously addressed in the DON's EIS for the federal action. The Orange County Great Park project is proposed by the City of Irvine and does not involve a federal action beyond the disposal of the property which is addressed in the federal EIS.

Response to Comment K4

Section 7.1 *Cumulative Impacts* of the EIR analyzes the potential environmental impacts associated with the development of the proposed project in conjunction with the projected growth in the region, including the Northern Sphere. This cumulative impact analysis includes analyses of impacts to traffic, air quality and energy.

With respect to aviation, implementation of the proposed project does not involve a use that would impact existing airports and aviation activity. The proposed project is the reuse of a former military air base which is currently not utilized for any type of aviation use. The Measure W initiative changed the County of Orange's General Plan and deleted the airport designation for the former MCAS

El Toro. Furthermore, on 25 February 2003 the Orange County Board of Supervisors, acting as the El Toro Local Redevelopment Authority, rescinded the El Toro Airport System Master Plan, thus removing an airport at MCAS El Toro from all County plans.

Response to Comment K5

This comment addresses the adequacy of the Final Environmental Impact Statement and Record of Decision issued by the DON for the closure of the former MCAS El Toro. This comment does not address the adequacy of the Orange County Great Park EIR and no further response is necessary.

Response to Comment K6

As described in Section 5.5 *Public Health and Safety* of the EIR, the DON will be responsible for clean-up and remediation activities on the base. Page 5.5-11 of the EIR states, "Under CERCLA, contaminated federal property cannot be transferred until all necessary remedial actions have been taken or a remediation system is operating properly and successfully. Cleanup responsibility remains with the DOD until the property is fully remediated. Therefore, some of the former air station property cannot be transferred immediately." Additionally, "As established by BRAC III, the DON will continue its environmental restoration activities after installation disposal. Sites that require continuing monitoring and remediation will receive continuing investigation/remediation beyond installation closure, which occurred in July 1999." (EIR, page 5.5-15) Additionally, Mitigation Measures HH1 through HH5 are proposed to ensure that no significant impact associated with the presence of hazardous materials or contamination occurs with implementation of the proposed project. Refer to Responses to Comments H61 and M26 for information pertaining to the DON's remediation requirements.

Response to Comment K7

Refer to Response to Comment K1.

Response to Comment L1

Refer to Responses to Comments DD1 through DD14, which respond to the Department of Toxic Substances Control comment letter on the EIR.

Response to Comment M1

Refer to Responses to Comments M2 through M95 which respond to each comment raised by the commentor.

Response to Comment M2

This comment correctly summarizes the primary components of the proposed project, as described in the EIR. However, the City does not agree with the commentor's statement that the Great Park is not a feasible reuse of the project site and that the magnitude of the proposed land uses are understated. The proposed uses are considered feasible in terms of constructability as well as a fiscal standpoint. Proposed uses have been carefully considered so as to achieve a fiscally balanced plan while maintaining the spirit and intent of Measure W.

The proposed project characteristics are described in detail in Section 3.0 *Project Description*. The EIR focuses on the Overlay Plan as it presents the highest level of potential impact in order to ensure mitigation at the highest level. Tables 3-3 and 3-4 provide a detailed summary of the potential maximum development potential of the project according to both the Base Plan and Overlay Plan.

Response to Comment M3

The proposed Orange County Great Park land uses are proposed within City of Irvine Planning Areas (PAs) 30 and 51. Lands within PA 51 are not subject to Measure W while they remain under the jurisdiction of the County of Orange. To the extent that these lands are not annexed under the Great Park Plan, there will be no impact to the County's General Plan and zoning. However, PA 30 is located within the jurisdictional boundary of the City, and is not subject to Measure W. Generally, the more intensive land uses are proposed within PA 30. Comparatively, the Overlay Plan is more intense than the Base Plan, which are clearly depicted in Tables 3-3 and 3-4 of the EIR. However, the Overlay Plan allows for a similar amount of the open space, park, recreational and public uses within PA 51 as could occur under the Base Plan.

The City does not concur that the Overlay Plan constitutes "massive development" as inferred by the commentor. Regardless of whether land uses are developed according to the Base Plan or the Overlay Plan, the spirit and intent of Measure W will be met with implementation of the proposed project, for that portion of the project site currently subject to Measure W. In either case, the development potential of the Base Plan and the Overlay Plan are clearly illustrated in Tables 3-3 and 3-4 of the EIR.

Response to Comment M4

As stated in the EIR, "the purpose of the project is to assure that reuse of El Toro is consistent with the intent of Measure W approved by the voters in March, 2002 while responding to the decision of the federal government to sell the land". The proposed zoning with the Base Plan and Overlay Plan assures the fulfillment of

this purpose, regardless of the option chosen by the buyers of the property. While the option of the Overlay Plan provides a potential higher return to the developers in exchange for providing the land and infrastructure for the public uses, the Base Plan, through the regulation of the permitted land uses, also assures that the land will be developed for open space, recreation, educational, and cultural facilities, agriculture, and other park-like uses. Project applicants may opt to develop under the Base Plan and forego the increased intensity and development rights that are available through the Development Agreement and Overlay Plan.

Response to Comment M5

The former air station will be divided into four parcels for sale by the DON. The requirement through the Development Agreement for land dedication and maintenance fee participation under the Overlay Plan option assures that the public uses are implemented. Conversely, under the Base Plan the land use regulations will be the mechanism for the implementation of the park and open space uses. Under the Base Plan, public funding is not required because park and open space lands are not required to be dedicated.

Response to Comment M6

The zoning allows the development of the Great Park under both options. With the Overlay Plan the Great Park will be implemented through land dedication and fee contributions, and the City (or its designee), in turn, will be the developer of those public uses. Under the Base Plan, the owner of the property will develop the land based on the designated land uses, including the open space, recreational, educational and cultural facilities, agriculture, and other park-like uses, since those are the permitted land uses provided by the Base Plan option.

Response to Comment M7

The EIR analyzed the potential impacts of the Overlay Plan as the maximum buildout of the Plan, including the Development Agreement as an integral part of the Overlay Plan option. If a buyer declines to enter into the Development Agreement, the property would have the General Plan and zoning designation provided in the Base Plan. Any subsequent increase in the density and intensity would require the preparation of a General Plan Amendment, zone change, and the required environmental documentation addressing both project-specific and cumulative impacts.

Response to Comment M8

The City of Irvine is not involved with the sale of land parcels; the DON has publicly stated that it will sell all parcels of the former MCAS El Toro concurrently. As the owner of the property, the DON has indicated that it will divide the land into the four parcels as indicated on the attached figures. The EIR provides an analysis of the project's potential impacts based upon the maximum amount of development allowed under the Base Plan and Overlay Plan regardless of the

manner in which the DON sells the property. (Note: The four referenced parcel figures are included in the Appendix to this Response to Comments document).

Response to Comment M9

The proposed maximum development intensity of the project is defined in Section 3.0 *Project Description*. The City does not propose to exceed the level of development beyond that defined in Section 3.0 and analyzed in the EIR. The development potential is based on densities and intensities achievable under the proposed General Plan land uses and zoning designations, subject to the specific density and intensity caps that are explicit in the proposed project. Any proposed increase in the level of development beyond that described and analyzed in the EIR would require the preparation of subsequent or supplemental environmental documentation to address the potential environmental impacts of such a proposal. The land use densities of the proposed project, as with land use densities for all similar proposed projects in Irvine, are based on and controlled by the maximum allowable development intensity. As such, the density range establishes the framework for analysis within the limits of the maximum development intensity.

Response to Comment M10

The proposed project sets specific maximum levels of density and intensity and the City of Irvine has no intention of changing these levels. Refer to Response to Comment M9.

Response to Comment M11

Comment noted.

Response to Comment M12

The EIR discusses all potential environmental effects of the Overlay Plan which is the maximum buildout scenario as defined in the project description. The City of Irvine has no intention of adding development intensity beyond that which is presented in the EIR. Refer to Responses to Comments M9 and M10.

Response to Comment M13

Refer to Responses to Comments M9 and M10

Response to Comment M14

Per the Overlay Plan, the maximum number of dwelling units in PAZ2 is set at 850, notwithstanding the number of units that could be calculated using the maximum range of the zoning designation. The maximum intensity of development for both the Base and Overlay Plans is specifically depicted in Tables 3-3 and 3-4 of the EIR. Refer to Response to Comment M9.

Response to Comment M15

Refer to Response to Comment M9.

Response to Comment M16

Comment noted.

Response to Comment M17

The air quality impact analysis contained in Section 5.3.3 *Air Quality Environmental Impacts* is adequately assesses the air quality impacts of runway removal as part of the overall project construction. In order to confirm the validity of the initial URBEMIS 2001 model, additional analysis of the airport runway model was completed. As part of this additional analysis, it was determined that the URBEMIS 2001 site grading PM₁₀ fugitive emissions calculations are based on the emission factor prepared by the CARB for construction activities, that include: limited-to-heavy trenching activities; limited-to-heavy earth moving activities by scrapers; road pre-paving activities; paving activities; road grading; scraper excavations; general construction of pads, framing, landscaping, etc.; and drilling, blasting, compaction, and trucking of excavated and fill material. The secondary set of URBEMIS 2001 model runs were performed with the demolition tab enabled. The results of the initial URBEMIS 2001 model run and the secondary URBEMIS 2001 calculations are presented as Table M-1 in the Appendix of this Response to Comments document. The results of the secondary URBEMIS 2001 calculations show that unmitigated PM₁₀ emissions increased to approximately 458-tons per year as compared to 451-tons per year using the initial URBEMIS 2001 data. This represents an increase of less than seven tons, or 1.4 percent of the total unmitigated PM₁₀ emissions. The difference is statistically insignificant and the additional analysis is provided to confirm that the initial analysis adequately assesses the air quality impacts of runway removal as part of the overall project construction. Section 5.3.3 will be amended with the addition of the secondary URBEMIS 2001 calculations and qualitative description.

The Mitigation Measures proposed will apply to all construction activities, including demolition and removal of the runways as well as grading and excavation. Mitigation Measure AQ2 has been amended to read:

“Prior to the commencement of construction activities required to demolish and/or remove existing DON infrastructure, including runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plans ~~plan~~ shall identify implementation procedures for each of the following emission reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.”

Response to Comment M18

Refer to Response to Comment M17. Section 5.3.3 *Air Quality Environmental Impacts* states:

“Both the Base Plan and Overlay Plan propose the development of the entire 4,693-acre base within a 19-year (2007-2025) time frame. For estimation of air emissions, it was assumed that either plan is subdivided into two phases based on utility and extent of the development...For the estimation of air quality emissions from construction of the various facilities, construction activity is assumed to last for a period of three years during each phase. This assumption conservatively accounts for both demolition and grading/excavation activities as major sources of construction-related emissions. The URBEMIS 2001 model is used for estimating construction emissions for all stages of development...Due to the limited availability of specific data regarding construction activities and equipment requirements, the URBEMIS 2001 model default options were used.”

Response to Comment M19

The DON will not transfer fee title to the property of the former MCAS El Toro until the parcels have been remediated to acceptable exposure levels; property not meeting acceptable exposure levels will not transfer or may be transferred to private control through a lease in furtherance of conveyance until the remediation is complete. The EIR will be revised to note that the DON, in the April 2003 Draft Final EBS, evaluated potential soil contamination adjacent to runways and underneath certain runway extensions. In addition, Mitigation Measure HH 5 puts in place a process for responding to potential unidentified contamination were it to be encountered during any construction activity on the former MCAS El Toro. Also refer to Response to Comment M24.

Response to Comment M20

Refer to Responses to Comments M17 and M19 for potential contamination issues associated with runways. Potential impacts to air quality related to the removal of runways, tarmac, and related infrastructure were modeled using URBEMIS 2001 and is presented in Section 5.3 *Air Quality*.

Response to Comment M21

Refer to Responses to Comments M16 through M20. Referenced analysis has been conducted and findings presented in the EIR.

Response to Comment M22

This comment incorrectly assumes that the proposed project provides the authority to develop an additional 14,000 acres of land. Even if the proposed project is not approved and implemented, based on Measure W, the Orange County General Plan precludes development of an airport on the former MCAS El Toro and thereby removes previous land use restrictions due to aircraft

operations. Even in the absence of the proposed project development would have to adhere to the non-aviation designation of the site based on the provisions of Measure W. The project proposes to change the City of Irvine General Plan and zoning designations for the project site from one non-aviation land use plan (e.g., the Millennium Plan, adopted in February 2000) to another non-aviation land use plan, designated the Great Park Plan.

The cumulative analysis provided in Section 7.1 of the EIR is consistent with the provisions of CEQA and the CEQA Guidelines. As stated in the EIR, the CEQA Guidelines allow for the analysis of cumulative impacts to utilize the Regional Growth Projections Method. According to CEQA Guidelines Section 15130, the Regional Growth Projections Method can be a summary of projections contained in an adopted general plan or related planning document which is designed to evaluate regional or area wide conditions. As described in the EIR (EIR, page 7-1), the Regional Growth Projections Method has been utilized for analysis of cumulative impacts. The cumulative analysis is based on buildout assumptions identified in the Center for Demographic Research's *Orange County Projections 2000*. This cumulative analysis takes into consideration buildout of local and regional general plans as well as population forecasts for the County of Orange and the region as a whole (as shown in Figure 7-1 and Table 7-1) (EIR, page 7-1). The EIR is consistent with the CEQA Guidelines provisions for the use of the Regional Growth Projections Method in the evaluation of cumulative impacts, as the OCP-2000 projections are adopted based on regional growth estimates utilized by various jurisdictions throughout the County.

Furthermore, the commentor appears to confuse the intent of CEQA Guideline Section 15130(b)(1)(B)(2) with respect to "probable future projects." CEQA Guideline Section 15130(b)(1)(B)2 addresses the list approach for analysis of cumulative impacts. As previously stated, the Orange County Great Park EIR does not rely on the list approach for the analysis of cumulative impacts. Also, CEQA Guideline Section 15130(b)(1)(B)2 does not apply to the 14,000 acres of land referenced by the commentor as it does not meet the criteria of the Guideline. Specifically: 1) the 14,000 acres is not the subject of an application requiring an agency approval which has been received at the time the notice of preparation was released; 2) the 14,000 acres is not a project identified in an adopted capital improvements program, general plan, regional transportation plan, or other similar plan; 3) the 14,000 acres is not a project anticipated at a later phase of a previously approved project; and 4) the 14,000 acres is not a public agency project for which money has been budgeted." Also refer to Response to Comment I10.

With respect to the City of Lake Forest, the City's adopted General Plan was both reviewed and has been included in the preparation of the Orange County Great Park EIR. Land use assumptions for cumulative growth include the adopted land uses of the City of Lake Forest General Plan. The City of Lake Forest has recently amended its General Plan to remove references to the aviation-use of

the airport, and to delete references to the noise contours and AICUZ boundaries formerly associated with the base operations. However, no land use changes were adopted as part of this recently approved General Plan amendment. Also, no land use changes have been identified or are proposed by the City at this time. The City has just recently solicited proposals to initiate a land use study that would examine potential land use changes within the areas previously restricted by aviation use of the former base. No formal land use change recommendations are expected until sometime in 2004. Because the nature, extent, and timing of potential land use changes that could occur in this area have not been determined, any additional analysis, beyond that provided in the EIR, would be speculative.

With respect to the City of Aliso Viejo, the City is a newly incorporated City and does not have an adopted General Plan. The City is currently in the preliminary stages of preparing a General Plan, which is expected to be adopted in late 2003 or 2004, well beyond the timeframe associated with the Orange County Great Park EIR. Rather than engage in speculation as to the nature, extent, and timing of potential land use changes that could occur in this newly incorporated jurisdiction, the Orange County Great Park EIR relies upon adopted growth projections as allowed by the CEQA Guidelines for the Regional Growth Projections Method.

The analysis of the 14,000-acres is addressed in the EIR, to the degree that the project would cause growth-inducing impacts in the City of Irvine and surrounding jurisdictions (EIR, page 7-13). The EIR concludes that the growth-inducing impacts are significant.

Response to Comment M23

The EIR describes the project's potential contribution to regional air emissions and provides a comparison of these emissions to the projected air emissions within the basin as a whole. The EIR does not rely upon this comparison as the basis for determining the significance of the project's air quality impacts. Rather, this comparison is made to assess the magnitude of the proposed project's impact on the region as a whole. While the EIR states that the project will have a negligible impact on the overall air quality within the SCAB, the EIR concludes that, "due to the size of the project, certain impacts that result from development will be "unavoidable" as these impacts cannot be completely mitigated and most of these changes are irreversible. This is considered a significant unavoidable impact, although the overall effect on air quality within the Basin for the life of the proposed project is estimated at less than one half of one percent." (EIR, page 5.3-55).

With respect to the EIR's conclusion of cumulative air quality impacts, the EIR's conclusion of significance is based on the cumulative impact associated with the regional growth projected pursuant to OCP-2000. The EIR concludes that area-wide emissions as a result of cumulative development pursuant to OCP-2000

projections are considered significant. As stated in the EIR, “operation emissions in conjunction with related projects and other emissions in the Basin will also coincide. Since air quality in the SCAB does not comply with federal or state standards, these emissions will contribute to a cumulatively significant impact on air quality,” (EIR, page 7-6). The tables provided in the discussion of cumulative air quality impacts provide a quantification of pollutant emissions estimates for the year 2025 based on the adopted 1997 Air Quality Management Plan. Also, regional emissions projections are graphically depicted in Figure 5.3-2 of the EIR.

The potential cumulative impacts with respect to CO hotspots are also quantified and evaluated in Section 5.3 *Air Quality*. Table 5.3-29 depicts the CALINE 4.0 8-hour Carbon Monoxide Modeling Results for Post-2025, and demonstrates that no project-specific or cumulative Carbon Monoxide Hot Spot will result.

Response to Comment M24

The EIR includes data and analysis from the DON and other sources of information and uses these sources to draw conclusions for potential impacts to public health and safety. The federal government is required to remediate the site to acceptable exposure levels. As part of its obligation to remediate, the DON continues to monitor the site and publish results of its monitoring and remediation efforts. The April 2003 Draft Final EBS is the most relevant evaluation of continuing remediation efforts; it identifies an additional 76 new potential release locations, all of which require further evaluation for potential releases to the environment and subsequent remediation, if required. The April 2003 Draft Final EBS catalogs the types of sites and distinguishes between those that require no further action, those that require further evaluation, those that require implementation of response actions, and those that require completion of ongoing response actions. The DON will not transfer fee title to the property of the former MCAS El Toro until the parcels have been remediated to acceptable exposure levels; property not meeting acceptable exposure levels will not transfer or may be transferred to private control through a lease in furtherance of conveyance until the remediation is complete. Property not transferred in fee title by the DON can only be developed with institutional controls established by the DON until remediation is complete and the fee title is complete. The April 2003 Draft Final EBS concludes that of the 3,738-acres of base property that are expected to become available for transfer, approximately 84 percent are environmentally suitable for transfer of fee title at the present time. The EIR will be revised to incorporate the latest information available in the April 2003 Draft Final EBS.

Response to Comment M25

Refer to Response to Comment M24.

Response to Comment M26

There is no indication that recordkeeping by the DON differed significantly from recordkeeping in private industry during the period the base was in operation.

Uses of hazardous materials are well-documented, as are facility plans and operating procedures. While quantities of wastes may not have been well-documented in the period prior to the advent and enforcement of RCRA at the base, that is also the case in the private sector. The extensive process of records reviews, visual inspections, and interviews has created as thorough a record of hazardous materials use and disposal practices as exists. The DON and the regulatory agencies participating in the Federal Facilities Agreement concur that the protocol for investigating the base is sound, that the vast majority of potential contamination locations at the base have been identified, and that significant areas of unidentified contamination are not likely to be found. The City is concerned that there may be small areas of unidentified contamination and that these may be encountered during grading and construction activities. Mitigation Measure HH 5 addresses this potential by requiring applicants for grading permits to prepare a protocol plan that will guide responses to the discovery of unknown contamination. Furthermore, the DON is required to complete all necessary remedial actions before title to the former MCAS El Toro is transferred from federal ownership. Even after the title is transferred, the federal government is required to conduct further remediation if additional contamination caused by DON actions is discovered or if a remedy fails to perform adequately. Federal law also provides that DON may be required to indemnify the new owners or certain other parties for liabilities arising from claims for personal injury or property damage resulting from the release or threatened release of any hazardous substances, pollutants or contaminants, or petroleum or petroleum derivatives attributable to DON activities on military installations. Refer to the following letters that are attached in the Appendix to this Response to Comments document: H.T. Johnson, Assistant Secretary of the Navy, Installations and Environment, Letter to the Editor, Los Angeles Times, 5 August 2002; and the letter to the City of Irvine from the DON dated 25 April 2003. Also see the "DOD Policy on Responsibility for Additional Environmental Cleanup after Transfer of Real Property" electronically at: [http://www.dtic.mil/envirodod/Policies/BRAC/brac_flu.htm].

GeoSyntec based its evaluation on the use of PRGs (preliminary remediation goals) for identified contaminants. As the U.S. Environmental Protection Agency notes:

"Preliminary Remediation Goals (PRGs) are tools for evaluating and cleaning up contaminated sites. They are risk-based concentrations that are intended to assist risk assessors and others in initial screening-level evaluations of environmental measurements. The PRGs contained in the Region 9 PRG Table are generic; they are calculated without site specific information. However, they may be re-calculated using site specific data.

PRGs should be viewed as Agency guidelines, not legally enforceable standards. They are used for site "screening" and as initial cleanup goals if applicable. PRGs are not de facto cleanup standards and should not be

applied as such. However, they are helpful in providing long-term targets to use during the analysis of different remedial alternatives. By developing PRGs early in the decision-making process, design staff may be able to streamline the consideration of remedial alternatives. “ EPA, Region 9, Superfund Program:
[<http://www.epa.gov/region09/waste/sfund/prg/index.htm>]

The City supports the use of PRGs in the screening process, but recognizes that site specific characteristics may result in the adoption and implementation of cleanup goals that protect public health and safety without achieving the PRGs. The City will review the specific sites mentioned in the comment and address them in the final EIR.

Considerations for remedial actions objectives are provided in 40 CFR 300.430(e)(2)(i) that states, “remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response.” This means that the DON will be responsible for remediation of the former MCAS El Toro to these exposure levels prior to the transfer of the fee title to the property. The DON has stated that some land-use controls (i.e., easements, covenants, institutional controls, ordinances, etc.) will be required in order to restrict public access on approximately seven Installation Restoration Plan (IRP) sites if those properties are transferred through a lease in furtherance of conveyance. The DON will employ limited land use controls at IRP sites 2, 3, 5, 16, 17, 18, 24; the use of such controls has yet to be determined for IRP sites 1, 8, 11, and 12. This action has been deemed necessary until the IRP sites in question can be remediated to the above mentioned acceptable exposure levels.

Response to Comment M27

Refer to Response to Comment H65. The DON has conducted a revised EBS of the remaining acreage at the former air station (April 2003 Draft Final EBS). The DON has sufficiently analyzed the existing locations of concern and has addressed recommendations for additional potential locations of concern set forth in the City of Irvine’s Solvents Study (January 2000) and the GeoSyntech report commissioned by the County of Orange (November 2001). The Solvents Study and GeoSyntech report predate the March 2003 letter from the City of Irvine; the April 2003 Draft Final EBS conducted by the DON sufficiently addresses environmental concerns at former MCAS El Toro. The City of Irvine has concluded that the assessment of the potential release locations is fair and appropriate.

Response to Comment M28

While the DON did not identify any specific spills or releases prior to 1983 (documentation of waste management practices improved dramatically following the implementation of RCRA beginning in the early 1980s), it acknowledged practices that resulted in releases that most likely caused the contamination problems at the base. These practices included disposal of hazardous materials and wastes to sewers, primarily storm sewer drains, disposal of hazardous wastes in base landfills, use of hazardous materials and wastes in controlling dust on roads and impermeable surfaces, uncontrolled runoff of hazardous wastes, lack of monitoring of underground storage tanks and storage facilities, and the use of hazardous materials and wastes for training of emergency response personnel. The DON's analysis of these practices led to its list of potential locations of concern (LOCs), evaluation of the LOCs, and responses where required. Where other parties, including the City of Irvine, the Restoration Advisory Board, the County of Orange, and the regulatory agencies involved in the base cleanup, have identified other potential locations of concerns, the Navy has responded with additional investigation. In some cases, the Navy, with the concurrence of the regulatory agencies, has concluded that releases did not occur or were not of sufficient magnitude to warrant further evaluation or remediation. For example, in response to the City's Solvent Study, the DON investigated Building 307, the Laundry and Dry Cleaning facility for the base. In its Final Technical Memorandum, the DON concluded that significant releases did not occur at that location and further investigation was not needed. In other cases, the DON has pursued additional evaluation as in the case of the discovery of radium dials at IRP Site 2, which prompted a thorough historical radiological analysis and a radiological survey of much of the base. This evaluation is ongoing. In sum, the City of Irvine considers the DON's process to be responsive to input from interested parties and to be sufficiently comprehensive.

Response to Comment M29

The DON responded to the GeoSyntec report in the April 2003 Draft Final EBS and concurred with seven of the 339 sites recommended for further action or assessment. The remaining 332 sites were either previously assessed, are currently being assessed, or will be assessed in the near future, have closure NFA letters signed by a regulatory agency or are recommended for NFA and are pending regulatory concurrence, or are considered to not require further action or assessment. Regulatory agencies concur with the DON's assessment of the GeoSyntec Report. The DON's April 2003 Draft Final EBS identifies new potential release locations that require further investigation, but does not identify conclusively any significant new risks to public health and safety, nor does it substantially alter conclusions drawn in the EIR.

Response to Comment M30

Refer to Responses to Comments M27 and M29 for information regarding the DON's April 2003 Draft Final EBS and information pertinent to the GeoSyntec report.

Response to Comment M31

Refer to Response to Comment M26. The City of Irvine will continue to review and monitor the base cleanup as it progresses. The City expects the DON to evaluate the seven GeoSyntec recommended new sites with which it concurs regarding the need for further evaluation, along with the other 69 new locations of concern, in a manner that follows regulatory requirements and guidelines and meets the highest of professional standards. At any sites that require remediation to protect public health and safety, the City expects that the DON will meet agreed upon remediation goals that will ultimately result in the transfer of fee title to the property in a condition suitable for unrestricted use.

Response to Comment M32

The DON has publicly stated that it will indemnify new land owners of former air station property in order to mitigate potential soil contamination that is attributable to historic DON operations. Refer to Response to Comment H67. Also refer to Responses to Comments M27 and M29 for information regarding the DON's April 2003 Draft Final EBS and information pertinent to the GeoSyntec report.

Response to Comment M33

Refer to Response to Comment M26. Also refer to Responses to Comments M27 and M29 for information regarding the DON's April 2003 Draft Final EBS and information pertinent to the GeoSyntec report.

Response to Comment M34

Refer to Response to Comment M26. There is no evidence that the Overlay Plan, due to its greater development, will result in greater human contact with contaminated or potentially contaminated soil. For both the Base Plan and the Overlay Plan, the greatest potential impact to public health and safety is the risk of exposure to unidentified contamination, rather than the risk of contact with known contaminated soil or groundwater. Whether currently identified or not, the DON is obligated to remediate the former MCAS El Toro to acceptable exposure levels. Mitigation Measure HH 5 addresses the potential for exposure and reduces the risk to below a threshold of significance.

Response to Comment M35

Refer to Response to Comment M34. The two examples cited in the letter are addressed through Mitigation Measure HH 5. The radiological anomaly found at IRP Site 2 (radium dial) was found on the surface of the site. Perchlorates were identified as part of the required regular groundwater monitoring at the base. In the case of the radiological anomaly, HH 5 requires the preparation of a protocol plan to guide responses to the discovery of unexpected contamination. The plan must include a response to the discovery of a radiological entity as well as more common toxic contaminants. Were the DON to identify additional contaminants of concern in particular geographic locations, protocol plans may be revised. Mitigation Measure HH 5 is amended to read:

“Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities.”

While the DON is reasonably certain that they have identified all potential locations of concern at the former MCAS El Toro, they are prepared to respond to any future identification of potential contamination following transfer of the fee title to the property. This is a prudent approach where complete certainty is not possible.

Response to Comment M36

Refer to Responses to Comments H65, H67, and M27 for information regarding the City of Irvine’s Solvents Study. Refer to Response to Comment M26 for information pertaining to protection of human health and the environment from known or suspected carcinogens, including TCE.

Response to Comment M37

Refer to Responses to Comments H65, H67, and M26 for information regarding the City of Irvine’s Solvents Study.

Response to Comment M38

See Response to Comment H65. The DON responded to the City of Irvine Solvent Study in the April 2003 Draft Final EBS. In its response, the DON concludes that the City of Irvine Solvent’s Study methodology was faulty in regards to the magnitude of solvent use and potential releases via the sanitary sewer system and that the likelihood of releases was small. The DON concluded that the lack of significant releases associated with Building 307, the Laundry and Dry Cleaning Facility, supported its prior conclusion that the sanitary sewer system is not a significant conduit of contamination to subsurface soil or groundwater.

Response to Comment M39

See Responses to Comments H65 and M38.

Response to Comment M40

See Responses to Comments H65 and M38. The April 2003 Draft Final EBS specifically evaluated the City of Irvine Solvent’s Study and concluded that the methodology presented in the study was faulty. Upon review of the April 2003 Draft Final EBS, the City of Irvine now accepts this assessment.

Response to Comment M41

See Response to Comment H65, M38, and M40.

Response to Comment M42

There is no evidence to suggest that unknown contaminated soils are likely to be discovered during excavation of the project site. Refer to Response to Comment M26 for information pertaining to the protection of human health and the environment from known or suspected carcinogens. Per the Mitigation Measures outlined in Section 5.6.5 *Geology and Seismicity Mitigation Measures*:

“Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site...The purpose of the subsurface evaluation is to further evaluate the subsurface conditions in the area...”

In the unlikely event that unidentified contaminants are discovered, the EIR provides an appropriate Mitigation Measure to deal with this scenario. Section 5.5.5 *Public Health and Safety Mitigation Measures* has been amended and read as follows:

“Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities.”

Response to Comment M43

Refer to Responses to Comments M35 and M42. There is no evidence to suggest that unknown contaminated soils are likely to be discovered during excavation of the project site. The former MCAS El Toro will be remediated to an exposure level acceptable to human health and the environment. Mitigation Measure HH 5 addresses this potential issue by requiring grading permit applicants to prepare a protocol plan that responds to unidentified contamination. Refer to the document *Reusing Cleaned Up Superfund Sites: Recreational Use of Land Above Hazardous Waste Contaminant Areas* – EPA Office of Emergency Response (March 2001) for technical information on how sites with waste contaminated areas have been safely reused for recreational purposes while ensuring the integrity and protectiveness of the remedy are maintained.

Response to Comment M44

Refer to Responses to Comments H65, M35, M38, M40, M42, and M43.

Response to Comment M45

Refer to Responses to Comments H65, M35, M38, M40, M42, and M43. The City of Irvine accepts the DON's conclusion in the April 2003 Draft Final EBS that widespread unidentified contamination is not likely to exist at the base. However, if unidentified contamination is discovered, Mitigation Measure HH 5 has been amended and responds to the potential for such localized unidentified contamination to exist and be encountered during grading activities.

Response to Comment M46

Refer to Responses to Comments H65, M35, M38, M40, M42, and M43. The DON is required to complete all necessary remedial actions before the fee title to the former MCAS El Toro is transferred from federal ownership. Even after the title is transferred, the federal government is required to conduct further remediation if additional contamination caused by DON actions is discovered or if a remedy fails to perform adequately. Federal law also provides that DON may be required to indemnify the new owners or certain other parties for liabilities arising from claims for personal injury or property damage resulting from the release or threatened release of any hazardous substances, pollutants or contaminants, or petroleum or petroleum derivatives attributable to DON activities on military installations. Refer to the following letters that are attached in the Appendix to this Response to Comments document: H.T. Johnson, Assistant Secretary of the Navy, Installations and Environment, Letter to the Editor, Los Angeles Times, 5 August 2002; and the letter to the City of Irvine from the DON dated 25 April 2003. Also see the "DOD Policy on Responsibility for Additional Environmental Cleanup after Transfer of Real Property" electronically at:

[http://www.dtic.mil/envirodod/Policies/BRAC/brac_flu.htm]. Using the proposed Mitigation Measure GS2 will require geotechnical assessment for specific development prior to construction; construction delays using this methodology will likely not occur.

Response to Comment M47

Refer to Response to Comment M46.

Response to Comment M48

Refer to Responses to Comments H78 and M46. The DON is required to complete all necessary remedial actions before the fee title to the former MCAS El Toro is transferred from federal ownership. Even after the title is transferred, the federal government is required to conduct further remediation if additional contamination caused by DON actions is discovered or if a remedy fails to perform adequately. Federal law also provides that DON may be required to indemnify the new owners or certain other parties for liabilities arising from claims for personal injury or property damage resulting from the release or threatened

release of any hazardous substances, pollutants or contaminants, or petroleum or petroleum derivatives attributable to DON activities on military installations. Refer to the following letters that are attached in the Appendix to this Response to Comments document: H.T. Johnson, Assistant Secretary of the Navy, Installations and Environment, Letter to the Editor, Los Angeles Times, 5 August 2002; and the letter to the City of Irvine from the DON dated 25 April 2003. Also see the “DOD Policy on Responsibility for Additional Environmental Cleanup after Transfer of Real Property” electronically at:
[http://www.dtic.mil/envirodod/Policies/BRAC/brac_flu.htm].

Response to Comment M49

Refer to Response to Comment M46. The comment acknowledges that federal law requires the DON to remediate any contamination attributable to their actions and indemnify the community from its effects; there is no basis to speculate that the DON will not comply with the law. While the purpose of an EIR is to evaluate environmental and not economic impacts, no economic consequences would result due to the DON’s indemnification.

Response to Comment M50

Refer to Responses to Comments H65, M26, M35, M43, and M46.

Response to Comment M51

Refer to Responses to Comments H65, M35, M38, M40, M42, M43, and M46.

Response to Comment M52

Refer to Responses to Comments H65, M26, M35, M43, M44, and M46. The DON’s initial 1995 EBS and April 2003 Draft Final EBS outline specific areas of soil contamination that will require remediation prior to ownership transfer. The DON has stated that some land-use controls (i.e., easements, covenants, institutional controls, ordinances, etc.) will be required in order to restrict public access on approximately seven Installation Restoration Plan (IRP) sites. The DON will employ limited land use controls at IRP Sites 2, 3, 5, 16, 17, 18, 24; the use of such controls has yet to be determined for IRP Sites 1, 8, 11, and 12. This action has been deemed necessary until the IRP Sites in question can be remediated to the above mentioned acceptable exposure levels.

Response to Comment M53

Refer to Responses to Comments M54 through M58.

Response to Comment M54

The study included explicit phase and analysis for 2007 conditions (short-term), 2025 (long-term), and post-2025 (General Plan buildout) conditions. This is consistent with requirements of the City of Irvine Traffic Impact Analysis guidelines. The 2007 analysis was included specifically to identify necessary phasing of short-term and long-term improvements. The City of Irvine has also developed an implementing mechanism in the form of the North Irvine

Transportation improvement Mitigation (NITM) program. Ongoing monitoring of study area conditions, as a feature of the NITM program, is in the form of an interim and 5-year review.

Response to Comment M55

The EIR, in conjunction with NITM, provides significant detail regarding the timing of construction of necessary roadways, and links development to the completion of the roadways. The information regarding the timing of construction of facilities presented in the referenced tables was obtained directly from the agency responsible for each improvement or the environmental document that required associated with each improvement. Construction of those improvements in the subject tables that are related to future development is tied to the development as required mitigation measures, and/or conditions of approval, that must be constructed in conjunction with the specified development. The tables referred to in the comment represent the best knowledge available regarding the timing of future development and anticipated roadway improvements.

Response to Comment M56

Refer to Responses to Comments M54 and M55. The EIR and NITM provide for comprehensive phasing for all necessary traffic improvement. For non-NITM improvements, Mitigation Measure Trans 4 specifically requires their construction by the developers of the Great Park, with construction phased in relation to Great Park development. The non-NITM improvements are designed to mitigate the specific impacts for which these improvements are required in the EIR. With respect to NITM improvements, the NITM program allocates funding responsibility for all improvements on a proportioned basis between Great Park and other properties generating traffic that necessitate the improvement. NITM also sets forth a phasing program for construction.

Response to Comment M57

Refer to Response to Comment M56.

Response to Comment M58

Refer to Response to Comment M56.

Response to Comment M59

The statement that no peak hour impacts were identified is incorrect. The segment of University Drive between the I-405 southbound ramps and Michelson Drive was identified for 2025 conditions as a roadway segment where an additional southbound through lane was required. The results of the daily and peak roadway segment analysis, in conjunction with the peak hour intersection analysis, did in fact accurately and adequately identify potential project impacts and required mitigation measures (mid-block or through travel lanes).

The key difference between the roadway segment daily and peak hour analysis is that the daily capacities assume a variety of impediments to capacity, including

the presence of cross-street intersections that consume a substantial proportion of available capacity. The peak hour capacities are focused on identifying the potential need for mid-block travel lanes based on unimpeded mid-block conditions.

The basic assumptions of the daily segment analysis and the peak hour segment analysis are different, corresponding to the different purposes of the two types of analysis. The daily segment analysis is intended to be utilized as a very general measure of roadway performance and includes the potential capacity reductions due to mid-block intersections. The peak hour segment analysis is intended to evaluate the specific need for mid-block travel lanes in the absence of cross-street interference.

Response to Comment M60

Refer to Response to Comment M59.

Response to Comment M61

The policy addressed in the comment is an already existing rather than proposed General Plan policy. The proposed project merely makes PA 30 subject to Policy B-1 of the General Plan Circulation Element. The application of the existing policy to PA 30 has been specifically analyzed in the EIR and the analysis concludes that the application of this policy allows for LOS E at two intersections (EIR Page 5.2-58). It is the prerogative of the City of Irvine to establish appropriate performance standards within its local jurisdiction.

Response to Comment M62

Refer to Response to Comment M61. The issue of thresholds of significance (impact) is separate from the concept of the local jurisdiction's right to establish the appropriate performance standard for the community.

Response to Comment M63

The comment deals with additional analysis provided by the EIR to examine future conditions if the City approves the General Plan Amendment and Zone Change for PA 40 (the "probably future project"). This project was previously approved but subjected to a litigation challenge. The PA 40 impacts and PA 40's responsibility to fund its proportionate share of traffic mitigation are set forth in the NITM program. Application of the NITM program will generate sufficient fees to timely fund construction of all traffic improvements necessary for the development of the Great Park, PA 40, and the remainder of undeveloped north Irvine.

Response to Comment M64

The Great Park Traffic Impact Analysis does take into account all anticipated growth in traffic for surrounding communities and the entire region, based on adopted growth forecasts for the entire County of Orange and surrounding region. The area model (ITAM) includes existing development and regional

growth projections for Orange County and the relevant portions of Los Angeles County, Riverside County, San Bernardino County, and Ventura County, as well as projected increases in interactions with the surrounding areas via the regional roadway system.

Response to Comment M65

The Traffic Impact Analysis executive summary is simply a summary of the proposed mitigation program; they are discussed in greater detail on page 5.2-71 of the EIR. That analysis concludes that if such programs were not implemented by the responsible regional agencies the cumulative impacts would be significant and unavoidable. Also refer to Responses to Comments F36 and S6.

Response to Comment M66

The sources referenced in the comment represent specific funding sources that are responsible for implementing the roadway improvements identified in the Traffic Impact Analysis developed for the EIR. The funding sources generally fall into two categories; the first funding source category is development projects that have been approved. The implementation mechanism/assurance of funding is the specific condition of approval requiring that the improvement be constructed in conjunction with the approved development project. The second funding source category is local agencies that have included specific improvements within their capital improvement program. Projects are only included in the local agency capital improvement program when they are associated with a specific funding source identified by the local agency.

Response to Comment M67

Land use based trip rates and socioeconomic data (SED) based trip rates simply reflect two different but commonly accepted approaches to evaluating traffic. There are underlying differences in the ways that land use based models and SED based models are used to forecast future traffic. Traffic models validated using land use data or SED have both been shown to match (validate to) existing traffic volumes quite well. Traffic forecasts for the Great Park Traffic Impact Analysis that match the regional SED driven forecasts are now a mandatory modeling consistency requirements based on stated and federal legislation. The ITAM model incorporates the conversion from one approach to the other and has been validated to existing traffic volumes.

Response to Comment M68

A key difference between land use based and SED based models is how they treat "linked" trips. A land use based model treats linked trips as two shorter individual trips. A SED based model treats the same linked trip as a longer single trip. The land use model has higher trip generation because it assumes that longer trips have stops and computes one longer trip as multiple shorter trips. As a result, the 6,256 trips under the land use model is a different way of expressing the same number of trips under the SED because they are both based on the same vehicle miles traveled per day.

Response to Comment M69

Refer Responses to Comments M54 to M58.

Response to Comment M70

Both direct and indirect potentially significant noise impacts are discussed in detail in the EIR. Section 5.4.3 *Noise Environment Impacts* discusses noise impacts relating to project construction activities, post-construction, traffic noise, project land use noise, and off-project area noise. Refer to the EIR, pages 5.3-22 through 5.3-34, as well as the Environmental Noise Assessment technical report (Appendix H of the EIR), for presentation of noise data and a comprehensive discussion of potential noise impacts. Traffic noise impacts were analyzed and determined based on current, accepted FHWA and Caltrans modeling methods, as well as compatibility guidelines established by the local county and city jurisdictions. Beyond this program level analysis, more detailed traffic noise assessments may be conducted as specific projects are developed.

Response to Comment M71

Noise impacts related to traffic generated by the project both on- and off-site are discussed in Section 5.4.3 *Noise Environmental Impacts* from traffic volume data presented in Section 5.2.3 *Traffic/Circulation Environmental Impacts*. The potential traffic noise impacts on noise-sensitive receptors due to the Great Park Plan were evaluated in accordance with methodologies established by the FHWA and CALTRANS, as well as compatibility guidelines established by the local county and city jurisdictions. Beyond this program level analysis, more detailed traffic noise assessments may be conducted as specific projects are developed. Mitigation Measure Trans 1 does not indirectly confirm the conclusion surmised in Comment M71; part of the purpose of requiring a project applicant to apply for annexation to the Irvine Spectrum TMA is to address traffic, air and noise impacts. Mitigation Measure Trans 1 further states that should this annexation application not be approved, a TMA shall be developed and implemented for the project. Additionally, the EIR concludes that traffic impacts resulting from the proposed project would be reduced to a less than significant level with implementation of the identified Mitigation Measures.

Response to Comment M72

The comment is in reference to residential development located in the transit-oriented development area which is designed to be in close proximity to the Urban Transportation Center and railway. Section 5.4.1 *Noise Environmental Setting* states:

“The Irvine Transportation Center, a major multi-modal transit center linking bus, commuter rail, and Amtrak rail services, is located along the southern edge of the project area, adjacent to the Southern California Regional Rail Authority railroad.”

California Building Standards establish uniform minimum noise insulation performance standards to protect persons from the effects of excessive noise in multi-family dwellings. Furthermore, as stated in Section 5.4 *Noise California Building Standards*:

“Interior noise levels attributable to exterior noise source must not exceed 45dBA in an habitable room...When the exterior noise levels cause interior noise levels to exceed 45dBA, the building must be designed to prevent the transmission of exterior noise....The California Building Standards will apply to...habitable dwellings other than detached single-family homes within the project site.”

Response to Comment M73

Refer to Responses to Comments M70 through M72.

Response to Comment M74

Comment 74 is responded to in Responses to Comments M75 through M79.

Response to Comment M75

Refer to Figure 5.7-1 for drainage areas and topography information. Per the EIR, a Flood Control Master Plan has been adopted by the City of Irvine, the City of Tustin, the Irvine Company, and the Orange County Environmental Management Agency and is currently being implemented in phases by these agencies. The phasing of flood control system improvements in PAs 51 and 30 will be coordinated with street-phasing schedule so that stormdrains are installed prior to or in concert with road construction. The City's DAMP requires that BMPs be implemented in order to reduce increased runoff to stormdrains. The EIR concludes that the potential for flooding to occur both on- and off-site as a result of future development of the project area is considered a significant impact. To this end, Mitigation Measure H/WQ4 is provided to reduce that potential impact to one of less than significant.

Response to Comment M76

As described in the EIR, the project site is located within the San Diego Creek watershed. No formal delineation of the 100-year flood plain has been prepared by FEMA for the project site as it has been under federal ownership. However, as described in the EIR, the “Flood Control Master Plan for San Diego Creek” (John M. Tettemer and Associates, 1989) identified a range of flood control improvements for the San Diego Creek watershed that would control flood peaks based on a 100-year flood (EIR page 5.7-4). The proposed project will provide for the construction of drainage improvements that are consistent with the Flood Control Master Plan. While the EIR states that some flood control deficiencies remain in the existing condition, any potential flood control deficiencies would be corrected through the implementation of the drainage improvements identified on Figure 5.7-2 Proposed Drainage System of the EIR and through implementation of Mitigation Measures H/WQ 3 and H/WQ 4.

As described in the EIR, developers with property located in the newly delineated 100-year floodplain will be required to construct such improvements as necessary to remove the property from the 100-year floodplain and to prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the flood control facilities.

Response to Comment M77

Refer to Response to Comment M76.

Response to Comment M78

This comment incorrectly recites text from EIR page 5.7-6. The EIR does analyze the potential impacts resulting from stormwater volume, identifies appropriate mitigation measures, and addresses how well they will reduce the impacts to a level less than significant (see EIR pages 5.7-13 through 5.7-26).

As described in the EIR, as part of site planning for the reuse of the former MCAS El Toro, a hydrology study for the 100-year storm event was prepared. Design discharges were developed, and Table 5.7-3 of the EIR provides a quantified summary of the peak flows. (EIR, page 5.7-15, 16) A drainage concept plan has been prepared for the project which addresses stormwater flows on the project site. The locations and sizes of drainage pipes and the proposed drainage channels were determined based upon the level of anticipated runoff from various land uses so as to maintain and improve the existing level of flood control service within the project area.

Response to Comment M79

The requirement for Section 404 Permit and related wetlands and dredge/fill permits are a component of the project; the EIR identifies future potential permit requirements for project implementation, including the potential need to obtain a Section 404 Permit from the US Army Corps of Engineers (EIR, p. 3-30). Issues related to dredge and fill of regulated waters is also addressed on 5.9-17 with specific mitigation cited on page 5.9-25. Permits will be obtained as necessary as future projects are proposed within the project area. There is only a small amount of wetland habitat located on the project site. The provision of large “daylighted” earthen drainage corridors in addition to the proposed wildlife corridor will provide ample opportunity for the development of viable wetland habitats within the project area.

Response to Comment M80

Refer to Response to Comment M22. The development of the 14,000-acres previously contained in the AICUZ is not affected by this project.

Response to Comment M81

Refer to Response to Comment M22.

Response to Comment M82

The proposed project will accommodate regional drainage control facilities. The project does not rely upon flood control systems already in place to mitigate potential impacts; rather, the EIR analyzes water quality impacts and the project proposes a comprehensive approach to addressing drainage control through the provision of drainage and flood control facilities on-site that will accommodate both project-specific runoff volumes as well as provide for regional flood control facilities. Refer to EIR pages 5.7-13 through 5.7-26.

Response to Comment M83

This comment introduces Comments M17 and M87 through M94.

Response to Comment M84

Refer to Response to Comment M17.

Response to Comment M85

Refer to Response to Comment M17. The existing analysis in the EIR evaluates both demolition and construction impacts.

Response to Comment M86

Refer to Responses to Comments M17 and M85.

Response to Comment M87

To provide a reasonable means to estimate air construction emissions in the EIR, it was assumed that either plan (Base and Overlay Plan) is divided into two phases based on the reasonable utility and extent of development being considered at this stage of the project. The first phase is assumed to last ten years (2007-2016) and the second phase is assumed to last the remaining nine years (2017-2025). For each phase, construction activity was assumed to last for a period of three-years, but spread out over a four-year schedule for emission estimation purposes. At this stage of the project, the aforementioned phased methodology of estimating air construction emissions is a reasonable approach considering the level of broad environmental impact analysis. The air quality impact remains the same whether demolition and construction occurs over two, three-year time periods or a single twenty-year time period; the quantity of the construction-related air emissions does not change whether the construction occurs over a shorter or longer timeframe. By analyzing over a shorter time period the EIR evaluates the more intense development scenario for these emissions.

Response to Comment M88

Refer to Response to Comment M87.

Response to Comment M89

The comment misapprehends the restrictions set forth in the proposed General Plan amendment; the numerical limits for allowable uses within the Great Park are the maximum allowed intensity level. Refer to Responses to Comments M9

and M87. The air quality analysis presented in the EIR is based on the buildout limits of the Overlay Plan and the Base Plan.

Response to Comment M90

Refer to Response to Comment M89.

Response to Comment M91

Section 5.3.5 of the EIR outlines several proposed construction and operational air quality impact mitigation measures that are recommended by the South Coast Air Quality Management District (SCAQMD) that may be implemented during the various phases of the project. Mitigation Measures AQ1 through AQ4 are outlined on pages 5.3-53 through 5.3-55 and will be implemented during various phases of the project.

Response to Comment M92

The comment is in error; see Mitigation Measures AQ1 and AQ2 on pages 5.3-53 and 5.3-54 in the EIR. Refer to Response to Comment M91.

Response to Comment M93

Refer to Responses to Comments H67, H77, and M87.

Response to Comment M94

Refer to Responses to Comments H67, H77, and M19.

Response to Comment N1

Comment noted. Traffic studies prepared in conjunction with specific development applications within the project site will be forwarded to the TCA for review as appropriate.

Response to Comment N2

Comment noted.

Response to Comment N3

Comment noted.

Response to Comment N4

Comment noted.

Response to Comment O1

Comment noted. This letter concludes that the EIR includes a discussion of the proposed project's consistency with SCAG policies and applicable regional plans, which were outlined in the SCAG's 6 November 2002 letter on the Notice of Preparation for the EIR.

Response to Comment P1

The City of Irvine proposes the construction of natural drainage corridors as a major project feature in order to achieve drainage control as well as water quality, biological, and aesthetic benefits associated with wetland/riparian restoration. To that extent the City anticipates restoration efforts will involve, among other disciplines, urban stream restoration specialists. The City envisions that these areas will be planted with native species to the extent practicable.

Response to Comment P2

The City of Irvine recognizes that site-specific best management practices (BMPs) implemented for each specific construction project will need to comply with RWQCB NPDES requirements. As required by Mitigation Measure H/WQ 2, prior to issuance of a grading permit for site specific development, evidence shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TMDL) Implementation Plan adopted for this watershed.

Response to Comment P3

The City of Irvine intends to reconstruct the currently underground Bee Canyon Channel and Agua Chinon Channel into natural drainage corridors. However, it is not likely that any new flood plain delineations prepared for the project area will reflect historic zones of flooding, as they will need to reflect the existing and proposed hydrological condition within the project area, not historic conditions.

Response to Comment P4

As depicted in Figure 5.7-2 of the EIR, four potential Irvine Ranch Water District (IRWD) NTS Water Quality Basins are proposed within the project area. One basin is proposed at the northern portion of the project site (PAZ 1) within the Marshburn Basin, while the remaining three are proposed at the “downstream” end of the two drainage corridors, and the wildlife corridor. The placement of the NTS facilities allow for regional water quality to be addressed by the IRWD in its environmental assessment of their NTS project. However, the City of Irvine will also provide, as necessary to meet NPDES requirements, structural and non-structural BMPs on a site-specific basis to ensure that polluted runoff is minimized.

Response to Comment P5

Development is not proposed within the Serrano Creek; however, some drainage improvements are proposed within this area as part of the overall drainage concept plan. While implementation of the proposed project will result in some isolated wetland impacts, the overall quality and value of wetland habitat is anticipated to be significantly enhanced by the proposed natural drainage corridors.

Response to Comment P6

It is anticipated that the "Q" will change as a result of project development. For example, currently undergrounded drainage systems that are proposed to be daylighted and restored as part of the project would experience a change in Q as these areas will become vegetated, with a meandering alignment and varying topographic conditions. Also, these drainages will be designed to accommodate additional runoff created by new development within the project area. However, all drainage facilities are proposed so as to avoid impacts to downstream and/or off-site facilities.

Response to Comment P7

Comment noted.

Response to Comment P8

Comment noted.

Response to Comment Q1

For the Final EIR, the IRWD letter dated 4 April 2003 will be added to Appendix C of the EIR along with the supplemental material provided as part of this document. This supplement confirms the validity and does not materially affect the conclusions reached in the WSA prepared for the subject project.

Response to Comment R1

A traffic study area for the purpose of assessing the project's potential traffic impacts has been defined, and is illustrated in Figure 5.2-1 of the EIR. The limits of the study area are defined by the amount of trips resulting from the proposed project and the potential to impact circulation systems. As shown in Figure 5.2-1, the trip distribution of the proposed project would not extend into areas of Newport Beach and Huntington Beach, and a significant amount of traffic is not expected to utilize Pacific Coast Highway.

Response to Comment R2

Refer to Response to Comment R1.

Response to Comment R3

Estimating the number of airline passengers generated by the proposed project and determining which airports these passengers would utilize is speculative. Additionally, this information does not represent a potential environmental impact.

Response to Comment R4

The amount of urban runoff generated by the project that will be recycled or used for irrigation has not been quantified. Normally, urban runoff is not recycled and directly utilized for irrigation purposes. Reclaimed water, which is sewage that has been substantially treated, is the primary water source utilized for irrigation purposes in the City. However, the proposed project will provide unique project features that will offer opportunity for recharge of groundwater from runoff in the form of the construction of two major natural drainage corridors – the Bee Canyon Channel and Agua Chino Channel. Both of these channels currently traverse the project site underground and do not contribute to recharge in the area. Reclaimed water will be provided to the project area to serve a majority of the landscaping needs on-site.

Response to Comment R5

Analysis of project impacts to public services as well as public health and safety is included in the EIR. There is no evidence to provide a link between homelessness, infectious disease, and lawlessness.

Response to Comment R6

There is no provision in the Orange County Great Park plan that dictates where residents should live and work. The Transit Oriented Development (TOD) land use designation proposed within the project area is intended to encourage the use of alternative modes of transportation by locating housing units in proximity to major public transit systems (e.g., the Metrolink station), employment centers, and shopping. Under the TOD designation, more refined TOD principles will be employed in this area as specific developments are proposed, such as the provision of pedestrian connections, to encourage the use of alternative modes of transportation.

Response to Comment R7

The Orange County Great Park plan does not dictate where employees working within the project site shall live. It is anticipated that persons residing in other communities will commute to the project site. This issue has been factored into the trip generation assumptions of the traffic analysis of the EIR.

Response to Comment R8

It is anticipated that the Orange County Great Park will be visited and used by a variety of people, who both live and work in the area, as well as tourists from other areas. The Orange County Great Park is envisioned to provide a variety of uses that will attract a large cross-section of people.

Response to Comment R9

Public transportation will be available to the project site. No determination has been made as to whether or not there will be a charge for parking in any portion of the project site, and if so, what that amount would be.

Response to Comment R10

The City has not determined the number of picnic tables that will be provided at the Orange County Great Park. This will be determined as site-specific park and recreational improvements are implemented within the various portions of the project site.

Response to Comment R11

No determination has been made whether the Orange County Great Park will provide a petting zoo feature, although this type of use is considered compatible with the type of uses envisioned for the park.

Response to Comment R12

No determination has been made whether the Orange County Great Park will provide a carousel, although this type of use is considered compatible with the type of uses envisioned for the park.

Response to Comment R13

The potential air quality impacts of the proposed are analyzed in Section 5.3 *Air Quality*. Table 5.3-12 depicts the Mitigated Construction Emissions for the development of the project area. These emission estimates conservatively account for demolition and grading/excavation activities as major sources of construction emissions.

Response to Comment R14

Construction noise, including the demolition of runways, is evaluated in Section 5.4 *Noise*. Table 5.4-8 depicts Typical Noise Levels for Construction Equipment. As shown, the noise level associated with the operation of unquieted jack hammers ranges between 75 and 85 dBA measured at 50 feet.

Response to Comment R15

The runway debris is proposed to be recycled onsite for use in constructing roadways and other supporting infrastructure for the project. As described on page 3-28 of the EIR, the runways can be removed in a sequential manner with stockpiling of materials onsite as required to permit maximum economy of scale in the operation.

Response to Comment R16

The runways will not be available for emergency landings once removal activities have been initiated.

Response to Comment R17

The demolition activities and runway removal will be phased with development onsite. Most of the supporting infrastructure will be constructed in the early phases of the development of the project site, which is expected in the first 3 to 5 years of project site development.

Response to Comment R18

Specific activities of any federal agency, including the Federal Aviation Administration (FAA) and Federal Bureau of Investigation (FBI) are subject to federal environmental regulations, including review under the National Environmental Policy Act (NEPA). Potential land use compatibility impacts would need to be evaluated based on the specific activity proposed by the federal agency. There is no information that indicates the FAA will use one-fourth of the former air station for aviation purposes, as such use is inconsistent with the Record of Decision adopted by the DON.

Response to Comment R19

Refer to Response to Comment R18.

Response to Comment S1

The comment states that the assumptions used in the analysis are theoretically within reason. The ITAM tool used to develop the future forecasts is consistent with the OCTAM travel demand forecasting tool, which is the regionally (County of Orange) adopted tool for developing future traffic forecasts on the regional roadway system, including the freeways and transportation corridors. Both ITAM and OCTAM have been validated against existing conditions including the freeways and transportation corridors.

Response to Comment S2

The planning level capacities used in the analysis (2,000 vehicles per hour per lane) are reduced to below their operational level capacities as observed in southern California (2,300 vehicles per hour per lane). It is reasonable to assume that including the additional capacity provided by an additional (truck climbing lane) offsets the loss of capacity that is already reflected in the planning level capacities used in this analysis. Regardless of capacity, the project contributes less than 0.03 to the volume capacity ration on the subject segments and accordingly does not exceed the CMP impact threshold for further analysis.

Response to Comment S3

Caltrans staff was contacted regarding ramp metering practices within the study area. No quantitative ramp metering plan was available for inclusion in the analysis and Caltrans could not provide a consistent schedule of ramp meter operations so it is impossible to determine where ramp metering will occur or when any given ramp meter will be operational. Therefore, it is appropriate to utilize the existing unmetered condition as the basis for projecting future traffic conditions and potential deficiencies. Storage of vehicles for a metered condition would of necessity utilize the arterial roadway system approaching the ramps to provide storage.

Response to Comment S4

The comment does not refer to any specific location(s) such that no site-specific response is possible. The Traffic Impact Analysis indicates that future traffic volumes are generally expected to increase over time. Isolated cases where improved future levels of service are projected to occur are most likely related to planned/funded improvements at the location in question.

Response to Comment S5

Proposed mitigation measures are based on environmental factors; the City of Irvine has no control over agreements entered into between Caltrans and other governmental agencies. The non-compete clause, for example, could result in one or more of the City of Irvine's mitigation measures not being implemented, but this is outside of the City of Irvine's control. The final EIR has been modified on page 5.2-71 to include discussion of the non-compete agreement and its potential effects on mitigating cumulative impacts. To the extent that the non-compete clause interferes with implementation of mitigation measures proposed

by the EIR, cumulative impacts would not be mitigated and thus remain significant and unavoidable. The following text has been added to Mitigation Measure Trans 7 on page 5.2-70 of the EIR:

“The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-compete clause or any similar agreement restricting a public agency’s authority to construct improvement.”

Response to Comment S6

The regional funding programs referenced in the EIR are not used as project mitigation. Rather, these programs are recognized as the regional approach to addressing cumulative impacts. The EIR mitigation measures address all project impacts that were identified in the Traffic Impact Analysis, subject to constraints such as those identified in Response to Comment S5 (TCA non-compete agreements).

Response to Comment S7

Comment noted.

Response to Comment T1

The EIR recognizes that the proposed Great Park project area currently and historically has had some wildlife movement; however, the project area does not currently serve as a significant wildlife movement corridor between the habitat preserve and the coastal habitat preserves. Additionally, by definition, a corridor is a linear habitat whose primary wildlife function is to connect significant habitat areas. Therefore, by definition, no wildlife corridor currently exists within the project area.

The Wildlife Corridor planning efforts are on-going, and the Orange County Great Park Plan land use concepts will accommodate this on-going planning effort to ensure that the proposed route of the new wildlife corridor is a viable one. Previously, as a part of the wildlife corridor feasibility study, preliminary "fatal-flaw" analysis was conducted on 15 August 1999, which has been examined on several subsequent occasions by wildlife biologists. The biologists examined the proposed route and its feasibility as a wildlife movement corridor. Additionally, a focused survey of the biological conditions along the proposed corridor was conducted on 7 September 1999. The biologists surveyed the extent of the route including the adjacent connective habitat at the start and end of the proposed corridor. Serrano Creek and Borrego Canyon Wash were also surveyed for use/potential use as wildlife corridors. Subsequent to these initial surveys, the proposed wildlife corridor has been informally surveyed by wildlife biologists and members of conservation groups.

As depicted in the Section 3.0 *Project Description* Figure 3-7 of this EIR, the riding and hiking trail is proposed to parallel Irvine Boulevard until it reaches the Habitat Preserve. At this point, the riding and hiking trail will extend north toward SR 241 and the Agua Chinon Reservoir. The biking and hiking trail does not enter the Wildlife Corridor.

As described in Figure 5.9-2, the proposed development within Planning Area 18 includes a golf course with a clubhouse and some residential uses. To ensure the compatibility with the Wildlife Corridor, the clubhouse and residential units will be subject to development regulations that will be created as part of a wildlife corridor master plan.

The City of Irvine will continue to work with State and federal agencies to implement the revegetation/restoration plan necessary to create a viable wildlife corridor within the project area.

Response to Comment U1

Considerations for remedial actions objectives are provided in 40 CFR 300.430(e)(2)(i) that states, "remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response." The DON will be responsible for remediation of the former MCAS El Toro to these exposure levels regardless of the land use designation or the population that resides there. The DON has publicly stated that it will indemnify new land owners of former air station property in order to mitigate potential soil contamination that is attributable to historic DON operations.

Response to Comment U2

The objectives of the proposed project are defined in Section 3.0 *Project Description* of the EIR. As described, Measure W amended the County of Orange General Plan to remove the designation of the project site as a commercial airport. Therefore, implementation of a commercial airport would not be consistent with Measure W.

Response to Comment V1

Comment noted. Refer to Responses to Comments V2 through V20 for a detailed response to each of the comments raised by the commentor.

Response to Comment V2

Page 5.2-41 of the EIR, under the heading Master Plan of Arterial Highways Amendment, discusses the issues of consistency with the MPAH and the proposed amendments. The EIR also recognizes that typically, a cooperative study would occur prior to the City amending its General Plan. However, since OCTA cannot recognize the City of Irvine's jurisdiction on the former MCAS El Toro until the annexation is complete, the EIR states that the City of Irvine will enter into a cooperative agreement as soon as possible following the annexation of the property to the City of Irvine.

Mitigation Measure Tran 6 addresses this issue:

"Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of any building permits within the base property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdiction to amend the Orange County Master Plan of Arterial Highways. Marine Way, Trabuco Road from the SR-133 tollway to College Road, and Y Street should be included on the MPAH."

Response to Comment V3

The post year 2025 roadway network is depicted in Figure 5.2-23. The assumed roadway network does not include the extension of Culver Drive north of Portola Parkway.

Response to Comment V4

The discrepancy is a typographical error on Table 5.2-11 (Table 5-15 of the Traffic Impact Analysis). These tables have been amended to reflect the correct figure of 9,732 trips. The figure of 9,732 trips was correctly utilized in both the air quality analysis and the actual traffic impact analysis.

Response to Comment V5

Refer to Response to Comment S6. Although the City of Irvine intends that the project will contribute its fair share towards mitigation/improvements on impacted freeway segment, the City of Irvine does not control the implementation process. Therefore a statement of overriding considerations is necessary if certain mitigation measures are not implemented by the responsible agency (Caltrans). Caltrans comments on the EIR, for instance, specifically identified their non-compete agreement with the Transportation Corridor Agency(ies) (TCA) as a potential impediment. The regional funding programs referenced in the EIR are not used as project mitigation. Rather, these programs are recognized as the regional approach to address cumulative impacts. The impact of OCTA providing extra-peak and off-peak train service was not evaluated in the Traffic

Impact Analysis, thereby making the analysis more conservative with regard to future traffic impacts.

Response to Comment V6

Refer to Responses to Comments H2 and V4. The City of Irvine has made every effort to accurately reflect anticipated project land uses and trip intensities in preparing the Great Park plan. However, in the event that the OCTA facility generates more traffic than was analyzed in the EIR, additional and separate environment analysis may be required for the OCTA facility. Any development proposed by OCTA, if it becomes a landowner in the future, which is not consistent with the proposed plan and EIR will require additional environmental evaluation.

Response to Comment V7

The explanatory variable of employment is intended to capture both actual employee trips and ancillary traffic, such as buses entering and leaving the facility, maintenance vehicles etc. Regarding any traffic not anticipated in the Great Park project description, refer to the Response to Comment V6.

Response to Comment V8

The City of Irvine intends to coordinate closely with OCTA regarding the realignment of Marine Way and any impact to the existing OCTA Bus Operations and Maintenance facility. Meetings have already taken place with regard to the realignment issue.

Response to Comment V9

The City of Irvine standard street design manual specifies transit amenities such as concrete bus pads, bus turnouts, layover areas, benches, and other amenities. All streets in the Great Park will be designed in compliance with the City of Irvine standard street design manual. The specifics of the transit system will be determined prior to the implementation of the project. As stated in Mitigation Measure Tran 7:

"Prior to issuance of any building permits on the Great Park property, the City of Irvine shall coordinate with the Orange County Transportation Authority to restructure transit service plans to provide effective service to the project area."

Mitigation Measure Tran 2 states:

"Prior to the first building permit, the City shall prepare a transit system/infrastructure fee program to fund improvements identified as mitigation measures for the project area."

The implementation of these two Mitigation Measures will provide the necessary detailed transit service and the associated funding which would subsequently be used for detailed identification of transit amenities.

Response to Comment V10

Comment noted. If development of the project requires temporary use of OCTA's right-of-way, appropriate agreements will be entered into prior to entry.

Response to Comment V11

During implementation phases of the proposed project, the City of Irvine will evaluate the demand for additional park and ride facilities to serve the project area. Additional parking area at the Irvine Transportation Center is included in the Overlay Plan.

Response to Comment V12

The various public uses and educational facilities may create the need for an internal shuttle service. This will be addressed during the implementation phases of the project as more detail on the operational aspects of the various land uses are known and the ability to finance an internal shuttle service is evaluated.

Response to Comment V13

The comment appears to refer to the extension of Marine Way as an at-grade crossing. Marine Way is intended to be a grade-separated over-crossing of the SCRRA rail lines.

Response to Comment V14

The traffic analysis of the EIR has addressed the Level of Service of the entire network serving the Great Park Plan, including all the streets mentioned in the comment.

Response to Comment V15

Refer to Responses to Comments C1 and V13.

Response to Comment V16

Use of the term "major event" in the comment is unclear. The operators of facilities located in the referenced location would be required to submit traffic and parking management plans as part of their master plans for the City of Irvine's approval. This EIR addresses the impacts and identifies mitigation measures for the Great Park Plan and zoning designations for the proposed project. Operational issues will be part of the future permit processing of those facilities.

Response to Comment V17

Comment noted.

Response to Comment V18

The City of Irvine General Plan Circulation Element has established policies to connect the City's trails to the regional trail network. The Great Park Plan will provide opportunities for the expansion of the trail system. As stated in the EIR, the City will continue to encourage such enhancement throughout the planning and implementation stages of the project. The Class II bike trail will remain along Irvine Boulevard and link to the Class I bike trails in the drainage corridors that traverse the Great Park.

Response to Comment V19

Refer to Responses to Comments C2 and H29. The City of Irvine is adding the County of Orange's proposed bike trail to its Trail Network. Were funding to become available through the County, or were the City to initiate the specific design of the Class I bike trail mentioned in the comment, coordination with OCTA would be required.

Response to Comment V20

Comment noted.

Response to Comment W1

Measure W was drafted in response to evidence that the citizens of Orange County opposed a commercial airport at El Toro and preferred a non-aviation reuse of the base property with public benefit uses such as open space, recreational, educational and cultural amenities. In order to change the airport designation of the former MCAS El Toro in the County's General Plan, Measure W also had to specifically override Measure A which had established the airport designation for the former MCAS El Toro in the Orange County General Plan. Until the annexation of the former MCAS El Toro is completed, the base property remains within the County jurisdiction. A ballot measure amending the County's General Plan does not apply to the City of Irvine.

Response to Comment W2

The first two websites cited dealt with the estimated number of homes during plan preparation; the third website deals with the actual project in the EIR of which 3,625 is the correct number in the Overlay Plan.

Response to Comment W3

The maximum number of dwelling units allowed under the Overlay Plan is 3,625.

Response to Comment W4

The maximum number of dwelling units (3,625) is established by the proposed General Plan and zoning standards within the project area. Any increase in the total number of residential units would require a General Plan amendment, zone change, and associated environmental review.

Response to Comment W5

Refer to Responses to Comments M3 and M4. It should also be noted that the majority of development intensity is located in PA30, the portion of the project area already in the City of Irvine and not affected by Measure W.

Response to Comment W6

The Measure W land use plan did not show a lake. Some conceptual drawings published by the proponents of Measure W included a lake in the Great Park. This EIR covers the annexation, General Plan Amendment and Zoning of the El Toro property. The detail design of the Great Park and its amenities, including landscaping, water features, hardscape design and materials and other such details will be prepared in the subsequent phases of the implementation of the project, subject to all applicable development and environmental policies and standards.

Response to Comment W7

The advertisements and commercials discussed in this comment were disseminated by the proponents of Measure W and not by the City of Irvine. Those materials depicted a conceptual representation of a future countywide park with an array of natural and manmade amenities. Neither Measure W nor

the Orange County Great Park Plan identify or specify any particular species of animals to be included in their project description.

Response to Comment W8

The comment does not address environmental issue relating to the EIR.

Response to Comment W9

The comment does not address environmental issue relating to the EIR.

Response to Comment W10

As required by CEQA, this EIR identifies, analyzes and discloses the potential environmental impacts of the proposed project and identifies feasible mitigation measures to minimize those impacts. CEQA does not require an economic analysis or a financing plan as a component of an EIR. Projections for economic and financial fluctuations are beyond the scope of this EIR.

Response to Comment W11

Refer to Response to Comment W10. The funding and financing strategy for the implementation of the proposed project are discussed in Section 3.0 *Project Description* and in the draft Development Agreement.

Response to Comment W12

The comment represents anecdotal information which is not relevant to the subject matter and scope of this EIR.

Response to Comment W13

The issues related to population, employment, and housing affordability are discussed extensively in Section 5.13 *Population and Housing*. As stated in Section 5.13.4, the jobs to housing imbalance will remain a significant impact and a statement of overriding consideration will have to be developed.

Response to Comment W14

Refer to Response to Comment W13.

Response to Comment W15

The future traffic impacts of the proposed project are based on the Irvine Transportation Analysis Model (ITAM 3.01). This model provides a quantitative and objective framework for projecting and analyzing future traffic conditions in the City of Irvine and roadways immediately adjacent to the City. The ITAM databases have been continually updated as new knowledge about development patterns and the circulation network has become available. The model is derived from the Orange County Transportation Analysis Model (OCTAM), which is a travel demand forecasting tool used by OCTA to evaluate circulation system needs throughout the County. The ITAM structure allows for the analysis of land use and roadway network alternatives using the data provided as input. For more information regarding land use assumptions and other parameters used in

the traffic model, refer to ITAM 3.01 Technical Documentation and ITAM 3.01 Primary Study Area Database Expansion Technical Supplement.

Response to Comment W16

Refer to Responses to Comments H71, H77, and M18. The air quality impact analysis is contained in Section 5.3 of the EIR.

Response to Comment W17

Refer to Responses to Comments H71, H77, and M20.

Response to Comment W18

Per page 5.4-24 of the EIR:

“The main noise producing activities are anticipated to occur primarily during the early phases of construction. Portions of the infrastructure construction activities and runway demolition may occur simultaneously. The sound levels associated with this worst case scenario were evaluated at the nearest off-project area residences. The combined sound level was estimated for: 20 pieces of large mobile equipment operating at a distance of 5,000 feet; five concrete breakers operating at a distance of 6,000 feet; and two crusher plants operating at a distance of 10,000 feet. These distances represent the closest possible location of the construction equipment to the nearest off-project area residences. Based on these equipment types and quantities, the combined effect of this equipment would result in a sound level of approximately 56dBA at the nearest off-project area residential locations during the heaviest construction period.”

General construction noise impacts, including runway demolition, are discussed in Section 5.4.3 of the EIR based on the program level analysis. As specific projects are developed and specific construction activities are planned, more detailed analysis of potential construction noise impacts may be conducted.

Response to Comment W19

Refer to Response to Comment M91. Per Section 5.3.4 *Air Quality Mitigation Measures*, prior to the start of demolition and construction within the project area adjacent sensitive receptors shall be informed of the planned demolition and construction activities. The erection of fences around construction areas, staggered use of equipment near sensitive receptors, diversion of trucks away from sensitive receptors shall be employed. Additional mitigation measures will be used as determined appropriate and necessary when greater detail is known regarding the exact construction phasing methodology and logistics are determined.

Response to Comment W20

Erection of fences such as wind fences or partial temporary barriers and enclosures provide a wind-sheltered region in the vicinity of the disturbed area.

The wind-shelter area reduces the mechanical turbulence generated by ambient winds, thus reducing the entrainment and wind erosion of small particulate matter.

Response to Comment W21

Construction would not be allowed to occur until contaminated soils are remediated to acceptable levels; therefore, it is not anticipated that the use of wash off stations for construction trucks will result in the generation of toxic water runoff.

Response to Comment W22

City inspectors, using professional judgment, will determine if the quantity of soil carried over to the streets constitutes substantial material. Street sweeping will be regularly practiced during construction activity to ensure soils are not washed into storm drains.

Response to Comment W23

Soil materials collected as a result of street sweeping will be recycled and disposed of on-site.

Response to Comment W24

Refer to Response to Comment H48. As described on page 5.15-20 of the EIR, demolition activities, including the removal of existing runways and buildings, at PA 51 will generate debris materials that will need to be disposed at local landfills. Additionally, green waste will be produced as a result of on-going park and landscaping maintenance. The City requires construction and demolition debris recycling for new development projects. This will allow the reuse of building materials and reduce waste volume requiring disposal. Additionally, Mitigation Measure SW2 is proposed that requires 75 percent reduction of solid waste of those materials that cannot be recycled. Mitigation Measure SW2 states:

“For solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant must submit a written plan to the City and implement such plan to ensure that 75 percent of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.”

The construction waste is anticipated to consist primarily of green waste and recyclable concrete. There will be very little solid waste sent to landfills; furthermore it is anticipated that this material will be significantly less when the project has been fully implemented.

Response to Comment W25

A substantial portion of the runway materials are proposed to be recycled on-site to the maximum extent feasible. It is anticipated that the remainder will be recycled in development projects located within the region. As a result, the truck hauling from the former MCAS El Toro will displace other truck hauling that would occur with no anticipated net increase in materials hauling.

Response to Comment W26

Refer to Response to Comment W25. Local construction hauling is assumed in the Traffic Impact Analysis. The anticipated quantity of traffic resulting from material hauling, which would only occur for materials not used on-site, is expected to be less than the volume of traffic resulting from the project itself.

Response to Comment W27

Refer to Responses to Comments M17 and M87. The total emission estimates from construction of the proposed project are presented in Tables 5.3-19 and 5.3-20 (page 5.3-25) of the EIR. As compared to the total projected emissions for the SCAB, the mitigated emissions after Base Plan implementation constitutes 0.05 percent (for ROG) to 0.20 percent (for CO) of the total SCAB emissions. The mitigated emissions after implementation of the Overlay Plan would constitute from 0.09 percent (for NOx) to 0.39 percent (for CO) for the total SCAB emissions.

Response to Comment W28

AQMD Rule 1196(d) lists the requirements for new fleet vehicles. A link to the AQMD fleet vehicles rule is: [http://www.aqmd.gov/news1/fleet_rule_home.htm].

These rules do not impose any emission limits but rather require the use of alternative fuel vehicles, dual-fuel vehicles and use of low emission vehicles. AQMD Rule 1620 provides emission credits for clean off-road mobile equipment.

The AQMD is seeking to gradually shift to low emissions and alternative fuel vehicles in order reduce air pollution from motor vehicles pursuant to air quality management plans. Overall program direction for managing and reducing motor vehicle emissions is based on technology needs identified in AQMD's Air Quality Management Plan; state and federal rules and regulations; annual research and development coordination meetings with the California Air Resources Board; periodic meetings with various technology, clean fuel, and industry working groups, and annual meetings with the Technology Advancement Advisory Group.

Response to Comment W29

Although there is ample opportunity for a substantial amount of recycled runway materials to be utilized on-site, there will be some recycled runway materials that will be sold for construction purposes outside of the project area. The effect on the concrete recycling market cannot be predicted as the quantity and timing of

sales is not known. CEQA requires analysis of environmental not economic impacts.

Response to Comment W30

Refer to Response to Comment W29.

Response to Comment W31

Base Plan intersections were included in the EIR Traffic Impact Analysis and considered in the CO air quality impact analysis based on the following criteria (refer to Table 5.3-26 in the EIR). Since localized CO air quality impacts generally reach their peak in the vicinity of traffic congestion, only those intersections and roadways with the highest traffic congestion level of service (LOS) designations were considered in the air quality analysis. The high congestion intersections naturally represent the highest potential for localized air quality impact resulting from the project.

Roadway system performance with respect to traffic and congestion is generally described in terms of a LOS scale that ranges from designations of "A" to "F". Level of Service "A" represents the highest or best LOS, while LOS "F" represents the lowest or worst LOS. During peak hours, LOS A, B, C, and D are generally (at a minimum) considered acceptable, while LOS E and F represent degrees of deteriorating traffic system performance. Intersections with LOS designations of D, E, and F were included in the CO air quality impact analysis, while intersections and road way systems with LOS designations of A, B, and C were not.

Response to Comment W32

Refer to Response to Comment W31.

Response to Comment W33

Section 5.5 *Public Health and Safety* states:

"The Norwalk Pipeline was used as a jet fuel distribution system in support of the military mission at the former MCAS El Toro. The pipeline originates in Norwalk, California, enters the project site near the existing commissary located adjacent to Irvine Boulevard, and runs through the former air station housing to the former storage tank facilities. In May 1999, all the jet fuel was purged from the pipeline from Norwalk to the former air station using a pigging process and replaced with inert gas (nitrogen). The Defense Energy Support Center currently maintains the pipeline."

Response to Comment W34

Section 5.5 *Public Health and Safety* states:

“The County of Orange, in coordination with all other local jurisdictions and emergency response providers in the County, is responsible for the preparation, maintenance, and implementation of emergency response plans...for the County. The Orange County Emergency Plan is the official emergency plan for the County. The plan is a basic reference and training document for emergency preparedness, response, recovery, mitigation, and provides the authority and basis for the development of more detailed departmental and functional standard operating procedures”

Response to Comment W35

New air traffic routes in the vicinity of the former El Toro MCAS due to the lifting of air-space restrictions are not a function of the proposed Great Park Plan but rather the closing of the former air station. It is anticipated that these routes would remain whether or not the Great Park Plan was developed. Noise sampling of existing conditions recorded existing aircraft overflights as part of the existing ambient noise.

Response to Comment W36

The FAA may maintain some existing ancillary facilities within the 4,700-acre base property. The largest presence of the FAA will be in the +/-970-acre habitat area (which will remain in federal ownership) and where the FAA may continue to use some of its communication relay facilities. VORs are used as navigational devices within the National Airspace System (NAS). The VOR purpose is to provide azimuth (direction) and is transmitted in all directions and each signal can be considered a course or route, referred to as a radial. It works much like a road map when you're attempting to get from a departure point to a destination. For example, a hypothetical VOR at El Toro may be used by aircraft traveling from Los Angeles to San Diego, without the aircraft ever flying at such altitudes over the area where the VOR is located to generate additional aircraft noise impacts as a result of the existence of the device. In any event, the discussions about maintaining the existing VOR within the base property are still on-going between the FAA and the DON. However, since the operational closure of El Toro in 1999, that VOR has not been used and currently is not included in the navigational charts used by the FAA. Nor is El Toro's VOR on any approach/departures charts. In addition, historically, the VOR at El Toro was used for aircraft operations for the former MCAS El Toro only. As such, the subject VOR is not used as a navigation aid supporting the current flow of traffic in the Southern California area of operations.

Response to Comment W37

Based on Response to Comment W36, the existing VOR at the former MCAS El Toro is not used as a navigational device within the Southern California Airspace and discussions about its removal or relocation are underway. Radio wave transmissions from other FAA facilities may remain on the former air station. Detailed land use restrictions would accompany any sale that involved lands adjacent to and impacted by FAA radio waves.

Response to Comment W38

Refer to Response to Comment R18. It is likely that there will be use of live ammunition at the FBI training facility.

Response to Comment W39

Refer to Response to Comment R18.

Response to Comment W40

Refer to Response to Comment R18.

Response to Comment W41

The proposed acreage designated for agricultural activities under both the Base Plan and Overlay Plan represents a net decrease in acreage currently available for agricultural activities at the project site. Local water supplies would not be strained by these proposed reductions in agricultural activity; refer to the Irvine Ranch Water District Water Supply Assessment in Appendix C of the EIR.

Response to Comment W42

Refer to Response to Comment W41.

Response to Comment W43

The Irvine Ranch Water District will be the designated provider for domestic, recycled, and wastewater services for the proposed project.

Response to Comment W44

Agricultural producers that hire labors for agricultural activities are required to pay California Minimum Wages.

Response to Comment W45

Refer to Responses to Comments W13 and W14. Assessing the potential impacts to local traffic requires specific information regarding the future commuting options for day laborers; this information is not available and would prove speculative.

Response to Comment W46

The area proposed for agricultural use is currently being utilized for agricultural purposes. Any use of pesticides will need to be in compliance with US Department of Agriculture regulations. The City of Irvine envisions the proposed agricultural areas to become components of the City's Agricultural Legacy Program. To that extent, agricultural farming activities onsite may include organic farming activities, which would also reduce the amount of pesticides and fertilizers utilized in these agricultural areas.

Response to Comment W47

Refer to Response to Comment W46.

Response to Comment W48

Refer to Response to Comment W46.

Response to Comment W49

Refer to Response to Comment W46.

Response to Comment W50

Organic farming is a component of the City of Irvine's proposed agricultural heritage program which may be implemented, in part, in the portions of the project site designated for agricultural use.

Response to Comment W51

The City of Irvine is not aware of any claims by Native Americans as to any ancestral use of any portion of the project site.

Response to Comment W52

No specific development project is proposed; however, there will be opportunity for collaboration and involvement of Native Americans groups, should cultural facilities be constructed that involve Native American heritage.

Response to Comment W53

Comment noted.

Response to Comment W54

The Orange County Great Park will be served by the City of Irvine Police Department at the same level of service as other portions of the City.

Response to Comment X1

Following the passage of Measure W, and the subsequent issuance of a federal Record of Decision (ROD), on 23 April 2002, the Orange County Board of Supervisors acting as the Local Redevelopment Authority (LRA) with a majority vote decided to cease all further planning for El Toro by the County and to defer all further planning for El Toro to the City of Irvine and support the City's annexation of the property. In addition, on 25 February 2003, the Orange County Board of Supervisors adopted a resolution rescinding the Airport System Master Plan for El Toro in recognition of the fact that the future reuse of El Toro would be for non-aviation uses.

In addition to action taken by the County of Orange Board of Supervisors, the DON has been working with the City on the sale of property since April 2002.

Response to Comment X2

The intent of Measure W was to repeal Measure A and amend the Orange County General Plan by eliminating the airport land use designation for El Toro and to redesignate the property for a mix of non-aviation uses with a vast portion allocated to open space, recreational, educational and cultural uses.

Section Two B of Measure W states:

“Purpose. This Initiative will allow for the creation of one of America's greatest parks, with open space, sports and recreation facilities, museums, libraries, arts and cultural attractions, and a home for major universities and research centers. It will also not generate the traffic, congestion, noise, and air pollution associated with the development of a commercial airport.”

Section Two J of Measure W states:

“Replaces the aviation use designation with non-aviation designations to ensure that the property will become a multi-use center for education, park, recreation, cultural and other public-oriented uses. These designations permit the development of El Toro over time, thus allowing future generations to determine specific uses consistent with this Initiative.”

As such, the proposed project is consistent with the intent of Measure W by providing a non-aviation mixed use plan with a substantial portion allocated to open space and public uses.

Response to Comment X3

Measure W is an alternative that was analyzed in Alternative 6.1, the No Project/Measure W in PA 51 and Millennium Plan II in PA 30 alternative. This alternative is considered superior from an environmental analysis perspective.

When Measure W qualified for the ballot, it was assumed that the DON would transfer the property at no cost or very low cost to the public agency conducting the reuse of the property. Shortly after the Measure W election in March 2002, the DON announced its intention to sell virtually all of the former MCAS El Toro to the highest bidder. To the extent that the implementation of Measure W would require substantially greater governmental funding than if the land was provided at no cost, Measure W is less feasible today under the DON's chosen conveyance program.

Response to Comment X4

The Eastern Transportation Corridor is not identified as State Route (SR) 55 on EIR pages 1-5 and 5.1-8.

Response to Comment X5

In Figure 1-3 on page 1-7, Planning Area Zone 6 is proposed as Medium Density Residential development.

Response to Comment X6

Figures 1-2 and 1-3 depict the land use for each of the Planning Area Zone (PAZs). Furthermore, each PAZ has more detailed development data not shown in Figures 1-2 and 1-3. For example, the Project Description Table 3-3 of this EIR describes the development data for the Base Plan. Table 3-3 specifies that 60 Multiple-family residential units are proposed within the PAZ 10, and 165 multiple-family residential units are proposed within the PAZ 17a. Additionally, Table 3-4 describes the development data for the Overlay Plan. Table 3-4 proposes 850 single-family residential units for PAZ 2, 800 senior housing units for PAZ 6, 60 multiple-family residential units for PAZ 10, 165 multiple-residential units for PAZ 17a, 250 single-family residential units for PAZ 18, 635 multiple-family residential units for PAZ 24, 50 multiple-family residential units for PAZ 25, 170 multiple-family residential units for PAZ 27, 345 multiple-family residential units for PAZ 28, and 300 multiple-family residential units for PAZ 29.

Response to Comment X7

The County Counsel's impartial analysis of Measure W published in the voter pamphlets stated:

“This measure would amend the Orange County General Plan (“General Plan”) with respect to unincorporated land within the El Toro Marine Corps Air Station (“MCAS El Toro”), and repeal Measure A, which was adopted by the voters on 8 November 1994, designating much of MCAS El Toro for civil aviation and related uses.”

Therefore, Measure W was a voter approved General Plan Amendment of the County's General Plan via the initiative process. As such, Measure W applies only to the El Toro property while the property remains within the unincorporated county area and under the jurisdiction and land use authority of the County of

Orange. There are no provisions in the Measure W language mandating adherence by any other jurisdiction to the provisions of the measure. The proposed project includes the Annexation, General Plan Amendment, Pre-Zoning and Zoning of the unincorporated portion of the Planning Area 51.

Response to Comment X8

As described on page 5.1-15, the land use, safety, and noise restricted areas as identified in the AELUP, AICUZ, and the PIL for the former MCAS EL Toro facility are no longer impacted by aircraft noise from military operations now that the air station has closed for military use. The military mission at the former air station has been terminated and there are no actual noise or safety hazards generated by aircraft flight which would threaten the proposed development; implementation of the proposed project would not result in a significant land use compatibility impact, even through it would conflict with the adopted AELUP. Implementation of the Base Plan or Overlay Plan would result in a non-aviation reuse of the former MCAS El Toro property. On 17 April 2003 the ALUC formally acknowledged that the ALUC has no statutory jurisdiction over the proposed project.

Response to Comment X9

The Great Park Traffic Impact Analysis demonstrates that no measurable impacts to streets or intersections within the City of Tustin will occur as a result of the proposed Great Park project. The methodology applied to determine the extent of the study area is to examine the increase in intersection capacity utilization (ICU) value and determine whether or not the increase exceeds the impact significance threshold (0.02). This method of determining traffic impacts and hence the study area boundary is employed by jurisdictions throughout California, including many jurisdictions in Orange County. The analysis included in the EIR demonstrates that the increase in ICU value attributable to the project is less than 0.02 west of Culver Drive. Therefore it was not necessary for the EIR to analyze the roadway segments and intersections listed in the comment. The roadway segments and intersections listed in the Response to the NOP were analyzed. The analysis completed in the EIR showed steadily decreasing traffic impacts at an increasingly greater distance from the project. The increase in traffic caused an ICU increase of less than 0.02 prior to reaching the City of Tustin. It should be noted that the Great Park project is several miles from any part of the City of Tustin and no project impacts were identified beyond Culver Drive in the City of Irvine.

Concurrently with the proposed project, the City of Irvine is considering adoption of the North Irvine Transportation Improvement (NITM) program. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events. NITM aggregates the traffic mitigation requirements for Northern Sphere, Great Park, and PAs 1, 2,

and 40 and allocates funding proportionately among the projects. The NITM program provides fair share funding for four intersections within or at the border with the City of Tustin; Irvine Boulevard/Tustin Ranch Boulevard, Jamboree Road/Irvine Boulevard, Jamboree Road/El Camino Real, and Red Hill Boulevard/Irvine Boulevard.

Response to Comment X10

All of the projects identified in the comment were incorporated in the Traffic Impact Analysis. PAs 1 and 2 are included in the City's General Plan. As a result, traffic generation from these already approved projects or land uses were analyzed as the future conditions for purposes of analyzing Great Park traffic impacts.

Response to Comment X11

As stated in the comment, the direct contribution of the project to increased traffic on the I-5 Freeway is already minimized by the existing congestion on that roadway, and the resulting impacts to the arterial roadway system have been identified and analyzed.

Response to Comment X12

Refer to Responses to Comments M64 and X9. Application of traditional study area boundary determination methodologies concludes that project traffic is not contributing significantly to future traffic volume increases in the City of Tustin. Increased traffic volumes result from regional growth including, but not limited to, City of Tustin's plan for the reuse and urbanization of MCAS Tustin.

Response to Comment X13

Refer to Responses to Comment X9 and X12.

Response to Comment X14

Substantial improvements to parallel routes (Irvine Boulevard and Trabuco Road), funded by north Irvine developers and the Great Park, are expected to reduce the future traffic volumes on Bryan Avenue.

Response to Comment X15

Refer to Response to Comment X9. The project contributes fair share funding to four intersections that have been identified by the NITM program. No project impacts are anticipated in the City of Tustin. However, the NITM program does identify very small traffic shares (approximately 1.5 percent) towards which the project will be contributing at locations significantly impacted by other projects (e.g., Northern Sphere) located in closer proximity to the City of Tustin.

Response to Comment X16

The ITAM traffic forecasting tool has been developed explicitly in response to modeling consistency requirements and is the most appropriate tool for use in the Great Park traffic study. The OCTAM 2.8 tool referred to in the comment was

“retired” by the Orange County Transportation Authority (OCTA) several years ago and is no longer appropriate for any type of regional or subregional analysis.

Response to Comment X17

Mitigation measures aimed at reducing significant impact to sensitive receptors from air quality impacts are described in Section 5.3.5 *Air Quality Mitigation Measures*. Mitigation Measure AQ1 states:

“Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of trucks away from receptors; etc., shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.”

Response to Comment X18

Comment noted. Mitigation Measure AQ4 and AQ5 will be located underneath a subheader that reads: “Operational Emissions Mitigation.” Mitigation Measure AQ5 has been amended to read:

“Future employment generating non-residential development shall include measures to reduce vehicle trips, including: the promotion of carpool incentives and alternative work schedules; easy access to public transit systems; trail linkages between uses; low-emissions vehicle fleets; the provision of on-site facilities, such as banking machines, food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.”

Response to Comment X19

Refer to Response to Comment M17. Section 5.3.3 *Air Quality Environmental Impacts* states:

“The URBEMIS 2001 model is used for estimating construction emissions for all stages of development. Estimates of land use and acreage absorbed are obtained for the plan proposal and modification for the development. Due to the limited availability of specific data regarding construction activities and equipment requirements, the URBEMIS 2001 model default options were used.”

Response to Comment X20

Disposition of the fuel line outside of PA 51 is not part of the proposed project and beyond the City’s legal authority and jurisdiction. The portion of the pipeline

referenced in the comment is under the authority of the federal government. The EIR discusses information from the DON on that portion of the pipeline. Refer to Section 5.5.1 *Public Health and Safety Environmental Setting* (page 5.5-19) for a detailed discussion of the status of the jet fuel distribution system.

Response to Comment X21

Comment noted.

Response to Comment Y1

The project impacts to Jeffrey Road have been thoroughly and completely evaluated in the Great Park Traffic Impact Analysis and EIR and all project impacts have been mitigated to a level of insignificance.

Response to Comment Y2

The analysis of the traffic impacts of the Great Park project have been analyzed in the EIR and supporting Traffic Impact Analysis and there has been no reliance on other environmental documents. The North Irvine Transportation improvement Program (NITM) is a mechanism for implementing the required mitigation for the Great Park and other significant development projects located in close proximity to the Great Park.

Response to Comment Y3

Refer to Response to Comment F50.

Response to Comment Y4

Refer to Response to Comment F50.

Response to Comment Y5

Refer to Response to Comment F50.

Response to Comment Y6

Refer to Response to Comment F50.

Response to Comment Z1

The intersection referenced in the comment is not an intersection of two arterial roadways Towne Center Drive is not shown on the Orange County Master Plan of Arterial Highways. The analysis of required lanes at adjacent intersections included in the Great Park Traffic Impact Analysis does not indicate the need for additional through lanes on Alton Parkway at Town Centre Drive.

Response to Comment Z2

The cumulative impacts and resulting roadway infrastructure needs of the Great Park project and surrounding development are analyzed under typical weekday conditions. Substantially lower overall traffic conditions can be expected on a weekend (Saturday). Therefore, no additional weekend analysis is required to evaluate areawide traffic impacts. The Sportspark would be required to prepare and submit traffic and parking management plans as part of their master plans for the City of Irvine's approval. This EIR addresses the impacts and identifies mitigation measures for the Great Park Plan and zoning designations for the proposed project. Operational issues will be part of the future permit processing of those facilities.

Response to Comment Z3

Concurrently with the proposed project, the City of Irvine is considering adoption of the NITM program. This program includes concrete, feasible mitigation measures that, if fully funded, will bring intersections back to the appropriate level of service. The EIR Traffic Impact Analysis includes an entire chapter (Chapter 9 of the Traffic Impact Analysis) devoted to CMP compliance. As part of this analysis, the EIR Traffic Impact Analysis and NITM identified all intersections in the City of Lake Forest to which project traffic contributed to an unacceptable level of service. The NITM program imposes fair share fee obligations on the project and other properties in the City of Irvine and its sphere of influence to fund their proportionate share of the mitigation to bring that intersection to an acceptable or pre-project level of service, based upon the extent of the properties' contribution of traffic. The City of Irvine recognizes that as the agency with jurisdiction over the intersections and as the lead agency for the construction of intersection improvements, the City of Lake Forest must concur with the proposed mitigation measures if those mitigation measures are to be implemented.

Response to Comment Z4

The extensions of Portola Parkway and Alton Parkway have been analyzed in the post-2025 Great Park Traffic Impact Analysis. The extensions were not included in the scenarios analyzing conditions prior to 2025.

Response to Comment Z5

Comment noted.

Response to Comment AA1

Comment noted.

Response to Comment AA2

Per this comment, the following has been added to Section 5.14 *Public Services and Facilities* page 5.14-25:

“Based on Table 5.14-6, the IUSD estimated the cost for typical District elementary, middle, and high schools. According to the District, the estimated acreage needed for an elementary school is 10-acres with a total building area of 45,000 square feet and the estimated acreage for a middle school is 15-acres with a total building area of 65,000 square feet. The District also estimated that an acre of land would cost \$1-1.5million, resulting in a total building cost of \$218 per square foot for elementary and middle schools (not including land for Oak Creek Elementary School in 2000). According to the District, the total building area needed for a high school expansion would be 20,000 to 30,000 square feet, resulting in an estimated total cost of \$3.2million.”

Response to Comment AA3

The EIR states that at this General Plan analysis it is unknown where exactly the housing units will be placed within each individual planning area (i.e., whether the new units will be in IUSD or SVUSD). For analysis purposes, the highest number of potential units was used to estimate the “worse-case” scenario for both districts. As a result, the analysis overestimated the amount of new or expanded school facilities that would be needed to serve the project. Therefore, the number of new students generated by the project is most likely overestimated and the number of new students will most likely be well under the estimated number of 1,525.

In regard to this comment requesting the shifts in the school attendance boundaries, the EIR states the following on page 5.14-26:

“In the event that a new school is not built, IUSD may consider shifts in the school attendance boundaries for existing elementary, middle, and high schools. This could result in existing communities within IUSD to change from their current school assignment to another District school in order to better accommodate new growth within PAs 51 and 30.”

Response to Comment AA4

The following sentence has been added to Section 5.14 *Public Services and Facilities* page 5.14-25:

“The District’s consultants are currently analyzing the land bordering the existing El Toro Elementary site for purposes of realigning the property

lines and/or expanding the site from approximately 10-acres to 13-acres in order to better accommodate a K-8 school."

Response to Comment AA5

The EIR states on page 5.14-25:

"To accommodate the expected student growth from the project during buildout of the proposed project and prior to final construction of the new elementary school, IUSD may re-open the El Toro Marine Elementary School and/or assign students residing in the project area to various schools with available capacity."

Response to Comment AA6

In order to obtain development rights under the Overlay Plan the landowner must enter into a Development Agreement that requires, among other things, the dedication of a 13-acre school site at no cost to IUSD. State law (Government Code Section 65995 and following) establishes the exclusive means of obtaining developer impact mitigation for public school construction.

Response to Comment AA7

Comment noted.

Response to Comment AA8

Comment noted.

Response to Comment BB1

This comment generally recites the major components of the proposed project and the responsibilities of the US Fish and Wildlife Service.

Response to Comment BB2

This comment summarizes the responsibilities of the California Department of Fish and Game.

Response to Comment BB3

Comment noted. The portion of the project site designated for habitat preserve is consistent with the NCCP/HCP. This property will remain under the ownership of the Federal Aviation Administration (FAA).

Response to Comment BB4

The City of Irvine is a participant in the Special Area Management Plan/Master Streambed Alteration Agreement (SAMP/MSAA) process. The City anticipates continued participation and coordination with the wildlife agencies in constructing the proposed natural drainages on-site.

Response to Comment BB5

Refer to Responses to Comments BB6 through BB18 for a response to each of these issues.

Response to Comment BB6

A portion of PAZ 4 is sage scrub habitat that will be designated as agriculture under the OCGP. Habitat preservation is a permitted use in the agricultural land use designation. The EIR did quantify an impact to this area. The City of Irvine is a participant in the NCCP/HCP program and will ensure that adequate protections are implemented in accordance with those programs.

Response to Comment BB7

Comment noted. Original biological surveys have not indicated the presence of the sensitive species identified by the commentor. No development is proposed within the Habitat Preserve portion of the Great Park plan; therefore, sensitive resources that may be located in this area would not be impacted by proposed development activities.

Any future development activity within the project area will be reviewed to ensure potential impacts have been adequately addressed. In order to ensure that potential biological impacts of proposed development are addressed, Mitigation Measure Bio.1 has been modified as follows:

“Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl, shall be conducted. Prior to approval of a subdivision map for development within, or in proximity to Serrano Creek a focused survey shall be

conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher, of this species in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG)."

Response to Comment BB8

Comment noted. As described in the EIR, a significant amount of open space and foraging areas will remain under the project's proposed land use plan.

Response to Comment BB9

Refer to Response to Comment BB7.

Response to Comment BB10

Refer to Response to Comment BB7.

Response to Comment BB11

Refer to Response to Comment BB7.

Response to Comment BB12

Mitigation Measure Bio 1 is proposed to address potential impacts to sensitive species potentially occurring onsite, and not covered by the NCCP. Any subsequent development project within the project area will be reviewed as to its potential environmental impacts, including biological resources. The City of Irvine will require additional biological surveys as appropriate to address any potential impacts to biological resources as a result of subsequent development activity.

Response to Comment BB13

Comment noted.

Response to Comment BB14

The comment pertains to a separate report entitled *Draft Wildlife Corridor Plan*. The City of Irvine appreciates the input from the US Fish and Wildlife Service and the California Department of Fish and Game and will evaluate and address these comments as it proceeds to process the *Draft Wildlife Corridor Plan* separately from this EIR.

Response to Comment BB15

Refer to Response to Comment B14.

Response to Comment BB16

Comment noted. Refer to Response to Comment B14.

Response to Comment BB17

Refer to Response to Comment B14. It is anticipated that these details related to the proposed wildlife corridor will be resolved after the general wildlife corridor concept has been adopted, and more detailed aspects of implementation are initiated.

Response to Comment BB18

Comment noted. Refer to Response to Comment B14.

Response to Comment BB19

Comment noted. Refer to Response to Comment B14.

Response to Comment BB20

Comment noted. Refer to Response to Comment B14.

Response to Comment BB21

Comment noted.

Response to Comment CC1

Under the Overlay Plan, the Agriculture designation is proposed within PAZ 1 and PAZ 4. As stated on page 5.8-10 of the EIR, the proposed project will help to implement the City's proposed Agricultural Legacy Program by proposing agricultural land uses in the portion of PA 51 that is identified by the Irvine Agricultural Legacy Program Preliminary Sites Assessment (City of Irvine 26 November 2002). The City of Irvine recently amended its General Plan Objective L-10 with the purpose of addressing the cumulative loss of agricultural resources in Irvine and Orange County as a whole. The amendment shifts the emphasis from retention of agriculture for open space relief, to retention of smaller scale agricultural operations for heritage value. To that extent, the City of Irvine has committed to preservation of agriculture in these areas of the project site both by designating these areas for agriculture use and through the recently amended General Plan policy, which commits the City of Irvine to implementation of the Agricultural Legacy Program.

Response to Comment CC2

An Agricultural Preservation Program, as described in this comment, has been determined to be infeasible. No agricultural preserves or Williamson Act contracts exist within the City of Irvine or the project site. As stated in the EIR, (page 5.8-15), the County of Orange has not yet initiated the evaluation of such a program, and has no plans to implement such a program.

Response to Comment CC3

Comment noted.

Response to Comment DD1

Section 3.0 *Project Description Actions and Approvals of Other Agencies* has been amended to reflect the requirement that DTSC approve the acquisition and/or development of property for public schools. The added additional language reads as follows:

“California Department of Toxic Substances Control (DTSC) – Approval of acquisition and/or development of property for public schools based on hazardous materials evaluation.”

Response to Comment DD2

Section 5.5 *Public Health and Safety Environmental Setting* has been amended with the following wording:

“Certain LBP abatement and hazard disclosure requirements must be complied with prior to the transfer of the former MCAS El Toro site from federal responsibility. Housing units constructed prior to 1960 must be abated of LBP and LBP hazards. The presence of LBP and LBP hazards must be disclosed for housing units constructed between 1960 and 1978. Occupation of housing units scheduled for demolition due to the presence of LBP or LBP hazards is prohibited. Post-demolition sampling and response actions for any hazards due to lead in soil shall be conducted, consistent with regulatory requirements, prior to the occupancy of any newly constructed housing units to ensure public health and safety.”

This language has also been added to Section 5.5.3.

Response to Comment DD3

Per the regulations outlined in 40 CFR 300.430(e)(2)(i), “remediation goals shall establish acceptable exposure levels that are protective of human health and the environment and shall be developed by considering the following...for known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response.” The DON will be responsible for remediation of the former MCAS El Toro to these exposure levels. The DON has publicly stated that it will indemnify new land owners of former air station property in order to mitigate potential soil contamination that is attributable to historic DON operations.

Response to Comment DD4

Comment noted. Revisions will be made as referenced.

Response to Comment DD5

Section 5.5 *Public Health and Safety Environmental Regulations Affecting MCAS El Toro* has been amended to reflect the comment. Added wording is as follows:

“The Resource Conservation and Recovery Act (RCRA), adopted in 1976, provides the basic framework for federal regulation of hazardous waste. The State of California Department of Toxic Substances Control (DTSC) is authorized to implement the state hazardous waste program in lieu of federal RCRA regulations.”

Response to Comment DD6

Section 5.5 *Public Health and Safety Compliance Program Sites and Other Locations of Concern* has been amended with the following language:

“The DTSC states that the former MCAS El Toro contains two hazardous waste management units (HWMU). The HWMUs include a hazardous waste container storage area and an open burn/open detonation (OB/OD) hazardous waste treatment unit. A hazardous waste facility permit (a RCRA-equivalent permit) to operate the hazardous waste container storage area designated as Building 673-T3 was issued in August 1993 by the DTSC. The permit allowed the storage of hazardous wastes for longer than 90-days at Building 673-T3. In March 1996, the closure certification report was accepted by the DTSC and the container storage area was considered closed.”

Response to Comment DD7

Refer to Response to Comment DD6.

Response to Comment DD8

Comment noted. The City of Irvine has coordinated with the DON and concurs with the DON’s determination that corrective action at the former MCAS El Toro can overlap with other remediation or response actions. EIR text will be amended to read:

“The State of California considered any site from which hazardous constituents may migrate to be a SWMU, but corrective action can be addressed through the Federal Facilities Agreement for MCAS EL Toro or responses to petroleum releases with oversight provided by the Regional Water Quality Control Board.”

Response to Comment DD9

The EIR clearly states that Site 24 contains VOC contaminated soil; Site 18 is a groundwater plume, contaminated by VOCs leaching from Site 24, that is located both on- and off-site. Language has been added to the referenced section to read:

“In addition to an interim Record of Decision (ROD) for the contaminated soil of Site 24, a final ROD for groundwater contamination at Sites 18 and 24 was signed in June 2002. Please refer to the *Final Record of Decision, Operable Unit 1, Site 18 – Regional Volatile Organic Compound*

Groundwater Plume, Operable Unit 2A, Site 24 – VOC Source Area, Former MCAS El Toro, California (Bechtel National, Inc. 2002) for additional information.”

Response to Comment DD10

The referenced section has been amended with the following added language:

“An interim ROD was signed in July 2000 for Site 2 and 17 to allow for the design of the landfill caps to proceed. However, construction of the landfill caps will not proceed until radiological survey/sampling is complete and the data have been evaluated to determine potential impact on the remedial design. Please refer to the *Final Interim ROD, Operable Unit 2B, Landfill Sites 2 and 17, MCAS El Toro, California* (Bechtel National, Inc. 2000) for additional information.”

Response to Comment DD11

The referenced section has been amended with the following added language:

“The draft version of the ROD for Sites 3 and 5 was issued in March 1999. The draft final ROD will be issued following evaluation of the results from radiological survey/sampling. Please refer to the *Draft ROD, Operable Unit 2C, Landfill Sites 3 and 5, MCAS El Toro, California* (Bechtel National, Inc. 1999) for additional information.”

Response to Comment DD12

The referenced section has been amended with the following added language:

“Site 7, Drop Tank Drainage Are No.2, and Site 14, Battery Acid Disposal Area, received concurrence for no further action in the final ROD signed June 2001. Please refer to the *Final ROD, Operable Unit 3B, No Action Sites 7 and 14, MCAS El Toro, California* (Bechtel National, Inc. 2001) for additional information.”

Response to Comment DD13

The referenced section has been amended with the following added language:

“Monitored natural attenuation is the selected remediation procedure for Site 16. A ROD is being prepared to document the selected remediation process. Please refer to the *Proposed Plan for Site 16, Crash Crew Training Pit No.2 at MCAS El Toro* (Bechtel National, Inc. 2002a) for additional information.”

Response to Comment DD14

The referenced section has been amended with the following added language:

“The DON is in the process of completing a remedial investigation to determine the nature and extent of contamination at Site 1. Please refer to the *Final Work Plan, Phase II Remedial Investigation, IRP Site 1, Explosive Ordinance Disposal Range, MCAS El Toro, California* (Earth Tech, Inc. 2001) for additional information.”

Response to Comment EE1

The Traffic Impact Analysis has been reviewed and revised in accordance with the new significance thresholds provided by the City of Laguna Hills. The additional analysis is provided as it confirms that the initial analysis adequately assesses the project's traffic impacts. A total of 16 intersections are located within the jurisdiction of the City of Laguna Hills or are shared with other local jurisdictions, including the City of Irvine.

Table EE-1 summarizes the 2007 intersection capacity utilization (ICU) analysis for the City of Laguna Hills intersections. As shown on Table EE-1, two intersections are impacted. Table EE-2 summarizes the 2025 intersection capacity utilization (ICU) analysis for the City of Laguna Hills intersections. As shown on Table EE-2, six intersections are impacted by either the Base Plan or the Overlay Plan. Table EE-3 summarizes the post-2025 intersection capacity utilization (ICU) analysis for the City of Laguna Hills intersections. As shown on Table EE-3, eight intersections are impacted for post-2025 conditions. Table EE-4 summarizes the proposed improvements at the intersections that are impacted by the Base Plan project alternative. Table EE-5 summarizes the proposed improvements at the intersections that are impacted by the Overlay Plan project alternative. The only intersection where additional impacts have been identified based on the revised impact criteria is Laguna Hills Drive at Paseo De Valencia, where very minimal mitigation improvements (modifying the traffic signal to provide an eastbound right turn overlap concurrent with the northbound left turns) would be required. (Note: All of the following referenced tables are included in the Appendix to this Response to Comments document.)

Response to Comment EE2

(Note: All of the following referenced tables are included in the Appendix to this document.) Cost estimates and the plan for funding the project fair share of improvements are included in the implementing mechanism (the NITM program) currently being developed by the City of Irvine as the next logical step in the development process. Funding for right of way acquisition, engineering, and construction is included in the NITM program. The City of Irvine recognizes that as the agency with jurisdiction over the intersections and as the lead agency for the construction of intersection improvements, the City of Laguna Hills must concur with the proposed mitigation measures if those mitigation measures are to be implemented. Table EE-6 summarizes the fair share traffic contributions and resulting cost share related to mitigation at the one intersection not specifically addressed in the NITM Program (Laguna Hills Drive at Paseo De Valencia). Table EE-7 then summarizes the project fair share traffic contribution at all of the locations impacted by the Base Plan alternative, along with the estimated cost contribution attributable to all NITM projects. Table EE-8 provides a similar summary for the Overlay Plan alternative.

Response to Comment FF1
Comment noted.

Response to Comment GG1

The comment regarding Irvine's urban water management plan is assumed to be in reference to the Irvine Ranch Water District's water supply assessment. The water supply assessment (WSA) contained in Appendix C complies with the most recent statutory requirements and concludes that adequate supplies are available to serve the proposed project. As noted in Response to Comment G2, the EIR is amended to reflect the statutory compliance of the water supply assessment prepared by the Irvine Ranch Water District.

Response to Comment GG2

The mitigation for loss of agricultural lands within the City of Irvine and surrounding areas was analyzed on a cumulative basis by the City when the General Plan agricultural policies contained in Objective L-10 were amended on 4 June 2002. The Great Park plan is full consistent with Objective L-10.

The EIR provides a comprehensive analysis of the feasibility of Mitigation Measures designed to reduce the project's impact to agricultural resources (see EIR pages 5.8-7 through 5.8-15). The EIR also identifies three feasible Mitigation Measures that will be implemented as part of the project (see Mitigation Measures AG 1 through AG 3 on pages 5.8-15 and 5.8-16). In this discussion, a variety of Mitigation Measures have been thoroughly analyzed including retention of agricultural uses. EIR pages Page 5.8-7 and 5.8-8 provide economic data to support the basis of conclusion of infeasibility of Mitigation Measures. Additionally, the City of Irvine's Legacy Program (as described in EIR page 5.8-14) promotes the preservation of agricultural resources city-wide, acreage from the Great Park of which are included in this program. On-site preservation of all existing agricultural lands on the Great Park property, to the exclusion of other City goals such as the provision of new open space through the park, job opportunities, and new housing would be inconsistent with the Objective L-10 as amended by the City of Irvine.

Response to Comment GG3

On page 5.13-9 of the EIR, the sections on long-term impacts for both the Base Plan and Overlay Plan indicate that the imbalance between jobs and housing will worsen and the impact is considered significant and unavoidable. This conclusion is repeated on pages 5.13-12 and 5.13-17. Also refer to Response to Comment KK1.

Response to Comment GG4

The base projections for the RHNA were completed in 1998 and assumed federal/military ownership of the site and it is likely that no RHNA allocation specific to the El Toro property was assigned. However, it is assumed that the upcoming 2004 RHNA, required under Government Code Section 65584 to allow the City of Irvine (and other jurisdictions) to undertake its required Housing Element updates, will reflect an appropriate allocation of future and existing regional housing need to the project site.

Response to Comment GG5

The City of Irvine has striven to integrate the Great Park with other planned development in the region, including the extension of public services. Preparation and planning with environmental documents such as this EIR is an important step in ensuring that this integration is seamless and coordinated. Section 5.14, *Public Services and Utilities*, considers potential impacts related to the extension of public services to the proposed project. Specific examples of planned development integration are considered in Section 7.1 *Cumulative Impacts*. The City of Irvine's Urban Services Plan will be made available to LAFCO as part of the annexation process undertaken with the Great Park. All impacts discussions in the EIR assume growth and development in the Northern Sphere as allocated in the Orange County Projection 2000 prepared by the Center for Demographic Research. (Note: The Urban Services Plan is included in the Appendix to this Response to Comments document).

Response to Comment HH1

Section 5.15.3 *Population and Housing Environmental Impacts* (5.13-12) states:

“Since the Orange County Subregion is anticipated to become increasingly jobs-rich over the next 20 years, the project-related employment would exacerbate the subregional jobs/housing imbalance. As a result, the proposed project will not improve and would only exacerbate the Orange County’s overall jobs/housing imbalance and the impact is considered significant and unavoidable.”

No mitigation is available to rectify conflicts with the numerical objectives of regional planning documents including the jobs/housing ratio. The imbalance between jobs and housing in Orange County may result in increased vehicle miles traveled since part of the work force consists of commuters who are drawn to the County for employment purposes. The EIR supports the SCAG objectives to reduce VMT and related congestion and air pollution. A CARB-commissioned report, entitled *Transportation-Related Land Use Strategies to Minimize Motor Vehicle Emissions: An Indirect Source Research Study*, analyzes the efficiency of numerous land use planning factors that have the greatest potential for reducing VMT and mobile source emissions. The study is outlined in the EIR, contains a list of recommended strategies, many of which have been incorporated into the Base Plan and Overlay Plan.

A portion of the project’s housing growth will be absorbed in residential projects currently being developed or planned in the surrounding area. Substantial new areas of residential development will be opened for development with the completion of several planned transportation improvement in the County. Housing projects developed under the Base Plan or Overlay Plan will be consistent with the City of Irvine’s Housing Element Affordable Housing Goal.

The Base Plan and the Overlay Plan were developed to reflect the intent of the voters of Orange County through the passage of Measure W. A higher development intensity alternative was analyzed (Alternative 6.5) in the EIR which evaluated 4,635 housing units. Alternative 6.5 concludes that a greater impact would occur on the following environmental elements: traffic/circulation; air quality; noise; geology and seismicity; hydrology and water quality; aesthetics; public services and facilities and utilities. Refer to the Alternatives (Section 6.0) in the EIR for further discussion. Moreover, the selection of an alternative that would include more housing and less commercial development would be infeasible since it would be in conflict with the City’s fiscal balance requirement for new planning areas and prevent the City from having the financial resources to implement the Great Park plan.

Response to Comment HH2

Under the proposed Base Plan 225 multi-family housing units would be developed; implementation of the Overlay Plan would result in the construction of

3,625 housing units. Implementation of either plan would be consistent with the affordable housing goals stated in the City of Irvine's General Plan Housing Element.

Response to Comment HH3

The EIR provides for a mix of housing densities in the residentially zoned areas. Implementation of the Base Plan would result in the construction of 225 multi-family housing units. It is beyond the scope of this EIR to "set-aside (future) City-owned sites for affordable housing sooner rather than later," increase densities in the transit areas from 40- to 60-units per acre, all farm-worker housing on or near agricultural areas, and include housing as an allowable use in all commercial, institutional, and industrial areas. These are policy matters that must be considered by the City of Irvine. Also refer to Response to Comment KK2.

Response to Comment II1

The Highway Capacity Manual (HCM) methodologies are most appropriate for near-term engineering and operational analysis. The many input data and factors required by HCM methodologies are not available for the long-range planning horizon addressed in this Traffic Impact Analysis. The planning level analysis in the Great Park Traffic Impact Analysis is an appropriate approach that has been utilized in various other traffic studies that have also been submitted to Caltrans.

The ITAM tool used to develop the future forecasts is consistent with the OCTAM travel demand forecasting tool, which is the regionally (County of Orange) adopted tool for developing future traffic forecasts on the regional roadway system, including the freeways and transportation corridors. The OCTAM model has been validated at both the peak hour and daily traffic volume levels of detail for freeway and transportation corridor mainline conditions. Use of a consistent modeling tool is a mandatory requirement, based on state and federal legislation.

Response to Comment II2

The lane assumptions for the I-5 Freeway corridor are correct and are based on existing field inventory and anticipated long-range improvements. The analysis may be inconsistent with OCTAM 3.1 because of the more accurate lane assumptions compared to the generalized OCTAM 3.1 inputs. The lane assumptions utilized in the Traffic Impact Analysis for the transportation corridors are based on the long-range capital improvement program (CIP) developed by the Transportation Corridor Authority(ies) (TCA).

Response to Comment II3

The analysis contained in the EIR and supporting Traffic Impact Analysis is unaffected by the status of the projects referenced in the comment. The ITAM model used in the Traffic Impact Analysis is based on a year 2000 validation scenario; therefore, all of the future forecasts included in the Traffic Impact Analysis accurately reflect the validation year conditions.

Response to Comment II4

The HOV lanes are identified in the TCA CIP. Ms. Macie Cleary-Milan of the Transportation Corridor Agency provided the following information on 7 May 2003 regarding the funding for HOV lanes on the transportation corridors:

The TCA has a list of all the projects that have been identified as part of the long-range concept plans for the various transportation corridors. Improvements are funded as the money is available, and as the need for the improvements is identified to provide acceptable traffic operations for the system. Priorities are set based on congestion or operational issues. If future traffic volumes result in a deterioration of levels of service, the TCA is dedicated to providing the improvements needed to provide the levels of service their patrons expect.

Therefore, it is reasonable to assume that the TCA would fund HOV improvements necessary to provide acceptable levels of service.

Response to Comment II5

Refer to Response to Comment S5.

Response to Comment II6

As demonstrated in the EIR and supporting Traffic Impact Analysis, adequate access to the Great Park is being provided. Major roadway improvements within and outside of the proposed park area include the widening of Trabuco Road, Bryan Avenue, Irvine Boulevard, and Sand Canyon Avenue. In addition, the Great Park project roadway system proposes a number of new arterial roadways, including Marine Way, College Road, and Y Street. The project also proposes substantial new or modified freeway/transportation corridor interchange improvements, including the I-5 Freeway/Bake Parkway interchange, the I-5 Freeway/Sand Canyon Avenue interchange, and the SR133 tollway/Trabuco Road interchange.

Concurrently with the proposed project, the City of Irvine is considering adoption of the North Irvine Transportation Improvement (NITM) program. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events. The NITM program also includes numerous other ramp improvements commensurate with other cumulative project impacts. In summary, the project has adequate access.

The EIR and supporting Traffic Impact Analysis have addressed both the changes in land use and the circulation system as a result of the proposed project. The issue raised in this comment is addressed either by the EIR analysis itself, or through the proposed mitigation measures. The key mitigation measure with respect to this comment is the requirement to enter into a cooperative Master Plan of Arterial Highways amendment study per the Orange County Transportation Authority (OCTA).

The portion of the comment related to the extension of Marine Way to Bake Parkway at the I-5 Freeway northbound ramps is noted. The City of Irvine is working closely with Caltrans to resolve the design issues related to the I-5 Freeway/Bake Parkway interchange.

Response to Comment II7

Refer to Response to Comment S6. The programs referenced in the comment will address ongoing regional traffic growth and are not related to the anticipated project impacts. The EIR mitigation measures address all project impacts that were identified in the Traffic Impact Analysis, subject to constraints such as those identified in Response to Comment S5 (TCA non-compete agreements).

The second part of the comment relates to the detailed implementation mechanism for mitigating project impacts. The City of Irvine is actively developing an implementation mechanism (NITM) for proposed Great Park (and other nearby) project mitigation measures/improvements. The NITM program includes conceptual engineering, cost estimates, and fair share contribution calculations as requested in this comment.

Response to Comment II8

Refer to Response to Comment II7. The City has created a pro rata fair share program (NITM program) that includes projects that mitigate impacts to the State facilities, including freeway mainline and ramp improvements.

Response to Comment II9

Refer to Responses to Comments II7 and II8.

Response to Comment II10

The comment pertains to a separate report entitled *Draft Wildlife Corridor Plan*. The City appreciates Caltrans input and will evaluate and address these comments as it proceeds to process the *Draft Wildlife Corridor Plan* separately from this EIR.

Response to Comment II11

Refer to Response to Comment II10.

Response to Comment II12

Refer to Response to Comment II10.

Response to Comment II13

Refer to Response to Comment II10.

Response to Comment II14

Refer to Response to Comment II10.

Response to Comment II15

Refer to Response to Comment II10.

Response to Comment II16

Refer to Response to Comment II10.

Response to Comment II17

Refer to Response to Comment II10.

Response to Comment II18

Refer to Response to Comment II10.

Response to Comment II19

Refer to Response to Comment II10.

Response to Comment II20

Refer to Response to Comment II10.

Response to Comment II21

Refer to Response to Comment II10.

Response to Comment II22

Comment noted.

Response to Comment JJ1

Comment noted.

Response to Comment JJ2

Comment noted.

Response to Comment KK1

Section 5.15.3 *Population and Housing Environmental Impacts* (5.13-12) states:

“Since the Orange County Subregion is anticipated to become increasingly jobs-rich over the next 20 years, the project-related employment would exacerbate the subregional jobs/housing imbalance. As a result, the proposed project will not improve and would only exacerbate the Orange County’s overall jobs/housing imbalance and the impact is considered significant and unavoidable.”

No mitigation is available to rectify conflicts with the numerical objectives of regional planning documents including the jobs/housing ratio. A portion of the project’s housing growth will be absorbed in residential projects currently being developed or planned in the surrounding area. Substantial new areas of residential development will be opened for development with the completion of several planned transportation improvement in the County. Housing projects developed under the Base Plan or Overlay Plan will be consistent with the City of Irvine’s Housing Element Affordable Housing Goal.

The Base Plan and the Overlay Plan were developed to reflect the will of the voters per Measure W. A higher development intensity alternative was analyzed (Alternative 6.5) in the EIR which evaluated 4,635 housing units. Alternative 6.5 concludes that a greater impact would occur on the following environmental elements: traffic/circulation; air quality; noise; geology and seismicity; hydrology and water quality; aesthetics; public services and facilities and utilities. Refer to the Alternatives (Section 6.0) in the EIR for further discussion.

Response to Comment KK2

While the number of multi-use residential units has been reduced from 2,313 to 1,500, the overall level of multi-use residential development has been increased from 3,261 to 3,625. The EIR examines two formulated plans: the Base Plan and the Overlay Plan. The EIR analyzes the environmental impacts from these plans and proposes mitigation measures to reduce impacts to levels less than significant. The current General Plan allows a maximum 3,261 dwelling units in Planning Areas 30 and 51 combined. Under the proposed Base Plan 225 multi-family housing units would be developed; implementation of the Overlay Plan would result in the construction of 3,625 housing units. Implementation of either plan would be consistent with the affordable housing goals stated in the City of Irvine’s General Plan Housing Element. As a result, the project provides for a mix of housing densities in the residentially zoned areas.

Section 5.13.3 *Population and Housing Environmental Impact* states:

“...housing project developed on the site under either the Base Plan or Overlay Plan will be required to be consistent with the City’s Housing Element Affordable Housing Goal, which states that:

- 5 percent of units should be affordable to households earning less than 50 percent of the County Median Family Income through rental housing.
- 5 percent of the actual number of units built should be affordable as either rental or ownership housing for households earning between 51 and 80 percent of the County Median Family Income.
- 5 percent of the units should be affordable to household earning between 81 and 121 percent of the County Median Family Income, satisfied through the development of ownership housing.”

Response to Comment KK3

Refer to Response to Comment KK2.

Final

Program Environmental Impact Report
Volume I

for the

Orange County Great Park
(Annexation, General Plan Amendment, Zoning
and Related Actions)

File Nos: 47782-GA
47785-ZC

SCH# 2002101020

Certified May 27, 2003
Irvine City Council Resolution No. 03-60

City of Irvine
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FINAL

ENVIRONMENTAL IMPACT REPORT
VOLUME I

ORANGE COUNTY GREAT PARK



FILE NOS: 47782-GA
47785-ZC

SCH# 2002101020

CERTIFIED MAY 27, 2003
IRVINE CITY COUNCIL RESOLUTION NO. 03-60

CITY OF IRVINE



Cotton/Bridges/Associates
A Division of P&D Consultants

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- Appendix H: Environmental Noise Assessment MCAS El Toro Site, Orange County Great Park Plan. January 16, 2003. Black & Veatch Corporation.
- Appendix I: Air Quality Assessment City of Irvine General Plan Amendment, Pre-Zoning, and Annexation File Nos: 47782-GA, 47785-ZC. January 16, 2003. Black & Veatch.
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Volume I – Appendix A

Acronyms

The following list of acronyms has been prepared for reference.

ACM	Asbestos Containing Materials
ADT	Average Daily Traffic
AELUP	Airport Environs Land Use Plan
AICUZ	Air Installation Compatibility Use Zones
ALUC	Airport Land Use Commission
APZ	Accidental Potential Zone
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
ASMP	Airport System Master Plan
BCP	Base Realignment and Closure Cleanup Plan
BCT	BRAC Cleanup Team
BMP	Best Management Practices
BRAC	Base Realignment and Closure
BRAC-III	Base Realignment and Closure Act of 1993
CAA	Clean Air Act
CAA	Community Analysis Area
CAAQS	California Ambient Air Quality Standards
Cal-EPA	California Environmental Protection Agency
CALOSHA	California Division of Occupation Safety and Health
CALTRANS	California Department of Transportation
CMP	Congestion Management Plan
CARB	California Air Resources Board
CC&R	Covenants, Conditions and Restrictions
CCAA	California Clean Air Act
CDFG	California Department of Fish and Game
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Cleanup and Liability Act
CERFA	Community Environmental Facilitation Act
cfs	Cubic Feet per Second
CIWMP	Countywide Integrated Waste Management Plan
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
ACOE	U.S. Army Corps of Engineers
CRP	Community Reuse Plan
CSS	Coastal Sage Scrub
DAMP	Drainage Area Management Plan
dB or dBA	Decibel(s)
DBH	Diameter at Breast Height
DEIR	Draft Environmental Impact Report
DOD	Department of Defense

DOI	Department of the Interior
DON	Department of the Navy
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EOC	Emergency Operations Center
EOD	Explosive Ordinance Disposal
EPA	Environmental Protection Agency
ETC	Eastern Transportation Corridor
ETRPA	El Toro Reuse Planning Authority
FAA	Federal Aviation Administration
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FTC	Foothill Transportation Corridor
FTA	Federal Transit Agency
GMP	Growth Management Plan
GPA	General Plan Amendment
GPA/ZC	General Plan Amendment/Zone Change
HCP	Habitat Conservation Program
HOA	Home Owners Association
HRA	Historical Radiological Assessment
HRS	Hazard Ranking System
HVAC	Heating and Ventilation and Air Conditioning Systems
HUD	Department of Housing and Urban Development
I-5	Interstate 5 (Santa Ana Freeway)
I-405	Interstate 405 (San Diego Freeway)
ICU	Intersection Capacity Utilization
IRP	Installation Restoration Program
IRWD	Irvine Ranch Water District
ITAM	Irvine Transportation Analysis Model
IUSD	Irvine Unified School District
IWMD	Integrated Waste Management Department
JWA	John Wayne Airport
LAFCO	Local Agency Formation Commission Orange County
LBP	Lead Based Paint
LOMR	Letter of Map Revision
LOS	Level of Service
LRA	Local Redevelopment Authority
MAP	Million Air Passengers
MCAS	Marine Corps Air Station
MGD	Million Gallons per Day
MP	Millennium Plan
MPAH	Master Plan of Arterial Highway (Orange County)
MSF	Million Square Feet
MSL	Mean Sea Level
MOU	Memorandum of Understanding

NAAQS	National Ambient Air Quality Standards
NCCP	Natural Communities Conservation Plan (California)
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NOI	Notice of Intent
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRHP	National Register of Historic Places
NWR	National Wildlife Refuge
OCFCD	Orange County Flood Control District
OCFA	Orange County Fire Authority
OCTA	Orange County Transportation Authority
OCTAM	Orange County Traffic Analysis Model
OCX	Orange County International Airport
OCWD	Orange County Water District
OWS	Oil/Water Separator
PAZ	Planning Area Zone
PCB	Polychlorinated Biphenyl
PIL	Policy Implementation Line
psi	Pounds per Square Inch
PVC	Polyvinyl Chloride
RCB	Reinforcement Concrete Box
RCP	Resources Conservation Plan
RCPG	Regional Comprehensive Plan and Guide
RCRA	Resources Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROD	Records of Decision
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAMP	Sub Area Master Plan
SARA	Superfund Amendments and Reauthorization Act
SARWQCB	Santa Ana Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAG	Southern California Association of Government
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison Company
SCRRA	Southern California Regional Rail Authority
SED	Socioeconomic Data
SEM	Standardized Emergency Management System
SFHA	Special Flood Hazard Area
SIP	State Implementation Plan
SR-133	Eastern Transportation Corridor (State Route 133)
SR-241	Foothill Transportation Corridor (State Route 241)
SRA	Seismic Resonse Area
SRHP	State Register of Historic Places
SVE	Soil Vapor Extraction
SVUCD	Saddleback Valley Unified School District
SWAT	Special Operations Unit
SWMU	Solid Waste Management Unit

SWPPP	Storm Water Pollution Prevention Plan
TCA	Transportation Corridor Agency
TCE	Trichlorethane
TCM	Transportation Control Measures
TMA	Transportation Management Association
TMDL	Total Maximum Daily Loads
UBC	Uniform Building Code
UFC	Uniform Fire Code
UFO	Urban Forestry Ordinance
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Services
USMC	United States Marine Corps
USOSHA	Occupational Safety and Health Administration
USGS	United States Geological Survey
USP	Urban Services Plan
UST	Underground Storage Tanks
UWMP	Urban Water Management Plan
V/C	Volume to Capacity
VCP	Vitrified Clay Pipe
VMT	Vehicle Miles Traveled
VPD	Vehicles Per Day
VOC	Volatile Organic Compound
WDRs	Waste Discharge Requirements
WQCP	Water Quality Control Plan
WRMP	Water Resources Master Plan
WWII	World War II
ZC	Zone Change

EXHIBIT A

FINDINGS OF FACT
AND
STATEMENT OF OVERRIDING CONSIDERATIONS
REGARDING THE FINAL ENVIRONMENTAL IMPACT REPORT
FOR THE ORANGE COUNTY GREAT PARK

STATE CLEARINGHOUSE NO. 2002101020

PREPARED BY:

CITY OF IRVINE
COMMUNITY DEVELOPMENT DEPARTMENT
ONE CIVIC CENTER PLAZA
IRVINE, CA 92623-9575

May 2003

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I. INTRODUCTION

A. Findings of Fact and Statement of Overriding Considerations

The California Environmental Quality Act (CEQA) (Pub. Res. Code §§ 21000, *et seq.*) and the State CEQA Guidelines (Guidelines) (14 Cal. Code Regs §§ 15000, *et seq.*) promulgated thereunder, require that the environmental impacts of a project be examined before a project is approved. Specifically, regarding findings, Guidelines Section 15091 provides:

- (a) No public agency shall approve or carry out a project for which an EIR has been completed which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:
 - 1. Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant environmental effects on the environment.
 - 2. Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can or should be, adopted by that other agency.
 - 3. Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the EIR.
- (b) The findings required by subsection (a) shall be supported by substantial evidence in the record.
- (c) The finding in subsection (a)(2) shall not be made if the agency making the finding has concurrent jurisdiction with another agency to deal with identified feasible mitigation measures or alternatives.
- (d) When making the findings required in subsection (a)(1), the agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to avoid or substantially lessen significant environmental effects. These measures must be fully enforceable through permit conditions, agreements, or other measures.

- (e) The public agency shall specify the location and custodian of the documents or other materials which constitute the record of the proceedings upon which its decision is based.

The “changes or alterations” referred to in Section 15091(a)(1) above, that are required in, or incorporated into, the project which mitigate or avoid the significant environmental effects of the project, may include a wide variety of measures or actions as set forth in Guidelines Section 15370, including:

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action.
- (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- (e) Compensating for the impact by replacing or providing substitute resources or environments.

Regarding a Statement of Overriding Considerations, Guidelines Section 15093 provides:

- (a) CEQA requires the decision maker to balance the benefits of a proposed project against its unavoidable environmental risks in determining whether to approve the project. If the benefits of a proposal project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable".
- (b) Where the decision of the public agency allows the occurrence of significant effects which are identified in the final EIR but are not at least substantially mitigated, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. This statement may be necessary if the agency also makes a finding under Section 15091(a)(2) or (a)(3).
- (c) If an agency makes a statement of overriding considerations, the statement should be included in the record of the project approval and should be mentioned in the notice of determination.

Having received, reviewed and considered the Final Environmental Impact Report (FEIR) for the Orange County Great Park, State Clearinghouse No. 2002101020 (FEIR), as well as all other information in the record of proceedings on this matter, the following Findings of Fact and Statement of Overriding Considerations (Findings) are hereby adopted by the City of Irvine (City) in its capacity as the CEQA Lead Agency. These Findings set forth the environmental basis for current and subsequent discretionary actions to be undertaken by the City and responsible agencies for the implementation of the Orange County Great Park (Project).

B. Record of Proceedings

For purposes of CEQA and these Findings, the Record of Proceedings for the proposed Project consists of the following documents and other evidence, at a minimum:

- The Notice of Preparation (NOP) and all other public notices issued by the City in conjunction with the proposed Project;
- The Final Environmental Impact Report for the proposed Project (FEIR);
- The Draft EIR;
- All written comments submitted by agencies or members of the public during the public review comment period on the Draft EIR;
- All responses to written comments submitted by agencies or members of the public during the public review comment period on the Draft EIR;
- All written and verbal public testimony presented during a noticed public hearing for the proposed Project at which such testimony was taken;
- The Mitigation Monitoring and Reporting Program (MMRP);
- The reports and technical memoranda included or referenced in Responses to Comments in the FEIR;
- All documents, studies, EIRs, or other materials incorporated by reference in the Draft EIR;
- The Ordinances and Resolutions adopted by the City in connection with the proposed Project, and all documents incorporated by reference therein;
- Matters of common knowledge to the City, including but not limited to federal, state and local laws and regulations;
- Any documents expressly cited in these Findings; and

- Any other relevant materials required to be in the record of proceedings by Public Resources Code Section 21167.6(e).

C. Custodian and Location of Records

The documents and other materials which constitute the administrative record for the City's actions related to the Project are located at the City of Irvine, 1 Civic Center Plaza, Irvine, California, 92623. The City Community Development Department is the custodian of the administrative record for the Project. Copies of these documents, which constitute the record of proceedings, are and at all relevant times have been and will be available upon request at the offices of the Community Development Department. This information is provided in compliance with Public Resources Code § 21081.6(a)(2) and Guidelines § 15091(e).

II. PROJECT SUMMARY

A. Project Location

The project is located in the center of Orange County and includes land within the City of Irvine and unincorporated area. The project area is northeast of the intersection of Interstate 5 and the Eastern Transportation Corridor Toll Road. Figure 1-1 (Project Location) depicts the location of the project area in a regional and local context, respectively. The total project area encompasses approximately 4,701 acres or 7.5 square miles. The total area proposed for annexation is 4,287 acres.

The project area is generally bounded by the cities of Irvine and Lake Forest on the south and east, and unincorporated area in the County of Orange on the north. Other nearby local jurisdictions include the cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo and Tustin.

Major roadways bordering the project area include I-5 to the southwest, Sand Canyon Avenue to the northwest, Portola Parkway and Irvine Boulevard to the north, and Bake Parkway to the northeast. John Wayne Airport is located seven miles to the west of the project area. The Irvine Transportation Center, a major multi-modal transit center linking Orange County Transportation Authority (OCTA) bus, Metrolink commuter rail, and Amtrak rail services, is adjacent to the SCRRA tracks which traverse the site and separate Planning Areas 51 and 30.

An eight-acre (IRWD) parcel west of the Musick Jail contains the IRWD East Irvine Zone IV Pumping Station, Zone III 5.0 million gallon potable water reservoir, and a 7.0 million gallon potable water reservoir.

B. Project Description

The project land area involves approximately 4,701 acres. At present, 414 acres are within the City of Irvine and the balance are unincorporated area. Of this acreage, 4,693 represent the former MCAS El Toro base property.

The project consists of the following actions: 1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; 2) Annexation of the unincorporated portion of Planning Area 35 (the Irvine Ranch Water District Parcel); and 3) General Plan Amendment and Zone Change for Planning Area 30 which is presently in the City of Irvine; and 4) Approval of the form of a Development Agreement vesting approval of higher intensity overlay uses in consideration for dedication of land for public purposes and for funding certain infrastructure improvements and maintenance of the public uses by the purchaser/developer and subsequent landowners and funds for specified park, roadways, and other circulation facilities and infrastructure.

The major components that are part of the proposed Project are as follows:

Area	Proposed Actions
PLANNING AREA 51 Portion of MCAS El Toro in unincorporated County	<ol style="list-style-type: none"> 1. Annexation of the majority of Planning Area 51 into City of Irvine. A small portion of Planning Area 51 is already in the City of Irvine. 2. General Plan Amendment to establish a land use category consistent with the Orange County Great Park Plan land use designations.* General Plan Amendments (Circulation Element) to realign Millennium Parkway as Marine Way and eliminate a portion of the extension of Trabuco Road, as well as modify the trails network. General Plan Amendment (Parks and Recreation and the Conservation and Open Space Elements) to establish land use policies consistent with the Orange County Great Park Plan land use designations. This amendment includes broadening the types of activities permitted in City park facilities, as well as modifying the location of recreational facilities and conservation/open space lands. 3. Pre-zoning prior to annexation and rezoning to permit implementation of the Orange County Great Park Plan designations. Creation of new or expanded zoning categories and overlay zones to implement the OCGP General Plan designation.
Portion of PA 51 located within City Limits	<ol style="list-style-type: none"> 1. General Plan Amendment to establish a land use category consistent with the Orange County Great Park Plan land use designations.* 2. Zone Changes in Planning Area 51 to permit implementation of the Orange County Great Park Plan designations and zoning overlay. Creation of new of expanded zoning categories and overlay zones to

Area	Proposed Actions
	address other components of the Great Park land use designations.
PLANNING AREA 35	<ol style="list-style-type: none"> 1. Annexation of a portion of Planning Area 35 (the IRWD parcel) to prevent creation of an unincorporated County island. 2. No General Plan amendment or zoning change is proposed.
PLANNING AREA 30 Portion of MCAS El Toro located within City limits	<ol style="list-style-type: none"> 1. General Plan Amendment to establish a land use category consistent with the Orange County Great Park Plan land use designations.* Circulation element revisions to realign Marine Way and Rockfield Boulevard and the trails network. Modification of the Parks and Recreation Element to relocate certain recreation facilities. 2. Zone changes in Planning Area 30 to permit implementation of the OCGP designations for the base zoning and the Overlay. Creation of new or expanded zoning categories and overlay zones to address the other components of the Great Park land use designations.

* The General Plan designation permits a base intensity of development with additional intensity available through compliance with criteria spelled out in a Development Agreement with the City and implemented through the City Zoning Ordinance.

C. Discretionary Actions

The discretionary actions to be taken by the City of Irvine at (or as part of) the completion of the EIR may include, but are not limited to the following:

- CEQA related actions and approvals;
- Annexation related approvals;
- General Plan amendments (including amendments made to conform to actions by other agencies related to the project);
- Approval of Development Agreements and Covenants, Conditions and Restrictions (CC&Rs) governing the property;
- Ordinance actions, including zone changes and zoning code amendment;
- Actions to approve interim use activities;
- Approval of master plan for development;
- Actions related to real and personal property acquisition, leases, management and other approvals;
- Regulatory or other actions implementing mitigation measures or actions identified in the final EIR;
- Approval of master plans and subdivisions for development; and
- Approval of community facilities districts or other assessment districts.

State and local agencies in addition to the City of Irvine may use the EIR in connection with any discretionary actions required to implement or otherwise assure development of

the Great Park Plan including, but not limited to actions of the following types. Federal agencies may also use the document as a basis for providing environmental review and clearance in accord with the National Environmental Policy Act.

The agencies which may use this Program EIR and types of actions that these agencies may take in connection with the EIR include, but are not limited to the following:

- Local Agency Formation Commission (LAFCO) – Approval of annexation
- The United States Department of Defense/Department of the Navy (DOD/DON) and the General Services Administration —Sale and conveyance of property
- Orange County Airport Land Use Commission (ALUC) - Revision of the Airport Environs Land Use Plan (AELUP)
- County of Orange – Revision of the County’s General Plan
- Southern California Association of Governments (SCAG) – Revisions to regional models related to growth, development and airport plans.
- Transportation Corridor Agency (TCA)
- South Coast Air Quality Management District (SCAQMD)
- Regional Water Quality Control Board (RWQCB) – National Pollutant Discharge Elimination System (NPDES) Permit
- Army Corps of Engineers (Corps) – Section 404 (Dredge and Fill) Permit
- California Department of Transportation (Caltrans)
- California Department of Fish and Game-Approvals related to streambed alterations and wildlife corridor and habitat areas
- Federal Department of the Interior (DOI) Fish and Wildlife Agency
- Southern California Regional Rail Authority (SCRRA)
- Orange County Transportation Authority (OCTA) – Revisions to the County Master Plan of Arterial Highways (MPAH)
- Irvine Unified School District
- Saddleback Unified School District

D. Use of the EIR

The EIR is intended to provide information to public agencies, the general public, and decision makers, regarding the environmental impacts from the construction and operation of the proposed project. Under CEQA, “The purpose of the Environmental Impact Report is to identify the significant effects of a project on the environment, to identify alternatives to the proposed project, and to indicate the manner in which significant environmental effects can be mitigated or avoided.” (Public Resources Code 21002.1(a)).

According to the CEQA Guidelines (Section 15168), a Program EIR may be prepared on a series of actions that can be characterized as one large project, are related geographically, and as logical parts in a chain of contemplated actions in connection with

issuance of rules, regulations or plans. The Program EIR allows for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on separate individual actions, and ensures consideration of cumulative impacts that might not otherwise be addressed on a case-by-case basis. The proposed project involves several land use actions covering approximately 4,806 acres of land.

Full development of the project area in accordance with the Orange County Great Park Plan is estimated to take over 20 years. As such, the Program EIR provides a first-tier analysis of the proposed project by analyzing broad environmental effects. Subsequent activities in the project area must be examined in light of the Program EIR to determine whether additional environmental document must be prepared. If a subsequent project or later activity would have effects that were not examined in this Program EIR, or not examined at an appropriate level of detail to be used for the later activity, an initial study would need to be prepared, leading to a negative declaration, mitigated negative declaration, or an EIR. If the City finds that pursuant to Section 15152 of the CEQA Guidelines, no new effects could occur or new mitigation measures would be required for a subsequent project, the City can approve the activity as being within the scope of the project covered by this Program EIR, and no new environmental documentation would be required.

E. Statement of Objectives

A number of Project-specific objectives have been formulated for the Project. These objectives include, but are not limited to, the following:

1. Annex the former MCAS El Toro site and adjacent lands within the City's Sphere of Influence.
2. Convert MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
3. Amend the Irvine General Plan and Zoning Ordinance to implement proposed Orange County Great Park land use designations.
4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.
5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.
6. Respond positively and effectively to the DON's decision to sell the property to private interests by allowing private development of some land while ensuring the implementation of park and open space amenities.

III. ENVIRONMENTAL REVIEW AND PUBLIC PARTICIPATION

A. Environmental Impact Report

On October 2, 2002, in accordance with Section 15082 of the Guidelines, the City distributed a Notice of Preparation (NOP) of an Environmental Impact Report to the State Clearinghouse, local and regional responsible agencies and other interested parties. A number of agencies and other interested parties responded to the NOP. The NOP, the NOP distribution list, and NOP comments received during the 30-day public review period are included in Appendix B and C of the FEIR. The comment letters to the NOP are on file at the City of Irvine, Community Development Department, One Civic Center Plaza, Irvine, California 92623-9575, contact Glen Worthington (949) 724-6370.

On October 29, 2002, the City of Irvine held a scoping session at the Irvine City Hall to answer questions and permit discussion on the project. The University Village alternative land use plan was developed in response to public comments made at the meeting and subsequently provided in written responses to the NOP. Comments received during the public involvement process and the NOP scoping period were considered in the preparation of the Draft EIR.

The Draft EIR for the proposed Project was then prepared and circulated for review and comment by the public, agencies and organizations for a 45-day public review period that began on February 19, 2003 and concluded on April 4, 2003. A Notice of Completion of the Draft EIR was sent to the State Clearinghouse and the Draft EIR was circulated to State agencies for review through the State Clearinghouse, Office of Planning and Research (SCH No. 2002101020). A notice of availability on the Draft EIR was published in Orange County Register on February 18, 2003. During the public review period, numerous comment letters on the Draft EIR were received. Following the public review period, the City of Irvine Planning Commission held a public hearing on the proposed project on April 17, 2003.

IV. GENERAL FINDINGS

The City hereby finds as follows:

- The City is the “Lead Agency” for the proposed Project evaluated in the FEIR;
- The Draft EIR and the FEIR were prepared in compliance with CEQA and the Guidelines;
- The City has independently reviewed and analyzed the Draft EIR and the FEIR, and these documents reflect the independent judgment of the City Council and the City of Irvine.

- An MMRP has been prepared for the proposed Project, which the City has adopted or made a condition of approval of the proposed Project. That MMRP is incorporated herein by reference and is considered part of the record of proceedings for the proposed Project;
- The MMRP designates responsibility and anticipated timing for the implementation of mitigation. The City will serve as the MMRP Coordinator;
- In determining whether the proposed Project has a significant impact on the environment, and in adopting these Findings pursuant to Section 21081 of CEQA, the City has complied with CEQA Sections 21081.5 and 21082.2;
- The impacts of the proposed Project have been analyzed to the extent feasible at the time of certification of the FEIR;
- The City has reviewed the comments received on the Draft EIR, and FEIR, and the responses thereto and has determined that neither the comments received nor the responses to such comments add significant new information regarding environmental impacts to the Draft EIR and FEIR. The City has based its actions on full appraisal of all viewpoints, including all comments received up to the date of adoption of these Findings, concerning the environmental impacts identified and analyzed in the FEIR;
- The responses to the comments on the Draft EIR, which are contained in the FEIR, clarify and amplify the analysis in the Draft EIR;
- Having reviewed the information contained in the Draft EIR and FEIR and the record of proceedings, as well as the requirements of CEQA and the Guidelines regarding recirculation of Draft EIRs, and having analyzed the changes in the Draft EIR which have occurred since the close of their respective public review periods, the City finds that there is no new significant information in the FEIR and finds that recirculation is not required.
- The City has made no decisions that constitute an irretrievable commitment of resources toward the proposed Project prior to certification of the FEIR, nor has the City previously committed to a definite course of action with respect to the proposed Project;
- Copies of all the documents incorporated by reference in the FEIR are and have been available upon request at all times at the offices of the City, custodian of record for such documents or other materials;
- Having received, reviewed and considered all information and documents in the record, the City hereby conditions the proposed Project and finds as stated in these Findings.

V. SUMMARY OF IMPACTS

The FEIR concludes that impacts of the proposed Project with respect to the following issues either will not be significant or will be mitigated to below a level of significance by existing regulations/standard conditions, project design features/special development requirements and/or mitigation measures that will be made conditions of Project approval: Land Use, Noise, Traffic/Circulation, Public Health and Safety, Geology and Seismicity, Hydrology/Water Quality, Biological Resources, Paleontological Resources, Cultural Resources, Aesthetics, Public Services and Facilities, and Utilities (including Potable Water, Recycled Water, Sewer and Energy and Communications). Impacts related to project-level Air Quality, Agricultural Resources, Population and Housing, and cumulative Air Quality, Traffic/Circulation, Agricultural Resources, and Population and Housing remain significant despite the adoption of all feasible mitigation measures.

VI. IMPACTS DETERMINED TO BE SIGNIFICANT AND MITIGABLE

The following describes the impacts determined to be significant and mitigable in the Final EIR (FEIR).

A. PROJECT-LEVEL LAND USE

Base Plan and Overlay Plan

No significant impact associated with land use has been identified.

B. PROJECT-LEVEL NOISE

Base Plan and Overlay Plan

No significant impact associated with noise has been identified.

C. PROJECT-LEVEL TRAFFIC/CIRCULATION

Base Plan

B1. Significant Impact:

Implementation of the Base Plan will cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestion at intersections) in the 2007, 2025, and Post 2025 scenarios as follows (EIR page 5.2-64):

ROADWAY/FREEWAY/TOLLWAY/RAMP SEGMENTS

Year 2007

I-5 Freeway Southbound off ramp at Alton Parkway

Year 2025

I-5 Freeway at Jeffrey Road – southbound on ramp (AM/PM)

I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM)

I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM)

I-5 Freeway at Bake Parkway – southbound off ramp (AM)

I-405 Freeway at Jeffrey Road – northbound off ramp (PM)

I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM)

I-405 Freeway at Sand Canyon Avenue – southbound off ramp (AM)

Post 2025

I-5 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)

I-405 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)

I-5 Freeway at Jeffrey Road – southbound on ramp (AM/PM)

I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM)

I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM)

I-5 Freeway at Bake Parkway – southbound off ramp (AM)

I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM)

I-405 Freeway at Sand Canyon Avenue – southbound off ramp (AM)

INTERSECTIONS

Year 2007

Please refer to Table 5.2-6.

Year 2025

Please refer to Table 5.2-7.

Post 2025

Please refer to Table 5.2-8.

Mitigation Measures

- Tran 1.** Prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) (“Spectrumotion”) in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs. The primary purpose of this mitigation measure is to reduce traffic, air quality and noise impacts. Should annexation into Spectrumotion not be approved, the landowner or subsequent project applicant shall develop and implement a similar transportation management plan containing the elements and meeting the criteria described below:

Transportation Management Plan (TMP)

The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for the Great Park Project. This document summarizes the key elements of the TMP.

1.0 Introduction

The purpose of this document is to provide an outline for a comprehensive TMP for the Great Park. This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.

It is the intent to annex Planning Area 51 and a portion of Planning Area 35 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation

Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.

In the event that annexation of PAs 51 and 35 into Spectrumotion is not approved, a TMP similar to that provided by Spectrumotion will be implemented. This document sets forth the components of the TMP should it be necessary.

2.0 Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

New Hire Orientation: Inform newly hired employees of commuting services available to them.

Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services ((i.e., OCTA buses, Metrolink, Amtrak, etc.).

Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.

On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.

Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.

Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.

Website: Maintain a website with all of their program information available.

Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.

Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.

Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.

3.0 Transportation Management Plan Implementation

As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Great Park. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.

- Tran 2.** Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of this EIR.
- Tran 3.** Prior to issuance of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the project traffic study (Urban Crossroads, December 2002) to maintain satisfactory levels of service as defined by the City's General Plan, based on thresholds of significance, performance standards, and methodologies used in this EIR, Orange County Congestion Management Program, and established in the transportation system/infrastructure fee program described in Mitigation Measure Tran 2 above.
- Tran 4.** Prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated traffic forecasts. The updated traffic study will evaluate the cumulative impact of the subject map and all previously approved or concurrently submitted maps. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic

study shall be consistent with a City approved traffic study scope of work. The landowner or subsequent project applicant shall construct, bond for, or enter into a funding agreement for necessary improvements identified in the updated traffic study and/or participate in the City fee program (Tran 2 above) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of this EIR.

Traffic signals that are on-site or directly related to the Great Park development will be installed as warranted through the mitigation implementation plan process.

Tran 5. In conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the following actions:

1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-tollway ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in this EIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines.
2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency.
3. The landowner or subsequent project applicant shall enter into an agreement with the City prior to recordation of the first final map for each Master Tentative Map or equivalent to establish the method and timing of payment of the identified percentage responsibility.
4. The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or funding participation in a regional transportation improvement fee program, if adopted.

- Tran 6.** The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.
- Tran 7.** Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-complete clause or any similar agreement restricting a public agency's authority to construct improvement.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure Trans 1 requires that prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs. The primary purpose of this mitigation measure is to reduce traffic, air quality and noise impacts. Should annexation into Spectrumotion not be approved, the landowner or subsequent project applicant shall develop and implement a similar transportation management plan containing the elements and meeting the criteria described in the Transportation Management Plan (TMP). Mitigation Measure Trans 2 requires that prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of the EIR.

Mitigation Measure Trans 3 requires that prior to issuance of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the project traffic study (Urban Crossroads, December 2002) to maintain satisfactory levels of service as defined by the City's General Plan, based on thresholds of significance, performance standards, and methodologies used in the EIR, Orange County Congestion Management Program, and established in the transportation system/infrastructure fee program described in Mitigation Measure Tran 2 of the EIR. Mitigation Measure Trans 4 requires that prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. Mitigation Measure Trans 5 requires that in conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the actions as specified in Mitigation Measure Trans 5. Mitigation Measure Trans 6 requires that the project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. Mitigation Measure Trans 7 requires that the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. Implementation of Mitigation Measures Trans 1 through Trans 7 will reduce the impacts associated with traffic/circulation to a level less than significant (EIR page 5.2-67).

Concurrently with the proposed project, the City of Irvine is considering adoption of the North Irvine Transportation Improvement (NITM) program. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events. The NITM program is consistent with and implements Mitigation Measure Tran 2. Traffic mitigation improvements within the City of Irvine as well as areas outside of the City will receive fair-share funding from the NITM program.

B2. Significant Impact:

Implementation of the Base Plan will result in inconsistencies with the adopted Orange County Master Plan of Arterial Highways (MPAH). These inconsistencies are associated with Marine Way and Rockfield Boulevard (EIR page 5.2-65).

Mitigation Measures

Tran 8. Following the approval of the Orange County Great Park and annexation of the project by the City of Irvine, the City will submit a request to the OCTA to initiate a cooperative study, involving the OCTA and other affected agencies, for the purpose of bringing the Orange County's Master Plan of Arterial Highways into conformity with the City of Irvine's Master Plan of Arterial Highways.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Implementation of Mitigation Measure Tran 8 requires the City of Irvine to take action to bring its Master Plan of Arterial Highways and the Orange County's Master Plan of Arterial Highways into mutual conformance. As stated in the EIR (page 5.2-41) the City or Irvine will amend both the Land Use Element and the Circulation Element contained in its General Plan. Following this action, the City will pursue a cooperative study with the OCTA and other affected agencies. The City will request that the realignment of Rockfield Boulevard west of Bake Parkway and the inclusion of Marine Way between Sand Canyon Avenue and Bake parkway be included in the MPAH. This mitigation measure is added in order to clarify concerns raised by the OCTA during the public comment period for the draft EIR. The MPAH inconsistency is a short-term impact that will be reduced to a level less than significant with the implementation of Mitigation Measure Tran 8.

B3. Significant Impact:

Implementation of the Base Plan will exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways in the 2025 scenario. The Base Plan will impact the following (EIR page 5.2-64):

INTERSECTION

Year 2025

El Toro Road/Avenida de la Carlota

Mitigation Measures

Tran 1. Prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) (“Spectrumotion”) in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs. The primary purpose of this mitigation measure is to reduce traffic, air quality and noise impacts. Should annexation into Spectrumotion not be approved, the landowner or subsequent project applicant shall develop and implement a similar transportation management plan containing the elements and meeting the criteria described below:

Transportation Management Plan (TMP)

The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for the Great Park Project. This document summarizes the key elements of the TMP.

1.0 Introduction

The purpose of this document is to provide an outline for a comprehensive TMP for the Great Park. This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.

It is the intent to annex Planning Area 51 and a portion of Planning Area 35 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.

In the event that annexation of PAs 51 and 35 into Spectrumotion is not approved, a TMP similar to that provided by Spectrumotion will be

implemented. This document sets forth the components of the TMP should it be necessary.

2.0 Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

New Hire Orientation: Inform newly hired employees of commuting services available to them.

Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services ((i.e., OCTA buses, Metrolink, Amtrak, etc.).

Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.

On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.

Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.

Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.

Website: Maintain a website with all of their program information available.

Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.

Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.

Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.

3.0 Transportation Management Plan Implementation

As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Great Park. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.

- Tran 2.** Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of this EIR.
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- Tran 4.** Prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated traffic forecasts. The updated traffic study will evaluate the cumulative impact of the subject map and all previously approved or concurrently submitted maps. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City approved traffic study scope of work. The landowner or subsequent project applicant shall construct, bond for, or enter into a funding agreement for necessary improvements identified in the updated traffic study and/or participate in the City fee program (Tran 2 above) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of this EIR.

Traffic signals that are on-site or directly related to the Great Park development will be installed as warranted through the mitigation implementation plan process.

Tran 5. In conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the following actions:

1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-tollway ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in this EIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines.
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4. The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or funding participation in a regional transportation improvement fee program, if adopted.

Tran 6. The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.

Tran 7. Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to

Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-complete clause or any similar agreement restricting a public agency's authority to construct improvement.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

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plan for traffic improvements associated with the subject Master Tentative Map. Mitigation Measure Trans 5 requires that in conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the actions as specified in Mitigation Measure Trans 5. Mitigation Measure Trans 6 requires that the project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. Mitigation Measure Trans 7 requires that the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. Implementation of Mitigation Measures Trans 1 through Trans 7 will reduce the impacts associated with traffic/circulation to a level less than significant (EIR page 5.2-67).

Concurrently with the proposed project, the City of Irvine is considering adoption of the North Irvine Transportation Improvement (NITM) program. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine; also, it imposes a nexus fee program to ensure the timely construction of these improvement events. The NITM program is consistent with and implements Mitigation Measure Tran 2. Traffic mitigation improvements within the City of Irvine as well as areas outside of the City will receive fair-share funding from the NITM program.

Overlay Plan

O1. Significant Impact:

Implementation of the Overlay Plan will cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestion at intersections) in the 2007, 2025, and Post 2025 scenarios as follows (EIR 5.2-66):

ROADWAY/FREEWAY/TOLLWAY/RAMP SEGMENTS

Year 2007

I-5 at Alton Parkway – southbound offramp (AM)

I-405 at Irvine Center Drive – southbound offramp (AM)

Year 2025

University Drive from the I-405 Freeway to Michelson Drive (AM)

I-5 Freeway from Sand Canyon Avenue to Jeffrey Road – northbound (PM)

I-5 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)

I-405 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)

I-5 Freeway at Jeffrey Road – southbound on ramp (AM)

I-5 Freeway at Sand Canyon Avenue – northbound on ramp (PM)

I-5 Freeway at Sand Canyon Avenue – southbound off ramp (AM)

I-5 Freeway at Alton Parkway - southbound off ramp (AM)

I-5 Freeway at Bake Parkway – southbound off ramp (AM)

I-405 Freeway at Sand Canyon Avenue – northbound direct on ramp (PM)

I-405 Freeway at Sand Canyon Avenue - southbound off ramp (AM)

I-405 Freeway at Irvine Center Drive - southbound off ramp (AM)

SR-241 Tollway at Lake Forest Drive – southbound off ramp (AM)

SR-133 Freeway at Barranca Parkway – northbound direct on ramp (PM)

Post 2025

I-5 Freeway from Sand Canyon Avenue to Jeffrey Road – northbound (PM)

I-5 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)

I-405 Freeway from Jeffrey Road to Sand Canyon Avenue – southbound (AM)

I-5 Freeway at Jeffrey Road – southbound on ramp (AM)

I-5 Freeway at Sand Canyon Avenue - northbound on ramp (PM)

I-5 Freeway at Sand Canyon Avenue - southbound off ramp (AM)

I-5 Freeway at Alton Parkway - southbound off ramp (AM)

I-5 Freeway at Bake Parkway - southbound off ramp (AM)

I-5 Freeway at El Toro Road – southbound off ramp (PM)

I-405 Freeway at Jeffrey Road – northbound off ramp (PM)

I-405 Freeway at Sand Canyon Avenue - northbound direct on ramp (AM/PM)

I-405 Freeway at Sand Canyon Avenue - southbound off ramp (AM)

I-405 Freeway at Irvine Center Drive – southbound off ramp (AM)

INTERSECTIONS

Year 2007

Please refer to Table 5.2-12.

Year 2025

Please refer to Table 5.2-13.

Post 2025

Please refer to Table 5.2-15.

Mitigation Measures

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In the event that annexation of PAs 51 and 35 into Spectrumotion is not approved, a TMP similar to that provided by Spectrumotion will be implemented. This document sets forth the components of the TMP should it be necessary.

2.0 Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

New Hire Orientation: Inform newly hired employees of commuting services available to them.

Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services ((i.e., OCTA buses, Metrolink, Amtrak, etc.).

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3.0 Transportation Management Plan Implementation

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- Tran 4.** Prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic

Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated traffic forecasts. The updated traffic study will evaluate the cumulative impact of the subject map and all previously approved or concurrently submitted maps. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City approved traffic study scope of work. The landowner or subsequent project applicant shall construct, bond for, or enter into a funding agreement for necessary improvements identified in the updated traffic study and/or participate in the City fee program (Tran 2 above) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of this EIR.

Traffic signals that are on-site or directly related to the Great Park development will be installed as warranted through the mitigation implementation plan process.

Tran 5. In conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the following actions:

1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-tollway ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in this EIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines.
2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency.
3. The landowner or subsequent project applicant shall enter into an agreement with the City prior to recordation of the first final map for each Master Tentative Map or equivalent to establish the method and timing of payment of the identified percentage responsibility.

4. The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or funding participation in a regional transportation improvement fee program, if adopted.

Tran 6. The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.

Tran 7. Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-complete clause or any similar agreement restricting a public agency's authority to construct improvement.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure Trans 1 requires that prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum

TMA, including any supplementary or amended CC&Rs. The primary purpose of this mitigation measure is to reduce traffic, air quality and noise impacts. Should annexation into Spectrumotion not be approved, the landowner or subsequent project applicant shall develop and implement a similar transportation management plan containing the elements and meeting the criteria described in the Transportation Management Plan (TMP). Mitigation Measure Trans 2 requires that prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of the EIR. Mitigation Measure Trans 3 requires that prior to issuance of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the project traffic study (Urban Crossroads, December 2002) to maintain satisfactory levels of service as defined by the City's General Plan, based on thresholds of significance, performance standards, and methodologies used in the EIR, Orange County Congestion Management Program, and established in the transportation system/infrastructure fee program described in Mitigation Measure Tran 2 of the EIR. Mitigation Measure Trans 4 requires that prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. Mitigation Measure Trans 5 requires that in conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the actions as specified in Mitigation Measure Trans 5. Mitigation Measure Trans 6 requires that the project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. Mitigation Measure Trans 7 requires that the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. Implementation of Mitigation Measures Trans 1 through Trans 7 will reduce the impacts associated with traffic/circulation to a level less than significant (EIR page 5.2-67).

Concurrently with the proposed project, the City of Irvine is considering adoption of the North Irvine Transportation Improvement (NITM) program. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine;

also, it imposes a nexus fee program to ensure the timely construction of these improvement events. The NITM program is consistent with and implements Mitigation Measure Tran 2. Traffic mitigation improvements within the City of Irvine as well as areas outside of the City will receive fair-share funding from the NITM program.

O2. Significant Impact:

Implementation of the Overlay Plan will result in inconsistencies with the adopted Orange County Master Plan of Arterial Highways (MPAH). These inconsistencies are associated with Marine Way and Rockfield Boulevard. (EIR page 5.2-66).

Mitigation Measures

Tran 8. Following the approval of the Orange County Great Park and annexation of the project by the City of Irvine, the City will submit a request to the OCTA to initiate a cooperative study, involving the OCTA and other affected agencies, for the purpose of bringing the Orange County's Master Plan of Arterial Highways into conformity with the City of Irvine's Master Plan of Arterial Highways.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Implementation of Mitigation Measure Tran 8 requires the City of Irvine to take action to bring its Master Plan of Arterial Highways and the Orange County's Master Plan of Arterial Highways into mutual conformance. As stated in the EIR (page 5.2-41) the City or Irvine will amend both the Land Use Element and the Circulation Element contained in its General Plan. Following this action, the City will pursue a cooperative study with the OCTA and other affected agencies. The City will request that the realignment of Rockfield Boulevard west of Bake Parkway and the inclusion of Marine Way between Sand Canyon Avenue and Bake parkway be included in the MPAH. This mitigation measure is added in order to clarify concerns raised by the OCTA during the public comment period for the draft EIR. The MPAH inconsistency is a short-term impact that will be reduced to a level less than significant with the implementation of Mitigation Measure Tran 8.

O3. Significant Impact:

Implementation of the Overlay Plan will exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for

designated roads or highways in the 2007 and 2025 scenarios. The Overlay Plan will impact the following (EIR page 5.2-66):

FREEWAY/TOLLWAY LOCATIONS

Year 2025

I-5 from Sand Canyon Avenue to Jeffrey Road – northbound (PM)

I-5 from Jeffrey Road to Sand Canyon Avenue– southbound (AM)

I-405 from Jeffrey Road to Sand Canyon Avenue- southbound (AM)

INTERSECTIONS

Year 2007

El Toro Road/Avenida de la Carlota

Year 2025

El Toro Road/Avenida de la Carlota

Mitigation Measures

Tran 1. Prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) (“Spectrumotion”) in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs. The primary purpose of this mitigation measure is to reduce traffic, air quality and noise impacts. Should annexation into Spectrumotion not be approved, the landowner or subsequent project applicant shall develop and implement a similar transportation management plan containing the elements and meeting the criteria described below:

Transportation Management Plan (TMP)

The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for the Great Park Project. This document summarizes the key elements of the TMP.

1.0 Introduction

The purpose of this document is to provide an outline for a comprehensive TMP for the Great Park. This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.

It is the intent to annex Planning Area 51 and a portion of Planning Area 35 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.

In the event that annexation of PAs 51 and 35 into Spectrumotion is not approved, a TMP similar to that provided by Spectrumotion will be implemented. This document sets forth the components of the TMP should it be necessary.

2.0 Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

New Hire Orientation: Inform newly hired employees of commuting services available to them.

Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services ((i.e., OCTA buses, Metrolink, Amtrak, etc.).

Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.

On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.

Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.

Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.

Website: Maintain a website with all of their program information available.

Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.

Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.

Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.

3.0 Transportation Management Plan Implementation

As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Great Park. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.

- Tran 2.** Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of this EIR.
- Tran 3.** Prior to issuance of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the project traffic study (Urban Crossroads, December 2002) to maintain satisfactory levels of service as defined by the City's General Plan, based on thresholds of significance, performance standards, and methodologies used in this EIR, Orange County Congestion Management Program, and established in the transportation system/infrastructure fee program described in Mitigation Measure Tran 2 above.
- Tran 4.** Prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic

Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated traffic forecasts. The updated traffic study will evaluate the cumulative impact of the subject map and all previously approved or concurrently submitted maps. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City approved traffic study scope of work. The landowner or subsequent project applicant shall construct, bond for, or enter into a funding agreement for necessary improvements identified in the updated traffic study and/or participate in the City fee program (Tran 2 above) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of this EIR.

Traffic signals that are on-site or directly related to the Great Park development will be installed as warranted through the mitigation implementation plan process.

Tran 5. In conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the following actions:

1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-tollway ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in this EIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines.
2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency.
3. The landowner or subsequent project applicant shall enter into an agreement with the City prior to recordation of the first final map for each Master Tentative Map or equivalent to establish the method and timing of payment of the identified percentage responsibility.

4. The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or funding participation in a regional transportation improvement fee program, if adopted.

Tran 6. The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.

Tran 7. Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-complete clause or any similar agreement restricting a public agency's authority to construct improvement.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure Trans 1 requires that prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum

TMA, including any supplementary or amended CC&Rs. The primary purpose of this mitigation measure is to reduce traffic, air quality and noise impacts. Should annexation into Spectrumotion not be approved, the landowner or subsequent project applicant shall develop and implement a similar transportation management plan containing the elements and meeting the criteria described in the Transportation Management Plan (TMP). Mitigation Measure Trans 2 requires that prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of the EIR. Mitigation Measure Trans 3 requires that prior to issuance of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the project traffic study (Urban Crossroads, December 2002) to maintain satisfactory levels of service as defined by the City's General Plan, based on thresholds of significance, performance standards, and methodologies used in the EIR, Orange County Congestion Management Program, and established in the transportation system/infrastructure fee program described in Mitigation Measure Tran 2 of the EIR. Mitigation Measure Trans 4 requires that prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. Mitigation Measure Trans 5 requires that in conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the actions as specified in Mitigation Measure Trans 5. Mitigation Measure Trans 6 requires that the project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. Mitigation Measure Trans 7 requires that the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. Implementation of Mitigation Measures Trans 1 through Trans 7 will reduce the impacts associated with traffic/circulation to a level less than significant (EIR page 5.2-67).

Concurrently with the proposed project, the City of Irvine is considering adoption of the North Irvine Transportation Improvement (NITM) program. The NITM program does two things: it prioritizes and schedules the construction of traffic improvements needed to address development in the Great Park, and other undeveloped areas of North Irvine;

also, it imposes a nexus fee program to ensure the timely construction of these improvement events. The NITM program is consistent with and implements Mitigation Measure Tran 2. Traffic mitigation improvements within the City of Irvine as well as areas outside of the City will receive fair-share funding from the NITM program.

D. PROJECT-LEVEL PUBLIC HEALTH AND SAFETY

Base Plan and Overlay Plan

1. Significant Impact:

Construction activities involving demolition and possible substantial remodeling of existing structures in the project area as the project area develops could result in the disturbance of structures and soils containing asbestos-containing materials (ACMs) or lead-based paints (LBPs). This is considered a significant impact.

The presence of ACMs and LBP in structures and soils of properties conveyed by the DON may pose a future hazard to the public if the materials degrade or are otherwise disturbed. This is considered a significant impact (EIR page 5.5-24).

Mitigation Measures

HH 1.

- a. Prior to the conveyance of the property and issuance of subsequent grading permits, where the presence of ACMs is identified, the DON or its transference shall ensure that all available information concerning ACMs has been provided to the City of Irvine, and the purchasers of the property, including:
 - The type, location and condition of ACMs
 - The results of any asbestos testing
 - Description of asbestos control measures taken, if any
 - The costs or time necessary to remove existing ACMs
 - The results of any site-specific asbestos inventory updates
- b. For any structures known to contain ACMs that will be renovated and/or demolished prior to transfer, the DON shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.
- c. Prior to transfer of any structure constructed before October 1988, scheduled for renovation and/or demolition, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by the DON. This requirement can be waived if an architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified

as a building material, and to the best of their knowledge, no ACMs were used as a building material.

- d. Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.
- e. Any renovation and/or LBP abatement activities on residential units at former MCAS El Toro, shall be conducted in accordance with all applicable federal, state and local regulatory requirements.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure HH1 requires that: a) prior to the conveyance of the property and issuance of subsequent grading permits, where the presence of ACMs is identified, the DON or its transferee shall ensure that all available information concerning ACMs has been provided to the City of Irvine, and the purchasers of the property; b) for any structures known to contain ACMs that will be renovated and/or demolished prior to transfer, the DON shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements; c) prior to transfer of any structure constructed before October 1988, scheduled for renovation and/or demolition, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by the DON; d) any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws; and e) Any renovation and/or LBP abatement activities on residential units at former MCAS El Toro, shall be conducted in accordance with all applicable federal, state and local regulatory requirements. Implementation of Mitigation Measure HH1 will reduce the impact associated with ACMs and LBPs to a level less than significant (EIR page 5.5-25).

2. Significant Impact:

IRP Site 24 is located in zoning districts categorized as 6.1 Institutional and 1.5 Recreation. The site may be conveyed with temporary restrictions on use that are not appropriate for transportation facility use. This is considered a significant impact.

Future uses of IRP Site 3 may be potentially constrained by the implementation of institutional controls. This is considered a significant impact.

IRP Site 16 (Crash Crew Pit No. 2) is located in zoning district designation 1.5 Recreation. The site may be conveyed with temporary restrictions on use that are not appropriate for recreational land uses. This issue is considered a significant impact (EIR page 5.5-24).

Mitigation Measures

HH 2.

- a. Prior to transfer, the City of Irvine shall receive from the DON, with the concurrence of the appropriate regulatory agencies, a statement that the “Action Required” IRP Site 3 is to be conveyed for restricted use and that all institutional controls have been identified and implemented. The City of Irvine will adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.
- b. Prior to transfer, if the DON chooses to impose temporary restrictions on the use of Sites 16 and 24 pending adequate remediation of groundwater, the City of Irvine shall receive from the DON a statement of temporary restrictions on the use of the sites and the release of the sites for unrestricted use following implementation of adequate remediation of groundwater. The City of Irvine shall adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure HH2 requires that: a) prior to transfer, the City of Irvine shall receive from the DON, with the concurrence of the appropriate regulatory agencies, a statement that the “Action Required” IRP Site 3 is to be conveyed for restricted use and that all institutional controls have been identified and implemented; and b) Prior to transfer, if the DON chooses to impose temporary restrictions on the use of Sites 16 and 24 pending adequate remediation of groundwater, the City of Irvine shall receive from the DON a statement of temporary restrictions on the use of the sites and the release of the sites for unrestricted use following implementation of adequate remediation of groundwater. Implementation of Mitigation Measure HH2 will reduce the impacts associated with the uses on IRP Site 24, IRP Site 3, and IRP Site 16 (Crash Crew Pit No. 2) to a level less than significant (EIR page 5.5-26).

3. Significant Impact:

The Habitat Preserve, Wildlife Corridor, and Recreational areas in the northeastern portion of PA 51 will be exposed to the highest level of fire risk from wildfires because these areas and adjacent areas currently have a high risk for wildland fires. The proposed project will result in an increase in both population and structures adjacent to this high fire risk area and the impact is considered significant. Additionally, existing structures may not meet City fire safety requirements (EIR page 5.5-25).

Mitigation Measures

HH 3. The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for “Development Within and Exclusion from Very High Fire Severity Zones” and “Fuel Modification Plans and Maintenance.” Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the proposed project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.

HH 4. Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.

- HH 5.** Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director of Community Development of the City of Irvine in a timely manner.
- HH6.** The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells located on the former MCAS El Toro in a geographic information systems database (GIS). The City will review all permit applications on the former air station for well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to wells will be limited to authorized personnel.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure HH3 requires that The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for “Development Within and Exclusion from Very High Fire Severity Zones” and “Fuel Modification Plans and Maintenance.” Mitigation Measure HH4 requires that prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval. Mitigation Measure HH5 requires that prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan to address circumstances where unknown hazardous materials are discovered during grading, construction, and/or related development activities. Mitigation Measure HH6 requires the City to develop and maintain the location and

status, as well as other pertinent information, of all monitoring wells located on the former MCAS El Toro in a geographic information systems database (GIS). The City will review all permit applications on the former air station for well locations that may be affected by a permit, and require applicants to maintain appropriate access. Implementation of Mitigation Measures HH3, HH4, HH5, and HH6 will reduce the impacts associated with fire risk from wildfires to a level less than significant (EIR page 5.5-26).

E. PROJECT-LEVEL GEOLOGY AND SEISMICITY

Base Plan

B1. Significant Impact:

Future development of the project area has the potential to result in the exposure of people or structures to strong seismic ground shaking in the event a major earthquake occurs along any one of the active faults in the region. This is considered a significant impact. (EIR page 5.6-12).

Mitigation Measures

GS B1. The City of Irvine will require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest adopted Uniform Building Code (UBC). Compliance with this measure shall be verified by the Community Development Department at the time specific development is proposed.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure GS B1 requires that that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest adopted Uniform Building Code. Implementation of Mitigation Measure GS B1 will reduce the strong seismic groundshaking impact to a level less than significant (EIR page 5.6-14).

B2. Significant Impact:

The level of seismic activity expected in the project area is similar to the County as a whole, and other areas of Southern California. As such, the risk of loss, injury, or death

involving strong seismic ground shaking is similar to the risk associated with other regions within Southern California. This is considered a significant impact. (EIR page 5.6-12).

Mitigation Measures

GS B2. Existing City policies require the preparation of geotechnical studies at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.

1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing shall be conducted. The purpose of the subsurface evaluation is to:
 - a. Further evaluate the subsurface conditions in the area of the proposed structures.
 - b. Provide specific data on potential geologic and geotechnical hazards.
 - c. Provide information pertaining to the engineering characteristics of earth materials in the project area.

From this data, recommendations for grading/earthwork, surface and subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural sections, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:

- Seismic Ground Shaking - Measures to prevent risk of loss, injury, or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.
- Erosion or Loss of Topsoil - Measures to address this condition include site watering during grading to reduce loss of topsoil and adequate surface and subsurface drainage systems to prevent large-scale soil erosion.
- Expansive Soils - Measures to address this condition include appropriate development locations that do not have a history of settlement.

Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure GS B2 requires that the City requires preparation of geotechnical studies at the time specific development projects are proposed to address site specific geotechnical considerations. Implementation of Mitigation Measure GS B2 will reduce the site specific geotechnical conditions impacts to a level less than significant (EIR page 5.6-14).

B3. Significant Impact:

Some expansive soils may be present in localized areas within the project area. The presence of expansive soils could create risks to life or property. This impact is considered significant (EIR page 5.6-12).

Mitigation Measures

GS B3. Prior to occupation of the existing structures on the former MCAS El Toro a detailed seismic evaluation shall be performed. Upon completion of the evaluation, if necessary, the structures shall either be upgraded to meet current seismic Uniform Building Codes or the structures shall remain vacant if they do not meet seismic Uniform Building Codes. Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure GS B3 requires that prior to occupation of the existing structures on the former MCAS El Toro a detailed seismic evaluation shall be performed. Upon completion of the evaluation, if necessary, the structures shall either be upgraded to meet current seismic Uniform Building Codes or the structures shall remain vacant if they do not meet seismic Uniform Building Codes. Implementation of Mitigation Measure GS

B3 will reduce expansive soils related impacts to a level less than significant (EIR page 5.6-15).

B4. Significant Impact:

Many of the existing buildings on the former MCAS El Toro site do not meet current seismic codes. Temporary or permanent reuse of these facilities could expose people to a greater seismic risk than buildings that are constructed to applicable seismic codes. This is considered a significant impact. (EIR page 5.6-12).

Mitigation Measures

GS B3. Prior to occupation of the existing structures on the former MCAS El Toro a detailed seismic evaluation shall be performed. Upon completion of the evaluation, if necessary, the structures shall either be upgraded to meet current seismic Uniform Building Codes or the structures shall remain vacant if they do not meet seismic Uniform Building Codes. Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure GS B3 requires that prior to occupation of the existing structures on the former MCAS El Toro a detailed seismic evaluation shall be performed. Upon completion of the evaluation, if necessary, the structures shall either be upgraded to meet current seismic Uniform Building Codes or the structures shall remain vacant if they do not meet seismic Uniform Building Codes. Implementation of Mitigation Measure GS B3 will reduce the impact associated with buildings that do not meet current seismic codes to a level less than significant (EIR page 5.6-12).

B4. Significant Impact:

Future development of the project area has the potential for impacts resulting from soil erosion or the loss of topsoil. This impact is considered significant through the post 2025 development levels (EIR page 5.6-12).

Mitigation Measures

GS B4. Detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure GS B4 requires that detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. Implementation of Mitigation Measure GS B4 will reduce impacts related to soil erosion and the loss of top soil to a level less than significant (EIR page 5.6-15).

B5. Significant Impact:

Some expansive soils may be present in localized areas within the project area. The presence of expansive soils could create risks to life or property. This is considered a significant impact (EIR page 5.6-13).

Mitigation Measures

GS B2. Existing City policies require the preparation of geotechnical studies at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.

1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing shall be conducted. The purpose of the subsurface evaluation is to:
 - a. Further evaluate the subsurface conditions in the area of the proposed structures.
 - b. Provide specific data on potential geologic and geotechnical hazards.
 - c. Provide information pertaining to the engineering characteristics of earth materials in the project area.

From this data, recommendations for grading/earthwork, surface and subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural sections, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:

- Seismic Ground Shaking - Measures to prevent risk of loss, injury, or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.
- Erosion or Loss of Topsoil - Measures to address this condition include site watering during grading to reduce loss of topsoil and adequate surface and subsurface drainage systems to prevent large-scale soil erosion.
- Expansive Soils - Measures to address this condition include appropriate development locations that do not have a history of settlement.

Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure GS B2 requires that the City requires preparation of geotechnical studies at the time specific development projects are proposed to address site specific geotechnical considerations. Implementation of Mitigation Measure GS B2 will reduce the impact associated with expansive soils to a level less than significant (EIR page 5.6-14).

Overlay Plan

O1. Significant Impact:

Future development of the project area has the potential to result in the exposure of people or structures to strong seismic ground shaking in the event a major earthquake occurs along any one of the active faults in the region. This is considered a significant impact. (EIR page 5.6-13).

Mitigation Measures

GS O1. The City of Irvine will require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest adopted Uniform Building Code (UBC). Compliance with this measure shall be verified by the Community Development Department at the time specific development is proposed.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure GS O1 requires that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest adopted Uniform Building Code. Implementation of Mitigation Measure GS O1 will reduce the impacts associated with strong seismic groundshaking to a level less than significant (EIR page 5.6-15).

O2. Significant Impact:

The level of seismic activity expected in the project area is similar to the County as a whole, and other areas of Southern California. As such, the risk of loss, injury, or death involving strong seismic ground shaking is similar to the risk associated with other regions within Southern California. This is considered a significant impact. (EIR page 5.6-13).

Mitigation Measures

GS O2. Existing City policies require the preparation of geotechnical studies at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.

1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing shall be conducted. The purpose of the subsurface evaluation is to:
 - a. Further evaluate the subsurface conditions in the area of the proposed structures.

- b. Provide specific data on potential geologic and geotechnical hazards.
- c. Provide information pertaining to the engineering characteristics of earth materials in the project area.

From this data, recommendations for grading/earthwork, surface and subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural sections, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:

- C Seismic Ground Shaking - Measures to prevent risk of loss, injury, or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.
- C Erosion or Loss of Topsoil - Measures to address this condition include site watering during grading to reduce loss of topsoil and adequate surface and subsurface drainage systems to prevent large-scale soil erosion.
- C Expansive Soils - Measures to address this condition include appropriate development locations that do not have a history of settlement.

Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure GS O2 requires preparation of geotechnical studies at the time specific development projects are proposed to address site specific geotechnical considerations. Implementation of Mitigation Measure GS O2 will reduce the impact associated with geotechnical conditions to a level less than significant (EIR page 5.6-15).

O3. Significant Impact:

Some expansive soils may be present in localized areas within the project area. The presence of expansive soils could create risks to life or property. This impact is considered significant. (EIR page 5.6-13).

Mitigation Measures

GS O3. Prior to occupation of the existing structures on the former MCAS El Toro a detailed seismic evaluation shall be performed. Upon completion of the evaluation, if necessary, the structures shall either be upgraded to meet current seismic Uniform Building Codes or the structures shall remain vacant if they do not meet seismic Uniform Building Codes. Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure GS O3 requires that prior to occupation of the existing structures on the former MCAS El Toro a detailed seismic evaluation shall be performed. Upon completion of the evaluation, if necessary, the structures shall either be upgraded to meet current seismic Uniform Building Codes or the structures shall remain vacant if they do not meet seismic Uniform Building Codes. Implementation of Mitigation Measure GS O3 will reduce the impacts associated with expansive soils to a level less than significant (EIR page 5.6-16).

O4. Significant Impact:

Many of the existing buildings on the former MCAS El Toro site do not meet current seismic codes. Temporary or permanent reuse of these facilities could expose people to a greater seismic risk than buildings that are constructed to applicable seismic codes. This is considered a significant impact. (EIR page 5.6-13).

Mitigation Measures

GS O3. Prior to occupation of the existing structures on the former MCAS El Toro a detailed seismic evaluation shall be performed. Upon completion of the evaluation, if necessary, the structures shall either be upgraded to meet current seismic Uniform Building Codes or the structures shall remain vacant if they do

not meet seismic Uniform Building Codes. Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure GS O3 requires that prior to occupation of the existing structures on the former MCAS El Toro a detailed seismic evaluation shall be performed. Upon completion of the evaluation, if necessary, the structures shall either be upgraded to meet current seismic Uniform Building Codes or the structures shall remain vacant if they do not meet seismic Uniform Building Codes. Implementation of Mitigation Measure GS O3 will reduce the impacts associated with expansive soils to a level less than significant (EIR page 5.6-16).

O5. Significant Impact:

Future development of the project area has the potential for impacts resulting from soil erosion or the loss of topsoil. This impact is considered significant. (EIR page 5.6-13).

Mitigation Measures

GS O4. Detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure GS O4 requires that geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. Implementation of

Mitigation Measure GS O4 will reduce the impacts resulting from soils erosion or the loss of topsoil to a level less than significant (EIR page 5.6-16).

O6. Significant Impact:

The Overlay Plan proposes development of habitable structures in the northeastern foothills area, which may result in a significant impact associated with landslides (EIR page 5.6-13).

Mitigation Measures

GS O1. The City of Irvine will require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest adopted Uniform Building Code (UBC). Compliance with this measure shall be verified by the Community Development Department at the time specific development is proposed.

GS O2. Existing City policies require the preparation of geotechnical studies at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.

1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing shall be conducted. The purpose of the subsurface evaluation is to:
 - a. Further evaluate the subsurface conditions in the area of the proposed structures.
 - b. Provide specific data on potential geologic and geotechnical hazards.
 - c. Provide information pertaining to the engineering characteristics of earth materials in the project area.

From this data, recommendations for grading/earthwork, surface and subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural sections, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:

- Seismic Ground Shaking - Measures to prevent risk of loss, injury, or death involving seismic ground shaking include constructing new

development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.

- Erosion or Loss of Topsoil - Measures to address this condition include site watering during grading to reduce loss of topsoil and adequate surface and subsurface drainage systems to prevent large-scale soil erosion.
- Expansive Soils - Measures to address this condition include appropriate development locations that do not have a history of settlement.

Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure GS O1 requires that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest adopted Uniform Building Code. Implementation of Mitigation Measure GS O1 will reduce the impacts associated with strong seismic groundshaking to a level less than significant (EIR page 5.6-15). Mitigation Measure GS O2 requires preparation of geotechnical studies at the time specific development projects are proposed to address site specific geotechnical considerations. Implementation of Mitigation Measure GS O2 will reduce the impact associated with geotechnical conditions to a level less than significant (EIR page 5.6-15).

O7. Significant Impact:

Some expansive soils may be present in localized areas within the project area. The presence of expansive soils could create risks to life or property. This is considered a significant impact (EIR page 5.6-13).

Mitigation Measures

GS O2. Existing City policies require the preparation of geotechnical studies at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.

1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing shall be conducted. The purpose of the subsurface evaluation is to:
 - a. Further evaluate the subsurface conditions in the area of the proposed structures.
 - b. Provide specific data on potential geologic and geotechnical hazards.
 - c. Provide information pertaining to the engineering characteristics of earth materials in the project area.

From this data, recommendations for grading/earthwork, surface and subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural sections, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:

- Seismic Ground Shaking - Measures to prevent risk of loss, injury, or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.
- Erosion or Loss of Topsoil - Measures to address this condition include site watering during grading to reduce loss of topsoil and adequate surface and subsurface drainage systems to prevent large-scale soil erosion.
- Expansive Soils - Measures to address this condition include appropriate development locations that do not have a history of settlement.

Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure GS O2 requires preparation of geotechnical studies at the time specific development projects are proposed to address site specific geotechnical considerations. Implementation of Mitigation Measure GS O2 will reduce the impact associated with geotechnical conditions to a level less than significant (EIR page 5.6-15).

F. PROJECT-LEVEL HYDROLOGY/WATER QUALITY

Base Plan

B1. Significant Impact:

Grading and excavation activities required for future development could result in the exposure of bare soils which could result in both wind and water-related erosion, and a significant water quality impact if not properly treated. Through buildout of the proposed project, wind and water related erosion has the potential to violate water quality standards or waste discharge requirements. This is considered a significant impact. Implementation of Mitigation Measures HW1 and HW2 will reduce the impact associated with the potential to violate water quality standards and waste discharge requirements to a level less than significant.

Additionally, a Storm Water Pollution and Prevention Plan (SWPPP), Water Quality Management Plan (WQMP), Best Management Practices (BMPs), Notices of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area (this requirement will be met to the satisfaction of the City Engineer for any disturbance of one acre or more of soil in the project area), and General Dewatering NPDES Permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.

These measures will be implemented in accordance with local and state regulatory requirements. As future projects are planned, designed, and constructed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. (EIR page 5.7-22).

Mitigation Measures

H/WQ B1. Future development of the project area shall comply with City of Irvine adopted policies to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance

states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area . . . and residential construction sites that result in the disturbance of five acres or more . . . shall be required to develop and implement BMPs . . . to control erosion and siltation and contaminated runoff from the construction sites."

The City's standard conditions of approval indicate that a Storm Water Pollution and Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.

Additionally, prior to the issuance of precise grading permits, project applicants must submit, and the Director of Community Development must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff. Ongoing operations after construction would be subject to the countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.); and shall reference the location(s) of structural BMPs.

Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the City Engineer for any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES Permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be

imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

H/WQ B2. All stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality standards identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TDML) allocations adopted for this watershed.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure H/WQ B1 requires that future development of the project area shall comply with City of Irvine adopted policies to ensure that the potential for soil erosion is minimized on a project-by-project basis. Mitigation Measure H/WQ B2 requires that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality standards identified in the Santa Ana Regional Water Quality Control Board Basin Plan. Implementation of Mitigation Measures H/WQ B1 and H/WQ B2 will reduce the impacts associated with the potential to violate water quality standards and waste discharge requirements to a level less than significant (EIR page 5.7-27).

B2. Significant Impact:

Improvements to the flood control system shall be evenly scheduled during the various phases of development. However, a substantial increase in the rate or amount of surface runoff due to new development, may occur, resulting in flooding on- or off-site depending on the future proposed development. The potential for flooding to occur on-or off-site as a result of future development of the project area is considered a significant impact. Implementation of Mitigation Measure HW3 will reduce this impact to a level less than significant (EIR page 5.7-23).

Mitigation Measures

H/WQ B3. Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrology and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCO methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to

proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure H/WQ B3 requires that prior to future development in the project area, detailed hydrology studies shall be conducted at the time specific development is proposed. Implementation of Mitigation Measure H/WQ B3 will reduce the impact associated with flooding to a level less than significant (EIR page 5.7-28).

B3. Significant Impact:

With recent improvements to upstream flood control facilities, the floodplain area has likely decreased and fewer areas of the project area are subject to inundation. The phasing of the flood control system improvements in PAs 51 and 30 will be coordinated with the street-phasing schedule so that the storm drains are installed prior to or in concert with road construction. Improvements to the flood control system shall be evenly scheduled during the various phases of development. However, a substantial increase in the rate or amount of surface runoff due to new development, may occur, resulting in flooding on- or off-site depending on the future proposed development. This is considered a significant impact. Implementation of Mitigation Measure HW3 will reduce on- or off-site flooding due to surface runoff to a level less than significant (EIR page 5.7-25).

Mitigation Measures

H/WQ B3. Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrology and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure H/WQ B3 requires that prior to future development in the project area, detailed hydrology studies shall be conducted at the time specific development is proposed. Implementation of Mitigation Measure H/WQ B3 will reduce the impact associated with flooding to a level less than significant (EIR page 5.7-28).

B4. Significant Impact:

As per the requirements of the Regional Water Quality Control Board, proposed projects occurring upstream of or discharging into impaired waterbodies listed on the Clean Water Act Section 303(D) list may be subject to additional controls (specifically Total Maximum Daily Loads or TMDLs). Depending on the specific type of project proposed, these controls could include discharge prohibitions, revisions to discharge permits, or management plans to address water quality impacts. This is especially important in the Newport Bay watershed. At this program level of planning, the potential to degrade surface water quality is considered a significant impact. Implementation of Mitigation Measure H/WQ B1 will reduce the impact of future development on surface water quality to a level less than significant.

Additionally, a Storm Water Pollution and Prevention Plan (SWPPP), Water Quality Management Plan (WQMP), Best Management Practices (BMPs), Notices of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board (this requirement will be met to the satisfaction of the City Engineer for any disturbance of one acre or more of soil in the project area), General Dewatering NPDES Permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit are required prior to issuance of grading permits in the project area.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Grading or building permit applicants will be required to submit and obtain approval of a Water Quality Management Plan (WQMP) from the City of Irvine prior to issuance of the permits. The WQMP will specifically identify BMPs that will be used on-site to control predictable pollutant runoff. This WQMP shall identify, at a minimum, the routine, structural and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the

assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.); and shall reference the location(s) of structural BMPs.

Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department (EIR page 5.7-23).

Mitigation Measures

H/WQ B1. Future development of the project area shall comply with City of Irvine adopted policies to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area . . . and residential construction sites that result in the disturbance of five acres or more . . . shall be required to develop and implement BMPs . . . to control erosion and siltation and contaminated runoff from the construction sites."

The City's standard conditions of approval indicate that a Storm Water Pollution and Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.

Additionally, prior to the issuance of precise grading permits, project applicants must submit, and the Director of Community Development must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff. Ongoing operations after construction would be subject to the countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.); and shall reference the location(s) of structural BMPs.

Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the City Engineer for any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES Permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure H/WQ B1 requires that future development of the project area shall comply with City of Irvine adopted policies to ensure that the potential for soil erosion is minimized on a project-by-project basis. Implementation of Mitigation Measure H/WQ B1 will reduce the impact of future development on surface water quality to a level less than significant (EIR page 5.7-27).

B5. Significant Impact:

Project development is proposed in areas of PAs 51 and 30. Existing and proposed development within these areas could be subject to potential flooding associated with a 100-year frequency storm. Mitigation Measure HW4 will reduce the impact of exposure of future residential development in the project area to a level less than significant (EIR page 5.7-24).

Mitigation Measures

H/WQ B4. Prior to the issuance of building permits, Flood Insurance Rate Maps (FIRMs) shall be prepared for the project area. It is known that portions of the project area are subject to flooding. Consequently, the limits of the

possible 100-year floodplain must be established via a Letter of Map Revision (LOMR) from FEMA for any proposed project within the project area. The City of Irvine currently imposes conditions of approval on projects in 100-year floodplains designated by FEMA. If a project includes land within a Special Flood Hazard Area (SFHA), subject to inundation according to the Flood Insurance Rate Map (FIRM), and not addressed by an underlying subdivision map, various City conditions of approval will apply. Prior to the issuance of a precise grading permit for any lot or parcel wholly or partially located within a SFHA, applicants must furnish to the City Engineer documentation required by FEMA for revision to the FIRM (of other FEMA flood hazard map) and Flood Insurance Study (FIS). Additionally, prior to the issuance of building permits on any lot or parcel located wholly or partially within the SFHA, a National Flood Insurance Program (NFIP) Elevation Certificate must be submitted in accordance with the requirements of the NFIP and must have been reviewed and approved by the City Engineer. If a nonresidential building is being floodproofed, then a FEMA Floodproofing Certificate must be completed in addition to the elevation certificate. Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure H/WQ B4 requires that prior to the issuance of building permits, Flood Insurance Rate Maps (FIRMs) shall be prepared for the project area. Implementation of Mitigation Measure H/WQ B4 will reduce the impact of exposure of future residential development with flooding associated with the 100-year frequency storm in the project area to a level less than significant (EIR page 5.7-28).

Overlay Plan

O1. Significant Impact:

Grading and excavation activities required for future development could result in the exposure of bare soils which could result in both wind and water-related erosion, and a significant water quality impact if not properly treated. Through buildout of the proposed project, wind and water related erosion has the potential to violate water quality standards or waste discharge requirements. This is considered a significant impact. Implementation of Mitigation Measures H/WQ O1 and H/WQ O2 will reduce the impact

associated with the potential to violate water quality standards and waste discharge requirements to a level less than significant.

Additionally, a Storm Water Pollution and Prevention Plan (SWPPP), Water Quality Management Plan (WQMP), Best Management Practices (BMPs), Notices of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area (this requirement will be met to the satisfaction of the City Engineer for any disturbance of one acre or more of soil in the project area), and General Dewatering NPDES Permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.

These measures will be implemented in accordance with local and state regulatory requirements. As future projects are planned, designed, and constructed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future (EIR page 5.7-23).

Mitigation Measures

H/WQ 01. Future development of the project area shall comply with City of Irvine adopted policies to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area . . . and residential construction sites that result in the disturbance of five acres or more . . . shall be required to develop and implement BMPs . . . to control erosion and siltation and contaminated runoff from the construction sites."

The City's standard conditions of approval indicate that a Storm Water Pollution and Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.

Additionally, prior to the issuance of precise grading permits, project applicants must submit, and the Director of Community Development must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff. Ongoing

operations after construction would be subject to the countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.); and shall reference the location(s) of structural BMPs.

Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the City Engineer for any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES Permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

- H/WQ O2.** All stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality standards identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TDML) allocations adopted for this watershed.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure H/WQ O1 requires that future development of the project area shall comply with City of Irvine adopted policies to ensure that the potential for soil erosion is

minimized on a project-by-project basis. Mitigation Measure H/WQ O2 requires that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality standards identified in the Santa Ana Regional Water Quality Control Board Basin Plan. Implementation of Mitigation Measures H/WQ O1 and H/WQ O2 will reduce the impact associated with the potential to violate water quality standards and waste discharge requirements to a level less than significant (EIR page 5.7-29).

O2. Significant Impact:

Improvements to the flood control system shall be evenly scheduled during the various phases of development. However, a substantial increase in the rate or amount of surface runoff due to new development, may occur, resulting in flooding on- or off-site depending on the future proposed development. The potential for flooding to occur on-or off-site as a result of future development of the project area is considered a significant impact. Implementation of Mitigation Measure HW3 will reduce this impact to a level less than significant (EIR page 5.7-25).

Mitigation Measures

H/WQ O3. Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrology and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure H/WQ O3 requires that prior to future development in the project area, detailed hydrology studies shall be conducted at the time specific development is proposed. Implementation of Mitigation Measure H/WQ O3 will reduce the impact associated with potential for flooding to occur on-or off-site as a result of future development of the project area to a level less than significant (EIR page 5.7-30).

O3. Significant Impact:

With recent improvements to upstream flood control facilities, the floodplain area has likely decreased and fewer areas of the project area are subject to inundation. The phasing of the flood control system improvements in PAs 51 and 30 will be coordinated with street-phasing schedule so that the storm drains are installed prior to or in concert with road construction. Improvements to the flood control system shall be evenly scheduled during the various phases of development. However, a substantial increase in the rate or amount of surface runoff due to new development, may occur, resulting in flooding on- or off-site depending on the future proposed development. This is considered a significant impact. Implementation of Mitigation Measure HW3 will reduce on- or off-site flooding due to surface runoff to a level less than significant (EIR page 5.7-25).

H/WQ O3. Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrology and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure H/WQ O3 requires that prior to future development in the project area, detailed hydrology studies shall be conducted at the time specific development is proposed. Implementation of Mitigation Measure H/WQ O3 will reduce the impact associated with potential for on- or off-site flooding due to surface runoff to a level less than significant (EIR page 5.7-30).

O4. Significant Impact:

As per the requirements of the Regional Water Quality Control Board, proposed projects occurring upstream of or discharging into impaired waterbodies listed on the Clean Water Act Section 303(D) list may be subject to additional controls (specifically Total Maximum Daily Loads or TMDLs) pursuant to that regulation. Depending on the specific type of project proposed, these controls could include discharge prohibitions, revisions to discharge permits, or management plans to address water quality impacts.

This is especially important in the Newport Bay watershed. At this program level of planning, the potential to degrade surface water quality is considered a significant impact. Implementation of Mitigation Measure HW1 will reduce the impact of future development on surface water quality to a level less than significant.

Additionally, a Storm Water Pollution and Prevention Plan (SWPPP), Water Quality Management Plan (WQMP), Best Management Practices (BMPs), Notices of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board (this requirement will be met to the satisfaction of the City Engineer for any disturbance of one acre or more of soil in the project area), General Dewatering NPDES Permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit are required prior to issuance of grading permits in the project area.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Grading or building permit applicants will be required to submit and obtain approval of a Water Quality Management Plan (WQMP) from the City of Irvine prior to issuance of the permits. The WQMP will specifically identify BMPs that will be used on-site to control predictable pollutant runoff. This WQMP shall identify, at a minimum, the routine, structural and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.); and shall reference the location(s) of structural BMPs.

Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department (EIR page 5.7-26).

Mitigation Measures

H/WQ O1. Future development of the project area shall comply with City of Irvine adopted policies to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area . . . and residential construction sites that result in the disturbance of five acres or more . . .

shall be required to develop and implement BMPs ... to control erosion and siltation and contaminated runoff from the construction sites."

The City's standard conditions of approval indicate that a Storm Water Pollution and Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.

Additionally, prior to the issuance of precise grading permits, project applicants must submit, and the Director of Community Development must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff. Ongoing operations after construction would be subject to the countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.); and shall reference the location(s) of structural BMPs.

Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the City Engineer for any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES Permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure H/WQ O1 requires that future development of the project area shall comply with City of Irvine adopted policies to ensure that the potential for soil erosion is minimized on a project-by-project basis. Implementation of Mitigation Measure H/WQ O1 will reduce the impact of future development on surface water quality to a level less than significant (EIR page 5.7-27).

O5. Significant Impact:

Project development is proposed in areas of PAs 51 and 30. Existing and proposed development within these areas could be subject to potential flooding associated with a 100-year frequency storm. Mitigation Measure HW4 will reduce the impact of exposure of future residential development in the project area to a level less than significant (EIR page 5.7-27).

Mitigation Measures

H/WQ O4. Prior to the issuance of building permits, Flood Insurance Rate Maps (FIRMs) shall be prepared for the project area. It is known that portions of the project area are subject to flooding. Consequently, the limits of the possible 100-year floodplain must be established via a Letter of Map Revision (LOMR) from FEMA for any proposed project within the project area. The City of Irvine currently imposes conditions of approval on projects in 100-year floodplains designated by FEMA. If a project includes land within a Special Flood Hazard Area (SFHA), subject to inundation according to the Flood Insurance Rate Map (FIRM), and not addressed by an underlying subdivision map, various City conditions of approval will apply. Prior to the issuance of a precise grading permit for any lot or parcel wholly or partially located within a SFHA, applicants must furnish to the City Engineer documentation required by FEMA for revision to the FIRM (of other FEMA flood hazard map) and Flood Insurance Study (FIS). Additionally, prior to the issuance of building permits on any lot or parcel located wholly or partially within the SFHA, a National Flood Insurance Program (NFIP) Elevation Certificate must be submitted in accordance with the requirements of the NFIP and must have been reviewed and approved by the City Engineer. If a nonresidential building is being floodproofed, then a FEMA Floodproofing Certificate must be completed in addition to the elevation certificate. Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure H/WQ O4 prior to the issuance of building permits, Flood Insurance Rate Maps (FIRMs) shall be prepared for the project area. Implementation of Mitigation Measure H/WQ O4 will reduce the impact of exposure of future residential development in the project area to a level less than significant (EIR page 5.7-30).

G. PROJECT-LEVEL BIOLOGICAL RESOURCES

Base Plan and Overlay Plan

1. Significant Impact:

The southern tarplant, a federal species of concern, may be affected by development of the site. This is considered a significant impact (EIR page 5.9-24).

Mitigation Measures

Bio 1. Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl, shall be conducted. Prior to approval of a subdivision map for development within , or in proximity to Serrano Creek a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher, of this species in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure Bio 1 requires that prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant shall be conducted. Implementation of Mitigation Measure Bio 1 will reduce the impact associated with the southern tarplant to a level less than significant (EIR page 5.9-24).

2. Significant Impact:

There is a limited amount of highly disturbed wetland habitat on the project site. The project may result in an impact to this habitat (EIR page 5.9-24).

Mitigation Measures

Bio 2. Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan subarea that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, re-creation (i.e. within the proposed wildlife corridor), and/or revegetation as deemed acceptable by the appropriate jurisdictional agencies.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure Bio 2 requires that prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan subarea that contain the potential for wetland habitat and/or jurisdictional waters. Implementation of Mitigation Measure Bio 2 will reduce the impact associated with wetland habitat to a level less than significant (EIR page 5.9-25).

3. Significant Impact:

PAs 51 and 30 contain a large number of trees, many of them mature, representing a wide range of species. Implementation of the proposed project may result in damage and destruction to the trees. A significant impact related to conflicts with the City of Irvine's Urban Forestry Ordinance may occur (EIR page 5.9-24).

Mitigation Measures

Bio 4. Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered “Significant Trees” under the City of Irvine’s Urban Forestry Ordinance (UFO) (Section 5-7-401 et al) and the UFO shall apply to all trees included in this inventory.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure Bio 4 requires that prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. Implementation of Mitigation Measure Bio 4 will reduce the impact associated with trees to a level less than significant (EIR page 5.9-25).

H. PROJECT-LEVEL PALEONTOLOGICAL RESOURCES

Base Plan and Overlay Plan

1. Significant Impact:

Earthmoving operations such as grading and trenching has the potential to impact buried paleontological resources in the moderately to highly sensitive areas in the coastal plain and washes, northeast, northwest and southern portions of PA 51. This is considered a significant impact.

Additionally, pleistocene terrestrial vertebrates have been discovered four miles from PA 30. Similar beds of Pleistocene terrestrial vertebrates may underlie PA 30. This impact is considered significant (EIR page 5.10-6).

Mitigation Measures

P1. Prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. (A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.

When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossils specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screen-washing operation on-site.

Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure P1 requires that prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. Implementation of Mitigation Measure P1 will reduce the impact associated with earthmoving operations, such as grading and trenching that may impact buried paleontological resources, to a level less than significant (EIR page 5.10-6).

I. PROJECT-LEVEL CULTURAL RESOURCES

Base Plan and Overlay Plan

1. Significant Impact:

Grading activities associated with future development of the project area may cause a substantial adverse change in the significance of an archaeological resource. Mitigation Measures Cult B1 through Cult B3 will reduce this impact to a level less than significant (EIR page 5.11-5).

Mitigation Measures

- Cult1.** Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PAs 51 and 30. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.
- Cult2.** Monitoring of excavation and grading activities associated with future development in PAs 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure Cult1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and an assessment of their importance under CEQA and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.
- Cult3.** Prior to the issuance of grading permits and/or building permits for any future development in PAs 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City of Irvine to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.

Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure Cult1 requires that prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PAs 51 and 30. Mitigation Measure Cult2 requires that monitoring of excavation and grading activities associated with future development in PAs 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure Cult1. Mitigation Measure Cult3 requires that prior to the issuance of grading permits and/or building permits for any future development in PAs 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City of Irvine to address archaeological resources discovered during grading. Implementation of Mitigation Measures Cult1, Cult, 2 and Cult3 will reduce the impact associated with archaeological resources to a level less than significant (EIR page 5.11-6).

2. Significant Impact:

Grading activities could uncover previously unknown human remains, including those interred outside of formal cemeteries. Mitigation Measure Cult B4 will reduce this impact to a level less than significant (EIR page 5.11-5).

Mitigation Measures

Cult4. Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City of Irvine to address the accidental discovery or recognition of any human remains. The program shall include the following:

There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

C The county coroner must be contacted to determine that no investigation of the cause of death is required, and

If the coroner determines the remains to be Native American:

- C The coroner shall contact the Native American Heritage Commission within 24 hours.
- C The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
- C The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
- C Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
 - o The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
 - o The descendant identified fails to make a recommendation; or
 - o The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

Compliance with this measure shall be verified by the Community Development Department.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure Cult4 requires that prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City of Irvine to address the accidental discovery or recognition of any human remains. Implementation of Mitigation Measure Cult4 will reduce the impact associated with grading activities that could uncover previously unknown human remains to a level less than significant (EIR page 5.11-6).

J. PROJECT-LEVEL AESTHETICS

Base Plan and Overlay Plan

1. Significant Impact

Future development of PAs 51 and 30, consistent with the Orange County Great Park land use plan, will lead to the introduction of new sources of light within the project area. These sources include street lighting along planned roadways and exterior lighting (including security lighting and parking lot lighting) for various educational and institutional developments, and lighting associated with athletic fields. The potential for a significant light impact may occur should proposed light sources be directed into or located near existing or planned residential uses, which are sensitive to light intrusion during nighttime hours (EIR page 5.12-9).

Mitigation Measures

- A1.** Prior to issuance of grading permits, lighting plans and signage plans for new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent residential areas occurs.

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure A1 requires that new development is reviewed by City of Irvine staff to ensure that minimal light intrusion occurs on neighboring development. Implementation of Mitigation Measure A1 will reduce light aesthetic impacts to a level less than significant (EIR page 5.12-10).

2. Significant Impact

Future development of PAs 51 and 30, consistent with the Orange County Great Park land use plan, will lead to the introduction of new sources of glare within the project area. Reflective materials and glazed or polished exterior surfaces associated with research and development land uses may create glare, which could cause visual nuisance to residential land uses (EIR page 5.12-9).

Mitigation Measures

- A2.** Prior to issuance of grading permits, during the master plan review process for future development in the project area, the Director of Community Development shall ensure mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs (EIR page 5.12-10).

Finding

Pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure A2 requires that new development is reviewed by City of Irvine staff to ensure that appropriate building materials and design is utilized to reduce glare from new development. Implementation of Mitigation Measure A2 will reduce glare related aesthetic impact to a level less than significant (EIR page 5.12-10).

K. PROJECT-LEVEL PUBLIC SERVICES AND FACILITIES

Base Plan and Overlay Plan

1. Significant Impact: Law Enforcement

The EIR concludes that development of the project will not have any significant impact on the provision of law enforcement services, or the ability of law enforcement services to respond to an incident in a timely manner. Through the continued implementation of the City's Strategic Business Plan and Budgeting process, adequate provision will be made for the maintenance of acceptable law enforcement levels of service. The general significant impacts associated with the construction and operation of public facilities has been addressed in the EIR, including the construction, expansion, and/or operation of a new police substation. Project-level environmental review, at the time the specific location of a future police substation is known, and when specific development plans have been prepared, will be required (EIR pages 5.14-4 and 5.14-5).

Mitigation Measures

The EIR concludes that development of the project will not have any significant impact on the provision of law enforcement services, or the ability of law enforcement services to respond to an incident in a timely manner. With regard to construction impacts,

mitigation measures identified in other sections of the EIR (5.1-5.15), including watering during construction to address air quality impacts, monitoring grading activity for paleontologic resources, etc., address the impacts associated with the construction and operation of public facilities. Specifically, Mitigation Measures AQ1, AQ2, AQ3, HH1, HH2, HH3, HH4, HH5, GS1, GS2, GS3, GS4, H/WQ1, H/WQ2, H/WQ4, SW1, Bio1, Bio2, Bio4, P1, Cult1, Cult2, Cult3, and Cult4 apply to the construction of public services and facilities. These measures would be applicable to new construction and operation of law enforcement facilities to serve new growth expected in the project area.

Finding

The EIR concludes that development of the project will not have any significant impact on the provision of law enforcement services, or the ability of law enforcement services to respond to an incident in a timely manner. With regard to construction impacts, pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

The EIR concludes that development of the project will not have any significant impact on the provision of law enforcement services, or the ability of law enforcement services to respond to an incident in a timely manner. With regard to construction impacts, mitigation measures required for any significant impacts identified in preceding sections of the EIR would apply to the future construction and operation of a new police substation within the project area. Project-level environmental review, at the time the specific location of the future police substation is known, and when specific development plans have been prepared, will be required and project specific mitigation measures developed and implemented. Implementation of Mitigation Measures identified in the EIR Sections 5.1-5.15 (that address the impacts associated with the construction and operation of public facilities) will reduce the impact associated with construction and operation of public facilities to a level less than significant (EIR page 5.14-6).

2. Significant Impact: Fire Protection and Emergency Services

The EIR concludes that development of the project will not have any significant impact on the provision of fire protection or emergency services, or the ability of fire services to respond to an incident in a timely manner. A final determination of fire station needs and locations will be made at a future date when more information is known about risk, density, construction, layout, and type of occupancy. Appropriate capital improvements and resources will be required to meet anticipated fire service delivery requirements. The general significant impacts associated with the construction, expansion, and/or operation of public facilities has been addressed in the EIR, including the construction, expansion, and/or operation of fire protection facilities and emergency response services (EIR pages 5.14-6 – 5.14-11).

Mitigation Measure

The EIR concludes that development of the project will not have any significant impact on the provision of fire protection or emergency services, or the ability of fire services to respond to an incident in a timely manner. With regard to construction impacts, mitigation measures identified in other sections of the EIR (5.1-5.15), including watering during construction to address air quality impacts, monitoring grading activity for paleontologic resources, etc., address the impacts associated with the construction and operation of public facilities. Specifically, Mitigation Measures AQ1, AQ2, AQ3, HH1, HH2, HH3, HH4, HH5, GS1, GS2, GS3, GS4, H/WQ1, H/WQ2, H/WQ4, SW1, Bio1, Bio2, Bio4, P1, Cult1, Cult2, Cult3, and Cult4 apply to the construction of public services and facilities. These measures would be applicable to new construction and operation of fire protection and emergency response services to serve new growth expected in the project area.

Finding

The EIR concludes that development of the project will not have any significant impact on the provision of fire and emergency services, or the ability of fire services to respond to an incident in a timely manner. With regard to construction impacts, pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

The EIR concludes that development of the project will not have any significant impact on the provision of fire and emergency services, or the ability of fire services to respond to an incident in a timely manner. With regard to construction impacts, mitigation measures required for any significant impacts identified in preceding sections of the EIR would apply to the future construction and operation of fire protection and emergency response services within the project area. Project-level environmental review, at the time the specific location of future fire protection facilities and/or emergency response services are known, and when specific development plans have been prepared, will be required and project specific mitigation measures developed and implemented. Implementation of Mitigation Measures identified in the EIR Sections 5.1-5.15 (that address the impacts associated with the construction and operation of public facilities) will reduce the impact associated with construction and operation of public facilities to a level less than significant (EIR page 5.14-11).

3. Significant Impact: Park and Recreation

The EIR concludes that development of the project will not have any significant impact on the provision of park and recreation facilities. The parkland acreage proposed under the proposed project will greatly exceed the existing City of Irvine's standards. The

general significant impacts associated with the construction, expansion, and/or operation of public facilities has been addressed in the EIR, including the construction, expansion, and/or operation of a new park and recreational facilities.

Mitigation Measure

The EIR concludes that development of the project will not have any significant impact on the provision of parks and recreation facilities. With regard to construction impacts, mitigation measures identified in other sections of the EIR (5.1-5.15), including watering during construction to address air quality impacts, monitoring grading activity for paleontologic resources, etc., address the impacts associated with the construction and operation of public facilities. Specifically, Mitigation Measures AQ1, AQ2, AQ3, HH1, HH2, HH3, HH4, HH5, GS1, GS2, GS3, GS4, H/WQ1, H/WQ2, H/WQ4, SW1, Bio1, Bio2, Bio4, P1, Cult1, Cult2, Cult3, and Cult4 apply to the construction of public services and facilities. These measures would be applicable to new construction and operation of new park and recreational facilities to serve new growth expected in the project area.

Finding

The EIR concludes that development of the project will not have any significant impact on the provision of parks and recreation facilities. With regard to construction impacts, pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

The EIR concludes that development of the project will not have any significant impact on the provision of parks and recreation facilities. With regard to construction impacts, mitigation measures required for any significant impacts identified in preceding sections of the EIR would apply to the future construction and operation of new park and recreational facilities within the project area. Project-level environmental review, at the time the specific location of new park and recreational facilities are known, and when specific development plans have been prepared, will be required and project specific mitigation measures developed and implemented. Implementation of Mitigation Measures identified in the EIR Sections 5.1-5.15 (that address the impacts associated with the construction and operation of public facilities) will reduce the impact associated with construction and operation of public facilities to a level less than significant (EIR pages 5.14-19 and 5.14-20).

4. Significant Impact: School Services

The EIR concludes that development of the project will not have any significant impact on the provision of school services. New development within the project area will have to pay development fees to the school districts. These fees will be used for the development of new schools, expansion or improvement of existing school facilities or to

fund school services. Under the Overlay Plan, the project would generate a total of 1,525 new students in the Irvine Unified School District and 384 new students in the Saddleback Valley Unified School District. Additionally, under the Overlay Plan, the Development Agreement requires dedication of a school site in the TOD portion of the project area. The general significant impacts associated with the construction, expansion, and/or operation of public facilities has been addressed in the EIR, including the construction, expansion, and/or operation of new school service.

Mitigation Measure

The EIR concludes that development of the project will not have any significant impact on the provision school services. With regard to construction impacts, mitigation measures identified in other sections of the EIR (5.1-5.15), including watering during construction to address air quality impacts, monitoring grading activity for paleontologic resources, etc., address the impacts associated with the construction and operation of public facilities. Specifically, Mitigation Measures AQ1, AQ2, AQ3, HH1, HH2, HH3, HH4, HH5, GS1, GS2, GS3, GS4, H/WQ1, H/WQ2, H/WQ4, SW1, Bio1, Bio2, Bio4, P1, Cult1, Cult2, Cult3, and Cult4 apply to the construction of public services and facilities. These measures would be applicable to new construction and operation of school services to serve new growth expected in the project area.

Finding

The EIR concludes that development of the project will not have any significant impact on the provision of school services. With regard to construction impacts, pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

The EIR concludes that development of the project will not have any significant impact on the provision of school services. With regard to construction impacts, mitigation measures required for any significant impacts identified in preceding sections of the EIR would apply to the future construction and operation of school services within the project area. Project-level environmental review, at the time the specific location of educational facilities and school services are known, and when specific development plans have been prepared, will be required and project specific mitigation measures developed and implemented. Implementation of Mitigation Measures identified in the EIR Sections 5.1-5.15 (that address the impacts associated with the construction and operation of public facilities) will reduce the impact associated with construction and operation of public facilities to a level less than significant (EIR pages 5.14-27 and 5.14-28).

L. PROJECT-LEVEL UTILITIES

Base Plan and Overlay Plan

1. Significant Impact: Potable Water

The EIR concludes that development of the project will not have any significant impact on the provision of potable water services. The existing transmission capacity of the potable water system on-site will be expanded to serve the proposed project. The Base and Overlay Plan system expands the existing MCAS El Toro potable water system to fully integrate into the IRWD system and provide backbone service to all user areas in the project. The specific environmental impact of constructing new potable water facilities that will be needed to serve the proposed project cannot be determined at this program level of analysis as site specific plans for the installation of the new potable water backbone system have not been prepared. However, the general impacts associated with the construction and operation of public utilities has been addressed within the EIR, which would include the construction and operation of the new potable water facilities (EIR pages 5.15-2 through 5.15-6).

Mitigation Measures

The EIR concludes that development of the project will not have any significant impact on the provision of potable water services. With regard to construction impacts, mitigation measures identified in other sections of the EIR (5.1-5.15), including watering during construction to address air quality impacts, monitoring grading activity for paleontologic resources, etc., address the impacts associated with the construction and operation of utilities. Specifically, Mitigation Measures AQ1, AQ2, AQ3, HH1, HH2, HH3, HH4, HH5, GS1, GS2, GS3, GS4, H/WQ1, H/WQ2, H/WQ4, SW1, Bio1, Bio2, Bio4, P1, Cult1, Cult2, Cult3, and Cult4 apply to the construction of utilities. These measures would be applicable to new construction and operation of the new potable water facilities to serve new growth expected in the project area.

Finding

The EIR concludes that development of the project will not have any significant impact on the provision of potable water services. With regard to construction impacts, pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

The EIR concludes that development of the project will not have any significant impact on the provision of potable water services. With regard to construction impacts, mitigation measures required for any significant impacts identified in preceding sections of the EIR would apply to the future construction and operation of the new potable water

facilities within the project area. Project-level environmental review, at the time the specific location of the new potable water facilities are known, and when specific development plans have been prepared, will be required and project specific mitigation measures developed and implemented. Implementation of Mitigation Measures identified in the EIR Sections 5.1-5.15 (that address the impacts associated with the construction and operation of public facilities) will reduce the impact associated with construction and operation of public facilities to a level less than significant (EIR page 5.15-6).

2. Significant Impact: Recycled Water

The EIR concludes that development of the project will not have any significant impact on the provision of recycled water facilities. The Irvine Ranch Water District (IRWD) will continue to provide recycled water service, at existing levels of service, to PAs 51 and 30. IRWD has indicated in its Water Resources Master Plan that it will have sufficient capacity to meet the future recycled water requirements of Measure W Orange County Great Park Plan, which is similar to the proposed project. Additionally, the IRWD Board of Directors approved water supply assessment for the proposed project. Based on the assessment, the IRWD has determined that a sufficient non-potable water supply is available to serve the project. The specific environmental impact of constructing recycled water facilities that will be needed to serve the proposed project cannot be determined at this program level of analysis as site specific plans for the installation of the new recycled water backbone system have not been prepared. However, the general impacts associated with the construction and operation of public utilities has been addressed within the EIR, which would include the construction and operation of the new recycled water facilities (EIR pages 5.15-7 through 5.15-11).

Mitigation Measures

The EIR concludes that development of the project will not have any significant impact on the provision of recycled water facilities. With regard to construction impacts, mitigation measures identified in other sections of the EIR (5.1-5.15), including watering during construction to address air quality impacts, monitoring grading activity for paleontologic resources, etc., address the impacts associated with the construction and operation of utilities. Specifically, Mitigation Measures AQ1, AQ2, AQ3, HH1, HH2, HH3, HH4, HH5, GS1, GS2, GS3, GS4, H/WQ1, H/WQ2, H/WQ4, SW1, Bio1, Bio2, Bio4, P1, Cult1, Cult2, Cult3, and Cult4 apply to the construction of utilities. These measures would be applicable to new construction and operation of new recycled water facilities to serve new growth expected in the project area.

Finding

The EIR concludes that development of the project will not have any significant impact on the provision of recycled water facilities. With regard to construction impacts, pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or

alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

The EIR concludes that development of the project will not have any significant impact on the provision of recycled water facilities. With regard to construction impacts, mitigation measures required for any significant impacts identified in preceding sections of the EIR would apply to the future construction and operation of new recycled water facilities within the project area. Project-level environmental review, at the time the specific location of new recycled water facilities are known, and when specific development plans have been prepared, will be required and project specific mitigation measures developed and implemented. Implementation of Mitigation Measures identified in the EIR Sections 5.1-5.15 (that address the impacts associated with the construction and operation of public facilities) will reduce the impact associated with construction and operation of public facilities to a level less than significant (EIR pages 5.15-11 and 5.15-12).

3. Significant Impact: Sewer

The EIR concludes that development of the project will not have any significant impact on the provision of sewer facilities. The IRWD will continue to provide sewer service, at existing levels of service, to Pas 51 and 30. IRWD has indicated in the past that it will have sufficient capacity to meet the future sewer requirements of Pas 51 and 30 under more intense development plans (the Millennium Plan) than proposed development plan; therefore, IRWD would have adequate capacity to service the less intense Base Plan and Overlay Plan. The specific environmental impact of constructing sewer facilities that will be needed to serve the proposed project cannot be determined at this program level of analysis as site specific plans for the installation of the new sewer system have not been prepared. However, the general impacts associated with the construction and operation of public utilities has been addressed within the EIR, which would include the construction and operation of the new sewer facilities (EIR page 5.15-12).

Mitigation Measure

The EIR concludes that development of the project will not have any significant impact on the provision of sewer facilities. With regard to construction impacts, mitigation measures identified in other sections of the EIR (5.1-5.15), including watering during construction to address air quality impacts, monitoring grading activity for paleontologic resources, etc., address the impacts associated with the construction and operation of utilities. Specifically, Mitigation Measures AQ1, AQ2, AQ3, HH1, HH2, HH3, HH4, HH5, GS1, GS2, GS3, GS4, H/WQ1, H/WQ2, H/WQ4, SW1, Bio1, Bio2, Bio4, P1, Cult1, Cult2, Cult3, and Cult4 apply to the construction of utilities. These measures would be applicable to new construction and operation of new sewer facilities to serve new growth expected in the project area.

Finding

The EIR concludes that development of the project will not have any significant impact on the provision of sewer facilities. With regard to construction impacts, pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

The EIR concludes that development of the project will not have any significant impact on the provision of sewer facilities. With regard to construction impacts, mitigation measures required for any significant impacts identified in preceding sections of the EIR would apply to the future construction and operation of sewer facilities within the project area. Project-level environmental review, at the time the specific location of new sewer facilities are known, and when specific development plans have been prepared, will be required and project specific mitigation measures developed and implemented. Implementation of Mitigation Measures identified in the EIR Sections 5.1-5.15 (that address the impacts associated with the construction and operation of public facilities) will reduce the impact associated with construction and operation of public facilities to a level less than significant (EIR page 5.15-18).

4. Significant Impact: Solid Waste

The EIR concludes that development of the project will not have any significant impact on the provision of solid waste facilities. Anticipated increases in solid waste generation resulting from the implementation of the proposed Base or Overlay Plans are not anticipated to exceed the capacity of IWMD facilities since the current capacity exceeds 30 years. Private solid waste hauling services will expand to meet the needs of the projected growth and development allowed under the proposed project. The proposed project is estimated to generate approximately 12.4 tons of solid waste per day (Base Plan) and 35.4 tons of solid waste per day (Overlay Plan) through buildout year 2025. Anticipated increase in solid waste generation resulting from implementation of either the Base Plan or Overlay Plan is not expected to exceed capacity of the County of Orange Integrated Waste Management Department facilities since the current capacity exceeds 30 years. Under AB939, each city and county is required to reduce 50% of solid wastes going into landfills, based on 1990 levels (EIR page 5.15-21). Additionally, as part of AB 939 compliance State law (SB1374) requires that all cities implement ordinances or other measures that specifically require the diversion of 75% of all construction or demolition wastes from landfills (EIR page 5.15-20).

Mitigation Measures

SW1. It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other deconstruction of the aged structures and property, including

but not limited to buildings and runways, at El Toro MCAS is contaminated with lead based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the El Toro MCAS site by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.

If it is determined by the technical evaluation that the material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as “waste-to-energy” (WTE) plants (EIR page 5.15-23).

- SW2.** For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant must submit a written plan to the City and implement such plan to ensure that 75% of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations (EIR page 5.15-23).
- SW3.** For that solid waste which the technical study deems to be suitable for recycling the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75% of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180. ("Recycling" does not include transformation, as defined in Public Resources Code Section 40201) (EIR pages 5.15-23 and 5.15-24).
- SW4.** To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by “weight ticket” receipts from state-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.

SW5. For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by the landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, and that a minimum of 50% of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.

To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.

Finding

The EIR concludes that development of the project will not have any significant impact on the provision of solid waste services. With regard to construction impacts, pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

Mitigation Measure SW1 requires the preparation of technical studies prior to the demolition or removal of aged structures or property, including runways, from the project site. The purpose of the technical studies is to determine the condition and feasibility of recycling solid waste material from the former MCAS El Toro. Mitigation Measures SW2 through SW5 requires the project applicant to submit written plans to the City of Irvine and maintain adequate records in order to ensure that 75% of the solid waste material removed from the project site, or the maximum amount feasible as determined by the technical studies, is recycled. Compliance with City and State policies and regulations and implementation of Mitigation Measures SW1 through SW5 will reduce the potentially significant solid waste impact to a level less than significant (EIR 5.15- 24).

5. Significant Impact: Energy and Communications

The EIR concludes that development of the project will not have any significant impact on the provision of energy and communications services. Sufficient available capacity exists at the Irvine and Limestone Substations to we4rve the Proposed Project's load estimates. Additionally, Southern California Edison has indicated its ability to serve the project, in accordance with all applicable tariff schedules which are the effective rates and rules of the Southern California Edison Company on file with and approved by the Public Utilities Commission, State of California, and subject to the receipt of such permits or authorization from public agencies may be required for such installation. The specific environmental impact of constructing energy and communications facilities that will be needed to serve the proposed project cannot be determined at this program level of analysis as site specific plans for the installation of the new energy and

communications systems has not been prepared. However, the general impacts associated with the construction and operation of public utilities has been addressed within the EIR, which would include the construction and operation of the new energy and communications facilities (EIR page 5.15-25).

Mitigation Measure

The EIR concludes that development of the project will not have any significant impact on the provision of energy and communications services. With regard to construction impacts, mitigation measures identified in other sections of the EIR (5.1-5.15), including watering during construction to address air quality impacts, monitoring grading activity for paleontologic resources, etc., address the impacts associated with the construction and operation of utilities. Specifically, Mitigation Measures AQ1, AQ2, AQ3, HH1, HH2, HH3, HH4, HH5, GS1, GS2, GS3, GS4, H/WQ1, H/WQ2, H/WQ4, SW1, Bio1, Bio2, Bio4, P1, Cult1, Cult2, Cult3, and Cult4 apply to the construction of utilities. These measures would be applicable to new construction and operation of new energy and communications facilities to serve new growth expected in the project area.

Finding

The EIR concludes that development of the project will not have any significant impact on the provision of energy and communications services. With regard to construction impacts, pursuant to CEQA Section 21081(a)(1) and Guidelines Section 15091(a)(1), changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the EIR.

Facts in Support of Finding

The EIR concludes that development of the project will not have any significant impact on the provision of energy and communications services. With regard to construction impacts, mitigation measures required for any significant impacts identified in preceding sections of the EIR would apply to the future construction and operation of new energy and communications facilities within the project area. Project-level environmental review, at the time the specific location of new energy and communications facilities are known, and when specific development plans have been prepared, will be required and project specific mitigation measures developed and implemented. Implementation of Mitigation Measures identified in the EIR Sections 5.1-5.15 (that address the impacts associated with the construction and operation of public facilities) will reduce the impact associated with construction and operation of public facilities to a level less than significant (EIR page 5.15-37).

VII. IMPACTS DETERMINED TO BE SIGNIFICANT AND UNAVOIDABLE

The following describes the project-level and cumulative unavoidable significant impacts identified within the FEIR.

A. PROJECT-LEVEL AIR QUALITY

1. Significant and Unavoidable Impact:

Base Plan and Overlay Plan

Implementation of the proposed project will result in a significant air quality impact associated with the fugitive dust emissions resulting from the demolition of existing structures, and land preparation and excavation for the construction of proposed structures. Additionally, the operation of the project will result in a significant impact associated with motor vehicle emissions.

Mitigation Measures

Construction Emissions Mitigation

The major source of construction emissions are fugitive dust emissions resulting from the demolition of existing structures, and land preparation and excavation for the construction of proposed structures. Actual erection of structures is considered a minimal source of construction related dust emissions. The following mitigation measures are intended to effectively reduce pollutant emissions from construction activities. Some or all of the mentioned mitigation measures can be implemented as necessary, but quantification and application of these measures cannot be specified at this time.

- AQ1.** Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors; etc.; shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.
- AQ2.** Prior to the commencement of construction activities required to demolish and/or remove existing DON infrastructure, including runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plans shall identify implementation procedures for each of

the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Evaluate the availability and use, if available, of low-emission (i.e., methanol- or natural gas-powered) construction equipment instead of diesel for each construction phase.
- Water exposed soils at least twice daily and maintain equipment and vehicle engines in good condition and in proper tune.
- Wash off trucks leaving the site.
- Replace ground cover on construction sites when it is determined that the site will be undisturbed for lengthy periods.
- Reduce speeds on unpaved roads to less than 15 miles per hour.
- Halt all grading and excavation operations when wind speeds exceed 25 miles per hour.
- Suspend all emission generating activities during smog alerts.
- Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible.
- Properly maintain diesel-powered on-site mobile equipment.
- Sweep streets at the end of the day if substantial visible soil material is carried over to the adjacent streets.
- Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible.
- Use of low-VOC asphalt.
- Cover all trucks hauling dirt, sand, soil or other loose material to and from the site.
- Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic.
- Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible.
- Reroute construction trucks away from congested streets, whenever feasible.
- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible.

AQ3. Prior to the issuance of building permits for any future development, the applicant shall submit, and the Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Utilize built-in energy-efficient appliances to reduce energy consumption and emissions.
- Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions.
- Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible.
- Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning.
- Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible.
- Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods.
- Centralize space heating and cooling for multiple-family dwelling units and commercial space.
- Orient buildings north/south for reducing energy-related combustion emissions.
- Use solar energy, when feasible.
- Use high rating insulation in walls and ceilings.

AQ4. Information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find employment nearby.

AQ5. Future employment generating non-residential development shall include measures to reduce vehicle trips including carpool incentives, easy access to public transit systems, trail linkages between uses, low-emissions vehicle fleets, and the provision of on-site facilities such as banking and food courts.

Due to the size of the project, certain impacts that result from development will be "unavoidable" as these impacts cannot be completely mitigated and most of these changes are irreversible. This is considered a significant unavoidable impact, although the overall effect on air quality within the Basin for the life of the proposed project is estimated at less than one half of one percent. Construction-related emissions are expected to result in unavoidable short-term impacts in terms of ROG and NO_x, although implementation of mitigation measures during construction will minimize these impacts to the extent feasible. Short-term impacts on sensitive receptors are expected to be mitigated during construction and no long-term CO hotspots will be created that may affect sensitive receptors. Operational emissions from future development under the proposed project will consist of area source and motor vehicle emissions, which will

exceed SCAQMD thresholds. These air quality emissions from future development under the proposed project will remain significant, even after mitigation.

Area Source (Post-Construction) Emission Mitigation

Emissions resulting from the post-construction and routine operation of various sources within a development contribute to long term impacts on air quality throughout its life.

Some of the mitigation measures that could reduce energy consumption within the proposed project and thus, reduce associated emissions should be considered for implementation and are listed below.

- ◆ Central residential space heating and cooling for multi-dwelling units.
- ◆ Orient buildings north/south for reducing energy-related combustion emissions.
- ◆ Central commercial space heating.

These measures could be accounted for in the planning process such that the overall impact of the proposed project on prevalent air quality in the SCAB is minimized.

Motor Vehicle (Operational) Emission Mitigation

Motor vehicle emissions form a large portion of the total operational emissions from the proposed project. These emissions can be mitigated by the use of fuel-efficient vehicles and a well designed transportation system. However, most of the measures will be ineffective unless the occupants of various commercial and residential establishments within the project contribute their share in the mitigation effort. The implementation of some of the measures cannot be stated with certainty, as they are owner and employer specific and related specific land use types within the proposed project. Development of the proposed project will identify motor vehicle mitigation measures that would result in reductions in emissions and thereby contribute to the overall improvement in air quality within the SCAB. The inclusion of the OCTA facility within the proposed project is aimed at encouraging the use of alternative transportation thereby reducing motor vehicle congestion and related air quality emissions and impacts. The implementation of an emission reduction program under SCAQMD Rule 2202 is also expected to result in reducing motor vehicle air quality emissions and impacts.

Finding

Pursuant to CEQA § 15091 (a)(3), specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIR.

Facts in Support of Finding:

The following section provides a summary of the possible mitigation measures that could be implemented for the development of the former MCAS El Toro according to the proposed project. The limited availability of specific data to quantify air quality impacts for emission sources within the proposed project make it impossible to accurately quantify the effectiveness of each of the mitigation measures. However, these measures are identified as possibilities for the project, while some are recommended by the SCAQMD for all development projects within the SCAB. As expected, the implementation of some or all of the mitigation measures will result in an overall reduction in potential air emissions from the proposed project. However, the implementation of any of these emission mitigation measures cannot be guaranteed at this stage of the proposed project, because they may not be technically or economically feasible once actual development gets underway. Therefore, the emission mitigation measures discussed in the EIR are defined as alternate control measures that could be implemented for the proposed project.

B. PROJECT-LEVEL AGRICULTURAL RESOURCES

1. Significant and Unavoidable Impact:

Base Plan and Overlay Plan

The project Base Plan will convert 574 acres of Prime Farmland, 63 acres of Unique Farmland, and 46 acres of Farmland of Statewide Importance to non-agricultural use. The Overlay Plan will convert 651 acres of Prime Farmland, 63 acres of Unique Farmland and 88 acres of Farmland of Statewide Importance to non-agricultural uses. Additionally, the project will involve changes in the existing environment, which, due to their location or nature, could result in conversion of existing farmland to non-agricultural use.

Mitigation Measures

Ag 1. In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operations, City Of Irvine Standard Discretionary Case Condition B.4 and City Of Irvine Standard Subdivision Condition 3.4 regarding disclosure statements shall be amended to include the following for subdivisions proposed adjacent to existing agricultural operations:

Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form,

along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:

C Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.

Ag 2. Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.

Ag 3. Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operation and adjacent urban uses.

Finding

Pursuant to CEQA § 15091 (a)(3), specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIR.

Facts in Support of Finding

Implementation of Mitigation Measures Ag 1 through Ag 3 will reduce the impact to an extent feasible; however, the impact associated with agricultural resources will remain significant and unavoidable.

C. PROJECT-LEVEL POPULATION AND HOUSING

1. Significant and Unavoidable Impact:

Base Plan and Overlay Plan

A significant impact to jobs/housing ratio will occur.

Mitigation Measure

No mitigation is available to rectify conflicts with the numerical objectives of regional planning documents including the jobs/housing ratio.

Finding

Pursuant to CEQA § 15091 (a)(3), specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIR.

Facts in Support of Finding:

Although the proposed amendments to the City of Irvine General Plan will be incorporated into regional SCAG and County of Orange planning projections, the impact associated with jobs/housing balance will remain significant and unavoidable.

D. CUMULATIVE AIR QUALITY

1. Significant and Unavoidable Impact:

Emissions due to development in the proposed project will exceed SCAQMD thresholds of significance for oxides of nitrogen and reactive organic gases during construction (short-term impact) and for oxides of nitrogen, reactive organic gases, carbon monoxide, and particulate matter less than ten microns in diameter (PM10) during operation from area source and vehicular emissions (long-term impact for both interim year and buildout year). Together, construction and operation emissions will also exceed applicable thresholds of significance. Although construction activities for the related projects may not overlap, the environmental analysis of this EIR assumes that they would. Operation emissions in conjunction with related projects and other emissions in the Basin will also coincide. Since air quality in the Basin does not comply with federal or state standards, these emissions will contribute to a cumulatively significant impact on air quality.

Mitigation Measures

Similar to project-specific impact, no feasible mitigation measures exist to reduce this cumulative impact to a level of less than significant because any project of substantial size will result in this impact.

Finding

Pursuant to CEQA § 15091 (a)(3), specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIR.

Facts in Support of Finding

Since air quality in the Basin does not comply with federal or state standards, the project related emissions will contribute to a cumulatively significant and unavoidable impact on air quality.

E. CUMULATIVE TRAFFIC/CIRCULATION

1. Significant and Unavoidable Impact:

The geographic scope for traffic includes cumulative growth projections for Orange County. The 2025 and Post 2025 analyses contained in Section 5.2 *Transportation/Traffic* assess the traffic impacts of all cumulative development anticipated by the Year 2025 and beyond. As shown in these analyses, all intersections and roadway/freeway/tollway/ramp segments will operate at acceptable levels of service with the existing or planned improvements. However, it has been assumed in the traffic analysis that the cumulative impact of project traffic along with other regional growth at the identified ramp and freeway locations will be mitigated through a combination of regional programs that are the responsibility of other agencies. If these programs are not implemented by the agencies with the responsibility to do so, the cumulative freeway/tollway ramp impacts would remain significant and unavoidable. As a result, the proposed project will result in a cumulatively significant traffic impact that may remain significant and unavoidable.

Mitigation Measures

Tran 1. Prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) (“Spectrumotion”) in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs. The primary purpose of this mitigation measure is to reduce traffic, air quality and noise impacts. Should annexation into Spectrumotion not be approved, the landowner or subsequent project applicant shall develop and implement a similar transportation management plan containing the elements and meeting the criteria described below:

Transportation Management Plan (TMP)

The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for the Great Park Project. This document summarizes the key elements of the TMP.

1.0 Introduction

The purpose of this document is to provide an outline for a comprehensive TMP for the Great Park. This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.

It is the intent to annex Planning Area 51 and a portion of Planning Area 35 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.

In the event that annexation of PAs 51 and 35 into Spectrumotion is not approved, a TMP similar to that provided by Spectrumotion will be implemented. This document sets forth the components of the TMP should it be necessary.

2.0 Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

New Hire Orientation: Inform newly hired employees of commuting services available to them.

Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services ((i.e., OCTA buses, Metrolink, Amtrak, etc.).

Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.

On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.

Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.

Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.

Website: Maintain a website with all of their program information available.

Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.

Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.

Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.

3.0 Transportation Management Plan Implementation

As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Great Park. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.

Tran 2. Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of this EIR.

Tran 3. Prior to issuance of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the project traffic study (Urban Crossroads, December 2002) to maintain satisfactory levels of service as defined by the City's General Plan, based on thresholds of significance, performance standards, and methodologies used in this EIR, Orange County Congestion

Management Program, and established in the transportation system/infrastructure fee program described in Mitigation Measure Tran 2 above.

- Tran 4.** Prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated traffic forecasts. The updated traffic study will evaluate the cumulative impact of the subject map and all previously approved or concurrently submitted maps. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City approved traffic study scope of work. The landowner or subsequent project applicant shall construct, bond for, or enter into a funding agreement for necessary improvements identified in the updated traffic study and/or participate in the City fee program (Tran 2 above) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of this EIR.

Traffic signals that are on-site or directly related to the Great Park development will be installed as warranted through the mitigation implementation plan process.

- Tran 5.** In conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the following actions:
1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-tollway ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in this EIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines.

2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency.
3. The landowner or subsequent project applicant shall enter into an agreement with the City prior to recordation of the first final map for each Master Tentative Map or equivalent to establish the method and timing of payment of the identified percentage responsibility.
4. The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or funding participation in a regional transportation improvement fee program, if adopted.

Tran 6. The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.

Tran 7. Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-complete clause or any similar agreement restricting a public agency's authority to construct improvement.

Finding

Pursuant to CEQA § 15091 (a)(3), specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIR.

Facts in Support of Finding

The traffic analysis indicates that the cumulative impact of project traffic along with other regional growth at the identified ramp and freeway locations will be mitigated through a combination of regional programs that are the responsibility of other agencies. If these programs are not implemented by the agencies with the responsibility to do so, the cumulative freeway/tollway ramp impacts would remain significant and unavoidable. As a result, the proposed project will result in a cumulatively significant traffic impact that may remain significant and unavoidable.

F. CUMULATIVE AGRICULTURAL RESOURCES

1. Significant and Unavoidable Impact:

The geographic scope for agricultural resources includes Orange County and the growth expected within the County. The encroachment of urban areas on agricultural lands is a long and continued trend in Orange County. Though it is difficult to quantify the amount of agricultural land that is under development pressure within the County, it is evident that such pressure exists and will continue to with or without implementation of the project. The rising cost of irrigation, increased land values, labor costs, and damage from vandalism have made it difficult to maintain a successful large scale agricultural operation. The conversion of agricultural land to urban uses is an important policy decision that is ultimately left to each jurisdiction. In order to address the cumulative loss of agricultural land within Irvine, the City has established an Agricultural Legacy Program, which intends to retain certain sites within Irvine for metro farming activities. Despite the fact that the project will help implement the City's Agricultural Legacy Program by retaining agricultural uses on-site, the loss of the remaining agricultural land is a cumulatively significant loss of local and regional agriculture. The project will result in a cumulatively significant and unavoidable impact associated with the loss of agriculture.

Mitigation Measures

Mitigation Measures Considered But Determined to be Infeasible:

CEQA Section 21002.1(b) requires that "each public agency shall mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so." The term "feasible" is defined by CEQA Section 21061.1 to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors."

A number of mitigation measures were considered for mitigating or avoiding the impact of the conversion of agricultural lands to other uses; however, no feasible mitigation measures are available that would reduce the impacts of the Base Plan or the Overlay

Plan to a level less than significant. Potential mitigation measures considered include: the retention of agricultural land on-site; the purchase, set-aside, or transfer of development rights to preserve agricultural land elsewhere in the City or region, and assessing agricultural impact fees. The following is a brief discussion of the mitigation considered to attempt to reduce the impacts of the project to a level less than significant and the reasons why these measures were found to be infeasible.

Retention of Agricultural Uses

The encroachment of urban areas on agricultural lands is a long and continuing trend in Orange County. Although it is difficult to quantify the amount of agricultural land that is under development pressure within the County, it is evident that such pressure exists and will continue to exist with or without implementation of the project. The rising costs of irrigation water, increased land values, labor costs, and damage from vandalism have made it difficult to maintain a successful large scale agricultural operation in the County. The conversion of agricultural land to urban uses is thus an important decisions that must ultimately be left to each local jurisdiction. The following describes actions considered by the City of Irvine to mitigate the loss of agricultural land.

Onsite Retention of Agricultural Uses

As discussed in subsection 5.8.1 *Environmental Setting* above, the City is working to establish an Agricultural Legacy Program, which is intended to address the local and regional loss of agricultural land. As part of this program, an initial assessment of candidate sites has been prepared (City of Irvine, November 26, 2002). Based on this preliminary assessment, several hundred acres of land will, within the next five years, be made available for metro farming, which may include such activities as specialty farming, model farming, heritage farming, and community service/educational farming. The proposed project helps implement the Agricultural Legacy Program on-site by proposing the OCGP General Plan designation and 1.1 Exclusive Agriculture Zoning designation on land within PAs 51 and 30, which will help retain on-site agricultural uses.

The retention of additional areas of the site in agricultural use is considered to be infeasible due to the constraints on the continued long-term viability of large scale agriculture in the area as discussed in the *Environmental Setting* subsection above. These constraints, particularly the economic constraints and constraints due to increased environmental regulation, will become greater over time. Despite any City actions to zone additional land for agricultural uses on-site, the City does not have the authority to require landowners to continue farming operations on land that is zoned for agricultural use. The retention of agricultural land use designations on the site will not, therefore, necessarily result in the continuation of agricultural uses. Moreover, a reduction in the development of the site would impede the City from achieving the voters' and the City's objectives for the site in a fiscally sound manner.

As noted above, the proposed project will retain a portion of the site in agricultural use, and agricultural uses may continue on other portions of the site until such time that development is to occur. These proposed long-term and interim uses, however, do not mitigate the significant impact of the conversion of significant farmland and existing agricultural land to non-agricultural uses.

Preservation of Agricultural Uses Citywide

The Irvine General Plan and the Phased Dedication and Compensating Development Opportunities Program will require the preservation of approximately 500 acres of land that has the soil quality and growing season that would otherwise qualify it as Significant Farmland.

Agricultural uses will continue on the South Coast Research and Extension Center SCREC site, which is owned by the University of California and is therefore not subject to many of the constraints on continued agricultural operations noted above. Land uses immediately adjacent to this facility should be planned with the continued agricultural operations at this facility in mind. In addition, agricultural operations are currently occurring in open space areas or lands owned by utilities whose operations are compatible with continuing agricultural activities, such as utility corridors.

As discussed above, the City is working to establish an Agricultural Legacy Program, which is intended to address the local and regional loss of agricultural land. As part of this program, an initial assessment of candidate sites has been prepared (City of Irvine, November 26, 2002). All of the potential sites are undeveloped and most are currently available for agriculture. The topography, climate, and other factors associated with the sites make them conducive to growing a variety of crops. Based on the preliminary assessment of the candidate sites, several hundred acres of land will be made available for metro farming, which may include such activities as specialty farming, model farming, heritage farming, and community service/educational farming.

No other area of Significant Farmland within the City is planned for agricultural uses in the Irvine General Plan. The restriction of additional lands within the City for permanent and exclusive agricultural uses would be inconsistent with the goals and objectives of the Irvine General Plan. In addition, the same constraints on the continued viability of long-term, large-scale, agricultural production noted above with respect to the onsite preservation of agricultural uses would apply to these lands as well, regardless of the land use designation. Without some type of economic support or developed agreements, the mere designation of these lands for agricultural land uses will not ensure long-term agricultural operations.

Finally, even if it were feasible to preserve existing agricultural uses elsewhere in the City, the preservation of such uses would not result in the replacement of the agricultural land converted by the project. There is a finite amount of land suitable for agricultural production and there would still be a net reduction in Significant Farmland and land in

agricultural production. The acquisition of fee title or conservation easements over off-site parcels would not, therefore, avoid, reduce, or compensate for the conversion of agricultural land to non-agricultural uses as a result of implementation of the project. At most, the acquisition might prevent the conversion of other farmland and agricultural uses as a result of other hypothetical future projects. This does not meet the requirement of a feasible measure as defined by CEQA.

Agricultural Impact Fees

Agriculture impact mitigation fees could be assessed against the project and used to purchase development rights in other areas so as to assure that permanent agriculture will be maintained. There are several programs that might be funded by impact fees.

The State Department of Conservation operates the California Farmland Conservancy Program, which provides grants to qualifying agencies for the acquisition of agricultural conservation easements. Establishing agricultural conservation easements involves purchasing deed restrictions on prime agricultural lands that preclude their use for development or non-agricultural purposes. The deed restriction would be permanent unless otherwise negotiated. The land under an easement remains in private ownership and use. Typically, restrictions imposed by an agricultural conservation easement limit residential, non-farm commercial, industrial, and extractive uses of the land. Deeds often allow construction of facilities for the production and processing of agricultural products. This program does accept private contributions. Applications, however, must be made by public agencies such as a county or a city, or certain qualifying not-for-profit entities. The County of Orange and the City of Irvine have not participated in this program. No other agency in Orange County has been identified that participates in this program.

Also, the General Plan of the County of Orange contemplates an evaluation of the establishment of an Agricultural Preservation Program, which would use funds generated from the cancellation of agricultural preserves to fund grants, loans, research, and other programs relating to agricultural resources in an effort to mitigate the long-term impact of Williamson Act contract cancellations and to provide economic and technical support to County agricultural activities. The County has not yet initiated the evaluation of such a program, and has no plans to implement such a program (Northern Sphere EIR, December 2001).

Neither the City of Irvine nor the County of Orange has a fee mitigation program, nor has any specific local program been identified that might be funded by such an impact fee. To be successful, such a program would have to be implemented on a regional basis. In view of the lack of a regional fee mitigation program or any other program for the acquisition of development easements in the vicinity of the project, the imposition of a mitigation fee on a project-by-project basis is not considered to be feasible mitigation because it would not be capable of being accomplished within a reasonable period of time. Also, as is the case with the preservation of off-site agricultural resources, the preservation of existing agricultural resources by the acquisition of agricultural

conservation easements would not prevent the net loss of significant farmlands and agricultural uses, and would not, therefore, mitigate the direct adverse effects of the project. Finally, the preservation of agricultural resources in the City of Irvine or even the County of Orange will not have a measurable impact on the availability of agricultural resources or agricultural production on a statewide or regional basis.

Since none of the potential mitigation measures are feasible, as discussed above, the impact related to the loss of agricultural land and significant farmland resulting from the implementation of the proposed project will remain significant and unavoidable.

Mitigation Measures Determined to be Feasible:

Ag 1. In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operations, City Of Irvine Standard Discretionary Case Condition B.4 and City Of Irvine Standard Subdivision Condition 3.4 regarding disclosure statements shall be amended to include the following for subdivisions proposed adjacent to existing agricultural operations:

Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:

C Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.

Ag 2. Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.

Ag 3. Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operation and adjacent urban uses.

Finding

Pursuant to CEQA § 15091 (a)(3), specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIR.

Facts in Support of Finding

In order to address the cumulative loss of agricultural land within Irvine, the City has established an Agricultural Legacy Program, which intends to retain certain sites within Irvine for metro farming activities. Despite the fact that the project will help implement the City's Agricultural Legacy Program by retaining agricultural uses on-site, the loss of the remaining agricultural land is a cumulatively significant loss of local and regional agriculture. The project will result in a cumulatively significant and unavoidable impact associated with the loss of agriculture.

G. CUMULATIVE POPULATION AND HOUSING

1. Significant and Unavoidable Impact:

The geographic scope for population and housing includes Orange County and the growth projections for the County. Other cumulative projects generally have been accounted for in these growth projections; however, future unknown development may also result in an exceedance of projections. Based on future projections, the Orange County Subregion is anticipated to become increasingly jobs-rich over the next 20 years. The proposed Base Plan and Overlay Plan for the former MCAS El Toro site would substantially add to employment generation characteristics of Irvine and the region. Since, the project-related employment would exacerbate the cumulative subregional jobs/housing imbalance, the cumulative population and housing impact is considered significant and unavoidable.

Mitigation Measures

No mitigation is available to rectify conflicts with the numerical objectives of regional planning documents including the jobs/housing ratio.

Finding

Pursuant to CEQA § 15091 (a)(3), specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIR.

Facts in Support of Finding

Since, the project-related employment would exacerbate the cumulative subregional jobs/housing imbalance, the cumulative population and housing impact is considered significant and unavoidable.

VIII. FINDINGS REGARDING ALTERNATIVES

Because the proposed Project will cause unavoidable significant environmental effects related to Air Quality, Agricultural Resources, Population and Housing, and cumulative Traffic/Circulation, Agricultural Resources, and Population and Housing, the City must consider the feasibility of any environmentally superior alternative to the proposed Project, evaluating whether these alternatives could avoid or substantially lessen the unavoidable significant environmental effects while achieving most of the objectives of the proposed Project. The FEIR evaluated five alternatives to the Project and evaluated the feasibility of each of the alternatives in light of the Project objectives and other considerations. As described in Section 3.0 of the FEIR, the specific objectives of the proposed Project are as follows:

1. Annex the former MCAS El Toro site and adjacent lands within the City's Sphere of Influence.
2. Convert MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
3. Amend the Irvine General Plan and Zoning Ordinance to implement proposed Orange County Great Park land use designations.
4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.
5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.
6. Respond positively and effectively to the Department of Navy's decision to sell the property to private interests by allowing private development of some land while ensuring the implementation of park and open space amenities.

The alternatives presented in the FEIR constitute a reasonable range of alternatives necessary to permit a reasoned choice among the options available to the City and/or the Project proponent. Based upon the administrative record for the Project, the City makes the following findings concerning the alternatives to the proposed Project.

A. Alternatives Considered and Rejected During the Scoping/Project Planning Process

Millennium Plan

In June 1999, the City of Irvine considered an annexation, General Plan amendment, and zone change for the project area based on the proposed land uses of the El Toro Reuse Planning Authority Millennium Plan.¹ The Millennium Plan proposed over 21,000,000 square feet of non-residential development and 5,897 dwelling units. Unlike the Orange County Great Park, the Millennium Plan did not propose a wildlife corridor through the project area. Additionally, the proposed central park was not large enough to meet plan objectives of implementing a diverse urban park with active and passive recreational amenities consistent with the recent passage of Measure W. Implementation of the Millennium Plan, as originally proposed, would create greater impacts than the proposed project in most of the environmental categories including traffic, air quality, noise, geology and seismicity, hydrology and water quality, agricultural resources, biological resources, paleontological resources, cultural resources, aesthetics, population/housing and public services, facilities and utilities. Also, because of its intensity it would not be as compatible with the surrounding communities. As such, the Millennium Plan is rejected from further consideration.

Alternative Location

The City did not consider alternative locations to the proposed project. Section 15126(f) (2) of the CEQA Guidelines states, in part, that the “key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR.” Development of the proposed project at an alternative location would likely result in similar and, in some cases, greater impacts than those identified in this EIR. Furthermore, it has been determined that no feasible alternative locations exist considering the fact that the project is the reuse of the former MCAS El Toro.

Aviation Reuse

The project site was previously proposed by the County of Orange to be reused as a commercial airport. Under the aviation reuse plan, the site would be developed with a full international passenger and cargo service airport with a projected 2020 service level of approximately 28.8 million annual passengers (MAP). The aviation reuse plan would

¹ The City of Irvine previously considered implementing the Millennium Plan land use plan for the project site. However, the Millennium Plan was not adopted by the City and was subsequently followed by the Millennium Plan II. The Millennium Plan II was adopted for the City and represents the City’s General Plan land uses for the project site.

include a terminal area and associated facilities, aircraft parking areas, and cargo facilities. Non-aviation uses included in the aviation reuse plan include habitat, open space, and recreation land uses, as well as several public facilities. (EIR #573)

According to the analysis of potential environmental impacts contained in EIR #573, implementation of this, or a similar, aviation reuse plan will result in a greater impacts to land use, traffic/circulation, air quality, noise, public health and safety, geology and seismicity, hydrology and water quality, agricultural resources, biological resources, aesthetics, population/housing, public services and facilities, and utilities.

An aviation reuse plan would not meet the primary objectives of the proposed project. Also, the spirit and intent of the recently passed Measure W, by the county voters would not be met. As such, this alternative is rejected from further consideration.

Agricultural Preservation

The Agricultural Preservation Alternative assumes that all of the existing agriculture on site will be permanently retained for agricultural production. The primary difference between this alternative and the proposed project is that this alternative would preserve all of PA 30 for agricultural production (in addition to the existing agricultural area located north of Irvine Boulevard in PAZ 1, which is proposed to be preserved under the project). Additionally, the area north and south of Irvine Boulevard in PAZ 4 and a portion of PAZ 18 would be preserved. The remainder of PA 51 would be developed according to the proposed project.

The feasibility of preserving agricultural resources in perpetuity is addressed in detail in *Section 5.8 Agricultural Resources* of this EIR. The long-term viability of agricultural production in Orange County continues to deteriorate. As described in Section 5.8, factors that impact the viability of agricultural uses include: 1) the cost of land; 2) the cost of water; 3) the cost of labor; 4) property taxes; 5) the impact of urbanization; 6) competition; and 7) the impact of environmental regulation. The retention of more area of the site in agricultural use than is proposed under the plan is considered to be infeasible due to the constraints on the continued long-term viability of large scale agriculture in the area. These constraints, particularly the economic constraints and constraints due to increased environmental regulation, will become greater over time. Despite any City actions to zone additional land for agricultural uses on-site, the City does not have the authority to require landowners to continue farming operations on land that is zoned for agricultural use. The retention of agricultural land use designations on the site will not, therefore, necessarily result in the continuation of agricultural uses. Moreover, a reduction in the development of the site would impede the City from achieving the voter's and the City's objectives for the site in a fiscally sound manner.

As noted above, the proposed project will retain a portion of the site in agricultural use, and agricultural uses may continue on other portions of the site until such time that development is to occur. These proposed long-term and interim uses; however, do not mitigate the significant impact of the conversion of significant farmland and existing

agricultural land to non-agricultural uses. As such, this alternative is rejected from further consideration.

B. Alternatives Selected for Further Analysis

The alternatives considered in the EIR include:

1. No Project/Measure W PA 51/Millennium Plan II PA 30
2. Existing City of Irvine General Plan (Millennium Plan II Land Uses)
3. Measure W PA 51/Millennium Plan II PA 30 - Modified
4. Alternative Land Use Plan – University Village
5. Increased Residential Alternative

1. No Project/Measure W PA 51/Millennium Plan II PA 30

Description:

The No Project/Measure W PA 51/Millennium Plan II PA 30 assumes that the former base would eventually be redeveloped according to the general provisions of Measure W for PA 51, which is the unincorporated portion of the base, and Millennium Plan II for PA 30, which is the portion of the base located within the City of Irvine. To develop this comparison, the Great Park concept plan was relied on to project land uses in PA 51. PA 30 land uses were based on the adopted City of Irvine General Plan and zoning. As depicted, approximately 5,203,000 square feet of non-residential development, 165 dwelling units, and 7,637 students would occur under this alternative. Approximately 3,535 acres would be devoted to open space, recreation, and agricultural uses. This compares to a maximum of 3,625 dwelling units, 6,585,594 square feet of non-residential, and 7,637 students that could occur under the proposed project. This alternative is environmentally superior to the proposed project.

Finding

The City finds that specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make the No Project/Measure W PA 51/Millennium Plan II PA 30 Alternative infeasible. (Public Resources Code § 21081(a)(3), Guidelines § 15091(a)(3)).

Facts in Support of Finding

- a. This alternative would result in less impacts to traffic/circulation, air quality, noise, geology/soils, hydrology/water quality, biological resources, paleontological resources, cultural resources, public services and utilities.

Under this alternative, approximately 5,203,000 square feet of non-residential development would occur, 7,637 additional students in the area would be expected, and 165 dwelling units would be constructed. This is compared to 6,585,594 square feet of non-residential development, 7,800 students, and 3,625 dwelling units that could occur under the proposed project (pursuant to the Overlay Plan). Development of PA51 according to Measure W land uses would generate approximately 83,347 ADT and development of PA30 according to the Millennium Plan II land uses would generate approximately 34,750 ADT.⁵ As such, the total trips generated by this alternative is 118,097 ADT. This compares to 148,000 trips generated by the project according to the Overlay Plan. Therefore, this alternative would result in less impacts to traffic/circulation. This alternative would also result in less of an air quality impact associated with the proposed project as the level of development and corresponding trip generation would be less. Mobile source air quality emissions are estimated to be approximately 20% less than the project, as the trips generated by this alternative are approximately 20% less than the project. Additionally, this alternative would result in less of a noise impact as the proposed project, as the overall amount of development and vehicular trips on surrounding roadways would be less.

Alternative 1 would result in less of a geology and seismic impact associated with seismic ground shaking, soil erosion or loss of topsoil, and expansive soils since there would be less overall development within the project area. Under this alternative, the hydrology and water quality impacts would be less than the proposed project. Most of the development would be concentrated in PA30, and, as compared to the proposed project, significantly less development and impervious surfaces would occur within PA51. Additionally, under this alternative, the proposed drainage corridors would be implemented as is proposed under the project. Implementation of this alternative would result in less of an impact than the proposed project in regards to potential conflicts with the City of Irvine Urban Forestry Ordinance, since less development would occur under the alternative. Also, because less of the site would be converted to urban uses, potential biological impacts would be reduced. As with the proposed project, this alternative would allow for the creation of drainage corridors through the project site that could allow for wetland creation, and this alternative would provide the same wildlife corridor alignment as the proposed project.

Under Alternative 1, development would be concentrated primarily in PA30, with substantially less development occurring in PA51 as compared to the project. Therefore, the potential for this alternative to directly or indirectly destroy a

unique paleontological resource or unique geologic feature is less than the project. Also, under this alternative, development would be concentrated primarily in PA30, with substantially less development occurring in PA51 as compared to the project. Therefore, the potential for this alternative to directly impact cultural resources is less than the project. Additionally, implementation of this alternative would result in less of an impact than the project related to the construction or expansion of public facilities. This alternative would result in less of a demand for school facilities and parks, as only approximately 165 dwelling units would be allowed under this alternative as compared to 3,625 dwelling units that would occur under the proposed project.

- b. Implementation of the No Project/Measure W PA51/Millennium Plan II PA30 Alternative would result in a similar impacts to land use, public health and safety, and agricultural resources.

Implementation of this alternative would result in a similar land use impact as the proposed project. This alternative would implement the mandate of the voter approved Measure W for development of PA 51 with park uses. This alternative would have a similar impact as the proposed project regarding conflicts with the County of Orange Master Plan of Arterial Highways and the existing Airport Environs Land Use Plan (AELUP), Air Installation Compatible Use Zones (AICUZ), and Policy Implementation Line (PIL) since non-aviation reuse of the former base conflicts with these existing plans. No other land use conflict would occur under this alternative. Additionally, implementation of this alternative would result in a similar public health and safety impact as the proposed project. This alternative would cause portions of PA51 containing existing structures to be developed, resulting in the need to demolish existing structures. Development would occur in those areas containing remediation sites. However, the impact associated with structures and population being located adjacent to wildland fire hazard area would be less. Implementation of this alternative would result in a similar impact related to the loss of agriculture since this alternative would preserve the same amount of acreage of agriculture as is proposed under the Overlay Plan.

- c. The alternative meets the following three project objectives:
 - 2. Convert MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
 - 4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.

5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.
- d. The alternative does not meet the following three project objectives:
1. Annex the former MCAS El Toro site and adjacent lands within the City's Sphere of Influence.
 3. Amend the Irvine General Plan and Zoning Ordinance to implement proposed Orange County Great Park land use designations.
 6. Respond positively and effectively to the Department of Navy's decision to sell the property to private interests by allowing private development of some land while ensuring the implementation of park and open space amenities.
- e. Although, this alternative is environmentally superior to the proposed project, this alternative is infeasible because it does not meet three of the proposed project objectives.

Reference: FEIR pages 6-5 to 6-9.

2. Existing City of Irvine General Plan

Description:

The Existing City of Irvine General Plan Alternative (Millennium Plan II Land Uses) assumes that the former base would eventually be redeveloped according to the Millennium Plan II land use plan. Figure 6-1 depicts the City of Irvine adopted land uses for PAs 51 and 30 and Table 6-3 lists the land use summary. As depicted, the existing City of Irvine General Plan land use designations of the project area would allow a total of 15,773,000 square feet of non-residential uses and 3,216 maximum dwelling units. This compares to a maximum of 3,625 dwelling units and 6,585,594 square feet of non-residential uses that could be developed according to the Overlay Plan. Land uses that could occur under this alternative include preservation, recreation, low and medium density residential, multi-use, community commercial, research and industrial, and institutional. This alternative is environmentally inferior to the proposed project.

Finding

The City finds that specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make Existing City of Irvine General Plan Alternative infeasible. (Public Resources Code § 21081(a)(3), Guidelines § 15091(a)(3)).

Facts in Support of Finding

- a. Implementation of the Existing City of Irvine General Plan (Millennium Plan II Land Uses) Alternative would result in greater impacts to traffic/circulation, air quality, noise, geology and seismicity, hydrology and water quality, agricultural resources, biological resources, paleontological resources, cultural resources, aesthetics, population/housing, public services and facilities, and utilities than the proposed project.

The Existing General Plan Alternative would result in a greater amount of traffic generated within the project area as the development intensity of the Millennium Plan II is greater than the proposed project. The Existing General Plan (Millennium Plan II Land Uses) Alternative is anticipated to generate approximately 228,000 average daily trips (ADT) while the proposed project is anticipated to result in the generation of approximately 91,000 to 148,000 ADT. This alternative would place a significantly greater demand on the roadway system, in turn, impacting a larger area, and requiring more roadway infrastructure improvements.

Implementation of this alternative would result in a greater air quality impact than the proposed project since this alternative would have significantly more construction, development, and corresponding levels of traffic, resulting in substantially more construction and operational (both mobile and stationary) emissions than would occur under the project. The Existing General Plan (Millennium Plan II Land Uses) Alternative is anticipated to generate approximately 228,000 ADT while the proposed project is anticipated to result in approximately 91,000 to 148,000 ADT. Millennium Plan II project would generate unmitigated emissions amounting to approximately 1.56 tons per day of ROG, 2.10 tons per day of NO_x, 8.83 tons per day of CO, and 0.75 tons per day of PM₁₀. This is compared to the unmitigated emissions estimate for the proposed project (Overlay Plan) which are estimated at approximately .66 tons per day of ROG, .06 tons per day of NO_x, 1.38 tons per day of CO, and .21 tons per day of PM₁₀.

Implementation of this alternative would result in a greater noise impact than the proposed project since this alternative would generate greater traffic within the project area and greater traffic noise. Unlike the proposed project, this alternative would result in a significant traffic-generated noise impact for the segment of Trabuco Road between Bake Parkway and Lake Forest Drive. As indicated in Section 5.4 Noise of this EIR, no impact would occur at this location under the proposed project.

Implementation of this alternative would result in a greater geology and seismic impact associated with seismic ground shaking, soil erosion or loss of topsoil, and expansive soils since there would be substantially more development within the

project area. There would also be an increase in the number of residents and workers/employees impacted by seismic groundshaking and an increase in the amount of property and people subject to risk. Additionally, this alternative would result in a greater hydrology and water quality impact than the proposed project related, as substantially more development would occur than the proposed project. With more development, the rate and amount of surface runoff would be greater than under the Orange County Great Park plan. In addition, this alternative would not involve the creation of natural drainage corridors as proposed under the project.

Implementation of this alternative would result in a greater impact related to the loss and conversion of agricultural resources. Under existing General Plan designations, no portion of the project site would be retained for agricultural uses in perpetuity, whereas, the proposed project would preserve approximately 438 acres of agricultural land under the Base Plan, and 303 acres of agricultural land under the Overlay Plan. Also, implementation of this alternative would result in a greater impact than the proposed project with respect to potential conflicts with the City of Irvine Urban Forestry Ordinance as development would occur that would impact existing trees within the project area. This alternative would result in the creation of a wildlife corridor on the eastern boundary of the project area; however, the wildlife corridor would be more constrained by adjacent land uses than the wildlife corridor proposed under the project. This alternative would not involve the creation of natural drainage corridors through the project site that offer the opportunity for wetland creation. Additionally, because no agricultural lands would be preserved and less parkland would be developed, the potential raptor foraging area within the project site would be less than the project.

Implementation of this alternative would result in potentially a greater impact to paleontological resources and cultural resources than the proposed project. Because much more development would occur, the potential for disturbing paleontological resources as a result of grading activity is greater. Additionally, because much more development would occur, the potential for disturbing cultural resources as a result of grading activity and development is greater.

Implementation of this alternative would result in a greater aesthetic impact than the proposed project as this alternative would allow significantly more development which has the potential to increase the light and glare produced in the project area and cause a change to the visual quality of the project area. Additionally, less park and open space uses would be provided. Implementation of this alternative would provide approximately 3,261 housing units. However, this alternative would also provide approximately 30,000 to 35,000 jobs in the project area which would exacerbate the jobs/housing imbalance to a greater degree than the proposed project. In regards to inducing population growth in the area, this alternative would have a greater impact than the proposed project since

it would generate significantly more jobs that would attract new residents to the area and increase pressure for the construction of additional housing.

Implementation of this alternative would result in a greater impact related to the construction and expansion of public facilities, as there would be significantly more demand placed on these facilities from residential and non-residential development. This alternative would generate a similar for police, requiring approximately 20 sworn police officers, 2 sworn police supervisors, 2 non-sworn support staff, and 4 marked police vehicles. The alternative would generate approximately 2,251 students within the Irvine Unified School District. This is approximately 726 students more than the proposed project. Also, implementation of this alternative would result in a greater impact related to the construction or expansion of utilities as significantly more development would occur within PAs 51 and 30 that would require new or expanded utilities. The daily potable water demand under this alternative is 3.3 million gallons per day. The daily sewer generation is 2.9 million gallons per day. This is approximately 1.55 million gallons per day more water and 2 million gallons per day more sewage than the proposed project.

- b. This alternative would result in similar impacts to land use and public health and safety as the proposed project.

Implementation of this alternative would result in a similar land use impact as the proposed project. This alternative would implement, to some degree, the intent of the voter approved Measure W for development of PA 51 with park uses as a large portion of PA 51 is designated for recreation uses under the Millennium Plan II. This alternative would result in similar land use impacts related to conflicts with the County of Orange Master Plan of Arterial Highways and the existing Airport Environs Land Use Plan (AELUP), Air Installation Compatible Use Zones (AICUZ), and Policy Implementation Line (PIL), since the proposed development would conflict with these existing plans. This alternative would not impact off-site land uses. Additionally, this alternative would result in a similar impact as the proposed project related to the disturbance of structures with asbestos-containing building materials or lead based paints. Buildings would be demolished under this alternative, and mitigation would be required to ensure that the building materials are properly handled and disposed. Implementation of this alternative would also result in a similar impact related to the potential health risks from remediation activities. Remediation would need to occur consistent with the health risk standards of the existing General Plan land uses. This alternative would also result in a similar impact related to wildland fire hazards as development would occur adjacent to a wildland fire hazard area in the northeastern portion of PA 51.

- c. The alternative meets the following project objectives:
 - 1. Annex the former MCAS El Toro site and adjacent lands within the City's Sphere of Influence.
 - 4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.
 - 5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.
 - 6. Respond positively and effectively to the Department of Navy's decision to sell the property to private interests by allowing private development of some land while ensuring the implementation of park and open space amenities.
- d. This alternative does not meet the following project objectives.
 - 2. Convert MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
 - 3. Amend the Irvine General Plan and Zoning Ordinance to implement proposed Orange County Great Park land use designations.
- e. This alternative is infeasible since it is environmentally inferior to the proposed project and it does not meet two of the project objectives.

Reference: FEIR pages 6-9 to 6-15.

3. Measure W PA 51/Millennium Plan PA 30-Modified

Description:

The Measure W PA 51/Millennium Plan II PA 30-Modified assumes that the former base would eventually be redeveloped according to the general provisions of Measure W for PA 51, which is the unincorporated portion of the base, and modified land uses of the Millennium Plan II for PA 30, which is the portion of the base located within the City of Irvine. To develop this comparison, the Great Park concept plan was relied on to project land uses in PA 51. PA 30 land uses were generally based on the adopted General Plan and zoning; however, the Research and Industrial use was decreased by 1,190,000 square feet, and 500 residential units were added. Approximately 4,013,000 square feet of non-residential development, 665 dwelling units, and 7,637 students would occur under this alternative. Approximately 3,535 acres would be devoted to open space, recreation, and agricultural uses. This compares to a maximum of 3,625 dwelling units, 6,585,594

square feet of non-residential, and 7,637 students that could occur under the proposed project. This alternative is environmentally superior to the proposed project.

Finding

The City finds that specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make the Measure W PA 51/Millennium Plan – Modified Alternative infeasible. (Public Resources Code § 21081(a)(3), Guidelines § 15091(a)(3)).

Facts in Support of Finding

- a. This alternative would result in less impacts to traffic/circulation, air quality, noise, geology/soils, hydrology/water quality, biological resources, paleontological resources, cultural resources, public services and facilities.

Under this alternative, approximately 4,013,000 square feet of non-residential development would occur, 7,637 additional students in the area would be expected, and 665 dwelling units would be constructed. This is compared to 6,585,594 square feet of non-residential development, 7,800 students, and 3,625 dwelling units that could occur under the proposed project (pursuant to the Overlay Plan). Development of PA51 according to Measure W land uses would generate approximately 83,347 ADT and development of PA30 according to land uses in this alternative would generate approximately 28,513 ADT.⁵ As such, the total trips generated by this alternative is 111,860 ADT. This compares to 148,000 trips generated by the project according to the Overlay Plan. Additionally, implementation of this alternative would result in less of an air quality impact associated with the proposed project as the level of development and corresponding trip generation would be less. Mobile source air quality emissions are estimated to be approximately 25% less than the project, as the trips generated by this alternative are approximately 25% less than the project. Similarly, which alternative would result in less of a noise impact as the proposed project, as the overall amount of development and vehicular trips on surrounding roadways would be less.

Implementation of this alternative would result in less of a geology and seismic impact associated with seismic ground shaking, soil erosion or loss of topsoil, and expansive soils since there would be less overall development within the project area. Also, this alternative would result in less of a hydrology and water quality impact as the proposed project. Most of the development would be concentrated in PA30, and, as compared to the proposed project, significantly less development and impervious surfaces would occur within PA 51. Additionally, under this alternative, the proposed drainage corridors would be implemented as is proposed under the project.

Implementation of this alternative would result in less of an impact than the proposed project in regards to potential conflicts with the City of Irvine Urban Forestry Ordinance, since less development would occur under the alternative. Also, because less of the site would be converted to urban uses, potential biological impacts would be reduced. As with the proposed project, this alternative would allow for the creation of drainage corridors through the project site that could allow for wetland creation, and this alternative would provide the same wildlife corridor alignment as the proposed project.

Implementation of this alternative would result in less of an impact to paleontological and cultural resources than the proposed project. Under this alternative, development would be concentrated primarily in PA30, with substantially less development occurring in PA51 as compared to the project. Therefore, the potential for this alternative to directly or indirectly destroy a unique paleontological resource or unique geologic feature is less than the project. Similarly, under this alternative, development would be concentrated primarily in PA30, with substantially less development occurring in PA51 as compared to the project. Therefore, the potential for this alternative to directly impact cultural resources is less than the project.

This alternative would result in less of an impact than the project related to the construction or expansion of public facilities. This alternative would result in less of a demand for school facilities and parks, as only approximately 665 dwelling units would be allowed under this alternative as compared to 3,625 dwelling units that would occur under the proposed project.

- b. Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would result in a similar impact to land use, public health and safety, and agricultural resources.

This alternative would implement the mandate of the voter approved Measure W for development of PA 51 with park uses. Implementation of the Measure W PA51/Millennium Plan II PA30 - Modified Alternative would have a similar impact as the proposed project regarding conflicts with the County of Orange Master Plan of Arterial Highways and the existing Airport Environs Land Use Plan (AELUP), Air Installation Compatible Use Zones (AICUZ), and Policy Implementation Line (PIL) since non-aviation reuse of the former base conflicts with these existing plans. No other land use conflict would occur under this alternative.

Implementation of this alternative would result in a similar public health and safety impact as the proposed project. This alternative would cause portions of PA 51 containing existing structures to be developed, resulting in the need to demolish existing structures. Development would occur in those areas containing remediation sites. However, the impact associated with structures and population

being located adjacent to wildland fire hazard area would be less. Also, implementation of this alternative would result in a similar impact related to the loss of agriculture. This alternative would preserve the same amount of acreage of agriculture as is proposed under the Overlay Plan.

- c. The alternative meets the following three project objectives:
 - 3. Convert MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
 - 4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.
 - 5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.
- d. The alternative does not meet the following project objectives:
 - 1. Annex the former MCAS El Toro site and adjacent lands within the City's Sphere of Influence.
 - 2. Convert MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
 - 6. Respond positively and effectively to the Department of Navy's decision to sell the property to private interests by allowing private development of some land while ensuring the implementation of park and open space amenities.
- e. Although, this alternative is environmentally superior to the proposed project, this alternative is infeasible because it does not meet three of the project objectives.

Reference: FEIR pages 6-16 to 6-19.

3. Alternative Land Use Plan – University Village

Description:

The Alternative Land Use Plan – University Village, generally involves redesignation of Planning Area Zone (PAZ) 5 from Research and Development (R&D) to Medium High Density Residential (MHDR). The student population of the proposed university is increased from 7,800 to 15,000, including approximately 1,500 dorm rooms on PAZ 7. Figure 6-2 depicts the Alternative Land Use Plan – University Village. As compared to the Overlay Plan, the changes are as follows:

PAZ 5 – Land Use changes from R&D to MHDR. Square feet change from 1,000,000 to 0. Dwelling units change from 0 to 1,580.

PAZ 7 – Students increase from 1,306 to 2,512. Square footage changes from 243,302 to 467,900. 1,500 residence hall rooms are added.

PAZ 8 – Students increase from 5,570 to 10,711. Square footage changes from 1,037,234 to 1,994,735.

PAZ 9 – Students increase from 172 to 331. Square footage changes from 32,013 to 61,566.

PAZ 10 – Students increase from 752 to 1,446. Square footage changes from 140,045 to 269,248.

The unincorporated area would be annexed into the City. No new development is proposed for the Musick Jail and IRWD properties, though the County of Orange may decide to expand the jail according to the proposed jail expansion plans. This alternative is environmentally inferior to the proposed project.

Finding

The City finds that specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make the Alternative Land Use Plan – University Village Alternative infeasible. (Public Resources Code § 21081(a)(3), Guidelines § 15091(a)(3)).

Facts in Support of Finding

- a. Implementation of the Alternative Land Use Plan – University Village would result in greater impacts to traffic/circulation, air quality, noise and public services and utilities.

Under this alternative, more development would occur than would occur under the proposed project, including an increase in the student population of the university. Total vehicular trip generation would be approximately 161,117 average daily trips as compared to 148,000 average daily trips generated by the Overlay Plan. Also, implementation of this alternative would result in a greater air quality impact than the project. This alternative would place housing (1,580 dwelling units) in proximity to the proposed university, thereby, potentially reducing commuter trip lengths and associated air emissions; however, the increase in permitted student population would result in an additional 13,117 vehicle trips generated within the project area. As such, the mobile emissions would be approximately 8% higher than the proposed project. Similarly, this alternative would result in a greater noise impact than the proposed project, as the overall amount of vehicular trips on surrounding roadways would be greater.

Implementation of this alternative would also result in a greater impact than the project related to the construction or expansion of public facilities. This alternative would significantly increase the demand for school facilities and parks, as approximately 1,580 additional dwelling units and 1,500 dorm rooms, and the corresponding population would be allowed under this alternative as compared to the proposed project.

- b. The impact to land use, public health and safety, geology and seismicity, hydrology and water quality, agricultural resources, biological resources, paleontological resources, cultural resources, and aesthetics would be similar to the proposed project.

Implementation of this alternative would have a similar impact as the proposed project regarding conflicts with the County of Orange Master Plan of Arterial Highways and the existing Airport Environs Land Use Plan (AELUP), Air Installation Compatible Use Zones (AICUZ), and Policy Implementation Line (PIL) since non-aviation reuse of the former base conflicts with these existing plans. As with the project, this alternative would not impact off-site land uses. Implementation of this would result in a similar public health and safety impact as the proposed project. As with the proposed project, this alternative would result in all of the area within PA 51 containing existing structures to be developed, resulting in the need to demolish existing structures. Development would occur in those areas containing remediation sites and structures and population would be located adjacent to wildland fire hazard area.

This alternative would result in a similar geology and seismic impact associated with seismic ground shaking, soil erosion or loss of topsoil, and expansive soils since there would generally be a similar amount of overall development within the project area as would the proposed project. Similarly, implementation of this alternative would result in a similar hydrology and water quality impact as the proposed project, since under this alternative, the proposed drainage corridors would be implemented as is proposed under the project.

Implementation of this alternative would result in a similar impact as the proposed project related to the loss of agriculture. This alternative would preserve the same amount of acreage of agriculture as is proposed under the Overlay Plan. Also, this alternative would result in a similar impact to the proposed project in regards to potential conflicts with the City of Irvine Urban Forestry Ordinance, since the area of the project site that is developed would be similar to the project. As with the proposed project, this alternative would allow for the creation of drainage corridors through the project site that could allow for wetland creation, and this alternative would provide the same wildlife corridor alignment as the proposed project.

Implementation of the Alternative Land Use Plan – University Village would result in a similar impact to paleontological and cultural resources as the proposed project. Under this alternative, development would occur in the same areas as would occur under the proposed project, therefore the potential for this alternative to directly or indirectly destroy a unique paleontological resource or unique geologic feature is similar to the proposed project. Similarly, under this alternative, development would occur in the same areas as would occur under the proposed project, therefore the potential for this alternative to impact cultural resources is similar to the proposed project. Additionally, implementation of this alternative would result in a similar light and glare as the project since the area of the project site that is developed would be similar. The impact related to the change in visual quality of the project area would also be similar as development would occur in the same areas as proposed under the project.

- c. The alternative will result in less of an impact to population/housing.

Implementation of this alternative would result in less of a population/housing impact related to the jobs/housing balance than the proposed project. There would be a reduction in the overall amount of employment generating land uses, and an increase in housing units with the change in PAZ 5 to residential. In regards to inducing population growth in the area, this alternative would have a similar impact as the proposed project since it would generate jobs and new residential opportunities that would attract new residents to the area.

- d. The alternative meets all of the following project objectives:

1. Annex the former MCAS El Toro site and adjacent lands within the City's Sphere of Influence.
2. Convert MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
3. Amend the General Plan and Zoning Ordinance to implement proposed Orange County Great Park land use designations.
4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.
5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.
6. Respond positively and effectively to the Department of Navy's decision to sell the property to private interests by allowing private development of

some land while ensuring the implementation of park and open space amenities.

- e. Although, this alternative meets all of the proposed project objectives, this alternative is infeasible because this alternative is environmentally inferior to the proposed project.

Reference: FEIR pages 6-20 to 6-28.

5. Increased Residential Alternative

Description:

This alternative would increase the amount of residential units provided in the project area. Under this alternative, the land uses proposed within PAZs 17a and 17b would be changed as shown in the following table.

PAZ/Acreage	Project Land Use	Alternative Land Use	Development Potential
17a/236	Commercial Recreation	Medium High Residential	3,540 d.u.'s
17b/73	Cemetery	Medium High Residential	1,095 d.u.'s
TOTAL/310			4,635

The medium high density residential units would be comprised of approximately 3,476 single-family residential units and 1,159 multi-family residential units. All other land uses would be the same as proposed under the Overlay Plan.

Finding

The City finds that specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make the Alternative 4 infeasible. (Public Resources Code § 21081(a)(3), Guidelines § 15091(a)(3)).

Facts in Support of Finding

- a. This alternative is environmentally superior to the proposed project with respect to the impact to population/housing.

This alternative would reduce the overall amount of employment generating land uses by approximately 236 acres and would increase the number of residential units by 1,010 dwelling units as compared to the project. As such, the alternative would reduce the project's contribution to the jobs housing imbalance. While the alternative would reduce the impact, it would remain significant and unavoidable.

- b. This alternative will result in a greater impact to traffic/circulation, air quality, noise, geology and seismicity, hydrology and water quality, aesthetics, and public services and facilities, and utilities than the proposed project.

Implementation of this alternative will result in a greater traffic/circulation impact than the proposed project. The increase of 4,635 residential dwelling units would generate approximately 37,010 daily trips (3,476 single-family dwelling units would generate approximately 28,733 daily trips and 1,159 multi-family dwelling units would generate approximately 8,277 daily trips). The commercial recreation and cemetery land uses as proposed under the project would generate approximately 5,867 daily trips. Therefore, implementation of this alternative would represent an increase in daily trips by 31,143 over the proposed project. Also, implementation of this alternative will result in a greater air quality impact than the proposed project as more development would occur, resulting in greater construction and operational emissions. The trip generation of this alternative is substantially greater (31,143 average daily trips) than the proposed project; therefore, the mobile air quality emissions generated by this alternative would be greater. Similarly, since this alternative would result in the generation of approximately 31,143 additional trips than the proposed project, which would be distributed on the surrounding roadway system, this alternative would increase the traffic noise levels along these roadways.

Implementation of this alternative will result in a greater geology and seismic impact associated with seismic ground shaking, soil erosion or loss of topsoil, and expansive soils, as there will be a greater amount of overall development within the project area. Implementation of this alternative would also result in a greater impact associated with hydrology and water quality than the proposed project. A greater amount of development and impervious surfaces would occur under this alternative as the proposed cemetery use in PAZ 17b would be developed with residential uses. This alternative would also result in a greater aesthetic impact related to light and glare than the project since there will be an overall increase in the amount of development occurring within the project area.

Implementation of this alternative will result in a greater impact related to the construction or expansion of public facilities as significantly more residential units would be constructed on the project site. The impact related to the construction of new school facilities will also be greater than the proposed project as there will be a greater amount of residential units and corresponding student generation. Similarly, this alternative will result in a greater impact related to the

construction or expansion of utilities as the increased residential uses would likely require a larger utility backbone system to support the alternative.

- c. This alternative will result in similar impacts to land use, public health and safety, agricultural resources, biological resources, paleontological resources and cultural resources as would occur under the proposed project.

Implementation of this alternative will have a similar impact as the proposed project regarding conflicts with the County of Orange Master Plan of Arterial Highways and the existing Airport Environs Land Use Plan (AELUP), Air Installation Compatible Use Zones (AICUZ), and Policy Implementation Line (PIL) since non-aviation reuse of the former base conflicts with these existing plans. As with the project, this alternative would not impact off-site land uses. Implementation of this alternative will result in a similar public health and safety impact to the proposed project. As with the proposed project, this alternative would result in all of the area within PA 51 containing existing structures to be developed, resulting in the need to demolish existing structures. Development will occur in those areas containing remediation sites and structures and population will be located adjacent to wildland fire hazard area.

Additionally, implementation of this alternative would result in a similar impact to agricultural resources as the proposed project. Under this alternative, the same areas of the project site that are currently used for agricultural production would be developed with an alternative land use. Likewise, as with the proposed project, PAZ 1 would be retained for agricultural use.

Implementation of this alternative will result in a similar impact as the proposed project in regards to potential conflicts with the City of Irvine Urban Forestry Ordinance. Although a different land use is proposed for PAZ's 17a and 17b, the potential for disturbance to biological resources would be similar. Also, this alternative would allow for the implementation of the proposed wildlife corridor, as is proposed under the project.

Implementation of the Increased Residential Alternative will result in a similar impact to paleontological and cultural resources as the same area of the project site would be disturbed by development activity as would occur under the proposed project. As with the proposed project, future development under this alternative has less potential to directly or indirectly destroy a unique paleontological resource, unique geologic feature or a cultural resource.

- d. The alternative meets the following project objectives:
 - 1. Annex the former MCAS El Toro site and adjacent lands within the City's Sphere of Influence.

2. Convert MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
 4. Coordinate location and development of roadways and transportation systems in the project area with the local and regional circulation and transportation systems.
 5. Create a wildlife corridor connection through the property which may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.
 6. Respond positively and effectively to the Department of Navy's decision to sell the property to private interests by allowing private development of some land while ensuring the implementation of park and open space amenities.
- e. The alternative does not meet the following project objective:
3. Amend the General Plan and Zoning Ordinance to implement proposed Orange County Great Park land use designations.
- f. This alternative is infeasible, because this alternative is environmentally inferior to the proposed project and it does not meet one of the project objectives.

Reference: FEIR pages 6-28 to 6-33.

IX. FINDINGS REGARDING GROWTH INDUCING IMPACTS

Guidelines Section 15126.2(d) requires that an EIR:

Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.

Direct Growth Inducing Impacts:

The former MCAS El Toro site is largely developed, and changes in land uses as proposed under the proposed project will involve the demolition of existing structures, construction of new development, and the provision of new roadways and infrastructure systems to serve this development. Areas on the northern and southern sections of the site that are currently in agricultural use are planned to be developed with urban land uses. In addition, there are adjacent agricultural areas and underutilized sites near the former MCAS El Toro (to the northwest, northeast, and southeast) that may be induced

by the proposed project to develop in the future. However, the proposed project is primarily conversion of the former MCAS El Toro to park/open space/recreation uses that will not contribute to conversion of adjacent agricultural areas to urban areas. The roadway and infrastructure improvements that will accompany future development under the proposed project may improve access to nearby vacant areas (over 1,000 acres located north of the site and designated for low-density residential development) and increase pass-by traffic. The provision of infrastructure improvements under the proposed project may also decrease the costs associated with extending or improving the existing infrastructure to these vacant sites and, therefore, make future development less costly and more expedient for developers. The proposed roadways will provide traffic access through the site. These roadways may make the surrounding area more attractive to investors, property owners and future residents and, thus, induce development in these areas. Therefore, the proposed project may facilitate development in these nearby vacant areas by making them more attractive residential sites or commercial and industrial centers.

The proposed project is designed to develop the former MCAS El Toro facility with primarily open space/recreational, commercial, research and development (R&D), and institutional uses. The planned residential development on the site is expected to partially accommodate housing demand that will be created by employees on-site wanting to reside near their places of work. These housing units, in addition to the estimated 55,000 housing units planned, but not yet built, in the County, will increase the housing stock of Orange County. The project is primarily focused on providing park/open space/recreation opportunities. These land uses will not generate a significant number of jobs. The planned land uses under the proposed project that would attract jobs to the area, include research and development, institutional, and educational. With the exception of research and development, these sectors are not considered economic drivers. Thus, the proposed project promotes economic growth; however, that is not the goal of the project. The presence of a qualified labor force in the region and the high demand for R&D and office space in Orange County led to the provision of adequate space for these sectors under the proposed project. The provision of a university campus on the site to support and develop this labor force is planned to attract high technology industries that demand a highly skilled labor force.

Since 1981 the recognized planning document for land use in the environs of the former MCAS El Toro has been the 1981 Air Installation Compatibility Use Zones (AICUZ) study. As part of this study, noise and accident potential zones were developed for areas surrounding the former MCAS El Toro installation. A land use compatibility matrix and applicable land use and zoning strategies were developed in an effort to achieve and maintain compatible land uses near the former MCAS El Toro site. The Noise Element of the Orange County General Plan establishes the 65 dB(A) CNEL contour contained in the 1981 AICUZ as the Policy Implementation Line (PIL) in which new residential construction is not permitted, although exceptions may exist for neighborhood infill conditions. At the time of development of the 1981 AICUZ, some residential development had already occurred within what will become the 65 dB(A) CNEL contour.

Since 1973, the City of Irvine has incorporated such factors as noise and accident potential into its General Plan, zoning, and development policies. In 1980, the City and the Marine Corps entered into a Memorandum of Understanding (MOU) that established the AICUZ study as the “basic planning resource in conjunction with the amendment of the City’s adopted General plan in so far as it relates to aircraft noise and hazard.”

Consistent with the passage of Measure W by Orange County voters and the County of Orange plans for the project site, the proposed project does not include aviation uses on the site, and thus will allow removal of development restrictions associated with the aircraft clear zones and flight patterns and the noise-restricted areas around the former MCAS El Toro. Previously development-restricted areas in the City, adjacent cities, and unincorporated areas in the County of Orange could develop with residential and other land uses, at higher densities, and at higher building heights. Such a scenario could allow new development in the surrounding area that would not have been possible if the aviation uses remained on the site.

Indirect Growth Inducing Impacts:

The adoption and implementation of the proposed project will allow for the intensification of urban land uses on-site and will create short-term construction employment, as well as long-term employment in research and development, institutional, and educational land uses. Additional employment opportunities in the City will be partially met by the local labor force, although individuals from areas outside the region may relocate to the County to be near these jobs. These off-site employees may, in turn, create additional demand for housing. While planned residential development on the site is expected to accommodate some of this demand, adjacent residential areas are expected to experience an increase in demand due to the availability of jobs on the site. As indicated earlier, some 55,000 housing units have yet to be built in planned developments in the surrounding area. These units are expected to meet demand resulting from new jobs on-site. The jobs and households on-site will also create demand for goods and services in the area. This demand may be met by the existing Irvine Spectrum development and new commercial, recreational, and retail uses that will be developed on-site, as well as in the surrounding area. Providing the goods and services needed to support new development on-site will lead to increases in demand for housing and support services, which in turn will induce additional growth in the City and the surrounding area. Thus, new development under the proposed project is expected to produce a multiplying pattern of development, investment, and growth in the community.

Roadway improvements, infrastructure systems, and provision of public services in the area may encourage residential, commercial, and industrial construction in adjacent areas, which will increase local population and employment bases. The intensification of land uses will foster growth and increases in utility consumption, as well as in demand for public services. Construction of capital improvements that are needed to support development will affect the pace of growth in the project area. The availability of

adequate utilities and infrastructure in the area is expected to indirectly serve to promote development of adjacent areas.

The reduction of land in the project area in agricultural production will have the indirect effect of increasing development pressure and accelerating the loss of the remainder of the agricultural land within the area. A net decrease in farmland under cultivation in an area has a consequent increase in agricultural production costs such as transportation and labor. Agricultural activities tend to be incompatible with urban and suburban neighbors because of factors such as dust, odors, pesticide use, and machinery noise associated with normal farming operations. Farmers may also experience increased costs associated with garbage dumping on their property, theft of produce and equipment, vandalism of equipment, and increased traffic on roads used to move equipment between fields. Development within the project area may reduce the attractiveness of continued production on nearby farmlands, and may increase the financial rewards of taking land out of agricultural use. However, conversion of agricultural land to urban uses is a long and continuing trend in Orange County. Though it is difficult to quantify the amount of agricultural land that is under development pressure within the County, it is unarguable that such pressure exists and will continue with or without implementation of the proposed project. As a result, while there are existing pressures that would result in the conversion of agricultural land within and adjacent to the project area with or without implementation of the proposed project, it is expected that the conversion of agricultural land within the project area will serve to indirectly promote the conversion and development of agricultural land within the area.

X. FINDINGS REGARDING SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Guidelines Section 15126.2(c) indicates that:

“Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely.”

The Guidelines also indicate that:

“Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.”

Primary Impacts:

In summary, annexation of the former MCAS El Toro site, Musick Jail site, and IRWD parcel and implementation of the proposed project will involve the following irreversible environmental changes:

- New development under the proposed project will lead to the loss of agricultural land on-site. These existing agricultural areas are planned for the development of the wildlife corridor, open space/park, and sports park uses.
- The project involves the commitment of approximately 4,738 acres (former MCAS El Toro) to land uses proposed under the proposed project, resulting in the elimination of existing on-site development. Some structures (“The Castle”, former bachelor housing) and uses (golf course, habitat preserve) may be retained, and some may serve as interim facilities until permanent facilities are constructed (i.e., El Toro Marine School and some existing office buildings, some of which have been retrofitted for other uses).
- New vehicle trips on proposed and surrounding roadways will be generated by new development under the proposed project. Planned roadways on-site are expected to provide access into the site and allow changes in traffic patterns due to the alternative routes provided on-site.
- Vehicle trips generated by new development under the proposed project will result in increases in air pollutants, including criteria air pollutants, associated with vehicle exhaust. Greater pollutant emissions are also expected from new stationary sources that may be built within the project area.
- New development under the proposed project will introduce long-term noise from vehicles traveling to and from the project site. The vehicular noise will add to ambient noise levels on-site and in the surrounding area. New sources of stationary noise are also expected from future development and on-site activities.
- The project will require the commitment of energy, water, and other natural resources for the construction and operation of new development. However, existing resources are available to meet the projected demand and utility providers can serve new development under the proposed project without adverse impacts.
- Implementation of the proposed project will involve demolition of existing structures that have asbestos-containing materials and lead-based paint and the disposal of other hazardous materials on the site. Abandonment of water wells and fuel tanks will also occur, along with the remediation of identified contaminated soils. Thus, elimination of existing public health and safety hazards will accompany the proposed project.
- Implementation of the proposed project will result in an increase in the demand for utilities and will require the extension of existing infrastructure to individual lots on the site. An increase in demand for public services and facilities operated by the City of Irvine and affected service agencies will also occur. This demand can be served by facilities and staffing of public service agencies.
- The proposed project will lead to demolition of existing structures on site, the construction of new structures, and changes in the visual quality of the site. New light sources will be introduced to the environment. These changes will not result in significant adverse impacts after mitigation.
- The preclusion of an airport and airport uses in accordance with Measure W, which was passed by Orange County voters in 2002.

Secondary Impacts:

Annexation of the proposed project area and its implementation will alter the pattern of on-site development through development of a primarily park/open space in the area and demolition of existing military facilities. New development planned under the proposed project will involve the provision of new roadways and infrastructure systems to serve individual lots and projects on-site. The proposed project will provide an extensive circulation network on-site and will divide the existing site into smaller planning areas for future development. While the former MCAS El Toro is not open to public access, the proposed project will provide public access to most of the site, as well as allow vehicles and people to pass through the site.

In the post-buildout period, when planned land uses change or areas are redeveloped within the project area, public service facilities and infrastructure that are constructed under the proposed project will continue to permit on-site urban development. These public improvements will also allow the site and the surrounding area to develop and accommodate additional population growth well beyond buildout of the project area. Recycling of land uses in and around the project area will be subject to City of Irvine General Plan policies for planned growth, phased development, and provision of public facilities and services. Therefore, no environmentally significant secondary impacts are anticipated to result from project implementation.

XI. STATEMENT OF OVERRIDING CONSIDERATIONS

Pursuant to Public Resources Code Section 21081(b) and the Guidelines Section 15093, the City has balanced the benefits of the proposed Project against the following unavoidable adverse impacts associated with the proposed Project and has adopted all feasible mitigation measures with respect to these impacts: (1) Traffic/Circulation, (2) Air Quality, (3) Population and Housing, and (4) Agriculture. The City also has examined alternatives to the proposed Project, none of which both meet the Project objectives and are environmentally preferable to the proposed Project.

The City, after balancing the specific economic, legal, social, technological, and other benefits of the proposed Project, has determined that the unavoidable adverse environmental impacts identified above may be considered “acceptable” due to the following specific considerations which outweigh the unavoidable, adverse environmental impacts of the proposed Project. Each of the separate benefits of the proposed Project, as stated herein, is determined to be, unto itself and independent of the other Project benefits, a basis for overriding all unavoidable adverse environmental impacts identified in these Findings.

- **Dedication of Open Space:** The proposed Base Plan will result in the dedication of approximately 1,564 acres of permanent open space/park, Sports Park, and golf

course, far in excess of open space dedication under traditional City requirements. The proposed Overlay Plan would result in the dedication of 1,073-acres of open space/park, Sports Park, and golf course, which will create one of the largest open space areas in Southern California, for the benefit of the residents of Irvine and the entire Orange County. These dedications are consistent the 1988 Open Space Initiative which identified as its purpose to give Irvine an open space system that provides relief from increasing congestion and urbanization of Irvine and the surrounding communities and which encapsulated a policy to move the City toward a planned open space system. The Initiative directed that the open space system should be created in a manner consistent with key objectives stated in the Initiative, including the consolidation of “important conservation and open space area into large continuous areas that may be integrated into local and regional open space areas”. The proposed project is consistent with and advances these open space objectives which have since been incorporated into the City’s General Plan Land Use Element and Conservation and Open Space Element.

- **Parks and Recreation:** According to the Base Plan, majority of land uses in PAs 51 and 30 are proposed for open space and recreation. Overlay Plan, the majority of land uses in PA 51 are proposed for open space and recreation. The project provides for a variety of open space features to serve the City and the surrounding region. These open space features include parks, sports parks, golf courses, habitat preserve, drainage and wildlife corridors, fairgrounds, and a cemetery. The parkland acreage proposed under the project will greatly exceed the existing City of Irvine’s standards described above, providing a regional open space amenity for the benefit of all Orange County. Under the Overlay Plan, the allowable development will fund the development of the park and recreation areas, and result in one of the largest single park and recreation areas in the urbanized area of Southern California, which will provide significant recreational and leisure benefits to residents of Irvine and throughout Orange County.
- **Wildlife Corridor:** Wildlife movement corridors are of substantial importance to the viability of regional planning efforts to obtain habitat linkages. Presently there is no wildlife corridor within the project area. However, a major feature of the proposed project is the inclusion of a wildlife corridor land use which would allow for the creation of a wildlife corridor connecting the Lomas Ridge and the San Joaquin Hills. The wildlife corridor provides connection to the estimated 974-acre habitat preserve, as well as the Limestone-Whiting Wilderness Park. To the south, the corridor will connect to the Laguna Coast Wilderness Park through existing and future major open space linkages. As a result, approval and development of this project will maintain and enhance wildlife movement, and provide significant benefits for wildlife.
- **Preservation of Agricultural Resources:** A major component of the Orange County Great Park Plan is the preservation of agriculture within several areas of the property. Under the proposed Base Plan, 443-acres of land are proposed for

an Agriculture land use. Similarly, under the proposed Overlay Plan, 307-acres of land are designated as an Agriculture land use. The proposed project helps implement the Agricultural Legacy Program by proposing agricultural land uses in the portion of PA 51 that is identified by the Irvine Agricultural Legacy Program Preliminary Sites Assessment (City of Irvine November 26, 2002).

- **Drainage Corridors:** The proposed project includes a land use category for the creation of drainage corridors through the project site. The proposed drainage plan for the project is based on an earthen open channel and landscaped drainage corridor (corridor) method. These drainage corridors offer an opportunity to control surface water flow, improve surface water quality, and create wetland/riparian habitats where none currently exist in the project area. The development of these drainage corridors will provide significant regional wildlife, aesthetic and water quality benefits for the entire region.
- **Hydrology/Water Quality Benefits:** The existing channels have all been improved/channelized and are proposed to remain the same under the Orange County Great Park Plan. Sediment loads currently carried by these channels may decrease in the future due to recently installed detention basins in Bee Canyon, Round Canyon, and the Marshburn Basin. Additionally, to improve water quality within the San Diego Creek watershed, natural drainage corridors will be included in the Great Park Plan. In addition, the Irvine Ranch Water District is proposing to develop water quality wetlands within the project area. The wetlands are planned to be located along the Bee Canyon Channel, Aqua Chinon Channel, Serrano Creek, and the Upper San Diego Creek. To the extent that the project would improve water quality, that benefit would be shared by the watershed. As a result, development of the project will have region-wide water quality benefits, including beneficial impacts on the watercourses emptying into Newport Bay and the Pacific Ocean.
- **Housing Opportunities:** The proposed project will provide additional housing on the site to accommodate demand for housing in Orange County and the impact will be beneficial. The Base Plan is expected to result in provision of 225 dwelling units, while the Overlay Plan is expected to result in provision of 3,625 dwelling units.
- **Employment Generation:** Temporary short-term construction jobs will be created during the lifetime of the proposed project. Additionally, the proposed project is expected to create a diverse range of long-term jobs on site. The Base Plan is expected to generate approximately 11,380 jobs, while the Overlay Plan would generate approximately 16,510 jobs.
- **Transit-Oriented Development:** The Base Plan proposes 99-acres of Transportation and Transit related facilities and 20 acres of Transit Oriented Development in the southern portion of the project area. The Overlay Plan

proposes 210-acres of Transit Oriented Development in the southern portion of the project area. These land use proposals take advantage of the existing commuter rail station (the Irvine Multimodal Transportation Center), the I-5 Freeway, the Foothill and Eastern Transportation Corridor toll facilities located within the project vicinity and encourage the increased use of transit in this area. Additionally, as mitigation for the project, the City will coordinate with the Orange County Transportation Authority to restructure transit service plans to provide effective service to the project area.

- **Pedestrian-Friendly Development:** By developing immediately adjacent to an existing urbanized area and in the vicinity of commuter rail and passenger facilities, the project also enhances the options for non-motorized access throughout the larger area. The project proposes pedestrian sidewalks, bikeways and transit routes that will link to surrounding trails, land uses, and activity centers. This will reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk or bike. Additionally, as mitigation for the project, the City will coordinate with the Orange County Transportation Authority to restructure transit service plans to provide effective service to the project area.
- **Major Central Park:** With the approval of Orange County Central Park and Nature Preserve Initiative (Measure W) in March 2002, the County of Orange General Plan was amended to create a major central park at the former MCAS El Toro site. Following this decision by the voters of Orange County, the Department of the Navy issued its Record of Decision to dispose of the former military base using the mixed land use alternative, leaving “the particular means to achieve redevelopment to the acquiring entity and the local zoning authorities.” Subsequently, representatives from the Department of the Navy and the General Services Administration met with City staff and began a dialogue on meeting the Navy’s interests in disposing of the former Base expeditiously while realizing the City’s goals of annexing the property within its sphere of influence and remaining consistent with the intent of Measure W. These meetings held in both the City of Irvine and Washington D.C. resulted in a mutual understanding among the parties regarding both the development opportunities and the open space requirements that need to be accommodated in the reuse plan.

In keeping with the mutual understanding between the Navy and the City of Irvine, the Orange County Great Park plan permits a certain level of mixed use development, with its attendant environmental impacts, in return for allocation of substantial portions of the property to open space uses. The City’s partnership with the Navy has produced a plan which will create one of America’s greatest parks right in the heart of Orange County. The City accepts the significant environmental impacts associated with development of the property in recognition of 2,600 acres of educational, open space, and recreational opportunities that will be created through the land use regulations. Specifically, a 165-acre Sports Park

will serve as a regional benefit by providing a venue for large-scale tournament play as well as the opportunity for instructional programs to benefit youth throughout the County. The creation of a 275-acre educational campus will meet the growing needs for higher education in South Orange County. The construction of a 73-acre cemetery site will meet the City's General Plan objective regarding public facilities development (Objective G-1). The 974-acre Habitat Preserve will expand and enhance the County's Natural Communities Conservation Program/Habitat Conservation Plan (NCCP/HCP). The 367-acre Meadows Park will be centrally located in Orange County and accessible by automobile, bus, and train, providing a close and available respite from suburban pressures. The 156-acre Exposition Center South will provide opportunities for future art, history, and science museums, botanical gardens, and other cultural facilities that currently do not exist anywhere else in the County.

When considered as a whole, the benefits to the residents of Irvine, to the voters who supported Measure W, and to the citizens of Orange County outweigh the significant environmental impacts of the project.

For the foregoing reasons, the City finds that the proposed project's adverse unavoidable environmental impacts associated with traffic/circulation, air quality, population and housing, and agriculture are outweighed by these considerable benefits.

XII. CONCLUSION

For the foregoing reasons, the City of Irvine concludes that the Orange County Great Park will result in a beneficial mix of regional open space, cultural and recreational facilities providing significant open space, recreation, hydrology/water quality, housing, employment and transit related benefits of local and regional significance, as well as various public infrastructure improvements, which outweigh the unavoidable environmental impacts. Therefore, the City of Irvine has adopted this Statement of Overriding Considerations.

ORANGE COUNTY GREAT PARK

Mitigation Monitoring Program

JUNE 2003

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**ORANGE COUNTY GREAT PARK
FINAL EIR
CITY OF IRVINE
MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST**

1.0 INTRODUCTION

Section 21081.6 to the State of California Public Resources Code requires a lead or responsible agency that approves or carries out a project where an environmental impact report (EIR) has identified significant environmental effects to adopt a “reporting or monitoring program for adopted or required changes to mitigate or avoid significant environmental effects.” The City of Irvine is the lead agency for the Great Park Plan EIR, and therefore is responsible for implementation of the mitigation monitoring program. An EIR has been prepared for this project which addresses potential environmental impacts and, where appropriate, recommends measures to mitigate these impacts. As such, a mitigation reporting or monitoring program is required to ensure that adopted mitigation measures are implemented.

The project is located in the center of Orange County and includes land within the City or Irvine as well as unincorporated area. The project area encompasses approximately 4,701 acres, or 7.5 square miles. The total area proposed for annexation is 4,287 acres.

The project area is bounded by the City of Lake Forest to the south and southeast, the City of Irvine to the west and southwest, and the County of Orange to the north. The former MCAS El Toro is generally located north of the Santa Ana (I-5) Freeway, east of the Eastern Transportation Corridor (SR-133), and south of the Foothill Transportation Corridor (SR-241). Major roadways bordering the project area include Barranca Parkway to the south, Sand Canyon Avenue to the west, Portola Parkway and Irvine Boulevard to the north, and Alton Parkway to the east. The James A. Musick Jail Facility is located on a 105-acre site northwest of existing Bake Parkway and east of the future extension of Alton Parkway. The northern boundary of the Musick Jail abuts the former MCAS El Toro. Existing buildings of the Irvine Spectrum abut the Musick Jail site to the west/southwest. An eight-acre parcel west of the Musick Jail contains the IRWD East Irvine Pumping Station, Zone III 5-million gallon potable water reservoir, and a 7-million gallon potable water reservoir.

The project consists of the following actions: 1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; 2) Annexation of the unincorporated portion of Planning Area 35 (the Irvine Ranch Water District Parcel); 3) General Plan Amendment and Zone Change for Planning Area 30 with is presently in the City of Irvine; and, 4) Approval in the form of a Development Agreement vesting approval of higher intensity overlay uses in consideration of dedication of land for public purposes and for funding certain infrastructure improvements and maintenance of the public uses by the

purchaser/developer and subsequent landowners and funds for specified park, roadways, and other circulation facilities and infrastructure. The proposed project also includes the dedication of approximately 21 acres to be used for the Jeffrey Pine Open Space Spine (JOSS). The JOSS acreage will serve as a connector to the regional open space system and will provide recreational opportunities in the Northern Sphere.

2.0 PROGRAM MANAGEMENT

The mitigation monitoring and reporting program (MMRP) for the Great Park Plan will be in place through all phases of project approval. Enforcement of the MMRP will be the responsibility of a Project Manager (PM) at the City of Irvine.

2.1 Roles and Responsibilities: Project Manager

The role is assigned by the Community Development Director. The PM assigned to the proposed project will supervise the MMRP during design, construction, and operation of the project and is responsible for the overall management of the MMRP. The PM is thoroughly familiar with the project and qualified to determine if an adopted measure is being properly implemented. The PM oversees the MMRP and reviews the Reporting and Implementation (R&I) Forms to ensure they are filled out correctly and proper action is being taken on each measure. The PM and/or an assignee will also be responsible for the filling and updating of the R&I Forms during all phases of the project. The PM will determine the need for a measure to be modified and ensure the use of a mitigation specialist if technical expertise beyond the PM's is required. If it is found that an adopted mitigation measure is not being properly implemented, the PM will require corrective actions to ensure adequate implementation. The responsibilities of the PM include the following:

1. An MMRP Reporting Form will be prepared for each potential significant impact and its corresponding mitigation, as identified in the list of significant impacts and mitigation measures attached hereto.
2. Appropriate specialists will be retained, as needed, to monitor specific mitigation activities and provide appropriate written approvals to the PM.
3. The PM and/or an assignee will approve, by signature and date, the completion of each action item that was identified on the MMRP Reporting Form.
4. All MMRP Reporting Forms for an impact issue requiring no further monitoring will be signed off as completed by the PM and/or an assignee at the bottom of the MMRP Reporting Form.

5. Unanticipated circumstances may arise requiring the refinement or addition of mitigation measures. The PM is responsible for approving any such refinements or additions. An MMRP Reporting Form will be completed by the PM and/or an assignee. The completed form will be provided to the appropriate design, construction, or operational personnel.
6. The PM has the authority to stop the work of construction contractors if compliance with any aspects of the MMRP is not occurring after written notification has been issued. The PM also has authority to hold certificates of occupancies if compliance with a mitigation measure attached herein is not occurring. The PM also has authority to hold the issuance of a building permit until all mitigation measures are implemented. Should the applicant/contractor disagree with the findings and actions of the PM, an appeal to the Community Development Director can be submitted.

2.2 General Procedures

MMRP Program Definitions

The MMRP consists of key program elements. The elements are summarized below.

MMRP Files

Files are established to document and retain records of the MMO. The file organization is established by the PM according to mitigation measures and project phases.

R&I Forms

R&I Forms are designed to record the monitoring activity in a consistent manner with appropriate approvals. The R&I Forms are placed in the MMRP files.

Environmental Compliance Verification

At the completion of construction contracts that are part of the overall development of the project, a verification of environmental compliance is executed by the PM. The verification concludes the construction monitoring process for the contract.

Mitigation Monitoring and Reporting Program Procedures

The policies and procedures for the MMRP described herein are intended to provide focused, yet flexible guidelines for monitoring the implementation of the mitigation measures discussed in the final EIR. The Mitigation Monitoring and Reporting Checklist lists each mitigation measure, the method of verification for each mitigation measure, and the party responsible for monitoring efforts. The Mitigation Monitoring and Reporting Checklist also provides the PM a verification of compliance for each mitigation measure during each applicable phase of the project. An R&I form is prepared for each potential significant impact and its corresponding mitigation measure. After each measure is verified for compliance, no further action is required for the specific phase. The PM shall initial and date the measure on Mitigation Monitoring and Reporting Checklist.

Disposition of Monitoring Forms

All actions and completed R&I Forms are kept in the MMRP file with the City of Irvine during the pre-design, design, construction, and operational phases of the project. Reports will be available from the city upon request at the following address:

City of Irvine (Lead Agency)
Community Development Department
One Civic Center Plaza
Irvine, California 92623-9575

MITIGATION MONITORING AND REPORTING PROGRAM

ORANGE COUNTY GREAT PARK

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
5.1 LAND USE (Base Plan and Overlay Plan)					
	No mitigation measures are required.				
5.2 TRAFFIC/CIRCULATION (Base Plan and Overlay Plan)					
TRAN1	<p>Prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs. The primary purpose of this mitigation measure is to reduce traffic, air quality and noise impacts. Should annexation into Spectrumotion not be approved, the landowner or subsequent project applicant shall develop and implement a similar transportation management plan containing the elements and meeting the criteria described below:</p> <p>Transportation Management Plan (TMP)</p> <p>The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for the Great Park Project. This document summarizes the key elements of the TMP.</p>	Requires submittal of annexation plans by project applicant in accordance with the Irvine Spectrum TMA. Failure to obtain approval of such plans requires project applicant to develop and implement a TMP as described in TRAN1.	Prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property.	Director of Community Development or designee.	

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	<p>1.0 Introduction</p> <p>The purpose of this document is to provide an outline for a comprehensive TMP for the Great Park. This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.</p> <p>It is the intent to annex Planning Area 51 and a portion of Planning Area 35 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.</p> <p>In the event that annexation of PAs 51 and 35 into Spectrumotion is not approved, a TMP similar to that provided by Spectrumotion will be implemented. This document sets forth the components of the TMP should it be necessary.</p> <p>2.0 Transportation Management Plan Framework</p> <p>The key elements of the Great Park TMP are set forth below:</p> <p>New Hire Orientation: Inform newly hired employees of commuting services available to them.</p> <p>Public Transportation Pass Sales: Provide a central</p>				

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	<p>location for purchase of passes to available transit services ((i.e., OCTA buses, Metrolink, Amtrak, etc.).</p> <p>Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.</p> <p>On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.</p> <p>Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.</p> <p>Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.</p> <p>Website: Maintain a website with all of their program information available.</p> <p>Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.</p> <p>Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.</p> <p>Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.</p> <p>3.0 Transportation Management Plan Implementation</p> <p>As part of the TMP, a process will be established to monitor its</p>				

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	effectiveness in reducing peak hour trip generation in the Great Park. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.				
TRAN2	Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of this EIR.	Requires contractual agreement between the City of Irvine and project applicant to fund improvement listed in the EIR.	Prior to the issuance of the first building permit.	Director of Community Development or designee.	
TRAN3	Prior to issuance of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the project traffic study (Urban Crossroads, December 2002) to maintain satisfactory levels of service as defined by the City's General Plan, based on thresholds of significance, performance standards, and methodologies used in this EIR, Orange County Congestion Management Program, and established in the transportation system/infrastructure fee program described in Mitigation Measure Tran 2 above.	Requires contractual agreement between the City of Irvine and project applicant to fund improvement listed in the EIR.	Prior to issuance of any building permits for permanent improvements in the project area.	Director of Community Development or designee.	
TRAN4	Prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated traffic forecasts. The updated traffic study will evaluate the cumulative impact of the subject map and all previously approved or concurrently submitted maps. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City approved	Requires the separate submission of updated traffic study developed in accordance with City of Irvine Traffic Study Guidelines.	Prior to the approval of each Master Tentative Map or equivalent document.	Director of Community Development or designee.	

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	<p>traffic study scope of work. The landowner or subsequent project applicant shall construct, bond for, or enter into a funding agreement for necessary improvements identified in the updated traffic study and/or participate in the City fee program (Tran 2 above) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of this EIR.</p> <p>Traffic signals that are on-site or directly related to the Great Park development will be installed as warranted through the mitigation implementation plan process.</p>				
TRAN5	<p>In conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the following actions:</p> <ol style="list-style-type: none"> 1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-tollway ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in this EIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines. 2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency. 3. The landowner or subsequent project applicant shall enter into an agreement with the City prior to 	Requires the separate submission of updated traffic study developed in accordance with City of Irvine Traffic Study Guidelines.	Prior to the approval of each Master Tentative Map or equivalent document.	Director of Community Development or designee.	

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	<p>recordation of the first final map for each Master Tentative Map or equivalent to establish the method and timing of payment of the identified percentage responsibility.</p> <p>The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or funding participation in a regional transportation improvement fee program, if adopted.</p>				
TRAN6	The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.	Requires the separate submission of updated traffic study developed in accordance with City of Irvine Traffic Study Guidelines. May require additional documentation and/or submission to other jurisdictions, depending on location of proposed improvement.	Prior to the approval of each Master Tentative Map or equivalent document.	Director of Community Development or designee.	
TRAN7	Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern	Requires the development and submission of a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study by the City of Irvine.	Prior to the approval of each Master Tentative Map or equivalent document.	Director of Community Development for submission to Caltrans and potentially effected TCA's.	

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	Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-compete clause or any similar agreement restricting a public agency's authority to construct improvement.				
TRAN8	Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of any building permits within the base property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdiction to amend the Orange County Master Plan of Arterial Highways. Marine Way, Trabuco Road from the SR-133 tollway to College Road, and Y Street should be included on the MPAH.	Requires cooperate study and subsequent amendment to Orange County Master Plan of Arterial Highways.	Following adoption of a land use plan and circulation plan for the project site and before the issuance of any building permits.	Director of Community Development, OCTA, and other affected jurisdictions.	
5.3 AIR QUALITY (Base Plan and Overlay Plan)					
AQ1	Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors; etc.; shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.	Requires written notification to potentially affected sensitive receptors (residents and landowners).	Prior to the start of demolition and construction within the project area.	Director of Community Development or designee.	
AQ2	Prior to the commencement of construction activities required to demolish and/or remove existing DON infrastructure, including runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plans shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation	Requires the development, submission, and approval of a construction emissions mitigation plan by project applicant.	Prior to the start of demolition and construction within the project area.	Director of Community Development or designee.	

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	<p>measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.</p> <ul style="list-style-type: none"> C Evaluate the availability and use, if available, of low-emission (i.e., methanol- or natural gas-powered) construction equipment instead of diesel for each construction phase. C Water exposed soils at least twice daily and maintain equipment and vehicle engines in good condition and in proper tune. C Wash off trucks leaving the site. C Replace ground cover on construction sites when it is determined that the site will be undisturbed for lengthy periods. C Reduce speeds on unpaved roads to less than 15 miles per hour. C Halt all grading and excavation operations when wind speeds exceed 25 miles per hour. C Suspend all emission generating activities during smog alerts. C Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible. C Properly maintain diesel-powered on-site mobile equipment. C Sweep streets at the end of the day if substantial visible soil material is carried over to the adjacent streets. C Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible. C Use of low-VOC asphalt. C Cover all trucks hauling dirt, sand, soil or other loose material to and from the site. C Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic. C Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible. C Reroute construction trucks away from congested streets, whenever feasible. 				

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	C Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible.				
AQ3	<p>Prior to the issuance of building permits for any future development, the applicant shall submit, and the Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.</p> <p>C Utilize built-in energy-efficient appliances to reduce energy consumption and emissions.</p> <p>C Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions.</p> <p>C Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible.</p> <p>C Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning.</p> <p>C Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible.</p> <p>C Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods.</p> <p>C Centralize space heating and cooling for multiple-family dwelling units and commercial space.</p> <p>C Orient buildings north/south for reducing energy-related combustion emissions.</p> <p>C Use solar energy, when feasible.</p> <p>C Use high rating insulation in walls and ceilings.</p>	Requires the development, submission, and approval of an operation-emissions mitigation plan by project applicant.	Prior to the issuance of building permits within the project area.	Director of Community Development or designee.	
AQ4	Information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find	Requires written notification to employees and residents within the project area.	On-going (prior to and during the development of the project area).	Director of Community Development or designee.	

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	employment nearby.				
AQ5	Future employment generating non-residential development shall include measures to reduce vehicle trips including carpool incentives, easy access to public transit systems, trail linkages between uses, low-emissions vehicle fleets, and the provision of on-site facilities such as banking and food courts.	Requires submission of potential measures to reduce vehicle trips, as identified in AQ5.	On-going (prior, during and upon completion of development of the project area).	Director of Community Development or designee.	
5.4 NOISE (Base Plan and Overlay Plan)					
	No mitigation measures are required.				
5.5 PUBLIC HEALTH AND SAFETY (Base Plan and Overlay Plan)					
HH1	<p>a. Prior to the conveyance of the property and issuance of subsequent grading permits, where the presence of ACMs is identified, the DON or its transference shall ensure that all available information concerning ACMs has been provided to the City of Irvine, and the purchasers of the property, including:</p> <ul style="list-style-type: none">C The type, location and condition of ACMsC The results of any asbestos testingC Description of asbestos control measures taken, if anyC The costs or time necessary to remove existing ACMsC The results of any site-specific asbestos inventory updates <p>b. For any structures known to contain ACMs that will be renovated and/or demolished prior to transfer, the DON shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.</p> <p>c. Prior to transfer of any structure constructed before October 1988, scheduled for renovation and/or</p>	Requires submission of Record of Decision (ROD) or similar applicable federal/state documentation to verify information provided to the City of Irvine by the DON.	Prior to the conveyance of the former MCAS El Toro property; prior to the occupation of existing structures on the former MCAS El Toro property.	Manager of Building and Safety; Director of Community Development.	

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	<p>demolition, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by the DON. This requirement can be waived if an architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building material, and to the best of their knowledge, no ACMs were used as a building material.</p> <p>d. Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.</p> <p>e. Any renovation and/or LBP abatement activities on residential units at former MCAS EI Toro shall be conducted in accordance with all applicable federal, state and local regulatory requirements.</p>				
HH2	<p>a. Prior to transfer, the City of Irvine shall receive from the DON, with the concurrence of the appropriate regulatory agencies, a statement that the "Action Required" IRP Site 3 is to be conveyed for restricted use and that all institutional controls have been identified and implemented. The City of Irvine will adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards,</p>	Requires submission of Record of Decision (ROD) or similar applicable federal/state documentation to verify information provided to the City of Irvine by the DON.	Prior to the conveyance of the former MCAS EI Toro property; prior to the use of Locations of Concern on the former MCAS EI Toro property.	Manager of Building and Safety; Director of Community Development; City Council.	

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	<p>boundaries and acreages are approximate and shall be established by master plan approval.</p> <p>b. Prior to transfer, if the DON chooses to impose temporary restrictions on the use of Sites 16 and 24 pending adequate remediation of groundwater, the City of Irvine shall receive from the DON a statement of temporary restrictions on the use of the sites and the release of the sites for unrestricted use following implementation of adequate remediation of groundwater. The City of Irvine shall adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.</p>				
HH3	<p>The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for “Development Within and Exclusion from Very High Fire Severity Zones” and “Fuel Modification Plans and Maintenance.” Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the proposed project is not</p>	<p>Requires submission of development plans by potential project applicants for review and approval.</p>	<p>Prior to the approval of development plans.</p>	<p>Manager of Building and Safety ; Orange County Fire Authority.</p>	

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	anticipated to result in significant short- or long-term adverse impacts related to fire hazards.				
HH4	Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.	Requires submission of development plans for existing structures for review and approval of required improvements.	Prior to the occupation of existing structures located on the former MCAS El Toro property.	Manager of Building and Safety; Orange County Fire Authority.	
HH5	Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director of Community Development of the City of Irvine in a timely manner.	Requires the development, submission, and approval of a protocol plan by the potential project applicant.	On-going (prior to the issuance of a grading permit within the project area; in the event of the discovery of unknown hazardous materials).	Director of Community Development or designee; the DON.	
HH6	The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells located on the former MCAS El Toro in a geographic information systems database (GIS). The City will review all permit applications on the former air station for well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to wells will be limited to authorized personnel.	Requires the development and maintenance of a GIS database by the City of Irvine.	On-going (prior to the issuance of grading permits; during construction activities).	Department of Public Works.	
4.6 GEOLOGY AND SEISMICITY (Base Plan and Overlay Plan)					
GS1	Prior to issuance of a building permit, the City of Irvine shall	Requires potential	Prior to the	Director of	

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	require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.	project applicant to address seismic design provisions in geotechnical reports per adopted Building Codes.	issuance of a building permit.	Community Development.	
GS2	<p>Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.</p> <p>1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be conducted. The purpose of the subsurface evaluation is to:</p> <ul style="list-style-type: none"> a. Further evaluate the subsurface conditions in the area of the proposed structures. b. Provide specific data on potential geologic and geotechnical hazards. c. Provide information pertaining to the engineering characteristics of earth materials in the project area. <p>From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural sections, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General</p>	Requires potential project applicant to prepare geotechnical studies in support of specific development plans.	Prior to the issuance of a building permit.	Director of Community Development.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>recommendations are as follows:</p> <ul style="list-style-type: none"> C Seismic Ground Shaking - Measures to prevent risk of loss, injury or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults. C Erosion or Loss of Topsoil – Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances. C Where Expansive Soils Exist – Measures for the design of foundations, slabs, flatwork and other improvements subject to drainage from expansive soils. <p>Compliance with this measure shall be verified by the Community Development Department.</p>				
GS3	Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of any existing structure if a building permit is not issued, a seismic evaluation of the structure including recommendations for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.	Requires potential project applicant to develop and submit a seismic evaluation in accordance with adopted Building Codes.	Prior to the issuance of a building permit for the occupation of any existing structure at the former MCAS El Toro.	Manager of Building and Safety.	
GS4	Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system	Requires potential project applicant to develop and submit geotechnical and hydrology reports in accordance with adopted	Prior to the issuance of a grading permit.	Director of Community Development.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	shall be implemented. Compliance with this measure shall be verified by the Community Development Department.	local/state/federal regulations.			
5.7 Hydrology/Water Quality (Base Plan and Overlay Plan)					
H/WQ1	<p>Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City of Irvine adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area . . . and residential construction sites that result in the disturbance of five acres or more . . . shall be required to develop and implement BMPs . . . to control erosion and siltation and contaminated runoff from the construction sites." Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of one acre or more.</p> <p>The City's standard conditions of approval indicate that a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.</p> <p>Additionally, prior to the issuance of a grading permit, project applicants must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be</p>	<p>Potential project applicant must show compliance with City of Irvine Grading and Water Quality Ordinances via approval of a NPDES permit, SWPPP, and WQMP.</p> <p>Notices of Intent (NOIs) for coverage of potential projects under the General Construction Activity Storm Water Runoff Permit must be submitted to the State Water Resources Control Board.</p>	Prior to the issuance of a grading permit.	Director of Community Development; Manager of Building and Safety; City Engineer; State/Regional Water Quality Control Boards.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.), and shall reference the location(s) of structural BMPs.</p> <p>Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the Director of Community Development for any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES Permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.</p> <p>The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.</p>				
H/WQ2	Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to	Submission of a construction management plan required by the potential project	Prior to the issuance of a grading permit.	Director of Community Development; City Engineer; State/Regional	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	comply with water quality requirements identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TDML) Implementation Plan adopted for this watershed.	applicant.		Water Quality Control Boards.	
H/WQ3	Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrology studies and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.	Requires the submission of a hydrology study and hydraulic analysis by the potential project applicant.	Prior to the approval of the first tentative tract or parcel map in the project area.	Director of Community Development; City Engineer.	
H/WQ4	Prior to issuance of a building permit, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.	Requires the development, review, and approval of a Letter of Map Revision; physical improvement of property located in 100-year floodplain by project applicant.	Prior to the issuance of a building permit.	Director of Community Development; City Engineer.	
5.8 AGRICULTURAL RESOURCES (Base Plan and Overlay Plan)					
AG1	In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operations, City Of Irvine Standard Discretionary Case Condition B.4 and City Of Irvine Standard Subdivision Condition 3.4 regarding disclosure statements shall be amended to include the following for subdivisions proposed adjacent to existing agricultural operations:	Project applicant shall complete and receive approval for an occupancy disclosure form per the standards stated in Mitigation Measure AG1.	Prior to the issuance of a building permit.	Director of Community Development.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:</p> <p>C Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.</p>				
AG2	Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.	May require development of a cooperative agreement.	On-going (prior to and during development of the project area).	Director of Community Development.	
AG3	Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operations and adjacent urban uses.	May require development of a cooperative agreement.	On-going (prior to and during development of the project area).	Director of Community Development.	
5.9 BIOLOGICAL RESOURCES (Base Plan and Overlay Plan)					
BIO1	Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. Prior to approval of a subdivision map for development within, or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owls, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated	Requires the development and submission of focused biological surveys for resources indicated in BIO1.	Prior to the approval of a subdivision map.	Director of Community Development; US Fish and Wildlife Service; California Department of Fish and Game.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).				
BIO2	Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan subarea that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, re-creation (i.e. within the proposed wildlife corridor), and/or revegetation as deemed acceptable by the appropriate jurisdictional agencies.	Requires the development and submission of wetland survey for potential wetland resources.	Prior to the approval of a subdivision map.	Director of Community Development; US Army Corps of Engineers; US Fish and Wildlife Service; California Department of Fish and Game.	
BIO3	The City shall continue to work with State and federal agencies during the implementation of the proposed project to implement the revegetation/restoration plan for the wildlife corridor. Measures such as sight and sound barriers, including artificial sound walls and natural diversions (e.g. hedges and tree lines) shall be incorporated into corridor design to ensure the viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the EIR.	May require development of a revegetation and/or restoration plan for the identified wildlife corridor.	On-going (prior to and during development of the project area).	Director of Community Development; US Fish and Wildlife Service; California Department of Fish and Game.	
BIO4	Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered "Significant Trees" under the City of Irvine's Urban Forestry Ordinance (UFO) (Section 5-7-401 et al) and the UFO shall apply to all trees included in this	Requires the development and submission of a tree inventory per the regulations outlined in the City of Irvine Urban Forestry Ordinance.	Prior to the issuance of a grading permit.	Director of Community Development; International Society of Arboriculture.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	inventory.				
5.10 PALEONTOLOGICAL RESOURCES (Base Plan and Overlay Plan)					
P1	<p>Prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. (A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.</p> <p>When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossils specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screen-washing operation on-site.</p> <p>Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.</p>	Submittal of resource recovery and disposition plans to the Community Development Department; qualified paleontologists' attendance at pre-grading conference(s) and field observation.	Prior to issuance of a grading permit and during site grading.	Director of Community Development or designee.	
5.11 CULTURAL RESOURCES (Base Plan and Overlay Plan)					

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
CULT1	Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PAs 51 and 30. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.	Requires development and submission of an archaeological resources report for PAs 51 and 30 by project applicant.	Prior to the issuance of subdivision maps.	Director of Community Development or designee.	
CULT2	Monitoring of excavation and grading activities associated with future development in PAs 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure Cult1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and an assessment of their importance under CEQA and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.	Requires field inspection and monitoring by qualified archaeologist implementing recommendations outlined in the report noted above.	Field inspection and monitoring required during grading activities.	Director of Community Development or designee.	
CULT3	Prior to the issuance of grading permits and/or building permits for any future development in PAs 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City of Irvine to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and	Requires the development and submission of an archaeological mitigation program by project applicant.	Prior to the issuance of grading permits and/or building permits in PAs 51 and 30.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	scientific resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.				
CULT4	<p>Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City of Irvine to address the accidental discovery or recognition of any human remains. The program shall include the following:</p> <p>C There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:</p> <p>The county coroner must be contacted to determine that no investigation of the cause of death is required, and</p> <p>If the coroner determines the remains to be Native American:</p> <p>C The coroner shall contact the Native American Heritage Commission within 24 hours.</p> <p>C The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.</p> <p>C The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or</p> <p>C Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject</p>	Requires the development and submission of an archaeological mitigation program by project applicant.	Prior to the issuance of grading permits and/or building permits.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>to further subsurface disturbance.</p> <ul style="list-style-type: none"> C The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission. C The descendant identified fails to make a recommendation; or C The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner. <p>Compliance with this measure shall be verified by the Community Development Department.</p>				
5.12 AESTHETICS (Base Plan and Overlay Plan)					
A1	Prior to issuance of grading permits, lighting plans and signage plans for new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent residential areas occurs.	Requires review of site specific plans for light intrusion and spillover by City of Irvine.	Prior to the issuance of grading permits, lighting plans, and/or signing plans.	Director of Community Development or designee.	
A2	Prior to the issuance of grading permits, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.	Discourages use of mirrored or reflective surfaces in proposed development; designs to be reviewed by the City of Irvine.	On-going (prior to the issuance of grading permits; during master plan review).	Director of Community Development or designee.	
5.13 POPULATION AND HOUSING (Base Plan and Overlay Plan)					
	No mitigation measures are available.				

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
5.14 PUBLIC SERVICES AND FACILITIES (Base Plan and Overlay Plan)					
	Mitigation Measures identified in other sections of this EIR (Section 5.1 – 5.13) address the impacts associated with the construction and operation of new public services and facilities (including law enforcement, fire and emergency medical services, parks and recreation, and school services). Refer to the individual sections mentioned above for a discussion on specific mitigation monitoring and reporting programs.				
5.15 UTILITIES (Base Plan and Overlay Plan)					
	Mitigation Measures identified in other sections of this EIR (Section 5.1 – 5.13) address the impacts associated with the construction and operation of new utilities (including potable water, recycled water, and sewer). Refer to the individual sections mentioned above for a discussion on specific mitigation monitoring and reporting programs. Mitigation Measures pertaining to solid waste are described below.				
SW1	<p>It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other deconstruction of the aged structures and property, including but not limited to buildings and runways, at El Toro MCAS, is contaminated with lead based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the MCAS El Toro site by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.</p> <p>If it is determined by the technical evaluation that the material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as “waste-to-energy” (WTE)</p>	Requires the development and submission of a technical evaluation by the project applicant to determine the composition of solid waste materials generated during the development of the project area.	Prior to the issuance of grading permits.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	plants.				
SW2	For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant must submit a written plan to the City and implement such plan to ensure that 75 percent of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.	Requires the project applicant to submit written plans to the City of Irvine to ensure recycling maximum feasible levels of solid waste material is recycled.	Prior to the issuance of grading permits.	Director of Community Development or designee.	
SW3	For that solid waste which the technical study deems to be suitable for recycling, the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75% of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180. ("Recycling" does not include transformation, as defined in Public Resources Code Section 40201.)	Requires the project applicant to submit written plans to the City of Irvine to ensure recycling maximum feasible levels of solid waste material is recycled.	Prior to the issuance of grading permits.	Director of Community Development or designee.	
SW4	<p>To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by "weight ticket" receipts from state-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.</p> <p>To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.</p>	Requires the project applicant to submit quarterly solid waste tonnage reports to the City of Irvine in order to demonstrate solid waste diversion has occurred.	Prior to the issuance of grading permits.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
SW5	For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50 percent of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.	Requires the project applicant to submit a written plan to the City of Irvine to ensure recycling of the maximum feasible amount of green waste material (minimum of 50 percent) by qualified agent.	Prior to the issuance of grading permits.	Director of Community Development or designee.	

Draft Addendum to the Orange County Great Park Final EIR

January 2006

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ATTACHMENT 1: Initial Study/Environmental Checklist (including Figures)

ATTACHMENT 2: Orange County Great Park Final Environmental Impact Report – Mitigation Monitoring and Reporting Program

ATTACHMENT 3: Résumés of document preparers (P&D Consultants)

I. INTRODUCTION

A. Background on the Addendum Process

This draft Addendum to the Orange County Great Park Final Environmental Impact Report (FEIR), SCH No. 2002101020, has been prepared in accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15164 and Health and Safety Code Sections 33333.3 and 33352.3. The draft Addendum updates the FEIR, which was certified by the City of Irvine on May 27, 2003. The purpose of the draft Addendum is to provide additional environmental review of the Orange County Great Park Redevelopment Plan (OCGPRP) as proposed by the City of Irvine.

The OCGPRP (proposed project) does not present a specific plan for the redevelopment, rehabilitation, and/or revitalization of any area within the Orange County Great Park boundaries; instead, the OCGPRP establishes a process and framework within which specific development plans will be presented, priorities for specific development projects will be established, and specific solutions will be proposed.

This draft Addendum is the result of an evaluation of the proposed project in relation to the Orange County Great Park as analyzed in the FEIR. The evaluation, contained in the attached Initial Study/Environmental Checklist, determined that the proposed project does not meet the CEQA Guidelines' requirements for preparation of a Subsequent or Supplemental EIR as described in Sections 15162 and 15163 of the Guidelines. Upon completion of the Initial Study/Environmental Checklist, the City of Irvine has determined, on the basis of substantial evidence in the light of the whole record, that the proposed project does not trigger any of the following conditions:

- substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- substantial changes occur with respect to the circumstances under which the project analyzed in the FEIR is undertaken which will require major revisions to the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or,
- new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
 - The project analyzed in the FEIR will have one or more significant effects not discussed in the previous EIR or negative declaration;
 - significant effects previously examined will be substantially more severe than shown in the previous EIR;

- mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
- mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Section 15164 of the CEQA Guidelines states that an Addendum to an EIR may be prepared “if some changes or additions are necessary, but none of the conditions described in Section 15162 calling for preparation of a Subsequent EIR or Negative Declaration have occurred.” If none of the aforementioned conditions have been met, preparation of a Subsequent or Supplemental EIR is not required. Rather, the Lead Agency may:

- Decide that no further environmental documentation is necessary; or
- require that an Addendum be prepared.

Information and data sources referenced in preparation of the draft Addendum and associated Initial Study/Environmental Checklist include the following:

- Orange County Great Park Final Environmental Impact Report (Certified May 27, 2003).
- Orange County Great Park Redevelopment Project: Redevelopment Plan (March 8, 2005).
- California Environmental Quality Act Statutes and Guidelines (2005).

The conclusions drawn in this draft Addendum are based on a review of these documents and the data and information utilized in the Initial Study/Environmental Checklist.

As illustrated in Table 1 (Summary Matrix), implementation of the Orange County Great Park Redevelopment Plan would not result in any new significant environmental impacts not already analyzed in the FEIR, nor would there be a substantial increase in the severity of environmental impacts previously discussed in the FEIR. In addition, no new information of substantial importance has become available since the FEIR was prepared regarding new significant environmental impacts, or feasibility of mitigation measures or project alternatives.

Table 1: Summary Matrix - CEQA Guidelines Determinations Requiring a Supplemental/Subsequent EIR by Environmental Category

This matrix summarizes the results of the attached Initial Study/Environmental Checklist and the draft Addendum to the Orange County Great Park Final EIR, concluding that none of CEQA Guidelines determinations requiring preparation of a Supplemental or Subsequent or EIR exists. Note: N = No		Environmental Categories															
		Aesthetics	Agricultural Resources	Air Quality	Biological Resources	Cultural Resources	Geology & Seismicity	Hydrology & Water Quality	Land Use & Planning	Mineral Resources	Noise	Population & Housing	Public Health & Safety	Public Services & Facilities	Traffic	Utilities	Cumulative Impacts
CEQA Guidelines Determinations Requiring a Supplemental/Subsequent EIR																	
1.	Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of significant new environmental effects or a substantial increase in the severity of previously identified significant effects.	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
2.	Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effect or a substantial increase in the severity of previously identified significant effects.	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
3.	New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:																N
a)	The project will have one or more significant effects not discussed in the previous EIR.	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
b)	Significant effects previously examined will be substantially more severe than shown in the previous EIR.	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
c)	Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effect of the project, but the project proponents decline to adopt the mitigation measure or alternative.	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
d)	Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

The draft Addendum is consistent with the provisions set forth in Sections 15168(c)(2) and 21083.3 of the CEQA Guidelines. Accordingly, Section 15168(c)(2) states that, should the Lead Agency determine that no new environmental effects or no new mitigation measures would be required to implement the proposed project, the Lead Agency may approve the proposed activity as being within the scope of the project covered under the previous EIR. The draft Addendum also meets the requirements of Section 21083.3 by maintaining consistency between the City's General Plan and zoning designations.

B. Notice of Preparation for the Addendum

A Notice of Preparation (NOP) for this draft Addendum was developed in accordance with Section 15082 of the CEQA Guidelines and circulated to applicable taxing agencies on November 30, 2005. The City of Irvine accepted responses to the NOP and attached Initial Study until January 3, 2006.

C. Orange County Great Park

With the approval of Measure W by the voters of Orange County on March 5, 2002, the electorate expressed their desire to create a regional park on the former grounds of the Marine Corps Air Station El Toro (Figure 1). As outlined the FEIR, the City of Irvine developed the "Base Reuse Plan" and amended the City's General Plan and zoning ordinance to ensure that the reuse of the former military installation would be consistent with Measure W, while balancing the U.S. Department of the Navy's interest in disposing of the federal lands by means of public auction.

The Orange County Great Park is located with the City of Irvine (Figure 2). The OCGPRP consists of three sub-categories of property ownership/land use status: Public Ownership/Public Land Uses; Private Ownership/Public Land Uses; and Private Ownership/Private Land Uses (Figure 3). Of the 4,693 total acres of the Orange County Great Park, Public Ownership/Public Land Uses will comprise 55 percent of the acreage (2,574 acres) as identified in the OCGPRP. Private Ownership/Public Land Uses encompasses another 28 percent (1,327 acres), while Private Ownership/Private Land Uses are to be accommodated on the remaining 17 percent (792 acres). Once redeveloped, the Orange County Great Park shall consist of the following land uses: open space and habitat preservation; parks and recreation; educational and institutional; agricultural resources; research and development; and transit-oriented commercial and residential. The Orange County Great Park Redevelopment Plan pertains to approximately 3,905 acres of the overall 4,693 acres of the Orange County Great Park.

D. City of Irvine

The Orange County Great Park is located within the corporate boundaries of the City of Irvine. With the exception of the property that remains in ownership of the federal government (Federal Aviation Administration), the City of Irvine has land use regulation and development review authority over all remaining acreage.

In May of 2003 the City of Irvine certified the FEIR. As part of the adoption of the FEIR, the City of Irvine established a two-tier zoning arrangement. Under the arrangement, the new property owner

(Lennar Corporation) had the option to “opt out” of the Base Plan and implement the Overlay Plan if it entered into a Development Agreement with the City. The Lennar Corporation selected the Overlay Plan option. The resulting Development Agreement requires the dedication of land and the funding of infrastructure improvements in excess of the City of Irvine’s standard requirements, as well as the commitment of long-term maintenance of public facilities. Additionally, the Development Agreement requires that the property owner convey to the City of Irvine, at no cost to the City, the following proposed elements: open space (367 acres); sports park (165 acres); drainage corridors (229 acres); wildlife corridor (179 acres); exposition center south (156 acres); transit facilities (35 acres); and roadways (185 acres) totaling 1,316 acres. The Development Agreement obliges the City of Irvine to ensure that the baseline infrastructure for the entire project site is completed with funding provided by the creation of a Community Facilities District.

E. City of Irvine Redevelopment Agency

The City of Irvine Redevelopment Agency has established the Orange County Great Park Project Area boundaries and is in the process of adopting the OCGPRP for the majority of the acreage of the former military installation. The OCGPRP is a legal document that describes the City’s duties and obligations to manage and allocate redevelopment funds as outlined below:

1. Construct public facility and infrastructure improvements;
2. provide affordable housing opportunities in conjunction with the Housing Element of the City’s General Plan;
3. fund property rehabilitation programs;
4. acquire property for sale or lease within the Orange County Great Park Project Area;
5. collect tax increment revenue to fund rehabilitation programs, public improvements, and other City activities; and,
6. sell bonds to fund, in whole or in part, rehabilitation programs, public improvements, and other City activities.

F. Private Landowners

The Lennar Corporation obtained ownership of approximately 4,693 acres of the Orange County Great Park at auction from the federal government. As the sole private landowner, Lennar Corporation will design and develop the buildings and facilities to be located on the estimated 2,119 acres of private property located within the Orange County Great Park; infrastructure improvements will be subject to the regulatory oversight of the City of Irvine Redevelopment Agency. Under the Development Agreement prepared for the Orange County Great Park, the Lennar Corporation became responsible for the payment of Community Facilities District fees and assessments, as well as for the development of baseline infrastructure improvements (e.g., public streets, stormwater drain improvements, wet/dry utilities, etc.).

G. Public Agency Landowners

Previously, the U.S. Department of the Navy transferred ownership of approximately 974 acres of the former Marine Corps Air Station El Toro to the U.S. Federal Aviation Administration. This acreage is located within the boundaries of the Natural Communities Conservation Plan, adopted by the County of Orange for the preservation of significant habitat for federal- and State-protected sensitive species. Under the Development Agreement, the U.S. Federal Aviation Administration will convey to the City of Irvine, at no cost to the City, the following open space parcels: Alton Parkway extension agricultural sites (90 acres); the Marshburn basin (46 acres); and the institutional site (135 acres), for a total of 271 acres. Additionally, the U.S. Federal Aviation Administration will convey to the Irvine Unified School District a 13-acre school site, the location of which will be determined in the future.

H. Great Park Corporation

The City of Irvine will enter into an Operating Agreement with the Great Park Corporation for the design, operation, and maintenance of the Park's public lands. The Great Park Corporation will be responsible for creating design guidelines for the "framework" lands. This entails preparing the master design for the landscaping of the streets and edge parcels which frame the gateways to the park and form the edge around the privately- and publicly-held lands. The Great Park Corporation's duties will also include the management of park development funds and the airport infrastructure (i.e., tarmacs and runways) recycling contract, as well as the development of public facilities and infrastructure on the Orange County Great Park lands.

II. PROJECT DESCRIPTION

A. Orange County Great Park Redevelopment Plan

The Orange County Great Park Redevelopment Plan (OCGPRP) (proposed project) has been prepared by the City of Irvine Redevelopment Agency pursuant to the California Community Redevelopment Law (Health and Safety Code Section 33000, et. Seq.), the California Constitution, and other applicable laws. It does not present a specific plan for the redevelopment, rehabilitation, and/or revitalization of any area within the Orange County Great Park project area; instead, the OCGPRP establishes a process and framework within which specific development plans will be presented, priorities for specific development projects will be established, and specific solutions will be proposed. The OCGPRP is based upon the Preliminary Plan formulated and adopted by the City of Irvine Planning Commission and the Irvine Redevelopment Agency on January 15, 2004 and January 27, 2004, respectively. This draft Addendum incorporates by reference the OCGPRP and the Orange County Great Park Final EIR (certified on May 27, 2003).

The OCGPRP pertains to approximately 3,905 acres of the 4,693 acres of the future Orange County Great Park. Once redeveloped, the OCGPRP shall consist of the following land uses: open space and habitat preservation; parks and recreation; education; agriculture; research and development; transit-oriented commercial and residential.

B. Redevelopment Plan Goals

Implementation of the OCGPRP is intended to achieve the following goals and objectives:

- To eliminate and prevent the spread of blight and deterioration, and the conservation, rehabilitation, and redevelopment of the Project Area in accord with the City of Irvine General Plan, the Redevelopment Plan, applicable specific plans, the Zoning Ordinance, and other applicable laws.
- To eliminate or ameliorate certain environmental deficiencies, including unsafe and unhealthy buildings, hazardous wastes, inadequate infrastructure and other similar public improvements, and facility and utility deficiencies that adversely affect the Orange County Great Park project area.
- To convert the former U.S. Marine Corps Air Station (MCAS) El Toro into a “Great Park” with associated regional open space, cultural, education, and recreational facilities.
- To construct needed public improvements to facilitate the redevelopment and reuse of the former MCAS El Toro.
- To encourage investment by the private sector in the development and redevelopment of the Orange County Great Park project area by eliminating impediments to such development and redevelopment.
- To assure reuse of the site of the former MCAS El Toro installation in accord with the Orange County Great Park plan.
- To provide for the development of a regional park, recreation, and other public uses.
- To implement the plan in a manner that avoids or minimizes local taxpayer responsibility or financial exposure to significant redevelopment costs, and to effectively finance the plan in a manner allowing recovery of development costs from users directly benefited by the redevelopment.
- To be reasonably capable of timely and effective project implementation.
- To be sensitive to local environmental concerns and considerations.
- To be sensitive to existing and planned patterns of development, particularly in the immediate vicinity of the Orange County Great Park project area.
- To remove materials and facilities that impede development.
- To provide for diverse means of transportation and access to the area.
- To encourage the timely recovery of military lands.

- To ensure the compatibility of uses on adjacent sites and create a symbiotic relationship between uses on the individual sites.
- To encourage and foster opportunities for continued, sustained growth of existing City business sectors.
- To expand the community's supply of housing, including opportunities for lower- and moderate-income households.
- To provide opportunities to sufficiently address the needs of persons and households seeking shelter and/or affordable housing.
- To encourage the use of energy efficient and sustainable design principles throughout the Orange County Great Park project area, especially in regard to City of Irvine Redevelopment Agency-assisted affordable housing.

C. Redevelopment Plan Actions

The City of Irvine Redevelopment Agency proposes to eliminate and prevent the recurrence of blight, while improving the economic base of the Orange County Great Park project area, through the implementation of the following actions:

- Implementing the Orange County Great Park plan.
- Acquiring, installing, developing, constructing, reconstructing, redesigning, planning, replanning, or reusing street, curbs, gutters, sidewalks, medians, and crossings, parking facilities, utilities, traffic control devices, flood control facilities, and other public improvements and public facilities.
- Clearing, altering, remodeling, improving, modernizing, rehabilitating, or reconstructing buildings, structures, and improvements.
- Providing open space, habitat reserve, wildlife corridor, drainage and riparian corridors.
- Facilitating the development or redevelopment of land for purposes and uses consistent with the Redevelopment Plan.
- Acquiring real property by purchase, lease, gift, grant, request, devise or any other lawful means, including eminent domain, pursuant to the terms stated in Section 503 and 504 of the Redevelopment Plan for the Orange County Great Park.
- Combining parcels and properties where and when necessary.
- Preparing building sites and constructing necessary off-site improvements.
- Managing property owned or acquired by the City of Irvine Redevelopment Agency.

- Disposing of property including, without limitation, the lease or sale of land at a value determined by the City of Irvine Redevelopment Agency for reuse in accordance with the Redevelopment Plan for the Orange County Great Park.
- Establishing controls, restrictions, or covenants running with the land, so that property will continue to be used in accordance with the Redevelopment Plan for the Orange County Great Park.
- If applicable, vacating or abandoning streets, alleys, and other thoroughfares, as necessary, and dedicating other areas for public purposes consistent with the objectives of the Redevelopment Plan for the Orange County Great Park.
- Applying for and utilizing grants, loans, and any other assistance from federal and State governments, or other sources.
- Taking actions that the City of Irvine Redevelopment Agency determines are necessary and consistent with State, federal, and local laws to remedy or remove a release of hazardous substances on, under, or from property within the Orange County Great Park project area, or to remove hazardous waste from said property.
- Periodically preparing and implementing plans for the improvement, rehabilitation, and redevelopment of blighted areas and creating a variety of economic development programs, which will help build a stronger economic base within the Orange County Great Park project area.
- Adopting specific design guidelines for projects to ensure a consistent design theme, which will guide rehabilitation, new development, developers, architects, and builders.
- Any and all other actions authorized directly or arising by implication pursuant to any statute or other legal authority permitting the City of Irvine Redevelopment Agency to eliminate blight; to prevent the recurrence of blight; and to improve the economic base of the Orange County Great Park project area.
- Rehabilitating, preserving, developing, or constructing affordable housing in compliance with State law.

In order to accomplish these goals/actions and implement the OCGPRP, the City of Irvine Redevelopment Agency proposes to use its authorized powers provided in the Redevelopment Plan, as well as the powers now or hereafter permitted by Community Redevelopment Law and any other applicable State laws.

III. ENVIRONMENTAL ISSUES

The following pages describe environmental issues for the proposed project. Each section contains an analysis of project modifications and potential impacts resulting from the changes, if any. This analysis has been undertaken, pursuant to the provisions of CEQA and its Guidelines, to provide decision makers with a factual basis for determining whether any modifications to the project, changes in circumstances, or receipt of new information not available during preparation of the Orange County Great Park Final EIR, require additional review or preparation of a Subsequent or Supplemental EIR. The findings for each environmental topic area are included in the analyses that follow.

A. AESTHETICS

Existing Environmental Setting

Please see Section 5.12 (Aesthetics) of the FEIR (certified on May 27, 2003) for a summary of the existing environmental setting for aesthetics. The specific mitigation measure language referenced below is presented in the Mitigation Monitoring and Reporting Program of the FEIR, provided as an attachment to this document.

FEIR

The FEIR evaluated impacts associated with viewsheds, visual quality, light and glare, and topography for the project site. Two significant impacts were identified pertaining to light and glare. Specifically, new sources of street lights along planned roadways and exterior lighting (excluding security lighting and parking lot lighting) for various educational/institutional developments as well as lighting associated with athletic fields were noted. The potential for a significant light impact may occur should proposed light sources be directed into or located near existing or planned residential land uses (which are sensitive to light intrusion). Through certification of the FEIR, the City Council determined that implementation of Mitigation Measure A1 would reduce the significant impact to below a level of significance.

In addition, the FEIR identified that implementation of the proposed project would introduce new sources of glare within the project area. Reflective materials and glazed/polished surfaces associated with research and development land uses may create glare, causing visual nuisance to residential land uses. Through certification of the FEIR, the City Council determined that implementation of Mitigation Measure A2 would reduce the significant impact to below a level of significance.

Proposed Project Modifications

The Orange County Great Park Redevelopment Plan evaluated in this Addendum does not propose any modifications to the project described in the FEIR that would require additional environmental documentation pertaining to aesthetics. Therefore, the Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions within the FEIR for this environmental category.

Findings

The Orange County Great Park Redevelopment Plan is consistent with the certified FEIR and would not result in any new significant environmental impacts related to aesthetics. Therefore, the comparison of anticipated environmental effects of the proposed project with the impacts disclosed in the previously certified FEIR support the required CEQA findings summarized below. Specifically, none of the conditions defined in Sections 15162 and 15163 of the State CEQA Guidelines that would require preparation of a subsequent or supplemental EIR have been met.

Major Revisions Not Required. Based on the foregoing analysis and information, there is no substantial evidence that the changes to the project require a major change to the certified FEIR. The Orange County Great Park Redevelopment Plan would not result in any new significant

environmental impact, nor is there substantial increase in the severity of impacts related to aesthetics from that described in the certified FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no substantial evidence in the record or otherwise that indicates that there are substantial changes in circumstances that would require major changes to the certified FEIR.

No New Information Showing Greater Significant Effects Than Previous EIR. This Addendum has analyzed available relevant information to determine whether there is new information that was not available at the time the FEIR was certified, indicating that a new significant effect not reported in the certified FEIR may occur. Based on the information and analysis above and presented in the Initial Study/Environmental Checklist, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the potentially significant aesthetic effects identified in and considered by the certified FEIR.

B. AGRICULTURAL RESOURCES

Existing Environmental Setting

Please see Section 5.8 (Agricultural Resources) of the FEIR (certified on May 27, 2003) for a summary of the existing environmental setting for agricultural resources. The specific mitigation measure language referenced below is presented in the Mitigation Monitoring and Reporting Program of the FEIR, provided as an attachment to this document.

FEIR

The FEIR evaluated impacts to agricultural resources, including direct impacts to on-site prime farmlands, existing farmland operations, and lands under an Agricultural Zoning and/or Williamson Act contract as well as indirect impacts to surrounding agricultural operations. Although no land in the project area is zoned for Agriculture or under a Williamson Act contract, the FEIR did identify that project implementation would result in the permanent loss of a maximum of 802 acres of land classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Additionally, the FEIR found that project implementation would involve changes in the existing environment, which, due to their location or nature, could result in conversion of existing farmland to non-agricultural use.

To partially reduce impacts to agricultural resources on-site and in the region, the Orange County Great Park project proposed the designation of a minimum of 307 acres of farmland for on-going agricultural use. Several mitigation measures were also investigated for their feasibility in reducing impacts to existing agricultural resources. Of the numerous measures evaluated, three were determined to be feasible to apply to the project. However, even with implementation of mitigation measures AG 1 through AG 3, the City Council determined that impacts to existing agricultural resources would remain significant and unavoidable. Thus, the City Council weighed the benefits of the projects against the unmitigated impacts to agricultural lands, and opted to adopt a Statement of Overriding Considerations.

Proposed Project Modifications

The Orange County Great Park Redevelopment Plan evaluated in this Addendum does not propose any modifications to the project described in the FEIR that would require additional environmental documentation pertaining to agricultural resources. Therefore, the Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions within the FEIR for this environmental category.

Findings

The Orange County Great Park Redevelopment Plan is consistent with the certified FEIR and would not result in any new significant environmental impacts related to agricultural resources. Therefore, the comparison of anticipated environmental effects of the proposed project with the impacts disclosed in the previously certified FEIR support the required CEQA findings summarized below.

Specifically, none of the conditions defined in Sections 15162 and 15163 of the State CEQA Guidelines that would require preparation of a subsequent or supplemental EIR have been met.

Major Revisions Not Required. Based on the foregoing analysis and information, there is no substantial evidence that the changes to the project require a major change to the certified FEIR. The Orange County Great Park Redevelopment Plan would not result in any new significant environmental impact, nor is there substantial increase in the severity of impacts related to agricultural resources from that described in the certified FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no substantial evidence in the record or otherwise that indicates that there are substantial changes in circumstances that would require major changes to the certified FEIR.

No New Information Showing Greater Significant Effects Than Previous EIR. This Addendum has analyzed available relevant information to determine whether there is new information that was not available at the time the FEIR was certified, indicating that a new significant effect not reported in the certified FEIR may occur. Based on the information and analysis above and presented in the Initial Study/Environmental Checklist, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the potentially significant agricultural resources effects identified in and considered by the certified FEIR.

C. AIR QUALITY

Existing Environmental Setting

Please see Section 5.3 (Air Quality) of the FEIR (certified on May 27, 2003) for a summary of the existing environmental setting for air quality. The specific mitigation measure language referenced below is presented in the Mitigation Monitoring and Reporting Program of the FEIR, provided as an attachment to this document.

FEIR

The FEIR evaluated impacts to air quality associated with five significance thresholds, including: 1) obstructing or conflicting with an applicable air quality management plan; 2) violating an air quality standard or contributing to an existing violation; 3) resulting in a cumulatively considerable net increase in a criteria pollutant; 4) exposing sensitive receptors to substantial pollutant concentrations; and 5) creating objectionable odors. The FEIR identified significant impacts associated with construction (dust emissions) and increased vehicular trips. Despite the inclusion of Mitigation Measures AQ1 through AQ5, the City Council determined that the impact associated with construction and vehicular trips would remain significant and unavoidable. Thus, the City Council weighed the benefits of the project against the unmitigated impacts to air quality and opted to adopt a Statement of Overriding Considerations.

Proposed Project Modifications

The Orange County Great Park Redevelopment Plan evaluated in this Addendum does not propose any modifications to the project described in the FEIR that would require additional environmental documentation pertaining to air quality. Therefore, the Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions within the FEIR for this environmental category.

Findings

The Orange County Great Park Redevelopment Plan is consistent with the certified FEIR and would not result in any new significant environmental impacts related to air quality. Therefore, the comparison of anticipated environmental effects of the proposed project with the impacts disclosed in the previously certified FEIR support the required CEQA findings summarized below. Specifically, none of the conditions defined in Sections 15162 and 15163 of the State CEQA Guidelines that would require preparation of a subsequent or supplemental EIR have been met.

Major Revisions Not Required. Based on the foregoing analysis and information, there is no substantial evidence that the changes to the project require a major change to the certified FEIR. The Orange County Great Park Redevelopment Plan would not result in any new significant environmental impact, nor is there substantial increase in the severity of impacts related to air quality from that described in the certified FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no substantial evidence in the record or otherwise that indicates that there are substantial changes in circumstances that would require major changes to the certified FEIR.

No New Information Showing Greater Significant Effects Than Previous EIR. This Addendum has analyzed available relevant information to determine whether there is new information that was not available at the time the FEIR was certified, indicating that a new significant effect not reported in the certified FEIR may occur. Based on the information and analysis above and presented in the Initial Study/Environmental Checklist, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the potentially significant air quality effects identified in and considered by the certified FEIR.

D. BIOLOGICAL RESOURCES

Existing Environmental Setting

Please see Section 5.9 (Biological Resources) of the FEIR (certified on May 27, 2003) for a summary of the existing environmental setting for biological resources. The specific mitigation measure language referenced below is presented in the Mitigation Monitoring and Reporting Program of the FEIR, provided as an attachment to this document.

FEIR

The FEIR evaluated impacts to a variety of biological resources, including sensitive and special status species, riparian habitat, wetlands, and wildlife corridors. The FEIR also analyzed the Overlay Plan's potential to conflict with local policies for tree preservation and adopted habitat management plans. Impacts to the southern tarplant and a limited amount of highly disturbed wetland habitat were expected to occur. Additionally, implementation of the Great Park project was found to potentially result in damage and destruction to a large number of trees, many of them mature, representing a wide range of species. A significant impact related to conflicts with the City of Irvine's Urban Forestry Ordinance was identified. In certifying the FEIR, the City Council determined that mitigation measures BIO 1 through BIO 4 would reduce the identified impacts to below a level of significance.

No significant impact to wildlife corridors or conflict with a habitat management plan was anticipated to occur.

Proposed Project Modifications

The Orange County Great Park Redevelopment Plan evaluated in this Addendum does not propose any modifications to the project described in the FEIR that would require additional environmental documentation pertaining to biological resources. Therefore, the Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions within the FEIR for this environmental category.

Findings

The Orange County Great Park Redevelopment Plan is consistent with the certified FEIR and would not result in any new significant environmental impacts related to biological resources. Therefore, the comparison of anticipated environmental effects of the proposed project with the impacts disclosed in the previously certified FEIR support the required CEQA findings summarized below. Specifically, none of the conditions defined in Sections 15162 and 15163 of the State CEQA Guidelines that would require preparation of a subsequent or supplemental EIR have been met.

Major Revisions Not Required. Based on the foregoing analysis and information, there is no substantial evidence that the changes to the project require a major change to the certified FEIR. The Orange County Great Park Redevelopment Plan would not result in any new significant

environmental impact, nor is there substantial increase in the severity of impacts related to biological resource from that described in the certified FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no substantial evidence in the record or otherwise that indicates that there are substantial changes in circumstances that would require major changes to the certified FEIR.

No New Information Showing Greater Significant Effects Than Previous EIR. This Addendum has analyzed available relevant information to determine whether there is new information that was not available at the time the FEIR was certified, indicating that a new significant effect not reported in the certified FEIR may occur. Based on the information and analysis above and presented in the Initial Study/Environmental Checklist, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the potentially significant biological resources effects identified in and considered by the certified FEIR.

E. CULTURAL RESOURCES

Existing Environmental Setting

Please see Sections 5.10 (Paleontological Resources) and 5.11 (Cultural Resources) of the FEIR (certified on May 27, 2003) for a summary of the existing environmental setting for paleontological and cultural resources. The specific mitigation measure language referenced below is presented in the Mitigation Monitoring and Reporting Program of the FEIR, provided as an attachment to this document.

FEIR

The FEIR evaluated impacts to a variety of cultural resources, including historical, archaeological, and paleontological resources, as well as human remains, with implementation of the proposed project. Impacts to historical resources were determined to be less than significant. However, potential impacts to significant prehistoric and paleontologic sites were identified. Through certification of the FEIR, the City Council determined that implementation of mitigation measures CULT 1 through CULT 3 and P1 would reduce impacts to these resources to a level below significance. Impacts associated with disturbing human remains were also identified in the FEIR. In certifying the FEIR, the City Council also determined that implementation of mitigation measure CULT 4 would reduce potential impacts to human remains to a level below significance.

Proposed Project Modifications

The Orange County Great Park Redevelopment Plan evaluated in this Addendum does not propose any modifications to the project described in the FEIR that would require additional environmental documentation pertaining to cultural resources. Therefore, the Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions within the FEIR for this environmental category.

Findings

The Orange County Great Park Redevelopment Plan is consistent with the certified FEIR and would not result in any new significant environmental impacts related to cultural resources. Therefore, the comparison of anticipated environmental effects of the proposed project with the impacts disclosed in the previously certified FEIR support the required CEQA findings summarized below. Specifically, none of the conditions defined in Sections 15162 and 15163 of the State CEQA Guidelines that would require preparation of a subsequent or supplemental EIR have been met.

Major Revisions Not Required. Based on the foregoing analysis and information, there is no substantial evidence that the changes to the project require a major change to the certified FEIR. The Orange County Great Park Redevelopment Plan would not result in any new significant environmental impact, nor is there substantial increase in the severity of impacts related to cultural resources from that described in the certified FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no substantial evidence in the record or otherwise that indicates that there are substantial changes in circumstances that would require major changes to the certified FEIR.

No New Information Showing Greater Significant Effects Than Previous EIR. This Addendum has analyzed available relevant information to determine whether there is new information that was not available at the time the FEIR was certified, indicating that a new significant effect not reported in the certified FEIR may occur. Based on the information and analysis above and presented in the Initial Study/Environmental Checklist, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the potentially significant cultural resource effects identified in and considered by the certified FEIR.

F. GEOLOGY AND SEISMICITY

Existing Environmental Setting

Please see Section 5.6 (Geology and Seismicity) of the FEIR (certified on May 27, 2003) for a summary of the existing environmental setting for geology and seismicity. The specific mitigation measure language referenced below is presented in the Mitigation Monitoring and Reporting Program of the FEIR, provided as an attachment to this document.

FEIR

The FEIR evaluated impacts associated with geology and seismicity, including the potential for substantial risks associated with: 1) rupture of earthquake faults; 2) seismic groundshaking; 3) seismically-induced ground failure; 4) landslides; 5) soil erosion; 6) unstable soils and geologic units; and 7) expansive soils. The FEIR also investigated the potential for impacts associated with soils incapable of supporting the use of septic tanks. A less than significant impact was identified associated with seismically-induced ground failure, unstable soils and geologic units, and soils incapable of supporting the use of septic tanks. Significant impacts were found associated with seismic groundshaking and the use/reuse of potentially unreinforced structures. Soil erosion and expansive soils were also found to pose significant impacts to development in the project area. Through certification of the FEIR, the City Council determined that implementation of mitigation measures GS 1 through GS 4 would reduce these impacts to below a level of significance.

Proposed Project Modifications

The Orange County Great Park Redevelopment Plan evaluated in this Addendum does not propose any modifications to the project described in the FEIR that would require additional environmental documentation pertaining to geology and seismicity. Therefore, the Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions within the FEIR for this environmental category.

Findings

The Orange County Great Park Redevelopment Plan is consistent with the certified FEIR and would not result in any new significant environmental impacts related to geology and seismicity. Therefore, the comparison of anticipated environmental effects of the proposed project with the impacts disclosed in the previously certified FEIR support the required CEQA findings summarized below. Specifically, none of the conditions defined in Sections 15162 and 15163 of the State CEQA Guidelines that would require preparation of a subsequent or supplemental EIR have been met.

Major Revisions Not Required. Based on the foregoing analysis and information, there is no substantial evidence that the changes to the project require a major change to the certified FEIR. The Orange County Great Park Redevelopment Plan would not result in any new significant environmental impact, nor is there substantial increase in the severity of impacts related to geology and seismicity from that described in the certified FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no substantial evidence in the record or otherwise that indicates that there are substantial changes in circumstances that would require major changes to the certified FEIR.

No New Information Showing Greater Significant Effects Than Previous EIR. This Addendum has analyzed available relevant information to determine whether there is new information that was not available at the time the FEIR was certified, indicating that a new significant effect not reported in the certified FEIR may occur. Based on the information and analysis above and presented in the Initial Study/Environmental Checklist, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the potentially significant geology and seismicity effects identified in and considered by the certified FEIR.

G. HYDROLOGY AND WATER QUALITY

Existing Environmental Setting

Please see Section 5.7 (Hydrology/Water Quality) of the FEIR (certified on May 27, 2003) for a summary of the existing environmental setting for hydrology and water quality. The specific mitigation measure language referenced below is presented in the Mitigation Monitoring and Reporting Program of the FEIR, provided as an attachment to this document.

FEIR

The FEIR evaluated impacts to hydrology and water quality, including impacts to surface and groundwater resources, drainage, and flood hazards. Potential impacts associated with seiches, tsunamis, and mudflows were also analyzed. The FEIR found that no significant impact to depletion of groundwater supplies, alteration of existing drainage patterns, placement of people or structures at substantial risk of flooding, or inundation by seiche, tsunami or mudflow would occur. However significant impacts associated with violating water quality standards and waste discharge requirements were identified. The proposed project's potential for increased erosion during construction and grading and increased impervious surfaces during operation also increases the possibility for drainage systems to become overwhelmed, thereby increasing the chance for flooding off-site. Through certification of the FEIR, the City Council determined that implementation of mitigation measures H/WQ 1 through H/WQ 4 would reduce the significant impacts related to water quality, drainage, and flooding to below a level of significance.

Proposed Project Modifications

The Orange County Great Park Redevelopment Plan evaluated in this Addendum does not propose any modifications to the project described in the FEIR that would require additional environmental documentation pertaining to hydrology and water quality. Therefore, the Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions within the FEIR for this environmental category.

Findings

The Orange County Great Park Redevelopment Plan is consistent with the certified FEIR and would not result in any new significant environmental impacts related to hydrology and water quality. Therefore, the comparison of anticipated environmental effects of the proposed project with the impacts disclosed in the previously certified FEIR support the required CEQA findings summarized below. Specifically, none of the conditions defined in Sections 15162 and 15163 of the State CEQA Guidelines that would require preparation of a subsequent or supplemental EIR have been met.

Major Revisions Not Required. Based on the foregoing analysis and information, there is no substantial evidence that the changes to the project require a major change to the certified FEIR. The Orange County Great Park Redevelopment Plan would not result in any new significant environmental impact, nor is there substantial increase in the severity of impacts related to hydrology and water quality from that described in the certified FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no substantial evidence in the record or otherwise that indicates that there are substantial changes in circumstances that would require major changes to the certified FEIR.

No New Information Showing Greater Significant Effects Than Previous EIR. This Addendum has analyzed available relevant information to determine whether there is new information that was not available at the time the FEIR was certified, indicating that a new significant effect not reported in the certified FEIR may occur. Based on the information and analysis above and presented in the Initial Study/Environmental Checklist, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the potentially significant hydrology and water quality effects identified in and considered by the certified FEIR.

H. LAND USE AND PLANNING

Existing Environmental Setting

Please see Section 5.1 (Land Use) of the FEIR (certified on May 27, 2003) for a summary of the existing environmental setting for land use and planning.

FEIR

The FEIR evaluated impacts to land use and planning, including whether implementation of the proposed project would physically divide an established community or conflict with an applicable land use plan including the Natural Community Conservation Plan/Habitat Conservation Plan. No impacts to these issue areas were identified in the FEIR and no mitigation was required.

Proposed Project Modifications

The Orange County Great Park Redevelopment Plan evaluated in this Addendum does not propose any modifications to the project described in the FEIR that would require additional environmental documentation pertaining to land use and planning. Therefore, the Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions within the FEIR for this environmental category.

Findings

The Orange County Great Park Redevelopment Plan is consistent with the certified FEIR and would not result in any new significant environmental impacts related to land use and planning. Therefore, the comparison of anticipated environmental effects of the proposed project with the impacts disclosed in the previously certified FEIR support the required CEQA findings summarized below. Specifically, none of the conditions defined in Sections 15162 and 15163 of the State CEQA Guidelines that would require preparation of a subsequent or supplemental EIR have been met.

Major Revisions Not Required. Based on the foregoing analysis and information, there is no substantial evidence that the changes to the project require a major change to the certified FEIR. The Orange County Great Park Redevelopment Plan would not result in any new significant environmental impact, nor is there substantial increase in the severity of impacts related to land use and planning from that described in the certified FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no substantial evidence in the record or otherwise that indicates that there are substantial changes in circumstances that would require major changes to the certified FEIR.

No New Information Showing Greater Significant Effects Than Previous EIR. This Addendum has analyzed available relevant information to determine whether there is new information that was not available at the time the FEIR was certified, indicating that a new significant effect not reported in the certified FEIR may occur. Based on the information and analysis above and presented in the

Initial Study/Environmental Checklist, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. No potentially significant land use and planning effects were identified in the FEIR.

I. MINERAL RESOURCES

Existing Environmental Setting

Please see Section 5.6 (Geology and Seismicity) of the FEIR (certified on May 27, 2003) for a summary of the existing environmental setting for mineral resources.

FEIR

The FEIR evaluated impacts to mineral resources and determined that no impact to mineral resources would occur with implementation of the proposed project because there are no known mineral resources in the project area. Because no impact was identified, no mitigation for mineral resources would be required.

Proposed Project Modifications

The Orange County Great Park Redevelopment Plan evaluated in this Addendum does not propose any modifications to the project described in the FEIR that would require additional environmental documentation pertaining to mineral resources. Therefore, the Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions within the FEIR for this environmental category.

Findings

The Orange County Great Park Redevelopment Plan is consistent with the certified FEIR and would not result in any new significant environmental impacts related to mineral resources. Therefore, the comparison of anticipated environmental effects of the proposed project with the impacts disclosed in the previously certified FEIR support the required CEQA findings summarized below. Specifically, none of the conditions defined in Sections 15162 and 15163 of the State CEQA Guidelines that would require preparation of a subsequent or supplemental EIR have been met.

Major Revisions Not Required. Based on the foregoing analysis and information, there is no substantial evidence that the changes to the project require a major change to the certified FEIR. The Orange County Great Park Redevelopment Plan would not result in any new significant environmental impact, nor is there substantial increase in the severity of impacts related to mineral resources from that described in the certified FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no substantial evidence in the record or otherwise that indicates that there are substantial changes in circumstances that would require major changes to the certified FEIR.

No New Information Showing Greater Significant Effects Than Previous EIR. This Addendum has analyzed available relevant information to determine whether there is new information that was not available at the time the FEIR was certified, indicating that a new significant effect not reported in the certified FEIR may occur. Based on the information and analysis above and presented in the

Initial Study/Environmental Checklist, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. No potentially significant mineral resources effects were identified in the FEIR.

J. NOISE

Existing Environmental Setting

Please see Section 5.4 (Noise) of the FEIR (certified on May 27, 2003) for a summary of the existing environmental setting for noise.

FEIR

The FEIR evaluated impacts associated with noise, including substantial increases in temporary and permanent ambient noise levels and groundborne vibration and noise levels associated with public and private airports. No significant noise impact was identified with implementation of the proposed project because the project area is not in the vicinity of a public or private airstrip and the noise modeling showed that potential short-term and long-term mobile and stationary noise would be less than significant. Additionally, the proposed project does not propose activities that would result in significant groundborne vibration. Because no impacts were identified, no mitigation for noise would be required.

Proposed Project Modifications

The Orange County Great Park Redevelopment Plan evaluated in this Addendum does not propose any modifications to the project described in the FEIR that would require additional environmental documentation pertaining to noise. Therefore, the Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions within the FEIR for this environmental category.

Findings

The Orange County Great Park Redevelopment Plan is consistent with the certified FEIR and would not result in any new significant environmental impacts related to noise. Therefore, the comparison of anticipated environmental effects of the proposed project with the impacts disclosed in the previously certified FEIR support the required CEQA findings summarized below. Specifically, none of the conditions defined in Sections 15162 and 15163 of the State CEQA Guidelines that would require preparation of a subsequent or supplemental EIR have been met.

Major Revisions Not Required. Based on the foregoing analysis and information, there is no substantial evidence that the changes to the project require a major change to the certified FEIR. The Orange County Great Park Redevelopment Plan would not result in any new significant environmental impact, nor is there substantial increase in the severity of impacts related to noise from that described in the certified FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no substantial evidence in the record or otherwise that indicates that there are substantial changes in circumstances that would require major changes to the certified FEIR.

No New Information Showing Greater Significant Effects Than Previous EIR. This Addendum has analyzed available relevant information to determine whether there is new information that was

not available at the time the FEIR was certified, indicating that a new significant effect not reported in the certified FEIR may occur. Based on the information and analysis above and presented in the Initial Study/Environmental Checklist, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. No potentially significant noise effects were identified in the FEIR.

K. POPULATION AND HOUSING

Existing Environmental Setting

Please see Section 5.13 (Population and Housing) of the FEIR (certified on May 27, 2003) for a summary of the existing environmental setting for population and housing.

FEIR

The FEIR evaluated impacts to population and housing, including the proposed project's potential to induce substantial population growth and displace substantial numbers of existing people and housing. Because no substantial numbers of people or occupied housing units exist in the project area, the FEIR found no significant impact associated with displacement. However, the FEIR found that because the substantial project-related employment opportunities generated by the proposed project would exacerbate the jobs/housing imbalance in the Orange County Subregion, implementation of the project would result in a significant impact. The FEIR found that no mitigation is available to rectify conflicts with the numerical objectives of regional planning documents including the jobs/housing ratio. Therefore, the population and housing impact is expected to remain significant and unavoidable. However, the City Council weighed the benefits of the project against the population and housing impacts and opted to adopt a Statement of Overriding Considerations.

Proposed Project Modifications

The Orange County Great Park Redevelopment Plan evaluated in this Addendum does not propose any modifications to the project described in the FEIR that would require additional environmental documentation pertaining to population and housing. Therefore, the Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions within the FEIR for this environmental category.

Findings

The Orange County Great Park Redevelopment Plan is consistent with the certified FEIR and would not result in any new significant environmental impacts related to population and housing. Therefore, the comparison of anticipated environmental effects of the proposed project with the impacts disclosed in the previously certified FEIR support the required CEQA findings summarized below. Specifically, none of the conditions defined in Sections 15162 and 15163 of the State CEQA Guidelines that would require preparation of a subsequent or supplemental EIR have been met.

Major Revisions Not Required. Based on the foregoing analysis and information, there is no substantial evidence that the changes to the project require a major change to the certified FEIR. The Orange County Great Park Redevelopment Plan would not result in any new significant environmental impact, nor is there substantial increase in the severity of impacts related to population and housing from that described in the certified FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no substantial evidence in the record or otherwise that indicates that there are substantial changes in circumstances that would require major changes to the certified FEIR.

No New Information Showing Greater Significant Effects Than Previous EIR. This Addendum has analyzed available relevant information to determine whether there is new information that was not available at the time the FEIR was certified, indicating that a new significant effect not reported in the certified FEIR may occur. Based on the information and analysis above and presented in the Initial Study/Environmental Checklist, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the potentially significant population and housing effects identified in and considered by the certified FEIR.

L. PUBLIC HEALTH AND SAFETY

Existing Environmental Setting

Please see Section 5.5 (Public Health and Safety) of the FEIR (certified on May 27, 2003) for a summary of the existing environmental setting for public health and safety. The specific mitigation measure language referenced below is presented in the Mitigation Monitoring and Reporting Program of the FEIR, provided as an attachment to this document.

FEIR

The FEIR evaluated impacts to public health and safety, including impacts associated with hazardous materials and airport and fire hazards. The proposed project's potential to impair implementation of an adopted emergency response and/or emergency evacuation plan was also evaluated. No impacts were identified associated with airport hazards because the project proposes non-aviation uses and is not within the vicinity of a private airstrip. Additionally, implementation of the project is not expected to result in a significant impact related to the use, transport, storage or disposal of hazardous waste, nor will the project emit hazardous materials within one-quarter mile of a school. However, the demolition, construction, and re-use activities associated with project implementation may release hazardous materials into the environment. Hazards associated with past uses on the project site may also pose a significant impact. Finally, implementation of the proposed project would increase hazards related to wildfires and structural fires. Through certification of the FEIR, the City Council determined that implementation of mitigation measures HH 1 through HH 6 would reduce these public health and safety hazards to below a level of significance.

Proposed Project Modifications

The Orange County Great Park Redevelopment Plan evaluated in this Addendum does not propose any modifications to the project described in the FEIR that would require additional environmental documentation as it pertains to public health and safety. Therefore, the Orange County Great Park Redevelopment Plan is consistent with the FEIR for this environmental category.

Findings

The Orange County Great Park Redevelopment Plan is consistent with the certified FEIR and would not result in any new significant environmental impacts related to public health and safety. Therefore, the comparison of anticipated environmental effects of the proposed project with the impacts disclosed in the previously certified FEIR support the required CEQA findings summarized below. Specifically, none of the conditions defined in Sections 15162 and 15163 of the State CEQA Guidelines that would require preparation of a subsequent or supplemental EIR have been met.

Major Revisions Not Required. Based on the foregoing analysis and information, there is no substantial evidence that the changes to the project require a major change to the certified FEIR. The Orange County Great Park Redevelopment Plan would not result in any new significant environmental impact, nor is there substantial increase in the severity of impacts related to public health and safety from that described in the certified FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no substantial evidence in the record or otherwise that indicates that there are substantial changes in circumstances that would require major changes to the certified FEIR.

No New Information Showing Greater Significant Effects Than Previous EIR. This Addendum has analyzed available relevant information to determine whether there is new information that was not available at the time the FEIR was certified, indicating that a new significant effect not reported in the certified FEIR may occur. Based on the information and analysis above and presented in the Initial Study/Environmental Checklist, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the potentially significant public health and safety effects identified in and considered by the certified FEIR.

M. PUBLIC SERVICES AND FACILITIES

Existing Environmental Setting

Please see Section 5.14 (public Services and Facilities) of the FEIR (certified on May 27, 2003) for a summary of the existing environmental setting for public services and facilities.

FEIR

The FEIR evaluated public services and facilities impacts associated with providing the following services: fire and emergency medical services; police; schools; parks and recreation; and other public facilities. The FEIR also evaluated the proposed project's potential for increasing the use of regional parks and other recreational facilities such that substantial deterioration would occur. As outlined in the FEIR, the physical impacts of the development of public services and facilities are addressed by the mitigation measures identified throughout the FEIR. Existing City standards would also ensure the appropriate level of services are provided to serve the proposed project. The project would provide parks and facilities in excess of the City's adopted standards for parks and recreational facilities. Therefore, no deterioration of other facilities would be increased by the Orange County Great Park project. No mitigation is required as no significant impact has been identified.

Proposed Project Modifications

The Orange County Great Park Redevelopment Plan evaluated in this Addendum does not propose any modifications to the project described in the FEIR that would require additional environmental documentation pertaining to public services and facilities. Therefore, the Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions within the FEIR for this environmental category.

Findings

The Orange County Great Park Redevelopment Plan is consistent with the certified FEIR and would not result in any new significant environmental impacts related to public services and facilities. Therefore, the comparison of anticipated environmental effects of the proposed project with the impacts disclosed in the previously certified FEIR support the required CEQA findings summarized below. Specifically, none of the conditions defined in Sections 15162 and 15163 of the State CEQA Guidelines that would require preparation of a subsequent or supplemental EIR have been met.

Major Revisions Not Required. Based on the foregoing analysis and information, there is no substantial evidence that the changes to the project require a major change to the certified FEIR. The Orange County Great Park Redevelopment Plan would not result in any new significant environmental impact, nor is there substantial increase in the severity of impacts related to public services and facilities from that described in the certified FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no substantial evidence in the record or otherwise that indicates that there are substantial changes in circumstances that would require major changes to the certified FEIR.

No New Information Showing Greater Significant Effects Than Previous EIR. This Addendum has analyzed available relevant information to determine whether there is new information that was not available at the time the FEIR was certified, indicating that a new significant effect not reported in the certified FEIR may occur. Based on the information and analysis above and presented in the Initial Study/Environmental Checklist, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. No potentially significant public services and facilities effects were identified in the FEIR.

N. TRANSPORTATION/TRAFFIC

Existing Environmental Setting

Please see Section 5.2 (Traffic) of the FEIR (certified on May 27, 2003) for a summary of the existing environmental setting for transportation/traffic. The specific mitigation measure language referenced below is presented in the Mitigation Monitoring and Reporting Program of the FEIR, provided as an attachment to this document.

FEIR

The FEIR evaluated impacts to transportation and traffic, including vehicular traffic, air traffic, hazards associated with proposed project's design features, emergency access, and parking. No impacts were identified associated with air traffic, hazards due to design features, emergency access, or parking. However, as evaluated in the FEIR, implementation of the proposed project will cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system and exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways in the 2007 and 2025 scenarios. The proposed project is also inconsistent with the Orange County Master Plan of Arterial Highways. Through certification of the FEIR, the City Council determined that implementation of mitigation measures TRAN 1 through TRAN 8 would reduce the potential transportation/traffic impacts to below a level of significance.

Proposed Project Modifications

The Orange County Great Park Redevelopment Plan evaluated in this Addendum does not propose any modifications to the project described in the FEIR that would require additional environmental documentation pertaining to transportation/traffic. Therefore, the Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions within the FEIR for this environmental category.

Findings

The Orange County Great Park Redevelopment Plan is consistent with the certified FEIR and would not result in any new significant environmental impacts related to transportation/traffic. Therefore, the comparison of anticipated environmental effects of the proposed project with the impacts disclosed in the previously certified FEIR support the required CEQA findings summarized below. Specifically, none of the conditions defined in Sections 15162 and 15163 of the State CEQA Guidelines that would require preparation of a subsequent or supplemental EIR have been met.

Major Revisions Not Required. Based on the foregoing analysis and information, there is no substantial evidence that the changes to the project require a major change to the certified FEIR. The Orange County Great Park Redevelopment Plan would not result in any new significant environmental impact, nor is there substantial increase in the severity of impacts related to transportation/traffic from that described in the certified FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no substantial evidence in the record or otherwise that indicates that there are substantial changes in circumstances that would require major changes to the certified FEIR.

No New Information Showing Greater Significant Effects Than Previous EIR. This Addendum has analyzed available relevant information to determine whether there is new information that was not available at the time the FEIR was certified, indicating that a new significant effect not reported in the certified FEIR may occur. Based on the information and analysis above and presented in the Initial Study/Environmental Checklist, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the potentially significant transportation/traffic effects identified in and considered by the certified FEIR.

O. UTILITIES AND SERVICE SYSTEMS

Existing Environmental Setting

Please see Section 5.15 (Utilities) of the FEIR (certified on May 27, 2003) for a summary of the existing environmental setting for utilities and service systems. The specific mitigation measure language referenced below is presented in the Mitigation Monitoring and Reporting Program of the FEIR, provided as an attachment to this document.

FEIR

The FEIR evaluated impacts to utilities and service systems, including: water supply and delivery; wastewater treatment and transmission lines; stormwater drainage facilities, solid waste disposal, and communications and energy infrastructure. No impact associated with wastewater treatment or water supply would occur. However, the proposed project would require the expansion of potable water, wastewater and stormwater conveyance facilities to increase transmission capacity. Also, the project may produce solid waste that is unsuitable for recycling or reuse. Despite this, anticipated increases in solid waste generation resulting from the implementation of the proposed project is not anticipated to exceed the capacity of IWMD facilities since the current capacity exceeds 30 years. Private solid waste hauling services will expand to meet the needs of the projected growth and development anticipated in the proposed project. Mitigation Measures SW 1 through SW 5 adequately address the solid waste impacts generated by the project. Finally, no substantial demand for energy and communication facilities is anticipated as a result of the proposed project even though the extension of these facilities into the project area would be required. Through certification of the FEIR, the City Council determined that implementation of the mitigation measures identified throughout the FEIR address impacts associated with the extension and construction of utilities and service systems.

Proposed Project Modifications

The Orange County Great Park Redevelopment Plan evaluated in this Addendum does not propose any modifications to the project described in the FEIR that would require additional environmental documentation pertaining to utilities and service systems. Therefore, the Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions within the FEIR for this environmental category.

Findings

The Orange County Great Park Redevelopment Plan is consistent with the certified FEIR and would not result in any new significant environmental impacts related to transportation/traffic. Therefore, the comparison of anticipated environmental effects of the proposed project with the impacts disclosed in the previously certified FEIR support the required CEQA findings summarized below. Specifically, none of the conditions defined in Sections 15162 and 15163 of the State CEQA Guidelines that would require preparation of a subsequent or supplemental EIR have been met.

Major Revisions Not Required. Based on the foregoing analysis and information, there is no substantial evidence that the changes to the project require a major change to the certified FEIR. The Orange County Great Park Redevelopment Plan would not result in any new significant environmental impact, nor is there substantial increase in the severity of impacts related to utilities and service systems from that described in the certified FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no substantial evidence in the record or otherwise that indicates that there are substantial changes in circumstances that would require major changes to the certified FEIR.

No New Information Showing Greater Significant Effects Than Previous EIR. This Addendum has analyzed available relevant information to determine whether there is new information that was not available at the time the FEIR was certified, indicating that a new significant effect not reported in the certified FEIR may occur. Based on the information and analysis above and presented in the Initial Study/Environmental Checklist, there is no substantial new information that there would be a new significant impact requiring major revisions of the certified FEIR.

No New Information Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the potentially significant utilities and service systems effects identified in and considered by the certified FEIR.

ATTACHMENT 1

**INITIAL STUDY/ENVIRONMENTAL CHECKLIST
(INCLUDING FIGURES)**

INITIAL STUDY/ENVIRONMENTAL CHECKLIST CITY OF IRVINE, CALIFORNIA

1. **PROJECT:** Orange County Great Park Redevelopment Plan
2. **LEAD AGENCY:** City of Irvine
3. **CONTACT PERSON AND PHONE:** David R. Law, AICP, Senior Planner, (949) 724-6385
4. **PROJECT LOCATION**

The Orange County Great Park is located in the City of Irvine California (Figure 1). The Orange County Great Park consists of approximately 4,693 acres of which an estimated 3,905 acres are covered by the Orange County Great Park Redevelopment Plan (project) (Figure 2). The irregularly shaped project area is generally bounded by the following street and highways: Interstate-5 to the southwest; Eastern Transportation Corridor (SR-133) to the northwest; Portola Parkway/Foothill Transportation Corridor (SR-241) to the northeast; and Alton Parkway to the southeast. Figure 3 illustrates the proposed land uses by ownership type for the future Great Park.

5. **APPLICANT**

City of Irvine
One Civic Center Plaza
P.O. Box 19575
Irvine, California 92623-9575

6. **GENERAL PLAN DESIGNATION**

The City of Irvine General Plan was amended, along with certification of the Final Environmental Impact Report (FEIR) for the Orange County Great Park project, on May 27, 2003 (Resolution No. 03-60). All 4,693 acres of the Orange County Great Park were designated as "Great Park" in the City's General Plan. The "Great Park" General Plan designation permits a base intensity of development with an overlay of additional intensity available through compliance with established criteria and in accord with the Development Agreement entered into between the City and the Lennar Corporation. Specifically, the following land uses are allowed and proposed under the Great Park General Plan designation: agriculture; low-density and medium-density residential; habitat preserve; research and development; educational; retail; sports park; exposition center; cemetery; golf course; drainage corridor; wildlife corridor; institutional; transportation; auto center; and open space (Figure 4).

7. **ZONING ORDINANCE**

The City of Irvine Zoning Ordinance was amended, along with certification of the FEIR for the Orange County Great Park project, on May 27, 2003 (Ordinance No. 03-18). The project area contains new and/or expanded zoning categories and overlay zones to address specific components of and be consistent with the Orange County Great Park. The specific zoning/overlay designations permitted within the project area include: exclusive agriculture; preservation; recreation; golf course (overlay); low-density residential; medium-density residential; transit-oriented development; community commercial; vehicle-related commercial; commercial recreation; general industrial; medical and science; and institutional (Figure 5).

8. PROJECT DESCRIPTION

The Orange County Great Park Redevelopment Plan (project) establishes a process and framework within which specific development plans for the Orange County Great Park will be presented, priorities for specific projects will be established, specific solutions will be proposed, and tools will be identified for the City of Irvine Redevelopment Agency to fashion, develop, and proceed with said specific plans, projects, and solutions. The Orange County Great Park Redevelopment Plan (OCGPRP) does not present or advocate a specific plan for redevelopment, rehabilitation, and/or revitalization within the project area boundaries.

The Orange County Great Park is located with the City of Irvine. Of the 4,693 total acres of the Orange County Great Park, public ownership and public land uses will comprise 55 percent of the acreage (2,574 acres) as identified in the OCGPRP, with private ownership and public land uses encompassing another 28 percent (1,327 acres). Private ownership and private land uses are to be accommodated on 17 percent (792 acres). The OCGPRP pertains to approximately 3,905 acres of the 4,693 acres of the Orange County Great Park. Once redeveloped, the OCGPRP shall consist of the following land uses: open space and habitat preservation; parks and recreation; education; agriculture; research and development; and transit-oriented commercial and residential.

9. SURROUNDING LAND USE(S) AND PROJECT SETTING

The project area is generally bounded by the city of Irvine to the north and west and the cities of Irvine and Lake Forest to the south and east. Other nearby local jurisdictions include the cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo, Tustin, and unincorporated areas of the County of the Orange.

The project area is located north of the Santa Ana Freeway (Interstate-5), east of the Eastern Transportation Corridor (SR-133), and south of the Foothill Transportation Corridor (SR-241). Major roadways bordering the project area include Barranca Parkway to the south, Sand Canyon Avenue to the west, Portola Parkway and Irvine Boulevard to the north, and Alton Parkway to the east.

The Irvine Transportation Center, a major multimodal transit center linking Orange County Transportation Authority bus, Metrolink commuter rail, and Amtrak rail services, is adjacent to the Southern California Regional Rail Authority tracks, which bisects the project area.

Surrounding land uses include the Irvine Spectrum business park, Wild Rivers Water Park and the Verizon Wireless Amphitheater to the southwest, industrial/business parks to the southeast, residential neighborhoods to the east within the City of Lake Forest, and agriculture, open space, and a corrections facility to the northeast.

The project site is located on the lands of the former Marine Corps Air Station El Toro, which was closed under the Base Realignment and Closure Act in July, 1999. Portions of the military infrastructure, including aircraft runways, buildings, structures, and ancillary facilities, remain on the project site. The project outlined in the FEIR will be implemented and the remaining military infrastructure will be razed and removed.

10. PUBLIC AGENCIES THAT MAY USE THIS ADDENDUM

Public agencies identified in the certified Final EIR for the Orange County Great Park that may use this Addendum in association with the Final EIR to assure development of the Great Park Redevelopment Plan include the following:

- California Department of Fish and Game
- California Department of Toxic Substance Control

- California Department of Transportation
- California Public Utilities Commission
- County of Orange
- Irvine Unified School District
- Local Agency Formation Commission Orange County
- Orange County Transportation Authority
- Regional Water Quality Control Board
- Saddleback Unified School District
- South Coast Air Quality Management District
- Southern California Association of Governments
- Southern California Regional Rail Authority
- Transportation Corridor Agency
- U.S. Army Corps of Engineers
- U.S. Department of Defense (Department of the Navy and General Services Administration)
- U.S. Fish and Wildlife Service

11. PREVIOUS ENVIRONMENTAL DOCUMENTATION

- Orange County Great Park Final Environmental Impact Report (City of Irvine, certified May 27, 2003)

12. CONSULTATION

- A. City of Irvine
Tina Christensen, Director of Community Development
Brian Fisk, Manager of Planning Services
Glen Worthington, Planning Manager, Great Park Corporation
Barry Curtis, Principal Planner
David R. Law, Senior Planner
- B. Documents and Resources:
- Orange County Great Park Final Environmental Impact Report (City of Irvine, certified May 27, 2003)
 - Orange County Great Park Redevelopment Plan (City of Irvine, March 8, 2005)

13. SUMMARY OF ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

A summary of the environmental factors potentially affected by this project, consisting of a "Potentially Significant Impact" or "Potentially Significant Impact Unless Mitigated", include:

- AESTHETICS
- AGRICULTURAL RESOURCES
- AIR QUALITY
- BIOLOGICAL RESOURCES
- CULTURAL RESOURCES
- GEOLOGY AND SEISMICITY
- HYDROLOGY AND WATER QUALITY
- LAND USE AND PLANNING
- MINERAL RESOURCES
- NOISE
- POPULATION AND HOUSING
- PUBLIC HEALTH AND SAFETY
- PUBLIC SERVICES AND FACILITIES
- TRANSPORTATION/TRAFFIC

- UTILITIES AND SERVICE SYSTEMS

14. ENVIRONMENTAL CHECKLIST AND DISCUSSION OF ENVIRONMENTAL EVALUATION

The City of Irvine certified the Orange County Great Park Final EIR (FEIR) on May 27, 2003. The Orange County Great Park Redevelopment Plan establishes a process and framework within which specific development plans will be presented, priorities for specific development projects will be established, and specific development solutions will be proposed. This Initial Study/Environmental Checklist has been prepared in accordance with Section 15063 of the CEQA Guidelines to determine whether any of the conditions requiring preparation of a Subsequent or Supplemental EIR (outlined in Section 15162) is evident. Where potentially significant environmental impacts and associated mitigation are the same for both the Orange County Great Park Redevelopment Plan and FEIR, no Subsequent or Supplemental EIR is required.

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?			✓	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			✓	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			✓	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?		✓		
<p>Discussion:</p> <p>(a through c) The Orange County Great Park FEIR (certified on May 27, 2003) states that impacts to aesthetic resources, including scenic vistas/resources and visual character, would be less than significant with implementation of the prescribed mitigation measures. The primary land use component of the Orange County Great Park would be open space. Open space amenities, including parks, golf courses, sports parks, and an exposition center would provide visual amenities to the entire project area. Landscaped parkways and pedestrian greenways would provide linkages to different areas of the proposed community between land uses and parks. Additionally, necessary grading due to implementation of the proposed project is not expected to involve more than 5,000 cubic yards of material on any 20-acre portion of the project site (due to the relatively flat to gently-rolling terrain). Since there are no scenic routes designated in the immediate area of the project site, no impact on existing scenic resources of the City or the region is anticipated. Finally, new development within the Orange County Great Park would be consistent with the FEIR and the City's General Plan and Zoning Ordinance. Although some development may be visible to motorists along adjacent roadways (i.e., Sand Canyon Avenue) and from homes located west and at higher elevations to the southeast and northeast of the project site, all development would be required to comply with the development standards outlined in the City's Zoning Ordinance. This entails City approval of architectural plans, landscape plans, and signage for each phase of development to ensure consistency with the City's Land Use Element, Circulation Element, and various design policies. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to aesthetics. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.</p> <p>d) As outlined in the Orange County Great Park FEIR (certified on May 27, 2003), future redevelopment of the project site may lead to the introduction of new sources of light and glare. These sources include street lighting along planned roadways and exterior lighting (e.g., security and parking lot lighting) for various educational and institutional land uses. Additionally, lighting associated with proposed athletic fields and glare from reflective surfaces have the potential to cause visual nuisance to residential land uses. Accordingly, the Orange County Great Park FEIR requires mitigation that, prior to the issuance of grading permits, lighting plans and signage permits for proposed development shall be reviewed by the Community Development Director (CDD) to ensure that minimal light intrusion and spillover into adjacent residential areas occurs. The CDD shall also ensure that mirrored and highly-reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level</p>				

glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs. With implementation of the above mitigation requirements, potential impacts to aesthetics would be reduced to below a level of significance. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to aesthetics. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
II. AGRICULTURAL RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to a non-agricultural use?	✓			
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to a non-agricultural use?	✓			
Discussion: a) As identified in the Orange County Great Park FEIR (certified on May 27, 2003), implementation of the Overlay Plan would result in the conversion of approximately 651 acres of Prime Farmland, 63 acres of Unique Farmland, and 88 acres of Farmland of Statewide Importance to non-agricultural land uses. This impact remains significant and unavoidable despite mitigation incorporation outlined in the FEIR. The City of Irvine determined, in its adoption of a Statement of Overriding Considerations, that the economic, legal, social, technological, and/or other benefits of the proposed project outweigh the unavoidable adverse environmental effects to agricultural resources. The Statement of Overriding Considerations was adopted by the City on May 27, 2003 and was supported by substantial evidence in the record. It should also be noted that the Overlay Plan outlined in the Orange County Great Park FEIR proposed preservation in perpetuity of approximately 307 acres of land (to be designated as Prime Farmland, Unique Farmland, and/or Farmland of Statewide Importance). The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to agricultural resources. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category. b) No agricultural lands located within the project site are currently covered under Williamson Act contracts. c) Implementation of the FEIR would not have a significant indirect effect on increasing development pressure and accelerating loss of the remainder of the agricultural land in the surrounding area. Development pressure already exists in these surrounding lands as a result of newly constructed roads that provide access to the area. Additionally, surrounding land owners have already submitted, or				

received approval for plans to develop the surrounding agricultural lands with a variety of urban uses. The conversion of agricultural lands to urban land uses is a long and continuing trend in Orange County. As a result, while there are existing pressures that would result in the conversion of agriculture within and adjacent to the project site with or without implementation of the Overlay Plan, the project would result in a significant and unavoidable impact associated with the conversion of existing agricultural land to nonagricultural uses. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to agricultural resources. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	✓			
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	✓			
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	✓			
d) Expose sensitive receptors to substantial pollutant concentrations?			✓	
e) Create objectionable odors affecting a substantial number of people?			✓	
<p>Discussion:</p> <p>a) through e) Implementation of the Orange County Great Park FEIR (certified May 27, 2003), would result in significant and unavoidable impacts to air quality. Construction-related emissions are expected to result in unavoidable short-term impacts associated with reactive organic gases, nitrogen dioxide, and fine particulate matter. Short-term impacts on sensitive receptors are expected to be mitigated during project construction, and no long-term carbon monoxide hotspots would be created that may affect sensitive receptors. Operational emissions from future development under the Overlay Plan would consist of area source and motor vehicle emissions which will exceed South Coast Air Quality Management District (SCAQMD) thresholds even with mitigation incorporation. Emissions resulting from post-construction and routine operation of various sources within the project site would contribute to long-term impacts on air quality.</p> <p>The inclusion of the Orange County Transportation Authority facility in the FEIR is aimed at encouraging the use of alternative transportation, thereby reducing motor vehicle congestion and related air quality emissions. The implementation of an emission reduction program under SCAQMD Rule 2202 would also likely result in reducing motor vehicle emissions. However, the air quality impacts remain significant and unavoidable despite mitigation incorporation outlined in the FEIR. The City of Irvine determined, in its adoption of a Statement of Overriding Considerations, that the economic, legal, social, technological, and/or other benefits of proposed project outweigh the unavoidable adverse environmental effects to agricultural resources. The Statement of Overriding Considerations was adopted by the City on May 27, 2003 and was supported by substantial evidence in the record. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to air quality. The Orange County Great Park Redevelopment Plan is consistent with the analysis and</p>				

conclusions of the FEIR for this environmental category.

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		✓		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?		✓		
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		✓		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				✓
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		✓		
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?			✓	
Discussion: a) and b) No federally-listed plant species were identified on the project site. Of the several species of concern that have a high potential to occur on the project site, only the habitat preserve portion of the project site contains suitable habitat for the southern tarplant. No federally-listed endangered wildlife species were identified on the project site. Several federal- and state-listed wildlife species were observed within the project site and may be impacted by project implementation, including the				

mountain plover, burrowing owl, least Bell's vireo, and southwestern willow flycatcher.

Mitigation outlined in the Orange County Great Park FEIR (certified May 27, 2003) requires that prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. Additionally, prior to the approval of a subdivision map for wash development within or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey(s) identify a significant population or southern tarplant or mountain plover, or the presence of the burrowing owl, least Bell's vireo, or southwestern willow flycatcher, in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated with the U.S. Fish and Wildlife Service and/or the California Department of Fish and Game. The Orange County Great Park Redevelopment Plan does not propose any modifications to the Overlay Plan that would require additional environmental documentation pertaining to biological resources. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

c) Limited riparian and wetland habitat exists on the project site. As identified in the FEIR, the City will permit and mitigate impacts to jurisdictional waters through consultation with the U.S. Army Corps of Engineers and California Department of Fish and Game. Wetland and riparian habitat creation and enhancement are available for mitigation within the proposed park/open space areas identified under the FEIR.

Mitigation outlined in the FEIR requires that prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan subarea that contain the potential for wetland habitat and/or jurisdictional waters of the U.S. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency(s). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, recreation, and/or revegetation as deemed acceptable by the appropriate jurisdictional agency(s). The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to biological resources. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

d) As identified in the FEIR, no evidence of a wildlife corridor was found during biological surveys. In addition, according to the Natural Community Conservation Plan/Habitat Conservation Plan and Implementation Agreement, there are no Existing Use Areas or Special Linkage Areas within the project area. Such designations would indicate the presence of important populations of sensitive species or migration corridors of designated preserve areas. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to biological resources. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

e) The project site contains a number of large-diameter trees, many of them mature, representing a wide range of species. The potential destruction or damage to these trees was considered a significant impact under the FEIR. Mitigation required to reduce the potential impact to these tree resources to below a level of significance is as follows: prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height greater than six-inches and any significant (as determined by a certified arborist selected by the City) plants on the project site. All trees in this inventory shall be considered "significant trees" under the City's Urban Forestry Ordinance (Section 5-7-401 et al.) and mitigated as such under the ordinance. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to biological resources. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

f) The Overlay Plan designated by the Orange County Great Park FEIR (certified on May 27, 2003)

designates lands in the project area for habitat conservation, consistent with the Natural Community Conservation Plan/Habitat Conservation Plan. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to biological resources. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?			✓	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		✓		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		✓		
d) Disturb any human remains, including those interred outside of formal cemeteries?		✓		
<p>Discussion:</p> <p>a) Implementation of the FEIR would result in the demolition of existing structures on the project site. However, the U.S. Department of the Navy has determined that existing buildings on the project site are not Cold War legacy eligible, nor are they eligible for the National Register of Historic Places. Furthermore, there are no features or characteristics of the project area which define or include unique ethnic cultural values, or culturally significant religious or sacred uses. The potential impact to historical resources is less than significant. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to cultural resources. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.</p> <p>b) Per the Orange County Great Park FEIR (certified May 27, 2003), no intensive development is proposed in areas with known archaeological resources. However, two known prehistoric sites are located on the project site, and there is the potential that archaeological resources are present that may be disturbed during grading activities associated with future development. Mitigation prescribed in the FEIR requires that, prior to subdivision development; a detailed archaeological report (s) shall be prepared for areas with known archaeological resources. The report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Monitoring of excavation/grading activities shall be conducted by a certified archaeologist. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and as assessment of their importance under CEQA and the City's guidelines. Finally, a detailed mitigation program shall be submitted to the City by the developer to address archaeological resources encountered, if any, during excavation/grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for the implementation of avoidance measures or appropriate mitigation shall be afforded. Work may continue on other portions of the project site. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to cultural resources. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.</p>				

c) The potential for discovering paleontological resources varies depending upon the geologic formations, or rock units underlying the project area. Alluvium of moderate- to high-sensitivity for paleontological resources underlies most of the project site. Indeed, three recorded fossil sites have been identified on the project site, while terrestrial vertebrate fossils were recovered during excavation of a flood control basin within close proximity of the project site. The three known fossil sites are located in an area not to be developed under the FEIR. Direct, significant impacts to paleontological resources may occur during ground disturbing activities, requiring mitigation to reduce the impact to below a level of significance. As a result, the FEIR requires that, prior to the issuance of a grading permit, a qualified paleontologist conduct an appropriate investigation of the area proposed for grading. If and when fossils are encountered, the paleontologist shall recover them. In certain instances the paleontologist/monitor shall be allowed to temporarily direct, divert, or halt grading to allow for fossil remains to be recovered in a timely manner. Due to the potential for the recovery of small fossil remains, it may be necessary in some instances to erect temporary screen-washing station(s) on the project site. Fossil remains collected during the monitoring and salvage portion of the mitigation program outlined in the FEIR shall be cleaned, repaired, stored, and cataloged per the City of Irvine specifications.

The City of Irvine maintains standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites and appropriate monitoring conditions have not been stipulated on previous map approvals. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to cultural resources. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

d) There are no known human remains in the project area. However, excavation/grading activities could uncover previously unknown human remains. Excavation/grading activities would result in a significant impact in regards to this cultural resource issue and requires mitigation to reduce to below a level of significance. Accordingly, the FEIR requires that, prior to issuance of any grading and/or building permit, a mitigation program shall be prepared to address the accidental discovery or recognition of any human remains. To this end, there shall be no further ground disturbance of the site or nearby areas reasonably suspected to overlie adjacent human remains until the County Coroner has determined that no investigation into the cause of death is warranted. If the County Coroner determines that the remains are Native American, the Native American Heritage Commission (NAHC) shall be contacted within 24 hours, and the NAHC shall identify the most likely descendent (MLD). The MLD may make recommendations to the landowner for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in the Section 5097.98 of the Public Resources Code. Where the following conditions occur, the landowner shall rebury the remains with appropriate dignity on the property in a location not subject to further surface disturbance: The NAHC is unable to identify a MLD; the MLD fails to make a recommendation; and/or the landowner rejects the recommendation of the MLD and mediation by the NAHC fails to provide measures acceptable to the landowner. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to cultural resources. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SEISMICITY. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			✓	
ii) Strong seismic ground shaking?		✓		
iii) Seismic-related ground failure, including liquefaction?			✓	
iv) Landslides?		✓		
b) Result in substantial soil erosion or the loss of topsoil?		✓		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			✓	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?		✓		
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?			✓	
Discussion: a. i-iv) The project area is located in the seismically active region of southern California. There is no known or potentially active fault crossing or projecting into the project area. The site has a low potential for liquefaction because the alluvial sediments are relatively coarse and the water table is generally more than 80 feet below the ground surface. The majority of the project site is located in the City's Seismic Response Area (2), meaning it is considered suitable for development. The potential for fault rupture in the project area is extremely low; no significant impact is anticipated through the post-2025 level of development outlined in the FEIR. No intensive development is proposed for areas on the project site that have the potential to experience liquefaction. However, future development on				

the project site has the potential to result in the exposure of people and structures to strong seismic ground shaking in the event of a major earthquake. This is considered a significant impact. New development in the project area would be required to be constructed according to the latest adopted building codes which address construction practices related to seismic safety. Finally, the proposed development of habitable structures would be allowed under the FEIR in areas with the potential for landslides to occur. This is also considered a significant impact.

Under the Orange County Great Park FEIR (certified on May 27, 2003), mitigation is required for the geology and seismicity impacts identified above to be reduced to below a level of significance. As a result, prior to the issuance of a building permit the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City. Geotechnical studies shall be prepared at the time specific development projects are proposed to address specific geotechnical conditions. These reports shall be required to provide measures to prevent settlement. Prior to the issuance of a building permit for the occupancy of an existing structure, a seismic evaluation of the structure, including recommendations for seismic improvements required for compliance with current Building Codes and plans for any seismic improvements, shall be submitted to the City. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to geology and seismicity. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

b) through e) Grading associated with future development in any portion of the project area would involve the removal of soils, soil compaction, and possible import and/or export of fill material. Grading would include the removal of existing runways, exposing soil surfaces to increased rates of wind and water erosion. The majority of the soil material in the project area is identified as well suited for grading and construction. Some expansive soils may be present in localized areas of the project site, however. The presence of expansive soils could create a risk to life and/or property.

The Orange County Great Park FEIR (certified on May 27, 2003) requires that erosion and sediment control measures be implemented as required by the City's Grading and Water Quality ordinances. Design measures for foundations, slabs, flatwork, and other improvements subject to drainage from expansive soils shall also be included. Specifically, prior to the issuance of a grading permit for a specific development project, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specify erosion control and surface runoff measures for both construction and long-term operations on the project site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx in the drainage system shall be implemented. Compliance with this measure shall be verified by the City and would reduce the potential impact to below a level of significance. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to geology and seismicity. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
VIII. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?		✓		
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			✓	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			✓	
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?		✓		
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?		✓		
f) Otherwise substantially degrade water quality?		✓		
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?		✓		
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?		✓		

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			✓	
j) Inundation of seiche, tsunami, or mudflow?			✓	

Discussion:

a) Grading and excavation required for future development would result in the exposure of bare soils, which could result in both wind and water-related erosion, and a significant water quality impact if not properly treated. Through buildout of the Overlay Plan, wind and water-related erosion would have the potential to violate water quality standards or waste discharge requirements.

As stated in the Orange County Great Park FEIR (certified on May 27, 2003), mitigation is required to reduce the significant impact to hydrology and water quality to below a level of significance. As a result, prior to the issuance of a grading permit, the development applicant shall provide evidence that the proposed development of the project area shall comply with the City of Irvine adopted Grading and Water Quality ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the National Pollutant Discharge Elimination System (NPDES) permit requirements to which the City is obligated would ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities.

The City's standard conditions of approval indicate that a Stormwater Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.

Additionally, prior to the issuance of a grading permit, developer applicants must submit a Water Quality Management Plan (WQMP) that identifies the best management practices (BMP) that would be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the County-wide Municipal NPDES Stormwater permit. The WQMP shall identify, at a minimum, the routine, structural, and nonstructural measures specified in the County-wide NPDES index which details implementation of the BMPs. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to hydrology and water quality. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

b) As identified in the Orange County Great Park FEIR (certified on May 27, 2003), implementation of the project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to hydrology and water quality. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

c) As identified in the Orange County Great Park FEIR (certified on May 27, 2003), implementation of the project would not substantially alter the existing drainage patterns of the project site or surrounding area, including through the alteration of the course of a stream or river in a manner which would result in substantial erosion or siltation on- or off-site. All proposed storm conveyance systems and detention facilities are intended to reduce siltation in area flood control facilities, including the San Diego Creek and in the receiving waters of Newport Bay. As flood control improvements are implemented, they would augment existing capacity within channels and facilities but would not substantially alter the existing drainage pattern of the site or area in a way that would result in substantial erosion or siltation on- or off-site. Future proposed development would be planned and phased in accordance with the

capacities of existing or planned stormwater drainage systems and pollutant reduction programs. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to hydrology and water quality. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

d) and e) As identified in the Orange County Great Park FEIR (certified on May 27, 2003), the existing drainage patterns of the project site would not be substantially altered nor would stream courses or rivers be substantially altered. With recent improvements to upstream flood control facilities, the floodplain area has likely decreased and fewer areas of the project site are subject to inundation. Although the project proposes flood control facilities to control runoff off-site, without proposed project drainage improvements a substantial increase in the rate or amount of surface runoff due to new development in localized areas may occur resulting in flooding on- or off-site. This potential for flooding to occur either on- or off-site as a result of future development is considered a significant impact.

The FEIR identifies appropriate mitigation to reduce this impact to below a level of significance. The phasing of the flood control system improvements proposed for the project site would be coordinated with the street-phasing schedule so that the storm drains are installed prior to (or in concert with) road construction. Improvements to the flood control system shall be evenly scheduled during the various phases of development. In addition, prior to approval of the first tentative tract or parcel map in the project area detailed hydrology and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with the Orange County Flood Control District methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of the project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to the proposed development shall be implemented. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to hydrology and water quality. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

f) Flood control conveyance and detention systems that are proposed to be implemented during project buildout would comply with the requirements of the Basin Plan and decrease the project area contribution to sediment loading and toxic pollutants in downstream facilities and the receiving waters of Newport Bay. As per the requirements of the Regional Water Quality Control Board, proposed projects occurring upstream of or discharging into impaired waterbodies listed on the Clean Water Act Section 303(d) list may be subject to additional controls (specifically, Total Maximum Daily Loads) pursuant to that regulation. Depending on the specific type of project proposed, these controls could include discharge prohibitions, revisions to discharge permits, or management plans to address water quality impacts. This future potential to degrade surface water quality is considered a significant impact in the FEIR and requires mitigation.

As identified in the Orange County Great Park FEIR (certified on May 27, 2003), in order to reduce the potentially significant impact to below a level of significance, prior to the issuance of a grading permit evidence (in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project areas shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water Quality Control Board Base Plan, including the Total Maximum Daily Load Implementation Plan adopted for this watershed. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to hydrology and water quality. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

g) and h) With recent improvements to upstream flood control facilities, the floodplain areas has likely decreased and fewer areas of the project site are subject to inundation. However, future development may be proposed in areas that are prone to flooding as the exact boundaries of the 100-year floodplain were unknown at the time of the certification of the FEIR. Consequently, this issue was identified as a potentially significant issue requiring mitigation.

As outlined in the Orange County Great Park FEIR (certified on May 27, 2003), in order to reduce this potentially significant issue to below a level of significance the City shall ensure that prior to the issuance of a building permit, developers with property located in a delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a letter of Map Revision (LOMR) request to have the Flood Insurance Rate Map revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the subject property. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to hydrology and water quality. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

i) and j) Implementation of the FEIR would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam because there is not a levee or dam in the vicinity of the project area. Additionally, the proposed project would not place people or structures in a location that would be adversely affected by a seiche, tsunami, or mudflow. There is not a dam or levee in the vicinity of the project site that could result in a potentially harmful seiche or mudflow resulting from an earthquake. The project site is located far enough from the shoreline as to avoid the affects of a tsunami. These issues are considered less than significant in the FEIR. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to hydrology and water quality. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
IX. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?			✓	
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			✓	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?			✓	

Discussion:

a) As presented in the Orange County Great Park FEIR (certified on May 27, 2003), all of the project site is located in the City of Irvine's Sphere of Influence, except a portion that is already within the City Limits (Planning Areas 30 and a portion of 35). There were no residents living within the former military installation at the time of certification of the FEIR, nor are there now. While there are persons residing within the James A. Musiak Jail Facility, any community created within the facility is contained within the jail confines. In addition, no land use change is proposed for the jail facility and the project does not have the potential to physically divide an established community. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to land use and planning. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

b) As part of certification of the FEIR, several Elements of the General Plan were amended to reflect passage of Measure W (approved by the voters of Orange County in March, 2002). The specific Elements of the General Plan that were successfully amended include: Land Use; Circulation; Housing; Seismic; Cultural Resources; Noise; Public Facilities and Services; Integrated Waste Management; Safety; Parks and Recreation; Conservation and Open Space; and Growth Management. In addition, zoning ordinances were amended to implement the Overlay Plan identified in the FEIR. Finally, the Orange County Master Plan of Arterial Highways was amended to reflect the General Plan amendments (mentioned above) and the zoning ordinance change. As a result of the adoption of these amendments during certification of the FEIR on May 27, 2003, the proposed project is consistent with all applicable land use plans, policies, and regulations (including the General Plan and zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effects. No significant impact is identified. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to land use and planning. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

c) With certification of the Orange County Great Park FEIR on May 27, 2003, the City incorporated a 974 acre Natural Community Conservation Plan habitat preserve into the project design. The habitat preserve has been conveyed to the federal government, the U.S. Department of the Interior managing

the land as part of the Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP). Since the inclusion of the habitat preserve in the NCCP/HCP is consistent with the County's adopted NCCP/HCP, the FEIR would not result in a significant impact to any applicable conservation plan or natural community conservation plan. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to land use and planning. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
X. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				✓
<p>Discussion:</p> <p>a) and b) There are no known mineral resources located on the project site. Implementation of the FEIR would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state, nor would it result in the loss of availability of a locally-important mineral resource recovery site delineated on any land use plan. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to mineral resources. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.</p>				

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XI. NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			✓	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			✓	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			✓	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			✓	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✓
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				✓
<p>Discussion:</p> <p>a) through d) The construction phases (short term noise events) are scheduled to correspond with the capacity and development of proposed roadways and growth of the surrounding community. Specific construction activities, level of activity, and the location of the construction would continually change throughout the course of project development. Development phasing would result in staggered noise impacts from demolition and construction activities and prevent significant short-term noise at any one time. The proposed project has been designed so that noise-sensitive areas are buffered from noise sources that surround the project areas and is compatible with the City's General Plan and zoning ordinance. Sensitive receptors would be located away from major noise sources such as the sports park and Orange County Transit Authority facility, as well as the existing railroad line and the Interstate-5 freeway. New development approved under the FEIR (certified on May 27, 2003) would be required to comply with all applicable federal, state, and local noise regulations as they relate to publicly funded roadway and housing projects, employee safety, and noise compatibility. All commercial uses proposed in the project site must comply with the Office of Safety and Health Administration and state-equivalent noise exposure limits. California Building Standards related to noise would apply to all new hotels, motels, dormitories, long-term care facilities, and multi-family housing associated with the FEIR.</p> <p>Total development of the project is expected to occur over approximately a 20-year period. The</p>				

construction phases are scheduled to correspond with the capacity and development of the proposed railways and growth of the local community. The specific construction activities, the level of activity, and the location of the construction would continually change throughout the course of project development. The phasing of development would stagger the noise effects at any one time during the 20-year development period.

Long-term impacts (operational noise events) include those post-construction noise impacts due to the operation and occupancy of the various land uses proposed for the project area. Post-construction noise sources include vehicle traffic generated by the project and stationary sources associated with the project land uses. Quantitative modeling and qualitative assessment presented in the FEIR conclude that the potential impact from both mobile and stationary noise sources (in the short- as well as long-term) would be less than significant.

The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to noise. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

e) The FEIR supports no aviation uses; no public airport, public-use airport, or airport land use plan is located in the vicinity. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to noise. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

f) The project site is not located in the vicinity of a private airstrip that could impact the proposed project. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to noise. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XII. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	✓			
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?			✓	
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?			✓	
<p>Discussion:</p> <p>a) As outlined in the Orange County Great Park FEIR (certified on May 27, 2003), implementation of the project is expected to result in the provision of approximately 3,625 dwelling units. Based upon the City of Irvine's zoning categories planned for the site, these dwelling units could accommodate up to 9,000 people. This increase in population would not substantially exceed projections contained for the site in <i>Orange County Projections 2000</i> (OCP-2000), and thus this impact is considered less than significant. Additionally, the FEIR is expected to result in 1,100 low-density, 860 medium-density, and 1,500 medium high-density residential dwelling units at buildout. An estimated 165 dwelling units would be ensure for homeless providers, and the provision for these dwelling units would not substantially exceed projections contained in OCP-2000.</p> <p>Implementation of the FEIR would substantially alter the projected employment generation characteristics of the City of Irvine. Since the Orange County Subregion is anticipated to become increasingly job-rich and housing-poor over the next 20 years, the project-related employment would exacerbate the subregional jobs/housing balance. As a result, the proposed project would not improve and would only exacerbate the County's overall job/housing imbalance; the impact is considered significant and unavoidable as there is no feasible mitigation. The City of Irvine determined, in its adoption of a Statement of Overriding Considerations, that the economic, legal, social, technological, and/or other benefits of proposed project outweigh the unavoidable adverse environmental effects to population and housing. The Statement of Overriding Considerations was adopted by the City on May 27, 2003 and was supported by substantial evidence in the record. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to population and housing. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.</p> <p>b) Military operations on the former Marine Corps Air Station El Toro ceased in 1999, and direct population and employment levels on the site are currently negligible. Therefore, the loss of military jobs and housing is not project-related. Depending on the decisions of the Lennar Corporation (private landowner) and the City of Irvine, it is likely that some or all of the existing vacant housing stock may be demolished. However, implementation of the FEIR would provide an estimated 3,625 dwelling units; this impact is considered beneficial. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to population and housing. The Orange County Great Park Redevelopment Plan is</p>				

consistent with the analysis and conclusions of the FEIR for this environmental category.

c) Military operations on the former Marine Corps Air Station El Toro ceased in 1999, and direct population and employment levels, as well as the associated population on the site, are currently negligible. Therefore, the displacement of residents from the project site is not project-related. Implementation of the FEIR would provide an estimated 3,625 dwelling units to help accommodate the demand for housing in Orange County; this impact is considered beneficial. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to population and housing. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
PUBLIC HEALTH AND SAFETY. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		✓		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			✓	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?		✓		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?			✓	
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?			✓	
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			✓	
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?		✓		

Discussion:

a) There is a potential impact resulting from the routine transportation of hazardous materials on the proposed streets in the project area. This same potential impact exists for all freeways, local streets, and railroad tracks in the project vicinity, surrounding areas, and the region. However, federal and state regulations strictly control the design and size of transport vehicles, the training of vehicle operators, the types and quantities of materials that may be transported, the documentation of the material from its source to its destination, and procedures in the event of an accidental spill. Many of the proposed land uses, such as recreational/cultural/open spaces and sports parks, are not likely to use and/or store substantial quantities of hazardous materials other than typical materials (such as cleaners) and relatively small amounts of paints and thinners, fuels and oil, pesticide and other chemicals used for building and/or grounds maintenance. All business activities and facilities would be required to comply with federal, state, and local regulatory agencies with jurisdictions over hazardous materials storage and use and hazardous waste management. As identified in the Orange County Great Park FEIR (certified on May 27, 2003), the proposed project would not be expected to result in a significant impact related to the transport, use, storage, and/or disposal of hazardous materials on or through the project site. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to public health and safety. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

b) Construction activities involving demolition and possible substantial remodeling of existing structures on the project site, as the project develops, could result in the disturbance of soils and/or structures containing lead-based paint (LBP) and asbestos-containing materials (ACM). The presence of LBP and/or ACM in structures and/or soils of properties conveyed by the federal government may pose a future hazard to the public if materials degrade or are otherwise disturbed. This is considered a significant impact that requires mitigation in order to be reduced to below a level of significance.

As outlined in the FEIR, prior to the conveyance of the property and issuance of subsequent grading permits, where the presence of ACMs is identified, the U.S. Department of the Navy (DON) or its transferee shall ensure that all available information concerning ACMs has been provided to the City of Irvine, and the purchasers of the property, including: the type, location and condition of ACMs; the results of any asbestos testing; description of asbestos control measures taken, if any; the costs or time necessary to remove existing ACMs; and the results of any site-specific asbestos inventory updates. For any structures known to contain ACMs that will be renovated and/or demolished prior to transfer, the DON shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements. Prior to transfer of any structure constructed before October 1988, scheduled for renovation and/or demolition, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by the DON. This requirement can be waived if an architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building material, and to the best of their knowledge, no ACMs were used as a building material. Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws. Any renovation and/or LBP abatement activities on residential units on the project site shall be conducted in accordance with all applicable federal, state, and local regulatory requirements. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to public health and safety. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

c) A regional educational campus is planned on the west side of the former MCAS El Toro site. The campus could support both corporate and public educational and training facilities (research and development) with ancillary retail, lodging and housing uses. These facilities will likely store, use and transport some hazardous materials as well as generate some hazardous waste. Typical hazardous materials/waste will likely consist of, but not be limited to: oils and petroleum products, paints, solvents, pesticides and herbicides, and VOC air emissions. These substances are regulated and controlled

through federal, state and local regulations governing the storage, handling, transportation and manifesting of hazardous materials and wastes. None of these hazardous materials are considered atypical for research and development purposes, and should not represent a significant risk to people residing and working within one-quarter mile of the proposed project area. Therefore, the proposed project is not anticipated to result in a significant impact related to hazardous emissions or materials within one-quarter mile of a proposed school. This issue is not considered a significant impact. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to public health and safety. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

d) The FEIR noted that IRP Sites 3, 16 and 24 may be conveyed by the DON with temporary restrictions on land uses that not appropriate for these parcels. These restrictions represent potentially significant impacts that require mitigation to reduce to below a level of significance. Consequently, per the Final EIR, prior to transfer of these parcels to the City of Irvine, the City shall receive from the DON with the concurrence of the appropriate regulatory agencies a statement that the "Action Required" IRP Site 3 is to be conveyed for restricted use and that all institutional controls have been identified and implemented. The City of Irvine will adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area, indicating location, acreage, and types of land use within the Planning Area. As stated under Section 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.

Prior to transfer, if the DON chooses to impose temporary restrictions on the use of Sites 16 and 24 pending adequate remediation of groundwater, the City of Irvine shall receive from the DON a statement of temporary restrictions on the use of the sites and the release of the sites for unrestricted use following implementation of adequate remediation of groundwater. The City of Irvine shall adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Section 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to public health and safety. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

e) and f) The proposed project is a nonaviation plan for the former military installation. The absence of aviation uses on the site eliminates the risk of aviation accidents. Additionally, the project site is not located in the vicinity of a private airstrip. These issues are considered less than significant. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to public health and safety. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

g) There is a minimal impact as a result of changes that would be necessary to current emergency response and evacuation plans. Following annexation, the City of Irvine would assume responsibility for the project area and would need to revise its existing emergency response and evacuation plans. The land use changes associated with the proposed project would also require revisions to the Orange County Emergency Plan. Currently, the project site is designated a potential emergency response staging area for fixed-wing aircraft and emergency response equipment. The implementation of a nonaviation plan for the project area would remove the site as a potential emergency response staging area for fixed-wing aircraft. Two other sites in the County, the Los Alamitos Armed Forces Reserve

Center in Los Alamitos and Mile Square Regional Park in Fountain Valley, would remain designated emergency staging areas. Portions of the proposed project area could remain available to nonaviation emergency response equipment. Therefore, the proposed project is not expected to interfere with emergency response and evacuation plans once they are revised and would not result in a significant impact related to emergency response and evacuation plans. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to public health and safety. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

h) There is a potential impact resulting from exposure of people and structures to wildland fires, as identified in the FEIR. The open space/recreational areas located in the northeastern portion of Planning Area 51 would be exposed to the highest level of fire risk from wildfires because these areas and adjacent areas are currently defined as having high risk for wildland fires. The proposed project would result in an increase in both population and structures adjacent to this high fire risk area and the impact is considered significant. Additionally, the City has no record of construction of existing structures on the site. Reuse of existing structures would require the City to inspect the building for conformance to fire life safety code requirements. This is a potentially significant impact requiring mitigation to reduce the impact to below a level of significance.

To this end, the FEIR requires that the Community Development Department, in coordination with the Orange County Fire Authority (OCFA), shall be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wildland fire hazards would be subject to OCFA Guidelines for "Development Within and Exclusion from Very High Fire Severity Zones" and "Fuel Modification Plans and Maintenance." Additionally, all demolition, renovation, and construction activities in the project area would be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the proposed project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.

Additionally, prior to issuance of occupancy permits of any existing structure on the project site, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.

Prior to the issuance of a grading permit, the landowner/applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan would be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director of Community Development of the City of Irvine in a timely manner.

Finally, the City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells located on the former military installation in a geographic information systems database (GIS). The City would review all permit applications on the former military installation for monitoring well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to monitoring wells would be limited to authorized personnel. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to public health and safety. The

Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XIII. PUBLIC SERVICES AND FACILITIES. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire and emergency medical services?			✓	
ii. Police services?			✓	
iii. Schools?			✓	
iv. Parks and Recreation?			✓	
v. Other public facilities?			✓	
b) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur?			✓	
<p>Discussion:</p> <p>a) As outlined in the Orange County Great Park FEIR (certified May 27, 2003), the general significant impacts associated with the construction and operation of public facilities, including fire protection, police protection, schools, and parks/recreation, have been addressed within the FEIR under other specific environmental issue sections (e.g., Transportation/Traffic, Air Quality, Land Use/Planning, etc.). These mitigation measures would be applicable to any new construction and operation of facilities to serve new growth in the northern portion of the City of Irvine. The need for new public facilities would be mitigated by using existing City standards. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to public services and facilities. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.</p> <p>b) Future development proposed under the FEIR would result in additional population growth and an increased demand for park and recreational facilities. A significant impact is not noted for existing parks and recreational facilities, however, as the FEIR would provide new parks and recreational facilities that are in excess of the City of Irvine's adopted standards for parks and recreation. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to public services and facilities. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.</p>				

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XIV. TRANSPORTATION/TRAFFIC. Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?		✓		
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?		✓		
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?			✓	
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			✓	
e) Result in inadequate emergency access?			✓	
f) Result in inadequate parking capacity?			✓	
<p>Discussion:</p> <p>a) and b) As identified in the Orange County Great Park FEIR (certified on May 27, 2003), implementation of the project would cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., resulting in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on road, or congestions at intersections) in the 2007, 2025, and post-2025 scenarios.</p> <p>Locations experiencing peak hour deficiencies and significantly impacted by the project have been evaluated in the FEIR to determine necessary improvements to provide acceptable levels of service in accordance with the City of Irvine and the standards of adjacent jurisdictions. Project mitigation in the form of (1) constructing new on-site arterial highways, (2) constructing new off-site roadway improvements, and (3) participating on a fair share basis to needed off-site freeway/tollway ramp improvements, have all been identified in the FEIR.</p> <p>The FEIR presents a multi-phase analysis of the potential traffic-related impacts that would be anticipated to occur under the proposed project's network and land use concepts. The following mitigation measures are to be employed to reduce the significant transportation impacts to below a level of significance. As the planning process for the project proceeds, and the land use plan becomes more defined and refined, additional analyses would be required to determine the cost, assign responsibility, and refine the phasing of mitigation measures.</p>				

Mitigation Measure Tran1:

Prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs. The primary purpose of this mitigation measure is to reduce traffic, air quality and noise impacts. Should annexation into Spectrumotion not be approved, the landowner or subsequent project applicant shall develop and implement a similar transportation management plan containing the elements and meeting the criteria described below:

Transportation Management Plan (TMP)

The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for the Great Park Project. This document summarizes the key elements of the TMP.

1.0 Introduction

The purpose of this document is to provide an outline for a comprehensive TMP for the Great Park. This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.

It is the intent to annex Planning Area 51 and a portion of Planning Area 35 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.

In the event that annexation of PAs 51 and 35 into Spectrumotion is not approved, a TMP similar to that provided by Spectrumotion will be implemented. This document sets forth the components of the TMP should it be necessary.

2.0 Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

- **New Hire Orientation:** Inform newly hired employees of commuting services available to them.
- **Public Transportation Pass Sales:** Provide a central location for purchase of passes to available transit services ((i.e., OCTA buses, Metrolink, Amtrak, etc.).
- **Vanpool and Carpool Formation Assistance:** Perform all of the administrative work necessary to establish van pools and car pools.
- **On-site Promotions:** Hold rideshare promotions at work sites and assist in employer assistance promotions.
- **Telecommuting/Alternative Work Schedule Consulting:** Assist employers in developing and implementing a telecommuting or alternative work schedule program.
- **Personalized Commute Consulting:** Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.
- **Website:** Maintain a website with all of their program information available.
- **Rideshare Promotions:** Conduct high visibility rideshare promotions as a means to advertise its

services.

- Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.
- Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.

3.0 Transportation Management Plan Implementation

As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Great Park. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.

Mitigation Measure Tran2:

Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of this EIR.

Mitigation Measure Tran3:

Prior to issuance of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the project traffic study (Urban Crossroads, December 2002) to maintain satisfactory levels of service as defined by the City's General Plan, based on thresholds of significance, performance standards, and methodologies used in this EIR, Orange County Congestion Management Program, and established in the transportation system/infrastructure fee program described in Mitigation Measure Tran 2 above.

Mitigation Measure Tran4:

Prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated traffic forecasts. The updated traffic study will evaluate the cumulative impact of the subject map and all previously approved or concurrently submitted maps. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City approved traffic study scope of work. The landowner or subsequent project applicant shall construct, bond for, or enter into a funding agreement for necessary improvements identified in the updated traffic study and/or participate in the City fee program (Tran 2 above) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of this EIR.

Traffic signals that are on-site or directly related to the Great Park development will be installed as warranted through the mitigation implementation plan process.

Mitigation Measure Tran5:

In conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the following actions:

1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-tollway ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in this EIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines.

2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency.

3. The landowner or subsequent project applicant shall enter into an agreement with the City prior to recordation of the first final map for each Master Tentative Map or equivalent to establish the method and timing of payment of the identified percentage responsibility.

The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or funding participation in a regional transportation improvement fee program, if adopted.

Mitigation Measure Tran6:

The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.

Mitigation Measure Tran7:

Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-compete clause or any similar agreement restricting a public agency's authority to construct improvement.

Mitigation Measure Tran8:

Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of any building permits within the base property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdiction to amend the Orange County Master Plan of Arterial Highways. Marine Way, Trabuco Road from the SR-133 tollway to College Road, and Y Street should be included on the MPAH.

The Orange County Great Park Redevelopment Plan does not propose any modifications to the Overlay Plan that would require additional environmental documentation pertaining to transportation/traffic. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the Orange County Great Park Final EIR for this environmental category.

c) The proposed project would not result in an impact to air traffic patterns associated with increased air traffic or the location of the development. No impact associated with air traffic would occur. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to transportation/traffic. The Orange

County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

d) The proposed project is intended to reduce incompatible uses and improve the street system in the area in accordance with local, regional, and State agency engineering requirements. No impact associated with increased hazards due to design features would occur. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to transportation/traffic. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

e) The existing and proposed roadway system would provide adequate emergency access to all uses on-site during all phases of the project, and would not affect off-site emergency access. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to transportation/traffic. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

f) The proposed project would not result in inadequate parking capacity as all new development would be required to provide parking in accordance with the City's parking requirements and standards per given land use. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to transportation/traffic. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XVI. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			✓	
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing significant environmental effects?		✓		
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?		✓		
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			✓	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?		✓		
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?		✓		
g) Comply with federal, state, and local statutes and regulations related to solid waste?		✓		
h) Result in substantial adverse physical impacts associated with the provision of new or physically altered energy and communication transmission facilities, need for new or physically altered energy and communication transmission facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable levels of service?		✓		
i) Result in the use of substantial amounts of fuel and/or energy?			✓	

Discussion:

a) The proposed project would not result in the exceedance of the Irvine Regional Water District's (IRWD) capacity to treat wastewater emanating from the project site. The IRWD is regulated by law to treat wastewater consistent with the requirements and standards of the Regional Water Quality Control Board. No significant impact is identified for this issue. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to utilities and service systems. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

b) through e) The proposed project would require the expansion of potable water facilities, stormwater conveyance systems, and wastewater treatment facilities to increase transmission capacity. The specific environmental impact of constructing new potable water facilities that would be needed to serve the proposed project cannot be determined at this level of analysis as the site-specific plans for the installation of the potable water system have not been prepared. However, the general impacts associated the construction and operation of public utilities and service systems have been addressed in the Orange County Great Park FEIR (certified on May 27, 2003), and include the construction and operation of potable water facilities, stormwater conveyance systems, and wastewater treatment facilities. Mitigation measures required for any significant impacts identified in other sections of the FEIR (i.e., Transportation/Traffic, Air Quality, Land Use/Planning, etc.) would apply to future construction and operation of potable water facilities, stormwater conveyance systems, and wastewater treatment facilities. Project-level environmental review, at the time that specific development plans have been prepared, would also be required. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to utilities and service systems. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

f) and g) The Orange County Great Park FEIR (certified on May 27, 2003) notes that the project site may contain solid waste unsuitable for recycling and reuse. Also, the proposed project may generate solid waste as a result of demolition, operation of proposed land uses, and landscape maintenance. These issues represent potentially significant impacts that require mitigation to reduce to below a level of significance. As outlined in the FEIR, it is anticipated that much of the solid waste resulting from the demolition, dismantling, or other deconstruction of the aged structures and property, including but not limited to buildings and runways, are contaminated with lead-based paints, asbestos-containing materials, or other materials that may render it unsuitable for recycling and reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings shall be submitted to the City of Irvine Community Development Department. The City of Irvine shall confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.

If it is determined by the technical evaluation that the material is contaminated and prohibited from being recycled by ordinary means, a further evaluation shall be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as "waste-to-energy" (WTE) plants.

For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant shall submit a written plan to the City and implement such plan to ensure that 75 percent of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.

For that solid waste which the technical study deems to be suitable for recycling the project applicant

shall submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75 percent of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180. ("Recycling" does not include transformation, as defined in Public Resources Code Section 40201.)

Finally, to ensure ongoing compliance with these mitigation measures, the project applicant shall be required to submit solid waste tonnage reports to the City of Irvine on City-approved forms, accompanied by "weight ticket" receipts from state-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.

For green waste, the project applicant shall submit a written plan to the City and implement such plan to ensure that the green waste material generated by the landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50 percent of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to utilities and service systems. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

h) and i) As outlined the Orange County Great Park FEIR (certified on May 27, 2003), the specific environmental impact of constructing new energy and communication transmissions facilities that would be needed to serve the proposed project cannot be determined at this level of analysis as site-specific plans have not been prepared. However, the general significant impacts associated with the construction and operation of the public facilities has been addressed in the FEIR. No significant impact is anticipated related to the substantial use of fuel and/or energy sources by the Overlay Plan. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation pertaining to utilities and service systems. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

Issues:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XVII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	✓			
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	✓			
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	✓			
<p>Discussion: a) The proposed project has the potential to degrade the quality of the environment by possibly resulting in significant and unavoidable impacts to agricultural resources, air quality, housing and population, and transportation/traffic. The project would not substantially reduce the habitat of a fish or wildlife species or cause a fish or wildlife population to decrease below self-sustaining levels; nor would it eliminate a plant or animal community or eliminate important example of major periods of California history or prehistory. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.</p> <p>b) The 2003 FEIR analyzed cumulative effects of the Great Park Plan using the Center for Demographic Research's Orange County projections (OCP-2000). This cumulative analysis took into consideration buildout of local and regional general plans as well as population forecasts for the County of Orange and the region as a whole. Major projects included within the buildout assumptions and this cumulative analysis include: Eastern Transportation Corridor (ETC); Alton Parkway Extension; Foothill Transportation Corridor North (FTC); Saddleback Meadows; Foothill Aliso Commercial Center; Natural Community Conservation Plan (NCCP); MCAS Tustin Reuse Plan; James A. Musick Facility; Planning Area 17; Planning Area 27; Planning Area 40; Northern Sphere; Woodbridge General Plan Amendment (Planning Area 15); and the Irvine Ranch Land Reserve.</p> <p>Since certification of the FEIR, additional regionally significant projects have continued to come forward that should be considered in the cumulative analysis of the Great Park Redevelopment Plan. Most of these projects share a common trend, replacing employment generating uses such as commercial and industrial uses with a variety of residential products. For example, projects in Irvine Planning Areas 1, 2, 9, 18, 33, 34, and 39 would reduce non-residential development intensity by about 5 million square</p>				

feet and transfer that intensity into the development of approximately 12,000 residential units. The City of Lake Forest is also proposing removing nearly 800 acres of land ("Opportunities Areas") currently zoned for business and industrial uses for new residential uses and public facilities such as a sports park and community center. Lake Forest's proposal would allow development of about 5,415 new residential dwelling units in place of the previously planned commercial and industrial uses.

Residential areas generally generate less traffic. For example, in the Lake Forest Opportunities areas, the proposed land uses would generate 72,816 average daily trips, whereas the previous land uses would have generated 152,790. Less traffic generally means less air quality and noise impacts. Additionally, because the Orange County Subregion is exceptionally "jobs rich and housing poor" and is projected to remain so, an increase in residential dwelling units versus employment-generating land uses helps improve the region's job/housing ratio. A better balance between jobs and housing in a region also helps reduce vehicular miles traveled and associated air quality and noise impacts. Based on this, the cumulative analysis in the FEIR assumed a worse scenario than the current cumulative setting suggests.

The 2025 and post-2025 transportation/traffic analysis contained in the Orange County Great Park FEIR (certified May 27, 2003) assesses the traffic impacts of all cumulative development anticipated by the year 2025 and beyond. As shown in the FEIR, all intersections and roadway/freeway/tollway ramp segments would operate at acceptable levels of service with the existing and proposed improvements. However, it has been assumed in the traffic analysis that the cumulative traffic impact of project traffic, along with other regional growth at the identified ramp and freeway locations, would be mitigated through a combination of regional programs that are the responsibility of other regulatory agencies. If these programs are not implemented by the agencies with the responsibility to do so, the cumulative freeway/tollway ramp impact would remain significant and unavoidable. This cumulatively significant impact remains significant and unavoidable despite mitigation incorporation outlined in the FEIR and the expected reduction in average daily trips associated with the transfer of non-residential uses to residential development currently proposed in Irvine and Lake Forest. The City of Irvine determined, in its adoption of a Statement of Overriding Considerations, that the economic, legal, social, technological, and/or other benefits of proposed project outweigh the unavoidable adverse environmental effects to cumulative transportation/traffic impacts. The Statement of Overriding Considerations was adopted by the City on May 27, 2003 and was supported by substantial evidence in the record.

As noted in the FEIR, air quality in the South Coast Air Basin (SCAB) does not comply with federal and state standards. Emissions due to project development would exceed South Coast Air Quality Management District threshold of significance for nitrogen oxide and reactive organic gases during construction, and for nitrogen oxides, reactive organic gases, carbon monoxide, and fine particulate matter during project operation. Consequently, as the proposed project would contribute pollutant emissions into a nonattainment air basin, a cumulatively significant air quality impact is noted. Similar to project-specific air quality impacts, no feasible mitigation measures exist to reduce this cumulative impact to below a level of significance as any project of substantial size would result in this impact. The City of Irvine determined, in its adoption of a Statement of Overriding Considerations, that the economic, legal, social, technological, and/or other benefits of proposed project outweigh the unavoidable adverse environmental effects to cumulative air quality impacts. The Statement of Overriding Considerations was adopted by the City on May 27, 2003 and was supported by substantial evidence in the record.

The encroachment of urban areas on agricultural lands is a long and continued trend in Orange County. As identified in the FEIR, project implementation would result in the loss of Prime Farmland, Unique Farmland, and Farmlands of Statewide Importance. In order to address the cumulative loss of agricultural lands within the City of Irvine, the City has established the Agricultural Legacy Program by retaining agricultural uses on the project site; however, the loss of the remaining agricultural land is considered a cumulatively significant impact. Even with incorporation of all feasible mitigation measures this impact remains significant and unavoidable. The City of Irvine determined, in its

adoption of a Statement of Overriding Considerations, that the economic, legal, social, technological, and/or other benefits of proposed project outweigh the unavoidable adverse environmental effects to cumulative agricultural resources impacts. The Statement of Overriding Considerations was adopted by the City on May 27, 2003 and was supported by substantial evidence in the record.

Based on future growth projections identified in the FEIR, the Orange County Subregion is forecasted to become increasingly job-rich and housing-poor over the next 20 years. However, recent cumulative projects in the region point to a trend of increasing housing development as evidenced by recent projects in Irvine and Lake Forest that would result in nearly 17,000 more housing units in the region. Despite this fact, the Overlay Plan adopted as part of the FEIR would substantially add to the employment generation characteristics of the City of Irvine and the region. As a result, the project-related employment would exacerbate the cumulative subregional jobs/housing imbalance, the cumulative population and housing impact remains significant and unavoidable. The City of Irvine determined, in its adoption of a Statement of Overriding Considerations, that the economic, legal, social, technological, and/or other benefits of proposed project outweigh the unavoidable adverse environmental effects to cumulative population and housing impacts. The Statement of Overriding Considerations was adopted by the City on May 27, 2003 and was supported by substantial evidence in the record. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

c) Please refer to the discussion in subsection "b" above for a summary of the significant and unavoidable impacts that remain after implementation of the proposed project. The Orange County Great Park Redevelopment Plan does not propose any modifications to the FEIR that would require additional environmental documentation. The Orange County Great Park Redevelopment Plan is consistent with the analysis and conclusions of the FEIR for this environmental category.

15. CEQA COMPLIANCE.

The Orange County Great Park Redevelopment Plan has been analyzed in this Initial Study/Environmental Checklist and the following environmental documents (which were prepared prior to this Initial Study/Environmental Checklist and are incorporated by reference):

- Orange County Great Park Final Environmental Impact Report. City of Irvine. Certified on May 27, 2003.
- Orange County Great Park Redevelopment Project – Redevelopment Plan. Irvine Redevelopment Agency. Dated March 8, 2005.

This Initial Study/Environmental Checklist has been prepared in compliance with the requirements for an Initial Study according to Section 15063 of the CEQA Guidelines.

16. SUMMARY OF FINDINGS.

The following findings are derived from the environmental review documented by this Initial Study/Environmental Checklist and the FEIR certified on May 27, 2003:

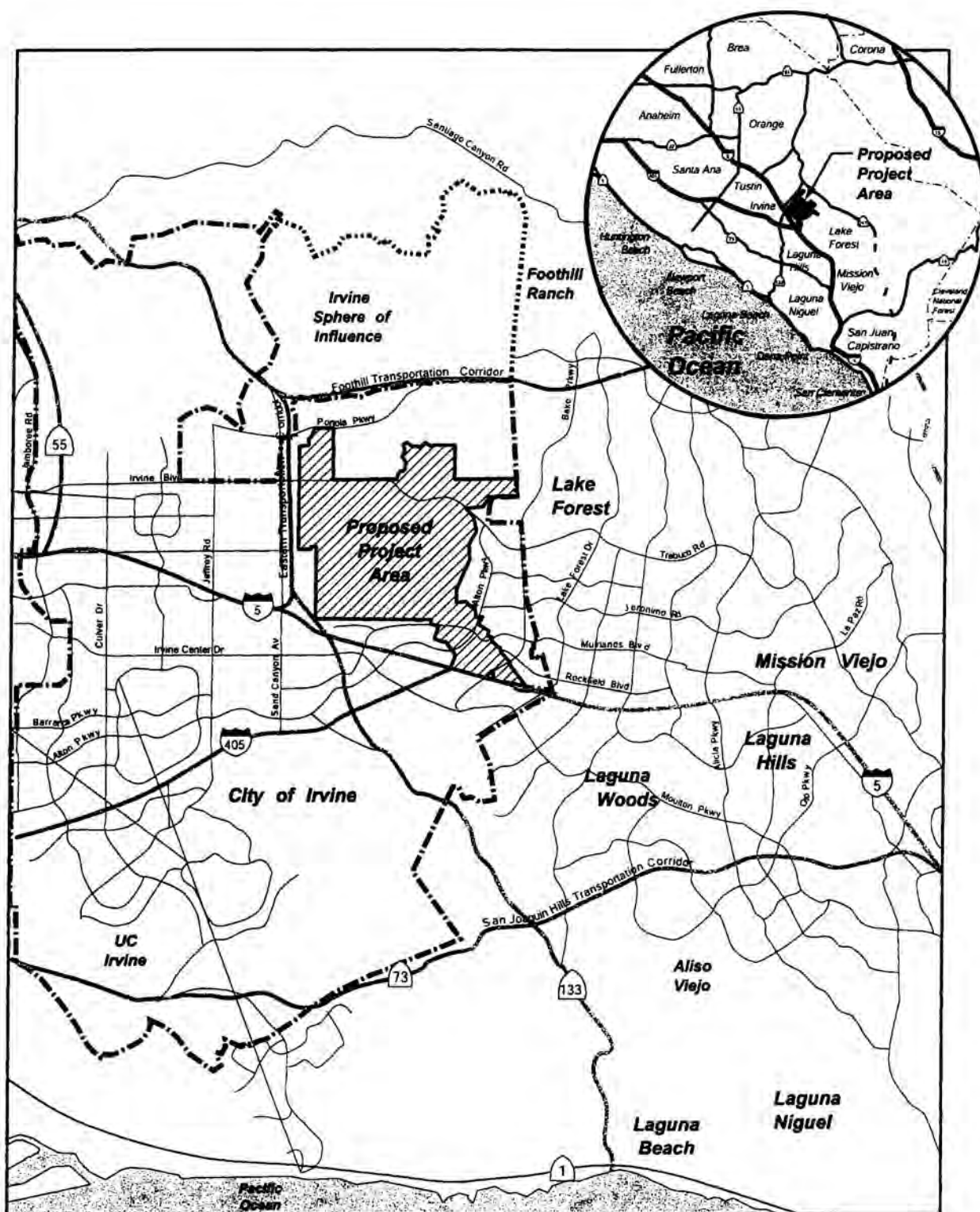
1. No substantial changes are proposed in the Orange County Great Park Redevelopment Plan, or with respect to the circumstances under which the Redevelopment Plan is to be undertaken as a result of the proposed activity, which will require important or major revisions in the FEIR;
2. No new information or substantial importance to the Orange County Great Park Redevelopment Plan has become available which was not known or could not have been known at the time the FEIR was certified as complete, and which shows that the Orange County Great Park Redevelopment Plan will have any significant effects not discussed previously in the FEIR, or that any significant effects previously examined will be substantially more severe than shown in the FEIR, or that any mitigation measures or alternatives previously found not to be feasible or not previously considered would substantially reduce or lessen any significant effects of the project on the environment;
3. No Negative Declaration, Subsequent EIR, or Supplemental EIR to the FEIR is necessary and/or required; an Addendum to the Orange County Great Park FEIR shall be prepared;
4. The implementation of the Orange County Great Park Redevelopment Plan will have no significant effect on the environment, except as identified and considered in the Orange County Great Park FEIR. No new or additional project-specific mitigation measures are required for this activity.

17. ENVIRONMENTAL ADMINISTRATOR DETERMINATION.

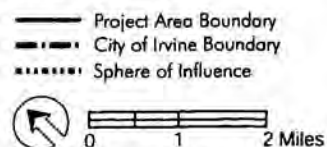
The initial study for this project has been reviewed and the environmental determination is hereby approved.



Barry Curtis, City of Irvine, Principal Planner



Source: P&D Consultants, 2005.



Regional and Vicinity Map

Figure 1



 Design Standards Overlay
 Redevelopment Agency Boundary

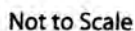
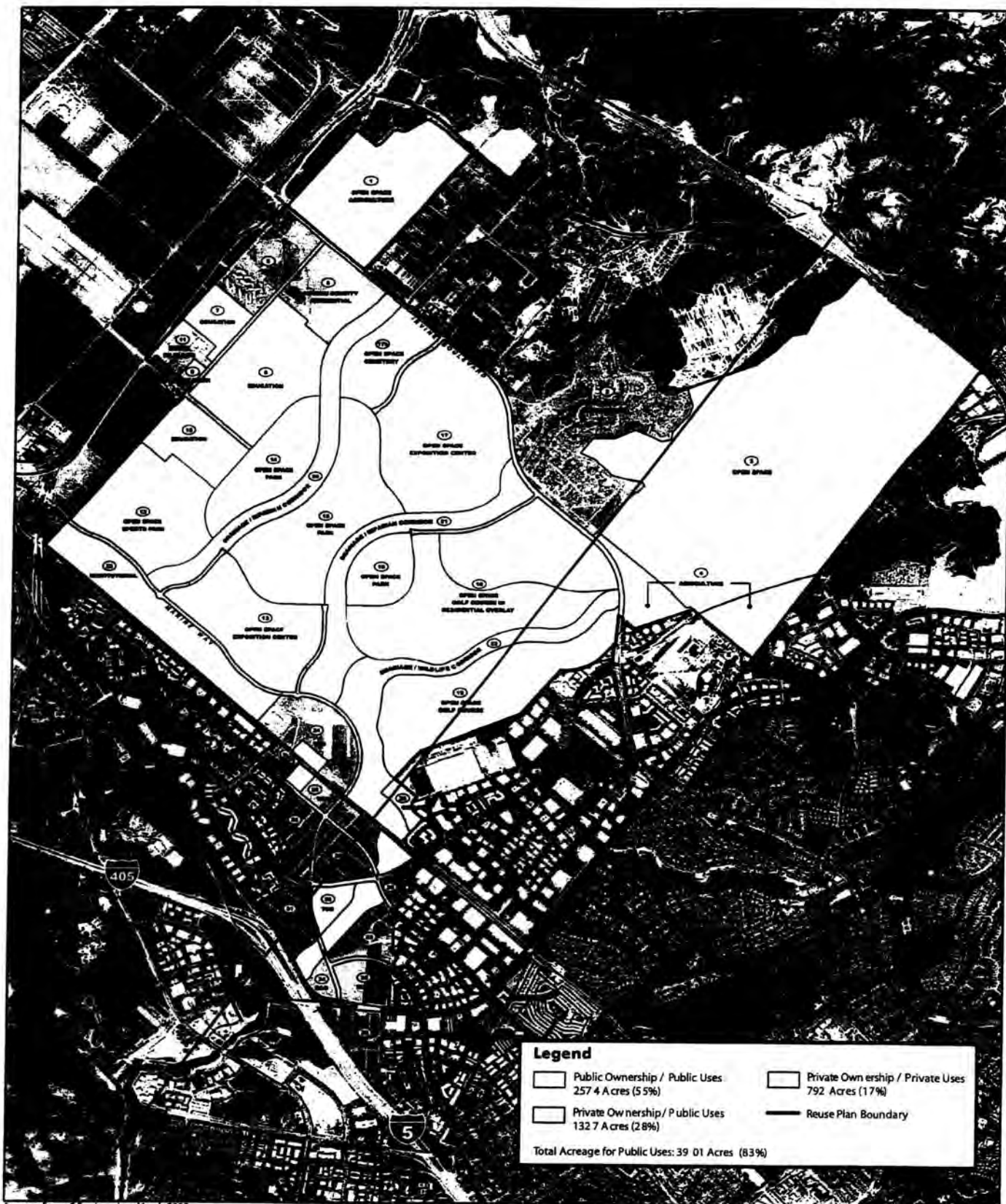


Figure 2



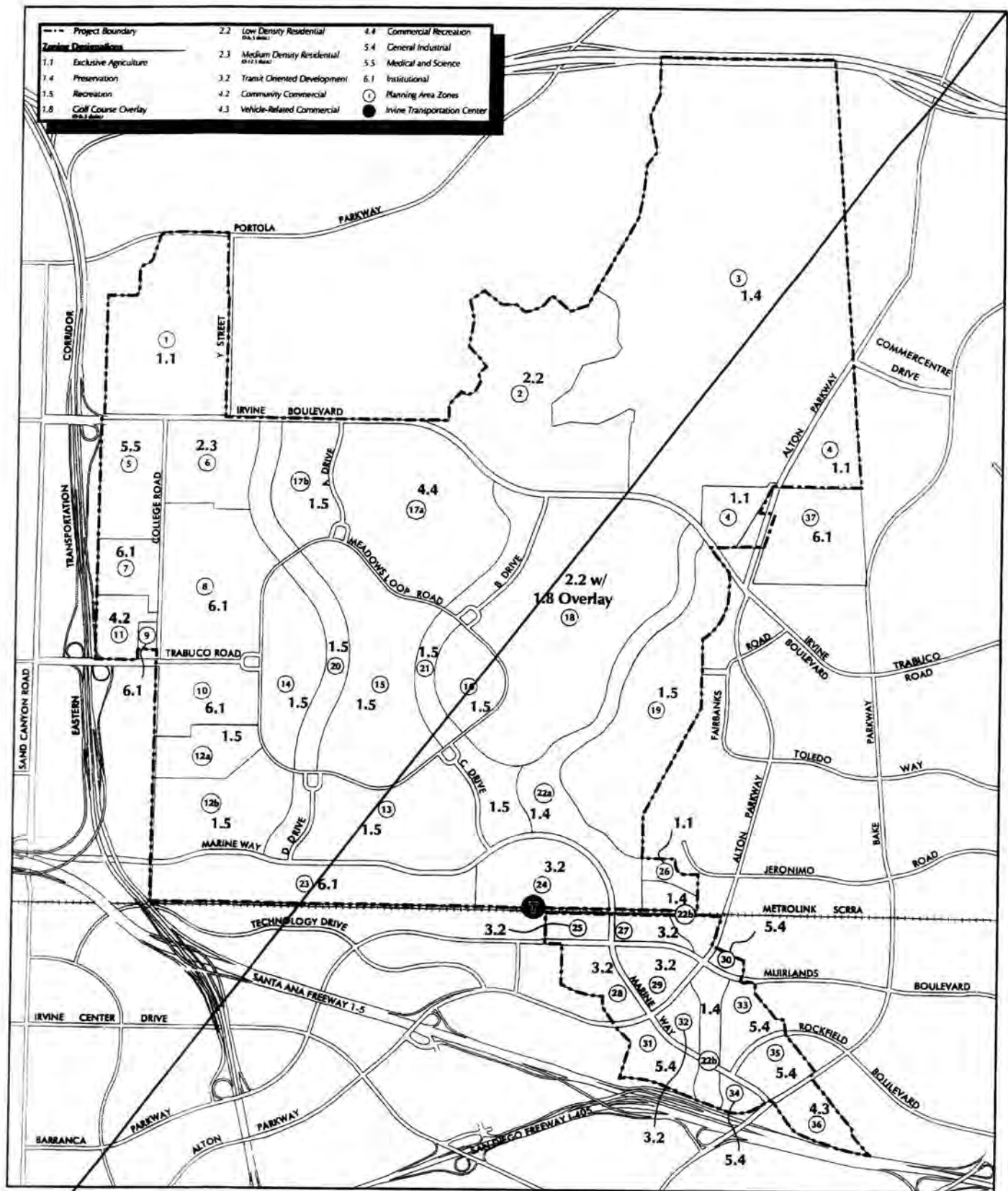
Source: Fusco Engineering, March 2005



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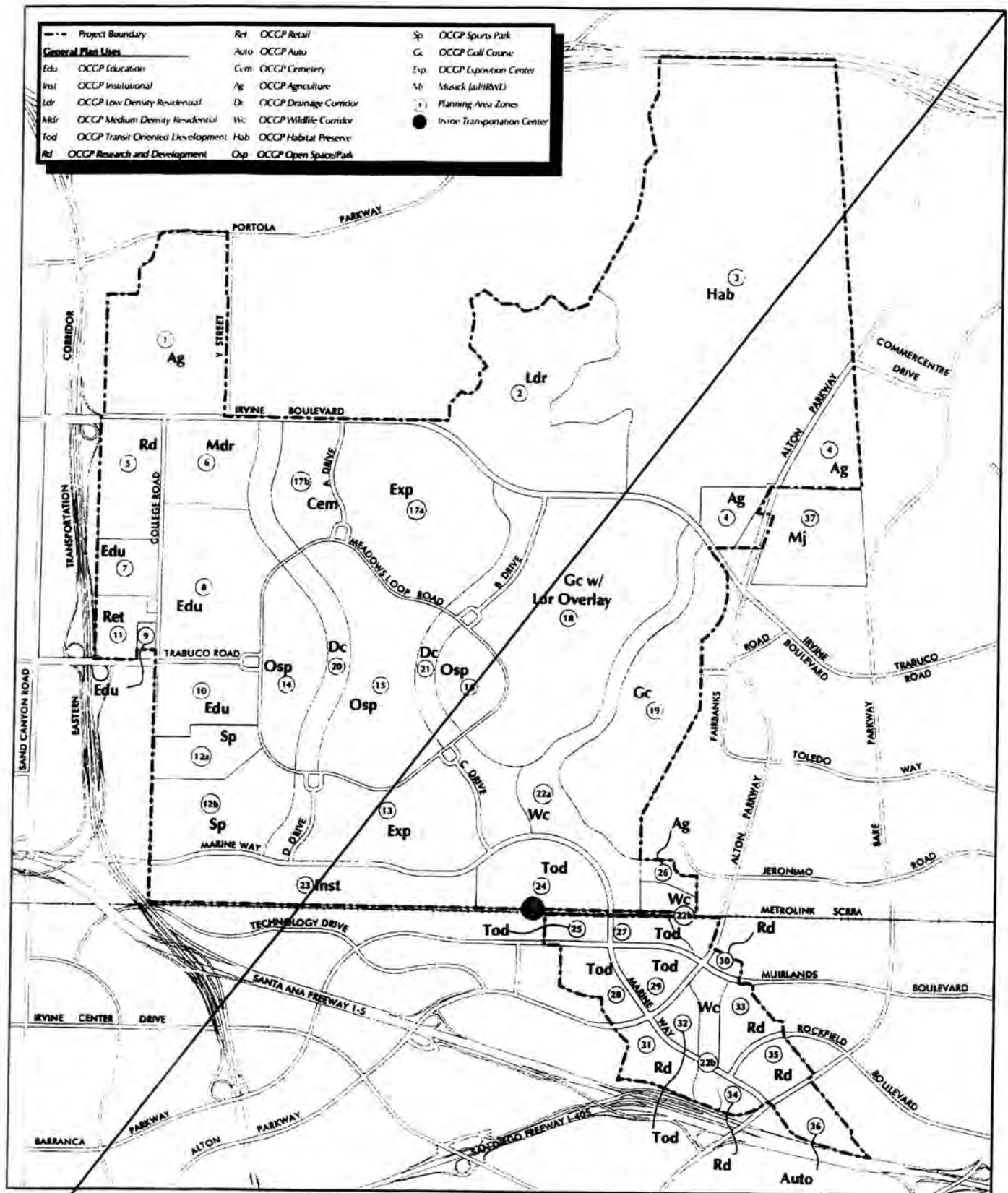
Orange County Great Park
Ownership and Land Uses

Figure 3



Orange County Great Park
Zoning Designations

Figure 5



Orange County Great Park
General Plan Land Uses

Figure 4

ATTACHMENT 2

**ORANGE COUNTY GREAT PARK FEIR – MITIGATION MONITORING
AND REPORTING PROGRAM**

**FINAL
ADDENDUM**

**ORANGE COUNTY
GREAT PARK
GENERAL PLAN
AMENDMENT AND
ZONE CHANGE**

SCH #2002101020

prepared for:



**CITY OF IRVINE
REDEVELOPMENT
DEPARTMENT**

Contact:
David Law, AICP,
Senior Planner

prepared by:

**THE PLANNING
CENTER**

Contact:
William Halligan, Esq.,
Vice President,
Environmental Services

SEPTEMBER 2006

**FINAL
ADDENDUM**

**ORANGE COUNTY
GREAT PARK
GENERAL PLAN
AMENDMENT AND
ZONE CHANGE**

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COI-14

SEPTEMBER 2006

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1. *EIR Addendum Summary*

1.1 **PURPOSE AND SCOPE**

This Initial Study/Addendum provides the basis for an addendum to the previously certified Final Environmental Impact Report (State Clearinghouse Number 2002101020) for the Orange County Great Park (OCGP) and serves as the environmental review of a proposal to adjust the boundary between the City and Heritage Fields properties, introduce limited revisions to the text and figures for Planning Areas 30 and 51, and to amend the zoning in the northwest portion of Planning Area 51 from the current land use zoning configuration of multiple zoning districts (e.g. residential, medical and science, institutional, community commercial) to a single mixed-used zoning district. This mixed-used zoning district is referred to as the Lifelong Learning District (LLD). This Addendum has been prepared pursuant to the provisions of the California Environmental Quality Act (CEQA), Public Resources Code Sections 21000 et seq., the State CEQA Guidelines, and the City of Irvine Local Guidelines for Implementing CEQA (Local CEQA Guidelines).

The analysis in this document discusses the adequacy of the OCGP Environmental Impact Report (EIR) to address the proposed General Plan Amendment 00416079-PGA and Zone Change 00416080-PZC. The proposed General Plan Amendment and Zone Change will incorporate minor adjustments to the boundary between the public and private areas of the OCGP, revisions to text and figures related to Planning Areas 30 and 51, and create a mixed-use zoning category called the Lifelong Learning District (LLD) within Planning Area 51 in the City of Irvine. The GPA also includes minor technical changes to the General Plan, as described in Section 2.3. The LLD would allow for a combination of residential, commercial, and educational uses that would promote and support a mixed-use environment. Specific uses that serve to enhance the cultural, education and recreational environment would be especially encouraged in the LLD. The land use intensity would be based on the currently allowed maximum residential units and non-residential square footage within the planning analysis zones (PAZs). The maximum intensity of development in the 8.1 Lifelong Learning District zone is stipulated as follows:

- 1,025 dwelling units
- 1,452,600 square feet of Institutional
- 1,000,000 square feet of Medical & Science
- 708,000 square feet of Commercial Recreation
- 225,000 square feet of Community Commercial
- 50,000 square feet of cemetery-related building space
- 40,000 square feet of elementary school.

1.2 **ENVIRONMENTAL PROCEDURES**

Pursuant to CEQA, the State CEQA Guidelines, and the City of Irvine CEQA Guidelines, the City's review of the proposed Initial Study/Addendum focuses on the proposed General Plan Amendment and Zone Change to determine if the project would cause a change in the conclusions of the OCGP EIR, and any change in circumstances or new information of substantial importance that would substantially change the conclusions of the OCGP EIR. This Addendum only relates to the proposed changes to the project including the creation of the Lifelong Learning District in the northwest portion of the site, revisions to text and figures related to Planning Areas 30 and 51, and minor boundary adjustments.

Pursuant to Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines, when an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for the project unless the lead agency determines, on the basis of substantial evidence, that one or more of the following conditions are met:



1. *EIR Addendum Summary*

- Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:
 - 1) The project will have one or more significant effects not discussed in the previous EIR or negative declaration.
 - 2) Significant effects previously examined will be substantially more severe than identified in the previous EIR.
 - 3) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives.
 - 4) Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.

Section 15164 of the State CEQA Guidelines states that an Addendum to an EIR shall be prepared “if some changes or additions are necessary, but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.” This Initial Study/Addendum reviews the changes proposed by the project and any changes to the existing conditions that have occurred since the OCGP EIR was certified. It also reviews any new information of substantial importance that was not known and could not have been known with exercise of reasonable diligence at the time that the OCGP EIR was certified. It further examines whether, as a result of any changes or any new information, a subsequent or supplemental EIR may be required. This examination includes an analysis of the provisions of Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines and their applicability to the proposed project. This Initial Study/Addendum relies on the attached Environmental Analysis, which addresses environmental checklist issues on a section-by-section basis.

The City of Irvine Environmental Checklist Form has been completed by the City and included in Section 3.0, *Environmental Checklist*. The Environmental Checklist Form is marked with the findings of the Redevelopment Director as to the environmental effects of the proposed project in comparison with the findings of the OCGP EIR certified in 2003. The checklist has been prepared pursuant to Section 15168(c)(4) of CEQA, which states that “where the subsequent activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR.”

Using that approach, the City of Irvine, the Lead Agency, determined that an Addendum to the previously approved OCGP EIR is the appropriate environmental clearance for the project application.

1. EIR Addendum Summary

1.3 PREVIOUS ENVIRONMENTAL DOCUMENTATION

The OCGP EIR was certified by the City of Irvine in May 2003. The project analyzed in the OCGP Program EIR consisted of the following actions: (1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; (2) Annexation of the unincorporated portion of Planning Area 35 (Irvine Ranch Water District Parcel); (3) General Plan Amendment and Zone Change for Planning Area 30; and (4) Approval of the form of a Development Agreement vesting approval of overlay uses and intensities in consideration for dedication of land for public purposes and for developing and funding certain infrastructure improvements and maintenance of the public uses by the purchaser/developer and subsequent landowners and funding for specific park, roadways, and other circulation facilities and infrastructure. Together, these actions establish the policy and legislative structure to guide the development of the former MCAS El Toro property.

The OCGP EIR mitigation measures are provided in the adopted Mitigation Monitoring Program included in Appendix A. The table includes:

- Mitigation number and a description of the action;
- Timing for implementation;
- Approving authority and reviewing agency(s), if any; and
- Method of compliance

The OCGP EIR and associated technical documents are on file at the City of Irvine, Redevelopment Department, located at 7000 Trabuco Road, Building 873, Irvine, California 92618.

1.4 ENVIRONMENTAL SETTING

The Orange County Great Park (which consists of City of Irvine Planning Areas 30 and 51) is located in the central portion of Orange County, approximately 45 miles southeast of Los Angeles. The project area is generally bounded by the Woodbury residential development to the west, future Portola Springs residential development to the north, Irvine Spectrum to the south, and the City of Lake Forest to the west. Other nearby local jurisdictions include: the Cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo, and Tustin. Specifically, the proposed Lifelong Learning District consists of Planning Area Zones (PAZ) 1, 5, 6, 7, 8, 9, 11, 17a and 17b, which are located in the northwest portion of Planning Area 51. Refer to Figure 2-7 for details of the PAZ.

The Irvine Transportation Center, a major multimodal transit center linking Orange County Transportation Authority (OCTA) bus, Metrolink commuter rail, and Amtrak rail services, is located adjacent to the Southern California Regional Rail Authority (SCRRA) Metrolink tracks, which bisect the project area and separate Planning Areas 30 and 51. The existing conditions within the project site include the California State University, Fullerton, Marine Memorial Golf Course, equestrian facilities, and agricultural and nursery operations. The OCGP EIR also describes interim activities that might occur on the site, including short-term use of the land or existing buildings on-site. Currently, there are offices occupied by the City of Irvine Redevelopment Department, Great Park Corporation (GPC), and Heritage Fields on-site. A day-care facility is located immediately adjacent to these office uses. Finally, a small portion of the existing runway has been removed within the southerly portion of PA 51.

Ownership of Planning Areas 30 and 51 has changed since certification of the OCGP EIR, including certain parcels that have been transferred to the Federal Aviation Administration, City of Irvine, County of Orange, and Heritage Fields, LLC, by the Department of Navy (DoN) or leased in furtherance of conveyance.



1. EIR Addendum Summary

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2. *Project Description*

2.1 **PROJECT LOCATION**

The Orange County Great Park, encompassing Planning Areas 30 and 51, is located northeast of the freeway junction at Interstate 5 (Santa Ana Freeway) and Interstate 405 (San Diego Freeway), within the City of Irvine. Figure 2-1 depicts the project location in a regional context and Figure 2-2 shows its local context.

Major roadways bordering the project are Sand Canyon Avenue to the northwest, Portola Parkway and Irvine Boulevard to the north, and Bake Parkway to the northeast. An aerial photograph of the project site and surrounding area is shown on Figure 2-3. The Irvine Transportation Center is situated adjacent to the SCRR Metrolink tracks, which traverse the site and separate Planning Areas 30 and 51. Surrounding the site are residential and nonresidential uses under construction to the north and west, open space to the northeast, and nonresidential and mixed land uses to the east and southeast within the City of Lake Forest and City of Irvine.

2.2 **PROJECT CHARACTERISTICS**

2.2.1 **Project Background**

On May 27, 2003, the City Council certified a Final Environmental Impact Report and adopted a general plan amendment and zone change to implement the development of the Orange County Great Park. In order to develop at the maximum intensities allowed in the Overlay Plan shown in the General Plan and zoning, the property owners entered into a development agreement, which required the dedication of land and the development or funding of infrastructure improvements in excess of the City's standard requirements, and the commitment to long-term maintenance of the public facilities.

In February 2005, Heritage Fields, LLC, purchased all four bid parcels through a U.S. Department of Navy/General Services Agency online auction process. Subsequent to the land purchase, the Great Park Corporation and Heritage Fields initiated their respective master design and development processes for the OCGP. To facilitate additional design options, both the Great Park Corporation and Heritage Fields, LLC, requested and the City initiated an amendment to the general plan and the zoning code to reconfigure the boundaries between the two properties. In addition, Heritage Fields has requested the creation of a new mixed-use zoning district called the 8.1/8.1A Lifelong Learning District. They have also proposed minor clarifications to the zoning text within Planning Areas 30 and 51. These requests will not result in any changes to the approved land use intensities or allowable uses within the Great Park/Heritage Fields site.



2. *Project Description*

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2. Project Description

Regional Location



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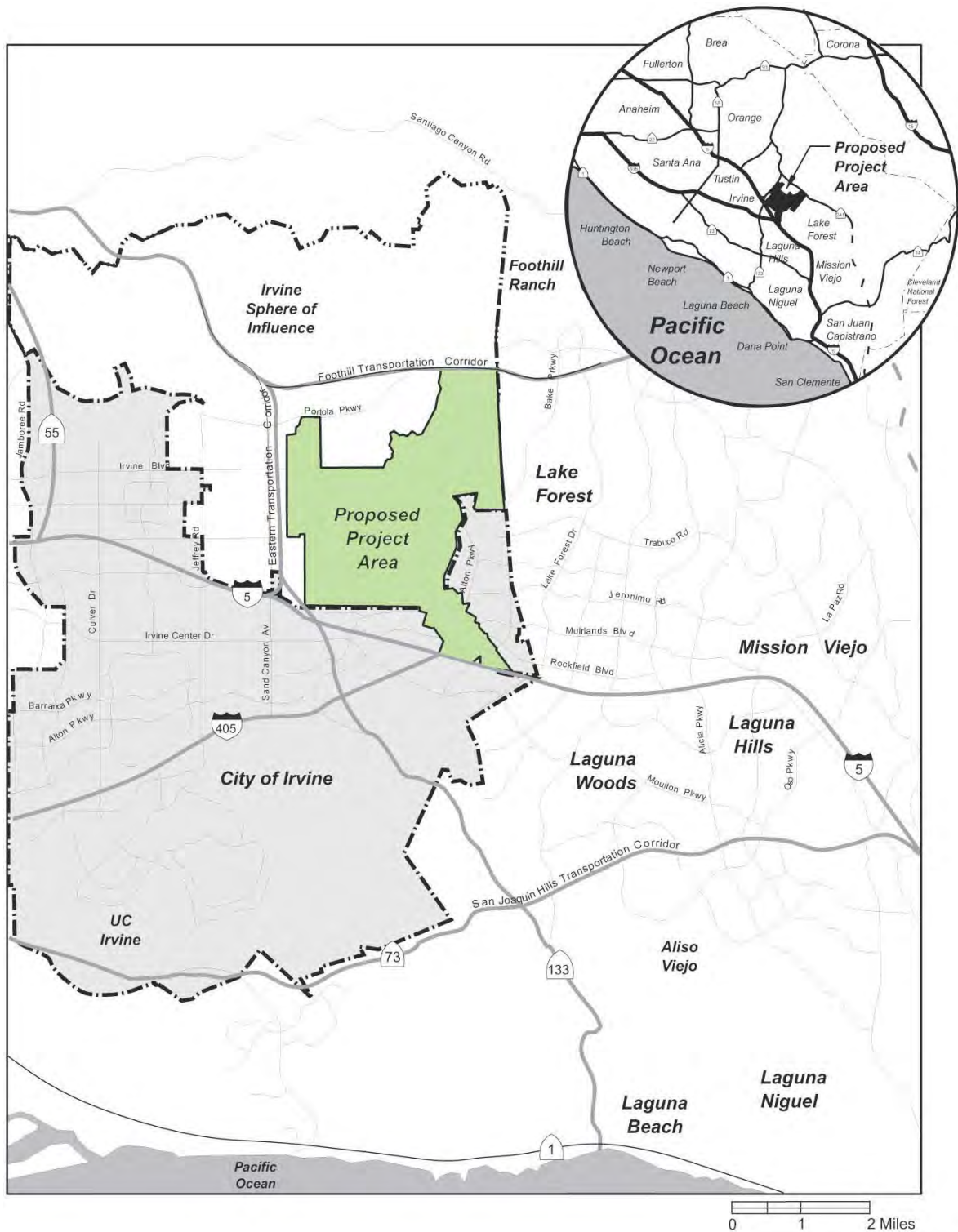


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2. Project Description

Vicinity Map

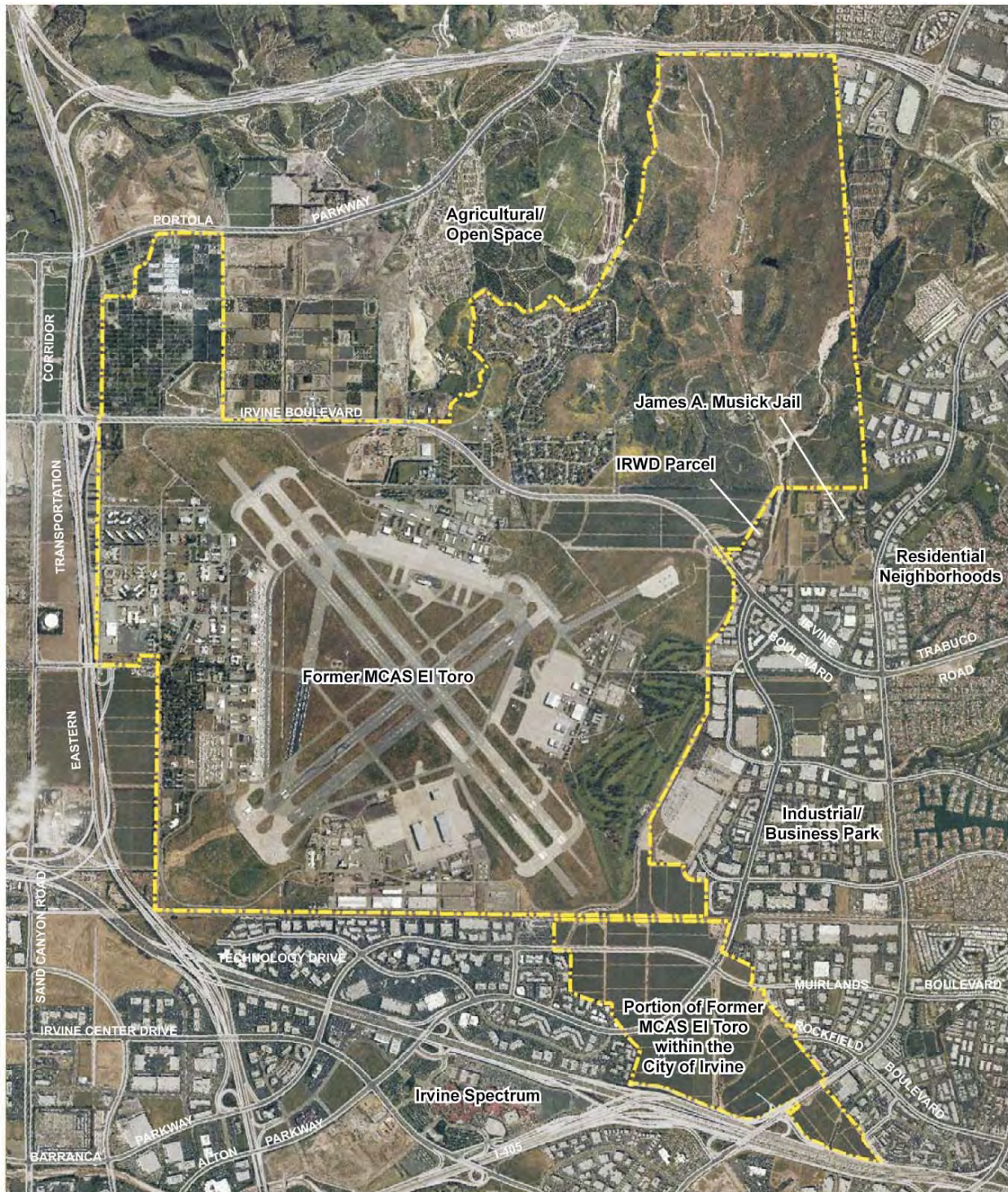


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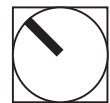
2. Project Description

Aerial Photograph



 Orange County Great Park

0 1,500



Source: EDAW

Addendum to the Orange County Great Park EIR

City of Irvine • **Figure 2-3**

2. *Project Description*

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2. *Project Description*

2.2.2 Project Components

According to the Great Park Development Agreement, the City of Irvine must initiate any requests to amend the General Plan and/or zoning within Planning Areas 30 and 51 (Great Park). The City, on behalf of Heritage Fields, LLC, is proposing to amend the zoning in the northwest portion of Planning Area 51 from the current land use zoning configuration of multiple zoning districts (e.g. residential, medical and science, institutional, community commercial) to a single mixed-used zoning district. This mixed used zoning district is referred to as the Lifelong Learning District (LLD). The LLD would allow the same type of land uses and intensities as currently allocated to this area, but under a single blended zoning district as compared to smaller multiple zoning districts. Heritage Fields is also proposing minor modifications to the zoning text in Planning Areas 30 and 51. These requests will not result in any changes to the approved land use intensities within the Great Park site. In addition, the Great Park Corporation and Heritage Fields are proposing minor changes to the boundaries between the Great Park and Heritage Fields properties.

On May 23, 2006, the City Council authorized staff to commence an analysis and environmental review of the Heritage Field's and the Great Park Corporation's request to revise the Orange County Great Park Overlay Plan (Revised Overlay Plan).

General Plan Amendment (00416079-PGA)

The City-adopted OCGP Overlay Plan shown in Figure 2-4 depicts the land use patterns and types initially envisioned for the Property. As shown on Figure 2-5, the Revised Overlay Plan creates a mixed used district referred to as the Lifelong Learning District (LLD), consistent with the proposed zoning for the property. The LLD would encompass a mix of residential and nonresidential land uses within the western portion of the OCGP community, and is envisioned as a unique urban setting that promotes and supports a mixed-use environment with an emphasis on cultural, sports, and recreational opportunities offered throughout the OCGP area.



The LLD would comprise of 1,025 residential units targeted for the senior, student and academic community and approximately 3,475,000 square feet of educational, civic, commercial, mixed-use, medical and science, and cemetery uses within an integrated urban setting. The 1,025 residential units in the proposed 8.1 Lifelong Learning District include 800 senior housing units, 165 ETHIC housing units and 60 faculty housing units. The proposed modifications will not result in any changes to the approved land use intensities for the project area.

The General Plan Amendment includes modifications to three elements as outlined below:

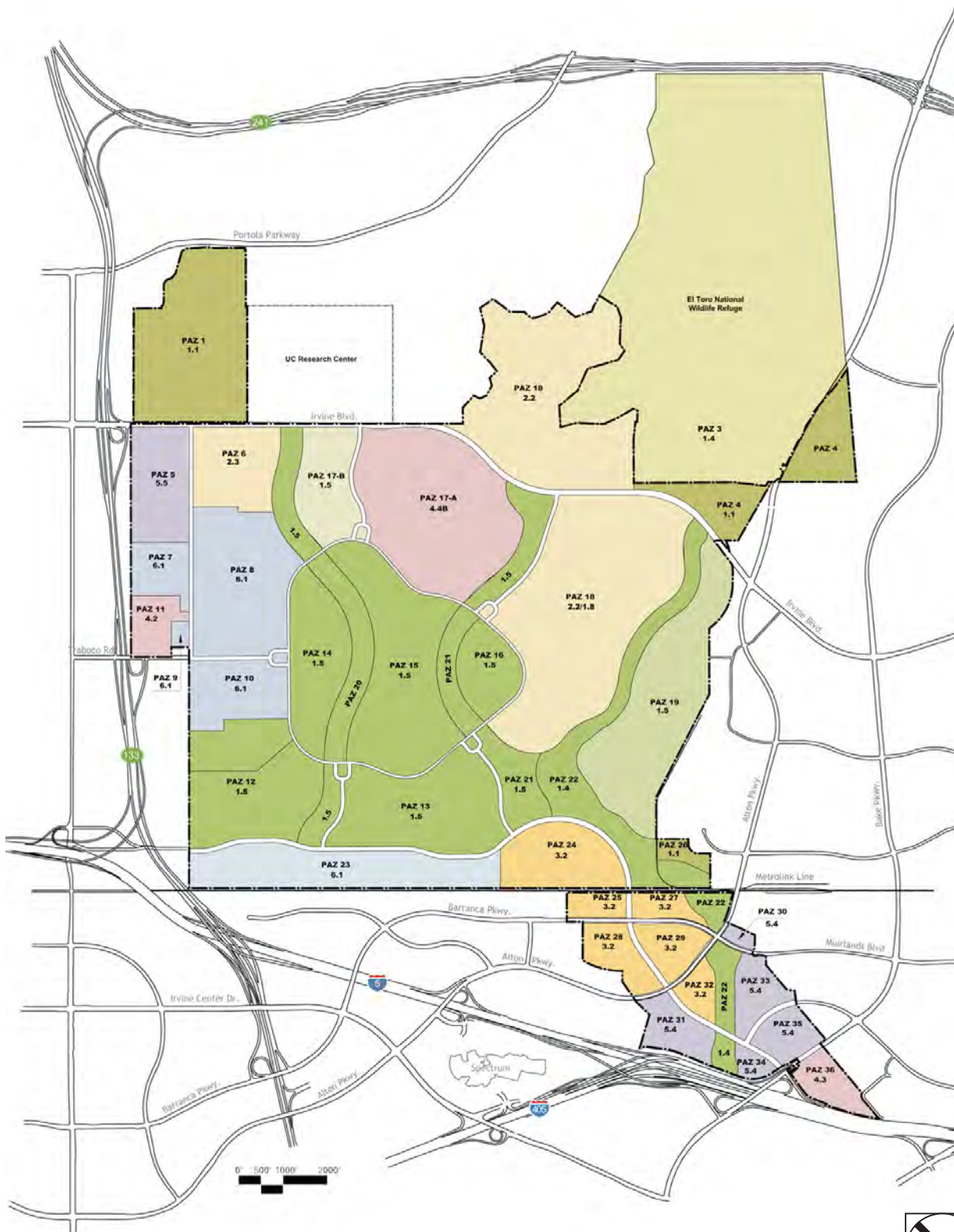
- 1) Modify the footnotes in Tables A-1, A-2, and A-5 of the Land Use Element in the General Plan to update the reallocation of land use intensities related to the creation of the new mixed-use zoning category - Lifelong Learning District.
- 2) Amend Figure A-3 (O) of the Land Use Element in the General Plan to reflect the proposed creation of the new mixed-use zoning category - Lifelong Learning District.
- 3) Amend Figures K-1 and L-2 in the General Plan to reflect the proposed boundary adjustments between the City of Irvine and Heritage Fields properties
- 4) Modifying Figure B-1 (Master Plan of Arterial Highway) of the Circulation Element of the General Plan to change the incorrect designation for Marine Way from a Major Highway to a Primary Highway.

2. *Project Description*

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2. Project Description

Existing Great Park Plan Overlay



Source: EDAW, Feb. 3, 2006

Addendum to the Orange County Great Park EIR

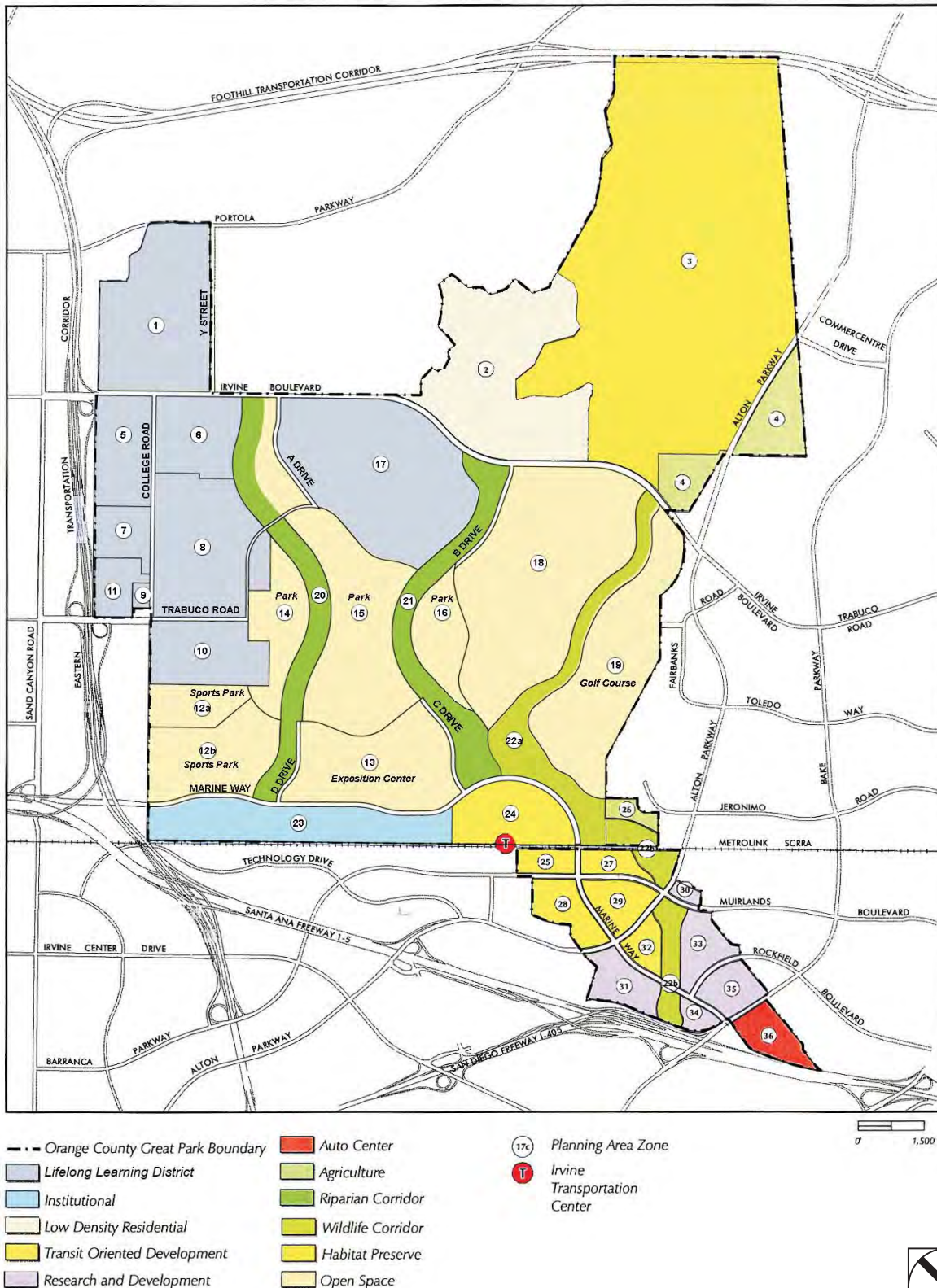
The Planning Center • **Figure 2-4**

2. *Project Description*

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2. Project Description

Proposed Great Park Overlay



2. *Project Description*

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2. *Project Description*

- 5) Amend Figure B-4 to modify the existing trail network to reflect the previously approved trail linkages as well as the inclusion of the known trail framework connections that will occur in conjunction with the build-out of Planning Areas 30 & 51.

Zone Change (00416080-PZC)

Figures 2-6 and 2-7 depict the existing and proposed zoning for Planning Areas 30 and 51, respectively. The project includes changes to Chapter 3-37, Zoning District Land Use Regulations and Development Standards; Chapter 9-30, Planning Area 31 Special Development Requirement; and Chapter 9-51, Planning Area 51 Special Development Requirement. Chapter 3-37 would be modified by adding a new section which would set forth land use regulations and development standards for the 8.1 and 8.1A Lifelong Learning District. The new district would apply to planning analysis zones (PAZs) 1, 5 through 11, and 17, as depicted in Figure 2-7.

The Zone Change request includes the following items:

- 1) Add a new zoning category, 8.1 Lifelong Learning District, to the list of zoning districts in Section 3-37-1 of the Zoning Code.
- 2) Modify Section 2-17-2 of the Zoning Code to add the new zoning category, 8.1 Lifelong Learning District, to the list of non-residential and residential developments that would require a master plan.
- 3) Modify Section 9-30 and 3-37-33 of the Zoning Code to add text related to interim uses, to update the parcels designated as 5.4 General Industrial to 5.4B General Industrial. Additional changes to section 9-30 include a development tracking and monitoring report, requirements for network trail connections, and language that subsequent traffic studies may be required by the Director of Public Works in the event that subsequent projects are found not to be in conformance with this zone change traffic study.
- 4) Revise Chapter 9-51 of the Zoning Code to update text and changes related to the proposed zoning category 8.1 Lifelong Learning District.
- 5) Amend the land use matrix in Section 3-3-1 of the Zoning Code to include the permitted and conditionally permitted land uses in the 8.1 Lifelong Learning District.



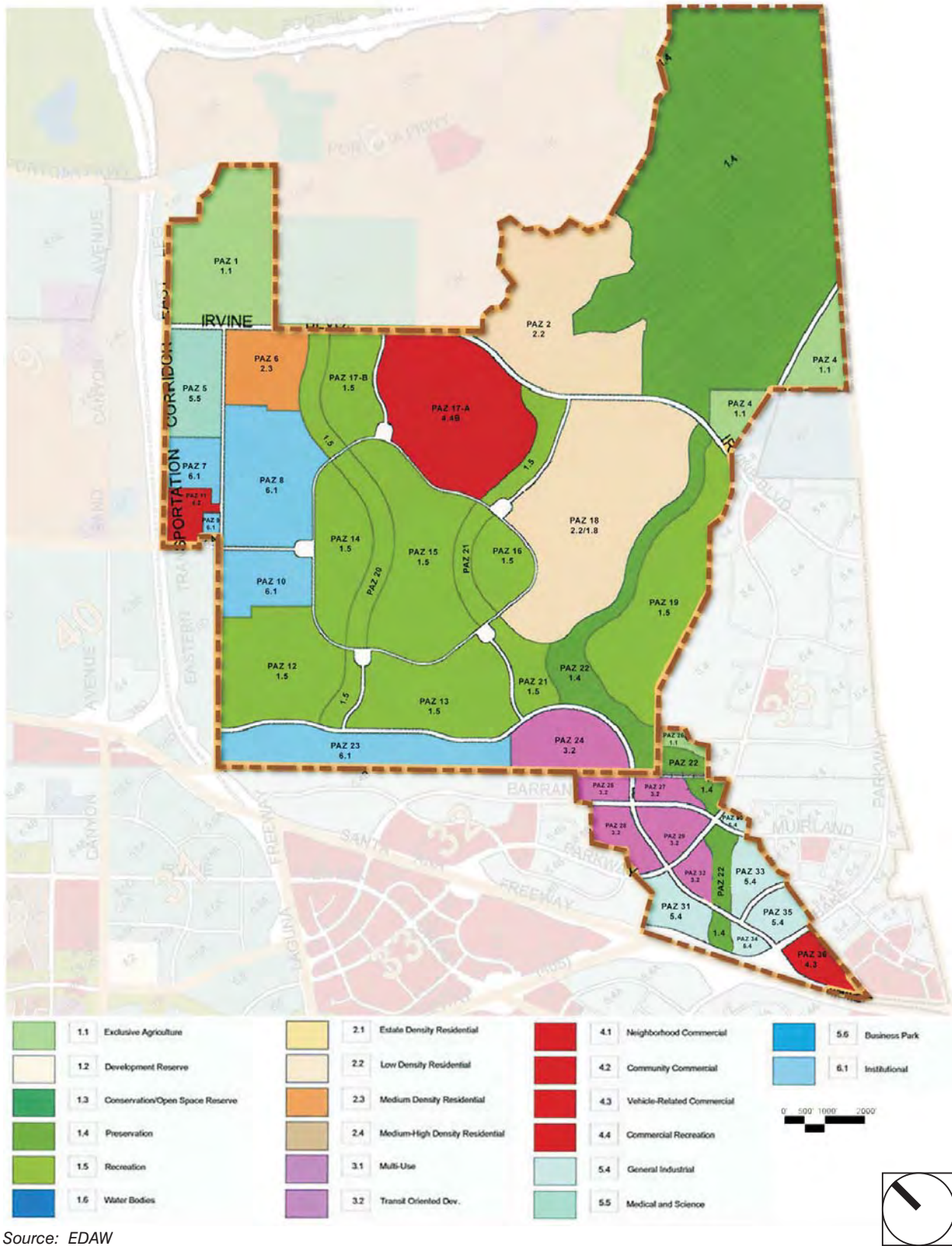
The proposed LLD, which would be assigned to land within PA 51 only, would not change the established land use intensity for residential and nonresidential uses within PA 51. Chapter 3-37 describes the intent of the district as a unique urban setting with a wide variety of land uses allowed on the same site consistent with the Great Park land use category as defined in the General Plan.

2. *Project Description*

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2. Project Description

Existing Zoning



Source: EDAW

Addendum to the Orange County Great Park EIR

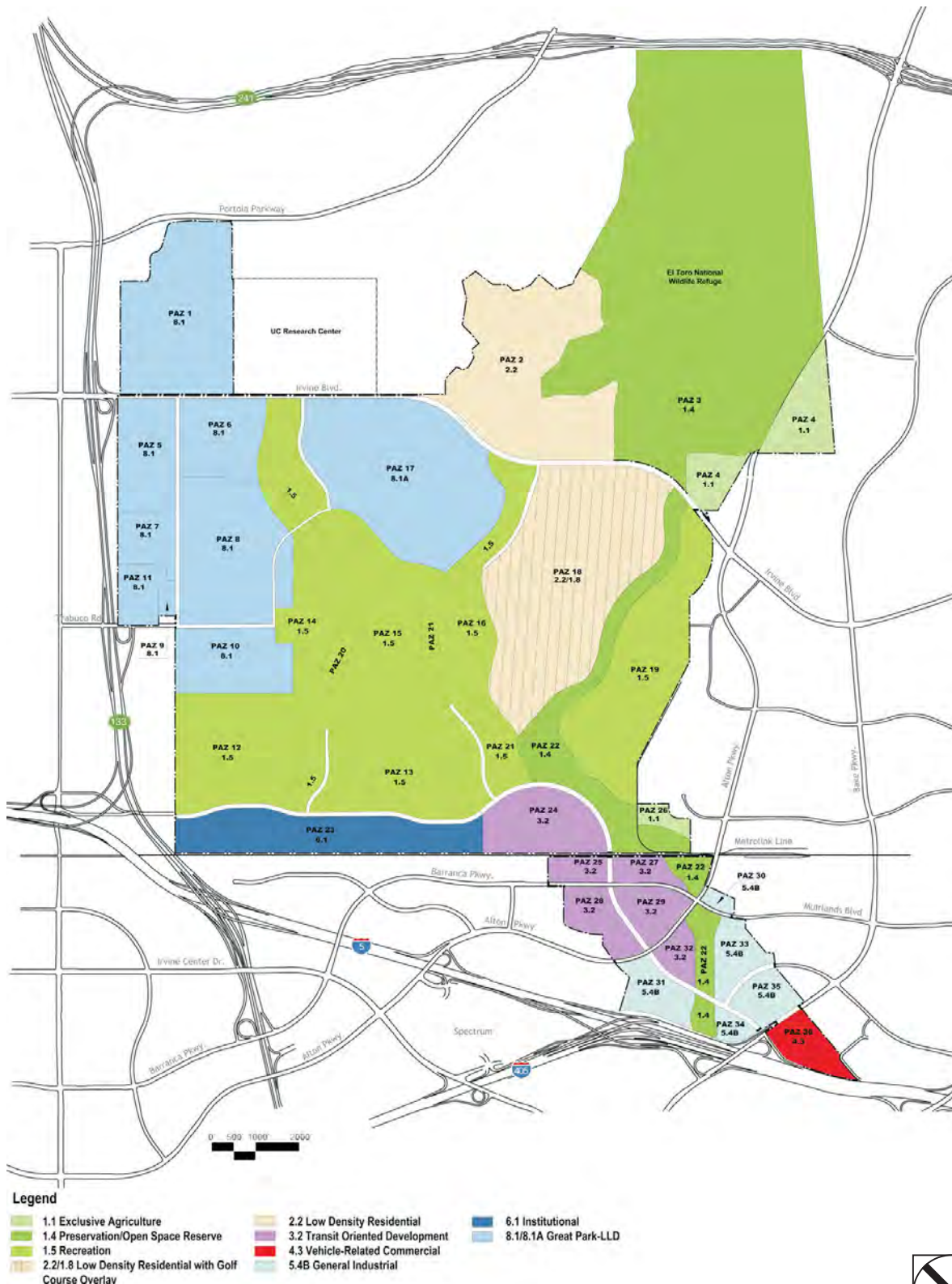
The Planning Center • **Figure 2-6**

2. *Project Description*

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2. Project Description

Proposed Zoning Map and Planning Analysis Zones



Source: EDAW

Addendum to the Orange County Great Park EIR

The Planning Center • **Figure 2-7**

2. *Project Description*

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2. Project Description

The LLD would allow for a combination of residential, commercial, and educational uses that would promote and support a blended mixed-use environment. Specific uses that serve to enhance the cultural, educational, and recreational environment would be especially encouraged in the LLD. The land use intensities are based on the currently allowed maximum residential units and nonresidential square footage within the PAZs. The maximum intensity of development of the 8.1 LLD is stipulated as follows:

- 1,025 dwelling units
- 1,452,600 square feet of Institutional
- 1,000,000 square feet of Medical & Science
- 708,000 square feet of Commercial Recreation
- 225,000 square feet of Community Commercial
- 50,000 square feet of cemetery-related building space
- 40,000 square feet of elementary school

The proposed modifications to Chapter 9-51 of the Zoning Ordinance would not change the trip allocation of the adopted zoning for Planning Area 51. Therefore, the maximum trip allocation for Planning Area 51 must not exceed 117,047 ADT as established in the Overlay Zone.¹ In addition, the proposed Chapter 3-37 includes a list of permitted and conditionally permitted residential and nonresidential uses similar to other mixed-use categories in the Zoning Ordinance, and identifies the Master Plan process (Zoning Ordinance Ch. 2-17) as a requirement for all future development within the LLD.

The proposed revisions to Chapter 9-51 for Planning Area 51 include the changes noted in Table 2-1. In addition, the Statistical Analysis (Overlay Zone Table) would be revised to reflect a total of 1,100 residential dwelling units allocated to the Park District PAZs 2 and 18, distributed as 470 dwelling units to PAZ 2 and 630 dwelling units to PAZ 18. The existing table allocates 850 dwelling units to PAZ 2 and 250 dwelling units to PAZ 18.



Table 2-1
Planning Area 51 Proposed Lifelong Learning District—
Existing and Proposed Zoning

Planning Area Zone	Acres	Zoning District Designation	
		Existing	Proposed
1	200	Exclusive Agriculture, 1.1	LLD, 8.1
5	79	Medical & Science, 5.5	LLD, 8.1
6	80	Medium Density Residential (senior housing), 2.3	LLD, 8.1
7	38	Institutional, 6.1	LLD, 8.1
8	162	Institutional, 6.1	LLD, 8.1
9	5	Institutional, 6.1	LLD, 8.1
10	70	Institutional, 6.1	LLD, 8.1
11	33	Community Commercial, 4.2	LLD, 8.1
17a	249	Commercial Recreation, 4.4	LLD, 8.1A
17b	73	Recreation (cemetery), 1.5	LLD, 8.1A
Total	989		

Source: SEMA Associates, LLC (June 7, 2006).

The LLD would encompass approximately 962 acres, including 200 acres of state-designated Prime Farmland and Unique Farmland. (Refer to section 3.8 of this document.) An existing nursery occupies 173 acres of state-designated farmland and the Marshburn Basin occupies approximately 27 acres of designated prime farmland. The proposed project would not affect the 27 acres of designated prime farmland. Although

¹ The existing zoning provides trip allocations for the Base Zone, which is not proposed to be deleted, notwithstanding the adoption of the Overlay Plan. Trip allocation for the Base Zone is 83,021 ADT.

2. *Project Description*

designated as Prime and Unique Farmland, the existing nursery operation is not dependent on the current site since all of the plants are grown in pots and it does not utilize the existing soils for growing of crops. In addition, all of the soils within the proposed LLD consist of alluvial soils similar to the existing nursery site and would support the growing of crops. Therefore, the proposed zoning stipulations within Section 9-51-3 (Statistical Analysis) include a footnote to ensure that 173 acres of Exclusive Agriculture is maintained within Planning Area 51, each with the following text:

An additional 173 acres of Exclusive Agriculture shall be located in PA 51. The total Agricultural acreage for Planning Areas 30 and 51 combined is 303 acres. (Refer to Section 9-51-3, footnotes * and ***)

Proposed Boundary Adjustments

The current Overlay Plan provides the general land use patterns and types of development envisioned for the property. Subsequent to the approval of the Overlay Plan, the Great Park Corporation and Heritage Fields recognized that the original plans could be enhanced, thus both entities have collaborated to refine the boundary between these properties, which will allow the consideration of a broader range of design options.

The adjustments to the boundaries include an even exchange of land (ranging from 2 to 33 acres) between the City and Heritage Fields. The adjustment occurs in two general locations: 1) Heritage Fields to provide land along the riparian corridor located in the western portion of Planning Area 51 totaling 35 acres. In exchange, the City proposes to provide land to Heritage Fields along the western edge of the park and the northern edge of the Sports Park totaling 35 acres; and 2) Heritage Field and City-owned properties along the Agua Chinon drainage corridor along the eastern edge of Planning Area 51 totaling 20 acres. A total of 90 acres will be impacted by the boundary adjustment. No boundary adjustments are proposed in Planning Area 30. Refer to Figure 2-8 for a depiction of the proposed adjustment between the City-owned and Heritage Fields property.

2.3 DISCRETIONARY APPROVALS

Implementation of the project includes the following discretionary actions for Planning Areas 30 and 51 to be undertaken by the City:

- CEQA related actions and approvals; and
- General Plan Amendment 00416079-PGA and Zone Change 00416080-PZC.

The OCGP EIR lists additional discretionary actions to be taken by the City and other public agencies at or as part of the completion of the project—the adopted Overlay Plan (OCGP EIR pages 3-29 and 3-30). The actions listed therein which have not yet been undertaken also are necessary for implementation of the project. The actions and responsible public agencies include, but are not necessarily limited to, these approvals:

- Master plans and subdivisions for development (City)
- Community facilities districts or other assessment districts (City)
- Actions to improve interim use activities (City and DoN)
- Transfer of parcels within Planning Area 51 (DoN)
- Clean Water Act section 404 permits (U.S. Army Corps of Engineers)
- Endangered Species Act compliance (U.S. Fish and Wildlife Service)
- Clean Water Act section 401 and National Pollutant Discharge Elimination System (NPDES) permits (Regional Water Quality Control Board)
- California Fish and Game Code 1602 permits (California Department of Fish and Game)

Revisions to the Orange County Master Plan of Arterial Highways (Orange County Transportation Authority)

2. Project Description

Proposed Boundary Adjustment



Source: EDAW

Addendum to the Orange County Great Park EIR

The Planning Center • **Figure 2-8**

2. *Project Description*

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3. Environmental Checklist

The City of Irvine Environmental Information Form and Environmental Checklist Form have been completed by the City and are included on the following pages. The Environmental Checklist Form is marked with the findings of the Redevelopment Department as to the environmental effects of the proposed changes to the project in comparison with the findings of the certified OCGP EIR.

As explained above, this comparative analysis has been undertaken, pursuant to the provisions of the California Environmental Quality Act, to provide the City with the factual basis for determining whether any changes in the project, any changes in the circumstances, or any new information requires additional environmental review or preparation of a subsequent or supplemental EIR. The basis for each of the findings listed in the attached Environmental Checklist Form is explained in Section 4.0 of the Addendum.

3. Environmental Checklist

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3. *Environmental Checklist*

3.1 **CITY OF IRVINE INITIAL STUDY AND ENVIRONMENTAL EVALUATION**

1. **Project Title:**

Orange County Great Park Revised Overlay Plan
General Plan Amendment 00416079-PGA and Zone Change 00416080-PZC
(Planning Areas 30 and 51 GPA/ZC) (Heritage Fields and Great Park Corporation)

2. **Lead Agency Name and Address:**

City of Irvine Redevelopment Department
7000 Trabuco Road, Building 873
Irvine, California 92618

3. **Contact Person and Phone Number:**

David Law, AICP, Senior Planner
(949) 724-7459

4. **Project Location:**

The project area is located north of Interstate 5 (Santa Ana Freeway), east of State Route 133 (Eastern Transportation Corridor), and south of State Route 241 (Foothill Transportation Corridor).

5. **Project Sponsor's Name and Address:**

City of Irvine Redevelopment Agency
7000 Trabuco Road, Building 873
Irvine, California 92618

6. **General Plan Designation:** OCGP (Orange County Great Park)

7. **Zoning:** 1.1 Exclusive Agriculture, 1.4 Preservation, 1.5 Recreation, 1.8 Golf Course Overlay, 2.2 Low Density Residential, 2.3 Medium Density Residential, 3.2 Transit Oriented Development, 4.2 Community Commercial, 4.3 Vehicle-Related Commercial, 4.4 Commercial Recreation, 5.4 General Industrial, 5.5 Medical & Science, and 6.1 Institutional

Proposed Zoning: 1.5 Recreation, 1.8 Golf Course Overlay, 2.2 Low Density Residential, 3.2 Transit Oriented Development, 4.3 Vehicle-Related Commercial, 5.4B General Industrial, 6.1 Institutional, 8.1/8.1A Lifelong Learning District

8. **Description of Project**

The proposal is to introduce minor boundary adjustments to the City and Heritage Fields properties, limited revisions to the existing policy and regulatory documents for Planning Areas 30 and 51, and to create a mixed-use category called the Lifelong Learning District (the "project"). No change to the land use intensities of the adopted General Plan and Zoning Ordinance, and other applicable development parameters are proposed. Please refer to Section 2.3, *Project Description*, for a more detailed description of the proposed actions.

3. Environmental Checklist

9. Surrounding Land Uses and Setting (Briefly describe the project's surroundings):

The proposed project area (which consists of City of Irvine Planning Areas 30 and 51) is located in the central portion of Orange County, approximately 45 miles southeast of Los Angeles. The project area is generally bounded by the Irvine Spectrum to the south, City of Lake Forest to the east, the Woodbury residential community to the west, and the future Portola Springs residential development to the north.

The project area is located north of the Santa Ana (I-5) Freeway, east of the Eastern Transportation Corridor (SR-133), and south of the Foothill Transportation Corridor (SR-241). Major roadways bordering the project area include Barranca Parkway to the south, Sand Canyon Avenue to the west, Portola Parkway and Irvine Boulevard to the north, and Alton Parkway to the east.

10. Other Public Agencies Whose Approval Is Required (e.g., permits, financing approval, or participation agreement):

None.

3. Environmental Checklist

3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology / Soils |
| <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use / Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation / Traffic |
| <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Mandatory Findings of Significance | |

3.3 DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☒ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

David Law, AICP, Senior Planner

Date

3. *Environmental Checklist*

3.4 **EVALUATION OF ENVIRONMENTAL IMPACTS**

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 1 5063(c) (3)(D). In this case, a brief discussion should identify the following:
 - a) **Earlier Analysis Used.** Identify and state where they are available for review.
 - b) **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) **Mitigation Measures.** For effects that are “Less Than Significant With Mitigation Incorporated,” describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

3. Environmental Checklist

- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
- a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significant.

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
I. AESTHETICS: Would the project:						
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway or local scenic expressway, scenic highway, or eligible scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in the visible grading of over 5,000 cubic yards on any 20-acre portion of the project site; or visible cut and fill slope over 25 vertical feet?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in the creation of light spillover and glare effects that present a nuisance to residential land uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Result in the substantial alteration of the existing landform of the site or of a unique topographic feature on the site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3. Environmental Checklist

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
II. AGRICULTURAL RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Mode (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:						
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:						
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IV. BIOLOGICAL RESOURCES: Would the project:						
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate,	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3. Environmental Checklist

	Subsequent or Supplemental EIR				Addendum to EIR	
ENVIRONMENTAL ISSUES	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?						
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
V. CULTURAL RESOURCES: Would the project:						
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the CEQA Guidelines and/or identified on the Qualified Historic Structures list of the Anaheim Colony Historic District Preservation Plan (July 20, 1999)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the CEQA Guidelines?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3. Environmental Checklist

	Subsequent or Supplemental EIR				Addendum to EIR	
ENVIRONMENTAL ISSUES	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
VI. GEOLOGY AND SOILS: Would the project:						
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:						
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
d) Be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
VII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:						
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■

3. Environmental Checklist

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
environment?						
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter-mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VIII. HYDROLOGY AND WATER QUALITY: Would the project:						
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3. Environmental Checklist

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
a manner which would result in substantial erosion or siltation on-site or off-site?						
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of pollutant runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IX. LAND USE AND PLANNING: Would the project						
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3. Environmental Checklist

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X. MINERAL RESOURCES: Would the project:						
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XI. NOISE: Would the project result in:						
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, heliport or helistop, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XII. POPULATION AND HOUSING: Would the project:						
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people,	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3. Environmental Checklist

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necessitating the construction of replacement housing elsewhere?						
XIII. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:						
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XIV. RECREATION: Would the project:						
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XV. TRANSPORTATION/TRAFFIC: Would the project:						
a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3. Environmental Checklist

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c) Result in a change in air traffic patterns, including either an increase in traffic levels or change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus stops/routes, bicycle lanes, sidewalks, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XVI. UTILITIES AND SERVICE SYSTEMS: Would the project:						
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project (including large scale developments as defined by Public Resources Code Section 21151.9 and described in Question No. 20 of the Environmental Checklist) from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3. Environmental Checklist

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
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f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with Federal, State, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Result in a need for new systems or supplies, or substantial alterations related to electricity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Result in a need for new systems or supplies, or substantial alterations related to natural gas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Result in a need for new systems or supplies, or substantial alterations related to telephone service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
k) Result in a need for new systems or supplies, or substantial alterations related to television service/reception?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XVII. MANDATORY FINDINGS OF SIGNIFICANCE						
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4. *Discussion of Checklist and Mitigation Measures*

This section is intended to provide evidence to substantiate the conclusions set forth in the Environmental Checklist. The section will briefly summarize the OCGP EIR conclusions and then discuss whether or not the proposed project is consistent with the findings contained in the OCGP EIR.

4.1 AESTHETICS

4.1.1 Environmental Setting

The OCGP EIR addressed in detail the potential visual impacts associated with the development of the former MCAS El Toro. The OCGP EIR discussed the project's visual setting associated with its location adjacent to various arterial highways and state and federal highways. None of these roadways are designated County or State scenic highways; although Sand Canyon Avenue is designated as a highway with rural/natural character. The City's General Plan also designates the Santa Ana (I-5) Freeway as an urban character Scenic Highway.

Generally, views of the former military base are from the surrounding highways. From these highways, a variety of land uses, structures, and facilities of differing ages, sizes, and architectural styles may be viewed. Though agricultural areas are located adjacent to and within the base, the predominant features are associated with the military use of the base, including runways, aprons, hangars, warehouses, barracks housing, recreational facilities, golf course, single-family housing, offices, and commercial structures.

The City of Lake Forest and the James A. Musick Branch Jail are located to the southeast; Irvine Spectrum abuts the former base along the eastern and southern boundaries; and existing and developing residential developments are located to the north and west. Further to the south are the residential areas of the Cities of Laguna Woods and Laguna Hills. These communities are at higher elevations and therefore have panoramic views of the project.

4.1.2 Impacts Identified in the OCGP EIR

The OCGP EIR discussed the potential aesthetic effects of the development of PAs 30 and 51 under the adopted Overlay Plan and found that future development of these two planning areas would introduce new sources of light within the project area. These sources include street lighting along planned roadways and various forms of exterior lighting including security lighting, parking lots, educational facilities, institutional and commercial developments, and lighting associated with athletic fields. The OCGP EIR concluded that significant light impacts may occur should proposed light sources be directed into or located near existing or planned residential uses, which are sensitive to light intrusion during nighttime hours.

4.1.3 Impacts Associated with the Revised Overlay Plan

The project would not introduce new light sources or highly reflective building materials that would result in new sources of potential glare beyond those already considered by the OCGP EIR, because it includes the same land uses and intensity, and comparable physical area for future development as the adopted Overlay Plan.

Although the project includes limited boundary adjustments along the Great Park edge, the adjustments would not result in new or more severe aesthetic impacts or impacts associated with new sources of light and glare. The project includes a more proportionate distribution of the residential dwelling units allowed within Park District PAZs 2 and 18 under the adopted Overlay Plan, which would result in the potential for a more even distribution of the light sources that were addressed in the OCGP EIR. This project feature would not introduce new significant or more severe aesthetic, light and glare impacts than those discussed in the OCGP EIR.

4. *Discussion of Checklist and Mitigation Measures*

The project creates a new land use category, LLD, to approximately 962 acres of land within the northwest quadrant of the project site. The LLD designation retains all of the land use and building intensities of the adopted Overlay Plan. The project could result in a spatial arrangement of development and agricultural land uses that would differ from the land use patterns assumed in the OCGP EIR for the 962-acre LLD area, because the LLD promotes the vertical and horizontal integration of land uses and activities. The use descriptions, square footage, and other planning standards of both the project and the adopted Overlay Plan are sufficiently similar that development under either set of regulations would be expected to result in comparable visual, light and glare effects. Accordingly, the introduction of the Lifelong Learning District to the project area would not result in new significant or more severe aesthetic, light and glare impacts than those disclosed in the OCGP EIR.

The project retains the commitment to satisfy the mitigation measures of the OCGP EIR related to potential light impacts.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major revision to the certified OCGP EIR due to any new significant environmental impact or a substantial increase in the severity of impacts.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP EIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the certified OCGP EIR.

4. *Discussion of Checklist and Mitigation Measures*

4.1.4 Mitigation from the OCGP EIR and Applicability to the Revised Overlay Plan

The OCGP EIR identified mitigation measures A 1 and A 2 which, if fulfilled, would reduce the effects of development under the adopted Overlay Plan to a less than significant level. Measures A1 and A2 are applicable to future development under the project.

- A 1 Prior to issuance of grading permits, lighting plans and signage plans for new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent residential areas occurs.
- A 2 Prior to the issuance of grading permits, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.

4.2 AGRICULTURAL RESOURCES

4.2.1 Environmental Setting

The OCGP EIR described the Farmland Mapping and Monitoring Program of the California Department of Conservation Division of Land Resources Protection classifications of agricultural lands present within the project area as follows:

- Prime Farmland: Land which has the best combination of physical and chemical features able to sustain long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for production of irrigated supply needed to produce sustained high yields. Land must have been used for production of irrigated crops at some time during the previous two map updates.
- Farmland of Statewide Importance: Similar to Prime Farmland, except this land has minor shortcomings such as greater slopes or less ability to store soil moisture than Prime Farmland. This land has minor shortcomings, such as greater slopes or less ability to store soil moisture than Prime Farmland. Land must have been used for production of irrigated crops at some time during the previous two map updates.
- Unique Farmland: Lesser quality soils used for the production of the state's leading crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climate zones in California. This land is used for the production of specific high economic value crops such as oranges, olives, avocados, rice, grapes, or cut flowers. Land must have been cropped at some time during the two previous maps updates.
- Farmland of Local Importance: Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

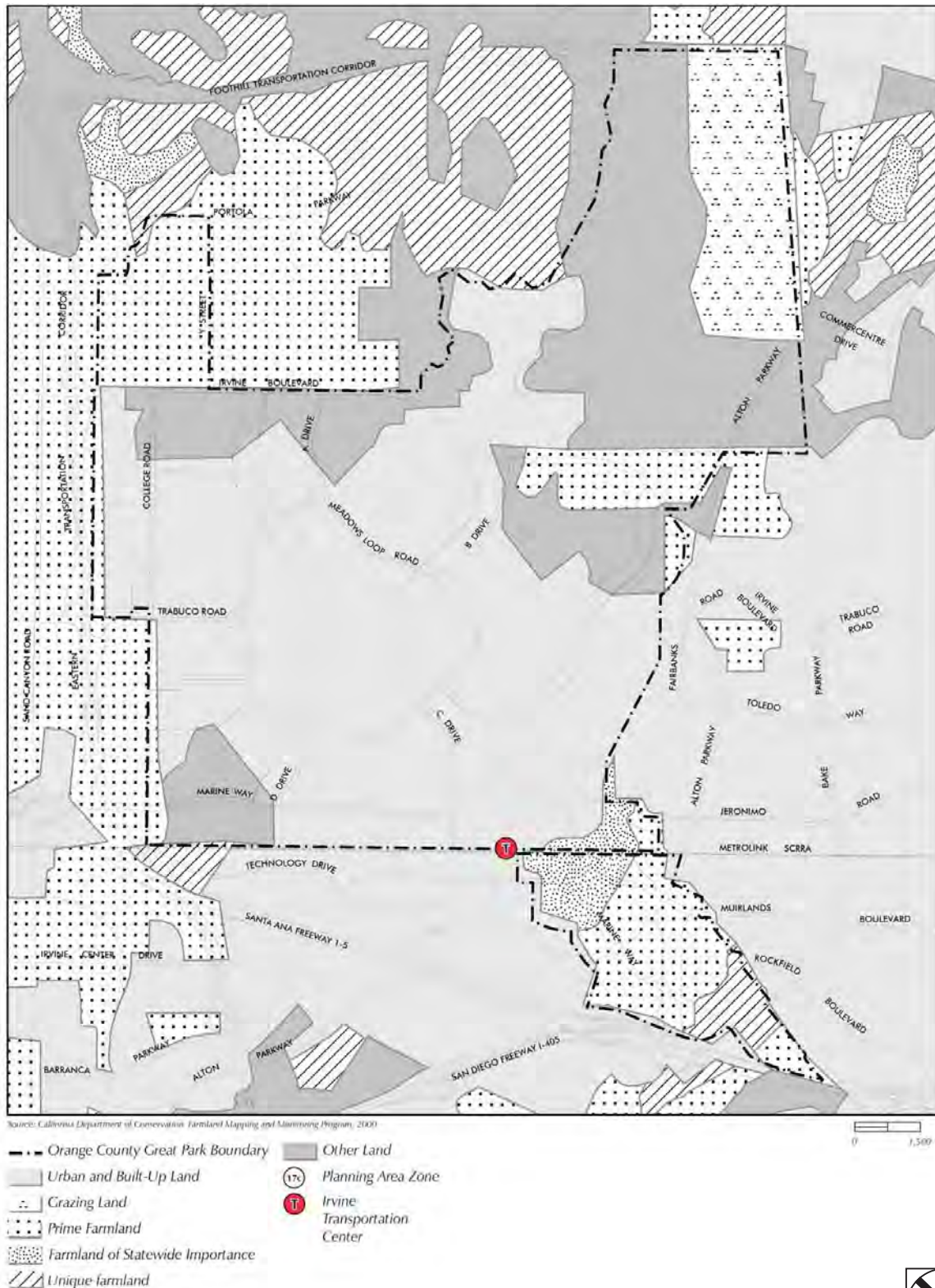
Figure 4-1 depicts the farmland classifications within the project site and surrounding area. The OCGP EIR identified approximately 659 acres of designated Prime Farmland, 70 acres of designated Unique Farmland, and 99 acres of designated Farmland of Statewide Importance. The Orange County Board of Supervisors has not designated any farmland as being of "Local Importance."

4. *Discussion of Checklist and Mitigation Measures*

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4. Discussion of Checklist and Mitigation Measures

Agriculture Resources



Source: California Department of Conservation, Farmland Mapping and Monitoring Program, 2000

Addendum to the Orange County Great Park EIR

The Planning Center • **Figure 4-1**

4. *Discussion of Checklist and Mitigation Measures*

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4. *Discussion of Checklist and Mitigation Measures*

City of Irvine Policies and Programs

The City of Irvine General Plan Objective L-10, as amended in 2002 and presented in the OCGP EIR, includes the following policies to “encourage the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development”:

Policy (a): Provide for farming opportunities in the community, where feasible and appropriate, through an Agricultural Legacy Program facilitating limited-scale agricultural operations and program on public lands. The program may include components such as edible landscape, metro-farming, heritage farming, model farming, education and community service farming and other farm or farm market program. Location for implementation of the Agricultural Legacy Program to be considered should, at a minimum, include:

- Designated open space spine network,
- Designated open space areas not subject to the Natural Community Conservation Plan (NCCP), and
- Other appropriate publicly owned lands.

Policy (b): Consider creating a “working model” farm to act as a center for education and enjoyment of all age groups pursuant to the Agricultural Legacy Program in conjunction with the City’s planning efforts concerning the reuse of MCAS El Toro, or with the South Coast Research Extension owned by UC Regents.

Policy (c): Permit agricultural use of land which is unsuitable for building because it is within flood plains, or is subject to hazards to public health, safety, and welfare or similar constraints precluding development. Conversion from agricultural use may be allowed where the identified hazard conditions have been eliminated.

Policy (d): Permit agricultural uses, on an interim bases, on land designated for development, and consider agricultural uses as part of the City’s planning efforts for the re-use of MCAS El Toro.

Policy (e): Encourage and support federal and state legislation proposed for the purpose of preservation of agricultural lands which are compatible with the City’s goals and objectives.

Policy (f): Allow for conversion of interim and permanent agricultural uses to development to provide land for the construction of housing units consistent with the Land Use and Housing Elements, and the development of commercial and industrial buildings consistent with the provision of job opportunities as described in the Land Use Element, where such conversion does not conflict with other L-10 policies.

Policy (g): Pursue the open space policies contained in the Conservation and Open Space Element and address any open space or aesthetic impacts from the conversion of interim and permanent agricultural uses to development as part of the City’s existing policies for the preservation of open space and existing policies for mitigation of views and aesthetic impacts under the policies in the Conservation and Open Space Element.

4. *Discussion of Checklist and Mitigation Measures*

4.2.2 Impacts Identified in the OCGP EIR

The OCGP EIR determined the adopted Overlay Plan would preserve in perpetuity 303 acres² of land for agricultural use, of which 251 acres are classified as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. The locations of the 303 acres of permanent agricultural land are listed below:

- **PA 30:** 13 acres within Planning Area Zone (PAZ) 26; and
- **PA 51:** 90 acres within PAZ 4; and 200 acres within PAZ 1.

The adopted Overlay Plan also would result in the permanent loss of 802 acres of designated farmland comprised of 651 acres of Prime Farmland, 63 acres of Unique Farmland, and 88 acres of Farmland of Statewide Importance. This impact was considered significant and unavoidable.

Lastly, it was determined the adopted Overlay Plan would result in a significant impact associated with the conversion of agricultural land to nonagricultural use. The OCGP EIR noted the context of agricultural production in Orange County—including development pressures that have contributed to the decrease in agricultural production in the County overtime—which suggested that conversion of agricultural land to urban uses would occur with or without the project.

4.2.3 Impacts Associated with the Revised Overlay Plan

The adopted Overlay Plan designates 290 acres of land zoned as 1.1 Exclusive Agriculture in PA 51: specifically, PAZ 1 and PAZ 4. PAZ 1 is located northeast of Irvine Boulevard and consists of approximately 200 acres. PAZ 4 consists of two parcels, one on each side of Alton Parkway and both located east of Irvine Boulevard; their combined size is approximately 90 acres. PAZ 1 is proposed to be rezoned to 8.1 Lifelong Learning District (LLD).

PAZ 1 is currently developed with Bordier's Nursery (173 acres) and the Marshburn Retarding Basin (27 acres). These uses existed prior to and at the time the OCGP EIR was prepared and certified. A wholesale nursery use is consistent with the City's zoning definition for agricultural use.³

The proposed project would not affect the 27 acres of designated prime farmland within the Marshburn. Although designated as Prime and Unique Farmland, the existing nursery operation is not dependent on the current site since all of the plants are grown in pots and it does not utilize the existing soils for growing crops. In addition, all of the soils within the proposed LLD District consist of alluvial soils similar to the existing nursery site and would support the growing of crops. Therefore, the proposed zoning stipulations within Section 9-51-3 (Statistical Analysis) include two footnotes to ensure that 173 acres of Exclusive Agriculture is maintained within Planning Area 51, each with the following text:

An additional 173 acres of Exclusive Agriculture shall be located in PA 51. The total Agricultural acreage for Planning Areas 30 and 51 combined is 303 acres. (Refer to Section 9-51-3, footnotes * and ***)

² Please note that there is a scribe's error within the OCGP EIR: Table 1-2 on page 1-8 and Table 3-4 on pages 3-12 and 3-13 identify the total agricultural land as 303 acres; however on page 5.8-10 the agricultural use acreage is noted as 307.

³ "Agricultural use: the production, keeping or maintenance of plants and/or animals useful to man, including but not limited to food and fiber crops, livestock forage and grazing, orchards, nursery and ornamental plants. This includes wholesale nurseries and produce stands..." (City of Irvine Zoning Ordinance Section 1-2-1).

4. *Discussion of Checklist and Mitigation Measures*

A majority of PAZ 1 is classified as Prime Farmland; however, there is a small area immediately south of Portola Parkway that is classified as Unique Farmland (OCGP EIR Figure 5.8-1). Since the nursery operation exists under a long-term lease, the adopted Overlay Zone identified PAZ 1 as 1.1 Exclusive Agriculture and the OCGP EIR impact analysis assumed the site would remain in agricultural use. In addition to the agricultural uses permitted in the Exclusive Agricultural land use category, a kennel, manufactured structure, and public stable are permitted subject to a conditional use permit (See City of Irvine Zoning Ordinance Sec. 3-37-2).

The total acreage to be preserved in agricultural use within PA 51 consists of 90 acres of existing cultivated land owned by the County of Orange, 27 acres of area containing the existing Marshburn Retarding Basin; and 173 acres of land used by an existing commercial nursery. Of this acreage, only the commercial nursery and the retarding basin are located within the proposed LLD. The proposed zoning requires that 200 acres be retained as 1.1 Exclusive Agriculture within the LLD. As a result, no new impacts to agricultural resources beyond those evaluated in the OCGP EIR would occur.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP EIR. The Revised Overlay Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP EIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the certified OCGP EIR.

4. *Discussion of Checklist and Mitigation Measures*

4.2.4 Mitigation from the OCGP EIR and Applicability to the Revised Overlay Plan

Mitigation measures AG 1 through AG 3 would be implemented in conjunction with master plan review and subsequent development permits. The project would neither change these mitigation measures nor their application to future development projects.

- AG 1 In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operators, City of Irvine Standard Discretionary Case Condition B.4 and City of Irvine Subdivision Condition 3.4 regarding disclosure statements shall be amended to include the following for subdivisions proposed adjacent to existing agricultural operations:

Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:

- Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.

- AG 2 Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.

- AG 3 Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operation and adjacent urban uses.

4.3 AIR QUALITY

4.3.1 Environmental Setting

The OCGP EIR described the existing air quality regarding the following regulated pollutants: ozone (O₃), carbon monoxide (CO), suspended particulate matter (PM₁₀), nitrogen oxides (NO_x), sulfur dioxide (SO₂), lead (Pb), volatile organic compounds (VOC), and reactive organic gases (ROG). The South Coast Air Basin (SCAB) is described as a nonattainment area for O₃, CO, and PM₁₀; annual maximum concentrations of O₃, CO, PM₁₀, and SO₂ exceeded both federal and state standards in some or all areas in the SCAB during the reporting period (2000). In contrast, standards for nitrogen dioxide (NO₂), SO₂, and Pb were not exceeded during the reporting period.

The OCGP EIR also noted the pending promulgation by the U.S. Environmental Protection Agency (EPA) and California Air Resources Board of standards for PM_{2.5} (particulate matter less than 2.5 microns in diameter). The standards are provided in Table 4-1 of this document. EPA has identified several counties, including Orange County, as PM_{2.5} nonattainment areas. EPA is in the process of responding to comments on related regulations. The California Air Resources Board adopted the annual standard identified in Table 2.3-1 but has postponed establishing a 24-hour standard for PM_{2.5}. At the local level, the South Coast Air Quality Management District (SCAQMD) is in the process of developing a methodology for calculating PM_{2.5} and PM_{2.5} significance thresholds for the purpose of analyzing local and regional air quality impacts in CEQA.

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documents. A draft communication issued in May 2006 by the SCAQMD to its working group indicated that the methodology for calculating PM₁₀ could also be used to calculate PM_{2.5}.

4.3.2 Impacts Identified in the OCGP EIR

The OCGP EIR identified significant air quality impacts associated with construction and operation of the adopted Overlay Plan. The construction impact analysis assumed demolition, grading and new construction would occur in two phases: the first phase would begin in 2007 and end in 2016 and the second phase would begin in 2017 and end in 2025. The emissions associated with demolition of existing structures, including 31.2 million cubic feet of concrete from removal of the runways, site grading, and development would generate construction air emissions above the significance thresholds for ROG, NO_x, and PM₁₀. The OCGP EIR described the construction air impacts after mitigation as significant and unavoidable. (Refer to OCGP EIR pp. 5.3-16 through 5.3-20.)

Table 4-1
Federal and State Standards¹ for PM_{2.5}

Averaging Time	Federal Standards	California Standards²
Annual Arithmetic Mean	15 µg/m ³	12 µg/m ³
24-Hour	65 µg/m ³	No Separate Standard

Source:

¹ www.epa.gov/pmdesignations/state/California.htm [June 5, 2006].

² 17 CFR §70200, Table of Standards.

The operations-related air quality impacts associated with build-out under the adopted Overlay Plan included emissions associated with energy consumption and vehicular trips. The Urban Emissions (URBEMIS) 2001 model and EMFAC7F (motor vehicle emission factor model) were used to estimate air emissions associated with operation of the project site through the analysis year post-2025. The operations air emissions for project area and vehicular mobile sources were estimated at above the significance thresholds for ROG, NO_x, CO, and PM₁₀, and described in the OCGP EIR as significant after mitigation, and an unavoidable consequence of the project (adopted Plan). No other construction- and operations-related significant air quality impacts were identified in the OCGP EIR. (Refer to OCGP EIR pp. 5.3-20 through 5.3-58, and 7-19.)

In addition, the OCGP EIR disclosed the results of the CO “hotspots” analysis, in which CO concentrations were predicted for intersections with a LOS of “D” or higher at a.m. and p.m. peak hours using the CALINE 4.0 model and EMFAC7F motor vehicle emission factors. No intersections in the traffic study area were expected to result in one-hour and eight-hour CO concentrations above the state standard of 20 parts per million (ppm) for one-hour concentrations and 9 ppm for eight-hour concentrations (Refer to OCGP EIR pp. 5.3-31 through 5.3-53).

4.3.3 Impacts of the Revised Overlay Plan

The project includes the same land use types, intensity, and density as the adopted Overlay Plan. In addition, the analytical assumptions concerning construction, development phasing, and operations of the adopted Overlay Plan remain appropriate for the project (Refer to OCGP EIR Table 5.3-14). Since the analysis assumptions did not change, the results of the impact assessment conducted for the adopted Overlay Plan would adequately characterize the potential air quality effects of the project.

The traffic study prepared for the project describes the traffic conditions in 2010, 2025, and post-2025 with and without implementation of the project. As presented in section 4 of the traffic study, the trip generation

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and traffic impact associated with the project would be comparable to that described for the adopted Overlay Plan; therefore, Project operations-related mobile source air emissions would be comparable to the operations-related mobile source emissions of the adopted Overlay Plan. Overall, implementation of the project would generate construction air emissions above the significance thresholds for ROG, NO_x, CO, and PM₁₀; the emissions would be associated with demolition of existing structures and land preparation and excavation for the construction of new development. Operations would result in mobile source air emissions of ROG, NO_x, CO, and PM₁₀ above the significance thresholds for these criteria pollutant; however, these impacts are comparable to those analyzed under the OCGP EIR.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP EIR. The Revised Overlay Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP EIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the certified OCGP EIR.

4.3.4 Mitigation from the OCGP EIR and Applicability to the Revised Overlay Plan

The OCGP EIR identified mitigation measures AQ 1 through AQ 5, which reduce the air quality effects of construction and operations of development under the adopted Plan. However, as noted above, the OCGP EIR found that short-term and long-term air quality impacts would remain significant and unavoidable. The measures are applicable to future development under the project.

- AQ 1 Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors; etc.; shall be employed as

4. *Discussion of Checklist and Mitigation Measures*

necessary. Compliance with this measure shall be verified by the Director of Community Development.

AQ 2 Prior to the commencement of construction activities required to demolish and/or remove existing DoN structures, including runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Evaluate the availability and use, if available, of low-emission (i.e., methanol- or natural gas-powered) construction equipment instead of diesel for each construction phase. Water exposed soils at least twice daily and maintain equipment and vehicle engines in good condition and in proper tune.
- Wash off trucks leaving the site.
- Replace ground cover on construction sites when it is determined that the site will be undisturbed for lengthy periods.
- Reduce speeds on unpaved roads to less than 15 miles per hour.
- Halt grading and excavation operations when wind speeds exceed 25 miles per hour.
- Suspend all emission generating activities during smog alerts.
- Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible.
- Properly maintain diesel-powered on-site mobile equipment.
- Sweep streets at the end of the day if substantial visible soil material is carried over to the adjacent streets.
- Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible.
- Evaluate the availability and use, if available, of low-emission (i.e., methanol- or natural gas-powered) construction equipment instead of diesel for each construction phase.
- Use of low-VOC asphalt.
- Cover all trucks hauling dirt, sand, soil or other loose material to and from the site.
- Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic.
- Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible.
- Reroute construction trucks away from congested streets, whenever feasible.
- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible.

4. *Discussion of Checklist and Mitigation Measures*

- AQ 3 Prior to the issuance of building permits for any future development, the applicant shall submit, and Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.
- Utilize built-in energy-efficient appliances to reduce energy consumption and emissions.
 - Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions.
 - Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible.
 - Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning.
 - Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible.
 - Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods.
 - Centralize space heating and cooling for multiple-family dwelling units and commercial space.
 - Orient buildings north/south for reducing energy-related combustion emissions.
 - Use solar energy, when feasible.
 - Use high rating insulation in walls and ceilings.
- AQ 4 Information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find employment nearby.
- AQ 5 Future employment generating nonresidential development shall include measures to reduce vehicle trips including: the promotion of carpool incentives and alternative work schedules, easy access to public transit systems, trail linkages between uses, low emissions vehicles fleets, and the provision of on-site facilities such as banking and food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.

4.4 BIOLOGICAL RESOURCES

4.4.1 Environmental Setting

The OCGP EIR described the biological resources within Planning Areas 30 and 51, including 995 acres of land retained in federal ownership and designated as habitat reserve and a part of the Orange County Central-Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP).

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The areas outside the habitat reserve were described as: (1) providing minimal native or undisturbed habitat; and (2) consisting of agricultural, ornamental, and domestic landscapes. The OCGP EIR identified nine vegetative communities within the project site, including Venturan-Diegan sage scrub, southern cactus scrub, chaparral, woodland, riparian scrub, grassland, open water, agriculture, and disturbed or developed areas. Several sensitive plant species and a large number of mature trees also were identified as potentially occurring within the project site. The sensitive plant species potentially occurring in both Planning Areas 30 and 51 include the southern tarplant, Palmer's grapplehook, many-stemmed dudleya, Coulter's Matilija poppy, Catalina mariposa lily, and intermediate mariposa lily. The OCGP EIR also noted the Coulter's saltbush, Laguna Beach dudleya, San Fernando Valley spineflower, and the Lewis's evening-primrose as having a moderate potential for occurrence. Species with a low potential for occurrence include the Los Angeles sunflower, south coast saltscale, Santa Monica Mountains dudleya, heart-leafed pitcher sage, coast wooly-heads, slender-horned spineflower, Santa Barbara morning glory, tecate cypress, and salt spring checkerbloom.

The OCGP EIR documented that one sensitive wildlife species, the burrowing owl, was observed outside the habitat reserve at the southwest end of Planning Areas 30 and 51 along Serrano Creek. Forty other sensitive wildlife species or species of local concern were identified as having a potential to occur on the site. In addition, the areas outside the habitat reserve, such as the agricultural lands, generally provide suitable foraging habitat for raptor species, including Swainson's hawk.

Lastly, the OCGP EIR described the Wildlife Corridor Concept Plan that would be incorporated into the eastern portion of the project site (Refer to pp. 5.9-9 through 5.9-14 of the OCGP EIR).

4.4.2 Impacts Identified in the OCGP EIR

The OCGP EIR disclosed several significant impacts of the adopted Overlay Plan, including potential impacts on: (1) the southern tarplant, a federal species of concern; (2) the limited amounts of highly disturbed wetland habitat on the project site; and (3) the wide range of species of trees, many of which are mature specimens.

4.4.3 Impacts Associated with the Revised Overlay Plan

The project includes the same land uses and development areas as the adopted Overlay Plan; therefore the conclusions drawn in the OCGP EIR adequately describe the environmental effects of the project relative to biological resources, as well as the severity of the impacts. Furthermore, several of the proposed boundary adjustments would add land to the Great Park at locations adjoining the drainage features of the adopted Overlay Plan in exchange for equal amounts of Great Park land in locations that are mutually acceptable to the City and Heritage Fields, LLC. The boundary adjustments would facilitate drainage improvements to support the Great Park and Heritage Fields development areas, some of which would also contribute toward the Wildlife Corridor.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP EIR. The Revised Overlay Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP EIR.

4. *Discussion of Checklist and Mitigation Measures*

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR.

This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the certified OCGP EIR.

4.4.4 Mitigation from the OCGP EIR and Applicability to the Revised Overlay Plan

Mitigation measures BIO 1 through BIO 4 would be implemented in conjunction with master plan review and subsequent development permits. The project would neither change these mitigation measures nor their application to future development projects.

- BIO 1 Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. Prior to approval of a subdivision map for development within or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement. If impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).
- BIO 2 Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). Wetlands impacted on-site replacement, recreation (i.e., within the proposed wildlife corridor), and/or re-vegetation as deemed acceptable by the appropriate jurisdictional agencies.
- BIO 3 The City shall continue to work with State and federal agencies during the implementation of the proposed project to implement the re-vegetation/restoration plan for the wildlife corridor. Measures such as sight and sound barriers, including artificial sound walls and natural diversions (e.g., hedges and tree lines) shall be incorporated into corridor design to ensure

4. *Discussion of Checklist and Mitigation Measures*

the viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the EIR.

- BIO 4 Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered "Significant Trees" under the City of Irvine's Urban Forestry Ordinance (UFO) (Sections 5-7-401 et al.) and the UFO shall apply to all trees included in this inventory.

4.5 CULTURAL RESOURCES

4.5.1 Environmental Setting

Cultural Resources

The discussion of Cultural Resources includes archaeological and historical resources. The OCGP EIR presents information pertaining to the regional setting of former MCAS El Toro from both a prehistoric and historic perspective. The OCGP EIR reported the presence of ten prehistoric archaeological sites and eight isolated prehistoric artifacts which have been recorded in the northeastern habitat preserve portions of Planning Area 51 (PA 51). These sites are generally located on the ridges between Borrego Canyon Wash and the Agua Chino Wash.

The former MCAS El Toro was surveyed to determine whether any of the structures would be eligible for the National Register. Generally, a structure which has achieved significance in the past 50 years is not considered eligible for the National Register unless it is of exceptional importance. The evaluation was expanded to include eligibility under the Legacy Cold War Project (Public Law No. 101-511, § 8120). Portions of PAs 30 and 51 (the former MCAS El Toro) were established during WWII, and no structure earlier than this period is at the former MCAS El Toro. Therefore, the historical significance of any structures at the former military base would be as part of the Cold War Legacy. Surveys conducted by the US Army Corps of Engineers and the Department of the Navy in conjunction with the base's closure concluded there were no structures eligible for designation as Cold War Legacy or for inclusion in the National Register of Historic Places.

Paleontological Resources

The OCGP EIR reported that a majority of Planning Areas 30 and 51 is located on the Tustin Plain, a coastal alluvial plain. Alluvium from the Late Pleistocene to Holocene Epochs (approximately 2 million to 11,000 years ago) immediately underlies the majority of the project area, including the part occupying the coastal plain and washes in the eastern portion of PA 51. The Pleistocene Alluvium formation is widespread and believed to extend to depths of 1,000 feet in PA 30. A significant deposit of Pleistocene terrestrial vertebrates was recovered during excavation of a flood control basin four miles from PA 30; thus, it is possible that similar beds underlie PA 30 (Refer to OCGP EIR 5.10-2).

The eastern portion of PA 51 is located in the western foothills of the northern Santa Ana Mountains. The hills and ridges in the eastern part of PA 51 are composed of older, underlying marine and nonmarine rock units of early Oligocene to late Pleistocene (23 million to 2 million years ago). In order of decreasing geologic age, these latter rock units include the undifferentiated Sespe and Vaqueros Formations, Topanga, and Monterey Formations, Oso Member of the Capistrano Formation, Niguel Formation, and Nonmarine Terrace Deposits.

4. *Discussion of Checklist and Mitigation Measures*

Nonmarine Terrace Deposits also underlie the terraces at the south corner of PA 51. The northwestern corner of PA 51 contains a small portion of the Santa Ana Mountains foothills, which were separated from the main formation by erosion. This small portion is composed of undifferentiated late Cretaceous (135 million years ago) marine Williams Formation. The rock units underlying portions of PA 51 have previously yielded important fossil remains at recorded fossil sites on and near the site. There are three recorded fossil sites in PA 51. These sites occur in undifferentiated Sespe and Vaqueros Formations and in the Topanga Formation. Fossil types include marine invertebrates and vertebrates, continental vertebrates, land plants, and land mammals. The three recorded fossil sites lie within the proposed habitat preserve portion of PA 51 (Refer to OCGP EIR p. 5.10-1 and Table 5.10-1).

4.5.2 Impacts Identified in the OCGP EIR

Cultural Resources

The OCGP EIR determined that development according to the adopted Overlay Plan would not cause a substantial adverse change in the significance of any historical structure. The consequence of grading activities associated with future development, however, could potentially result in a substantial adverse change in the significance of an archaeological resource. The OCGP EIR also stated that grading activities could uncover previously unknown human remains, including those interred outside formal cemeteries.

Paleontological Resources

The OCGP EIR stated that earthmoving operations associated with grading and trenching have the greatest potential to impact buried paleontological resources in the moderately to highly sensitive areas in the coastal plain and washes, northeast, northwest and southern portions of PA 51. The OCGP EIR considered the potential impact associated with earthmoving operations as a significant impact for which mitigation was necessary.

4.5.3 Impacts Associated with the Revised Overlay Plan

Cultural Resources

The project represents minor changes to the adopted Overlay Plan through boundary adjustments, revisions to General Plan and Zoning text for Planning Areas 30 and 51, and a general reallocation of land uses on-site. However, these changes would not reduce the potential for impacts associated with earthmoving operations. A key component of the project is that it would not open new areas to disturbance nor cause greater disturbance than reported in the OCGP EIR. Accordingly, the impacts disclosed in the OCGP EIR adequately describe the effects of the proposed project in that: (1) the project would not cause a substantial adverse change in the significance of any historical structure; (2) the consequence of grading activities associated with future development could potentially result in a substantial adverse change in the significance of an archaeological resource; and (3) grading activities could uncover previously unknown human remains, including those interred outside formal cemeteries.

Paleontological Resources

The project represents refinements to the adopted Overlay Plan through boundary adjustments and a general reallocation of land uses on-site. However, these refinements would not reduce the potential for impacts associated with earthmoving operations. A key component of the project is that it would not open new areas to disturbance nor cause greater disturbance than reported in the OCGP EIR. The paleontological mitigation measure developed for the OCGP EIR remains applicable to future development under the project.

4. *Discussion of Checklist and Mitigation Measures*

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP EIR. The Revised Overlay Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP EIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the certified OCGP EIR.

4.5.4 Mitigation from the OCGP EIR and Applicability to the Revised Overlay Plan

Cultural Resources

The OCGP EIR identified mitigation measures CULT 1 through CULT 4 which, if fulfilled, would reduce the effects of development under the adopted Plan to a level less than significant. Measures CULT 1 through CULT 4 are applicable to future development under the project.

- CULT 1 Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PAs 51 and 30. This report (s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.
- CULT 2 Monitoring of excavation and grading activities associated with future development in PAs 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure CULT 1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and an assessment of their importance under CEQA

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and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.

CULT 3 Prior to the issuance grading permits and/or building permits for any future development in PAs 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City of Irvine to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.

CULT 4 Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City of Irvine to address the accidental discovery of recognition of any human remains. The program shall include the following:

There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- The county coroner must be contacted to determine that no investigation of the cause of death is required, and

If the coroner determines the remains to be Native American:

- The coroner shall contact the Native American Heritage Commission within 24 hours.
- The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
- The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for the means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
- Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
- The Native American heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
- The descendant identified fails to make a recommendation; or
- The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage commission fails to provide measures acceptable to the landowner.

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Compliance with this measure shall be verified by the Community Development Department.

Paleontological Resources

The OCGP EIR identified mitigation measure P1 which, if fulfilled, would reduce the effects of development under the adopted Overlay Plan to a level less than significant. Measure P1 is applicable to future development under the project.

- P1 Prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. (A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.

When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossils specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screening-washing operation on-site.

Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.

4.6 GEOLOGY AND SOILS

4.6.1 Environmental Setting

The OCGP EIR describes the topography of the project site as nearly flat and gently sloping down to the west to southwest with elevations ranging from 450 feet above mean sea level (MSL) to 200 feet above MSL. Planning Area 30 is located at the southeast margin of the Tustin plain with elevations ranging from about 260 to 300 feet above MSL. Planning Area 51 includes some slopes of the Santa Ana foothills which each elevations of about 750 feet above MSL. Alluvial soils of six major soil associations consisting of predominantly of varying sands, silts, and clayey silty sands are present within PA 51. Soils underlying PA 30 contain clayey loam alluvial material, terrace deposits, and old and unconsolidated recent alluvium of the Myford and Sorrento series.

The OCGP EIR identified the primary potential seismic hazard in the area as ground motion. Seismic Response Areas (SRA) designations are used by the City to assess the geologic and seismic risk associated with potential development. All of PA 30 and a majority of PA 51 are located within SRA-2 (denser soils/deeper groundwater) and are considered suitable for development. The planned development area of

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PA 51 situated north of Irvine Boulevard is designated SRA-3 (alluvium/shallow bedrock) and also susceptible to ground motion.

No known active faults crossing or projecting into the project area were identified; however, the project site is located within the seismically active Southern California region and there are two active faults—Whittier-Elsinore Fault and Newport-Inglewood Fault—located within 14 miles of the site.

4.6.2 Impacts Identified in the OCGP EIR

The OCGP EIR disclosed the potential for future development of the project area to result in the exposure of people or structures to strong ground shaking in the event of a major earthquake along any one of the active faults in the region. The OCGP EIR noted new construction would be required to adhere to current seismic safety building codes which address seismic concerns. Existing buildings within PA 51 do not meet current seismic codes; therefore, the temporary or permanent reuse of the existing buildings and the associated exposure of people or structures to potential substantial adverse effects due to strong seismic-related ground shaking were considered a significant impact.

Because of the documented landslides in the northeastern Santa Ana foothills area of the project site, the OCGP EIR analysis concluded the project would result in a significant impact associated with landslides in the affected area of PA 51 east of Irvine Boulevard, where future development of habitable structures could occur under the adopted Overlay Plan.

The OCGP EIR also concluded future development has the potential to result in soil erosion or the loss of topsoils, and risks to life and property due to with the presence of expansive soils; and that these impacts are considered significant. The project includes the same land uses and development areas as the adopted Overlay Plan; therefore the conclusions drawn in the OCGP EIR adequately describe the environmental effects of the project relative to soils, geologic hazards, and seismic safety, as well as the severity of the impacts.

4.6.3 Impacts Associated with the Revised Overlay Plan

The project includes the same land uses and development areas as the adopted Overlay Plan; therefore the conclusions drawn in the OCGP EIR adequately describe the environmental effects of the project relative to soils, geologic hazards, and seismic safety, as well as the severity of the impacts.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP EIR. The Revised Overlay Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP EIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR.

This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

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No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP EIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the certified OCGP EIR.

4.6.4 Mitigation from the OCGP EIR and Applicability to the Revised Overlay Plan

The OCGP EIR identified four mitigation measures to reduce the effects of the adopted Overlay Plan on soils, geologic hazards and seismic safety. All of the mitigation measures are applicable to implementation of the project and would be carried forward to future development of the project site. Implementation of measures GS1 through GS4 (listed below) would reduce Project impacts to a level less than significant.

- GS 1 Prior to issuance of a building permit, the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.

- GS 2 Prior to issuance of a building permit, as per existing City policies, geological studies shall be prepared at the time specific development projects are proposed to address site specific geological considerations. The scope of each geological study is based on the underlying geological conditions of the individual site. These reports will provide measures to prevent settlement.

- 1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be conducted. The purpose of the subsurface evaluation is to:
 - a. Further evaluate the subsurface conditions in the area of the proposed structures.
 - b. Provide specific data on potential geologic and geotechnical hazards.
 - c. Provide information pertaining to the engineering characteristics of earth materials in the project area.

From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural section, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:

4. *Discussion of Checklist and Mitigation Measures*

- Seismic Ground Shaking – Measures to prevent risk of loss, injury or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.
- Erosion or Loss of Topsoil – Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances.
- Where Expansive Soils Exist – Measures for the design of foundation, slabs, flatwork and other improvements subject to drainage from expansive soils.

Compliance with this measure shall be verified by the Community Development Department.

- GS 3 Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of any existing structure if a building permit is not issued, a seismic evaluation of the structure including recommendations for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.
- GS 4 Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

4.7 HAZARDS AND HAZARDOUS MATERIALS

4.7.1 Environmental Setting

Hazardous Materials and Hazardous Wastes

The OCGP EIR discussed an environmental baseline survey that was conducted for the project area. Information was used from the Base Realignment and Closure Business Plan for Marine Corps Air Station (MCAS) El Toro dated May 2002; the environmental baseline survey (EBS) dated 1995; and an update to the EBS—April 2003 Draft Final EBS. The 2003 EBS identified “76 potential release locations, all of which require further evaluation for potential releases to the environment and subsequent remediation, if required” (Refer to OCGP EIR p. 5.5-5).

Regarding the Installation Restoration Program (IRP), the OCGP EIR summarizes the status of each IRP site based on the information available at the time the EIR was prepared. Ten (10) IRP sites were identified as requiring “No Further Action,” including sites 4, 6, 7, 9, 10, 13, 14, 15, 19, 20, 21, 22 and 25. The IRP sites identified as “Action Required” included sites 1, 2, 3, anomaly 3, 5, 8, 11, 12, 16, 17, 18 (plume), and 24 (Refer to OCGP EIR pp. 5.5-6 through 5.5-9).

Of the 404 underground storage tanks (USTs) identified, 357 had been remediated and received findings of “no further action” at the time the OCGP EIR was prepared. Of the 39 aboveground storage tanks (ASTs) on the property, 36 had been remediated and received findings of “no further action” (Refer to OCGP EIR p. 5.5-10).

Evaluation and remediation of previously identified IRP sites within the project site continues with the resulting changes in the condition of the property largely anticipated in the OCGP EIR. The IRP sites are

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depicted in Figure 4-2. Subsequent to certification of the OCGP EIR, the DoN completed environmental related findings that support the suitability to transfer real property made available through the Base Realignment and Closure process and to support of the lease of areas not yet suitable for transfer.⁴

The areas suitable for lease encompass locations of concern identified in the 1995 and 2003 EBS, and in the OCGP EIR, where future evaluation and/or actions are ongoing or required. These areas were identified as “carve-outs” in the DoN documentation.⁵

Progress relative to conveyance of the carve-outs includes DoN transfer of approximately eight acres of the project site to Heritage Fields and the Great Park Corporation on March 22, 2006. At the time of the initial land sale, these properties (carve-outs) were retained by the DoN in order to complete environmental clean up, and have since been approved by the regulatory agencies for transfer (FOST #2). The following sites were included in this transfer:

- Carve-out parcel II-J, consists of approximately 0.2 acre situated in the central portion of former MCAS El Toro. It contains one building—Building No. 860—and one location of concern.
- Carve-out parcel II-Q (portion) consists of approximately 5 acres situated in the eastern portion of the former MCAS El Toro. It is an abandoned jet fuel (JP-5) pipeline.
- Carve-out parcel II-S consists of approximately 1.3 acres situated in the southeastern portion of former MCAS El Toro. It contains six buildings (347, 377, 447, 448, 566, and 726) and 13 locations of concern.
- Carve-out parcel II-T consists of approximately 0.5 acre situated in the southeastern portion of former MCAS El Toro. It contains one building—Building No. 761—and four locations of concern. The facility was a former aircraft wash rack.
- Carve-out parcel III-C consists of approximately one acre situated in the western portion of the former MCAS El Toro. It contains one building—Building No. 240—and seven locations of concern. This site was a former ordnance storage facility.

Emergency Plans

The OCGP EIR described the former MCAS El Toro site (Planning Areas 30 and 51) as a potential emergency response staging area because of its capacity for processing and storing large quantities of cargo. The Orange County Emergency Plan, which incorporates the statewide standardized emergency management system (SEMS), guides multijurisdictional response to emergency conditions. No substantial change to the description of the setting regarding emergency plans has occurred that would alter the analysis and conclusions of the OCGP EIR on emergency plans and response.

Wildland Fires

- The OCGP EIR identified high fire hazard areas within open space, undeveloped land northeast of and adjacent to Planning Area 51. The City has no construction records of existing buildings and structures extant on the property. No substantial change to the description of the setting relative to wildland fires has occurred that would alter the analysis and conclusions of the OCGP EIR regarding wildland fires.

⁴ U.S. Department of the Navy, 2004. *Final Finding of Suitability to Transfer, Parcel IV and Portions of Parcels I, II, and III, Former Marine Corps Air Station, El Toro, California*, July 2004; *Final Finding of Suitability to Lease for Carve-outs Within Parcels I, II, and III, Former Marine Corps Air Station, El Toro, California*, July 2004.

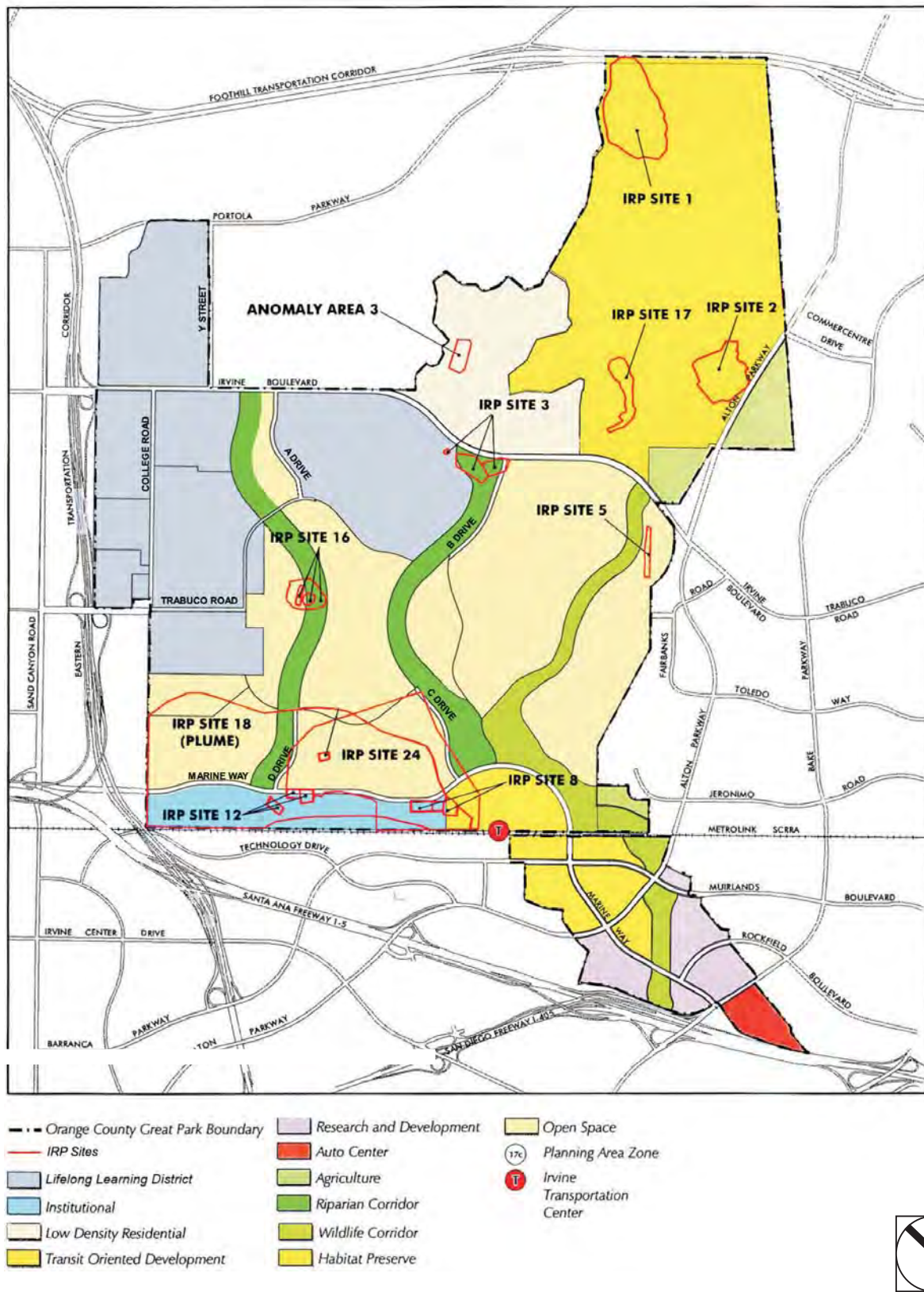
⁵ U.S. Department of the Navy, 2004a. *Final Finding of Suitability to Lease for Carve-outs within Parcels I, II, and III, Former Marine Corps Air Station, El Toro, California*, July 2004.

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4. Discussion of Checklist and Mitigation Measures

Installation Restoration Program Sites



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4. *Discussion of Checklist and Mitigation Measures*

4.7.2 Impacts Identified in the OCGP EIR

Hazardous Materials and Wastes

The OCGP EIR identified no significant impacts associated with the No Further Action IRP sites, which are listed in Table 4-2. Table 4-3 identifies each Action Required IRP site and its location relative to the adopted Overlay Plan. The OCGP EIR disclosed the following environmental consequences of the adopted Overlay Plan as significant impacts:

- Construction activities involving demolition and possible substantial remodeling of existing structures in the project area as the project area develops could result in the disturbance of structures and soils containing asbestos-containing building materials (ACM) and lead-based paint.
- IRP site 24 is located in zoning districts categorized as 6.1 Institutional and 1.5 Recreation. The site may be conveyed with temporary restrictions on use that are not appropriate for transportation facility use. This is considered a significant impact.
- Future uses of IRP site 3 may be potentially constrained by the implementation of institutional controls.

IRP site 16 (Crash Crew Pit No. 2) is located in zoning district designation 1.5 Recreation. The site may be conveyed with temporary restrictions on use that are not appropriate for recreational land uses.

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Table 4-2
No Further Action IRP Sites and Zoning

IRP Site	IRP Designation	Adopted Overlay Plan Zoning District	Proposed Project
4	Ferrocene Spill Area	4.4 Commercial Recreation	Change to 8.1 LLD
6	Drop Tank Drainage Area No. 1	2.2 Low-Density Residential with 1.8 Golf Course Overlay	None
9	Crash Crew Pit No. 1	1.5 Recreation	None
10	Petroleum Disposal Area	1.5 Recreation	None
13	Oil Change Area	1.5 Recreation	None
15	Suspended Fuel Tanks	1.5 Recreation	None
19	Air Craft Expeditionary Refueling	2.2 Low-Density Residential with 1.8 Golf Course Overlay	None
20	Hobby Shop	2.3 Medium Density Residential	Change to 8.1 LLD
21	Materials Management Group	6.1 Institutional	None
22	Tactical Air Fuel Dispensing System	1.5 Recreation	None

Source: OCGP EIR, Table 5.5-3, p. 5.5-21; SEMA Associates (June 7, 2006).

Table 4-3
Action Required IRP Sites and Zoning

IRP Site	IRP Designation	Adopted Overlay Plan Zoning District	Proposed Project
1	EOD Range	1.4 Preservation	None
2	Magazine Road Landfill	1.4 Preservation	None
3	Original Landfill	1.5 Recreation/ 2.2 Low-Density Residential with 1.8 Golf Course Overlay	8.1 LLD
5	Perimeter Road Landfill	1.5 Recreation	None
7	Drop Tank Drainage Area No. 2	1.5 Recreation	None
8	DRMO Storage Yard	6.1 Institutional/ 3.2 Transit Oriented Development	None
11	Transformer Storage Area	1.5 Recreation	None
12	Sludge Drying Beds	6.1 Institutional	None
14	Battery Acid Disposal Area	1.5 Recreation	None
16	Crash Crew Pit No. 2	1.5 Recreation	None
17	Communications Station Landfill	1.4 Preservation	None
24	VOC Source Area	6.1 Institutional/ 1.5 Recreation/ 3.2 Transit Oriented Development	None

Source: OCGP EIR, Table 5.5-4, p. 5.5-22; SEMA Associates (June 7, 2006).

4. *Discussion of Checklist and Mitigation Measures*

Emergency Plans

The OCGP EIR determined the Overlay Plan would not be expected to interfere with emergency response and evacuation plans on the bases that other sites within Orange County are already designated emergency staging areas and portions of the OCGP would remain available to non-aviation emergency response equipment. Accordingly, the OCGP EIR concluded the adopted Overlay Plan would not result in a significant impact related to emergency response and evacuation plans.

Wildland Fires

The OCGP EIR concluded the Habitat Reserve, Wildlife Corridor, and Recreational areas in the northeastern portion of Planning Area 51 would be exposed to the highest level of fire risk from wildland fires under the adopted Overlay Plan, and that reuse of existing buildings require inspection for conformance to fire life safety code requirements. The OCGP EIR identified the wildland fire impacts as potentially significant.

4.7.3 Impacts Associated with the Revised Overlay Plan

Hazardous Materials and Wastes

Table 4-2 lists each No Further Action IRP site, its designation, and its location relative to the project, and Table 4-3 lists each Action Required IRP site with similar information. Figure 4-2 depicts the general location of both No Further Action and Action Required IRP sites. In July 2004, two reports were completed under the auspices of the DoN for the property. The Finding of Suitability to Transfer (FOST) documented the environmental condition of the property and the appropriateness of its conveyance. The document concluded 2,798 acres are suitable for transfer by deed for residential purposes and that the parcels can be used with acceptable risk to human health and the environment, and without interference with the environmental restoration process (Refer to FOST, Ch. 8). The companion report, the Finding of Suitability for Lease (FOSL) documents the suitability for lease of 41 carve-out areas totaling approximately 921 acres (Refer to the FOSL p. 2-2). The carve-outs are locations within the Property where the potential or known release or disposal of hazardous substances or petroleum products has occurred. Based on the information provided in the FOSL, carve-outs have been deemed suitable for lease subject to specified conditions, notifications, and restrictions set forth in the FOSL and the terms of the leases. Use of these properties has been determined by the DoN to be appropriate, subject to use restrictions in the leases, with acceptable risk to human health and the environment and without interference with the environmental restoration process. The carve-out parcels remain in U.S. Department of Defense ownership.

The proposed boundary adjustment would move the City/Heritage Fields property ownership boundary in the vicinity of small areas with ongoing investigations and environmental cleanup activities. The boundary adjustment in the northeastern portion of Planning Area 51 and the Bee Canyon drainage corridor would move the park boundary to the southeast, over a site identified as suitable for lease (site II-L). Boundary adjustments proposed along the Agua Chion drainage corridor and the Park District of Planning Area 51 are near small areas also identified as suitable for lease (sites II-K, II-S and II-T) (DoN 2004a). Also, the boundary adjustments south of Trabuco Road would move the City/Heritage Fields property boundary to the northeast, over a small area deemed suitable for lease and located northwest of carve-out site I-I (Building/Facility No. 47, former Construction Shop). The boundary adjustments at these locations are not expected to result in new or more severe impacts than those disclosed in the OCGP EIR.

Creation of the mixed-use category Lifelong Learning District (LLD) includes planning area zones (PAZ) 1, 5 through 11, 17a and 17b and encompasses subparcels of land undergoing investigation and environmental cleanup by the DoN ("carve-outs"), and agricultural land (Bordier's Nursery), which routinely stores and uses hazardous materials. Regarding the carve-outs, the DoN has defined the boundaries of the subparcels to

4. *Discussion of Checklist and Mitigation Measures*

“allow use of the property without impeding environmental cleanup and to prevent human exposure to potential contaminants while remedial action is being conducted.” Use of the carve-outs suitable for lease is subject to restrictions (DoN 2004). The final disposition of each carve-out would be considered together with its specific future use—residential and nonresidential development. The existing nursery stores reportable quantities of hazardous substances and its operation over time is expected to have affected the quality of the soils on-site. As a provision under 8.1 LLD Zone, the required 173 acres of agricultural land would be provided but could be moved from its existing location northeast of Irvine Boulevard to another site(s) within the LLD. A land use change of this type would require approval of a Master Plan in accordance with City Zoning Ordinance Chapter 2.17, and associated environmental documentation. The discretionary permit process and required environmental review for future individual development projects provide sufficient safeguards to reduce the potential for human exposure to contaminants associated with past use of the existing nursery site.

The land use parameters for both the Park and Transit Oriented Development (TOD) Districts of the Overlay Plan would be modified slightly. Among the revisions would be a more proportionate distribution of planned residential development within the Park District and clarifications to the type of nonresidential development that would be allowed within the TOD. These project features are not expected to result in new or more severe public health and safety impacts relative to hazardous materials and waste.

Overall, the proposed project would not change the OCGP EIR conclusions; with mitigation measures HH1, HH2, HH5, and HH6, the project would result in less than significant impacts related to hazardous materials and waste.

Emergency Plans

Like the adopted Overlay Plan, the proposed project would not be expected to interfere with emergency response and evacuation plans on the bases that other sites within Orange County are already designated emergency staging areas and portions of the OCGP would remain available to non-aviation emergency response equipment. Accordingly, the proposed project would not change the OCGP EIR conclusions; the project would not result in a significant impact related to emergency response and evacuation plans.

Wildland Fires

Under the proposed project, the Habitat Reserve, Wildlife Corridor, and Recreational areas in the north-eastern portion of Planning Area 51 would be exposed to the highest level of fire risk from wildland fires and reuse of existing buildings would require inspection for conformance to fire life safety code requirements. As the potential significant wildland fire impacts of the proposed project are similar to those disclosed in the OCGP EIR, the project would not substantially change the findings and conclusions of the OCGP EIR regarding wildland fires.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP EIR. The Revised Overlay Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP EIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is

4. *Discussion of Checklist and Mitigation Measures*

no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the certified OCGP EIR.

4.7.4 Mitigation from the OCGP EIR and Applicability to the Revised Overlay Plan

The OCGP EIR identified six mitigation measures to reduce the effects of the adopted Overlay Plan on public health and safety; specifically, environmental effects associated with hazardous materials and waste, emergency response, and wildland fires to a level less than significant. All of the mitigation measures are applicable to implementation of the proposed project and would be carried forward to future development of the project site. Measures HH1 through HH6 are listed below:

- HH 1
- a. Prior to the conveyance of the property and issuance of subsequent grading permits, where the presence of ACMs is identified, the DoN or its transferee shall ensure that all available information concerning ACMs has been provided to the City of Irvine, and the purchasers of the property, including:
 - The type, location and condition of ACMs
 - The results of any asbestos testing
 - Description of asbestos control measures taken, if any
 - The costs or time necessary to remove existing ACMs
 - The results of any site-specific asbestos inventory updates
 - b. For any structures known to contain ACMs that will be renovated and/or demolished prior to transfer, the DoN shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.
 - c. Prior to transfer of any structure constructed before October 1988, scheduled for renovation and/or demolition, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by the DoN. This requirement can be waived if an architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building material, and to the best of their knowledge, no ACMs were used as a building material.

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- d. Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.
 - e. Any renovation and/or LBP abatement activities on residential units at former MCAS El Toro, shall be conducted in accordance with all applicable federal, state and local regulatory requirements.
- HH 2
- a. Prior to transfer, the City shall receive from the DoN, with the concurrence of the appropriate regulatory agencies, a statement that the “Action Required” IRP Site 3 is to be conveyed for restricted use and that all institutional controls have been identified and implemented. The City Irvine will adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are appropriate and shall be established by master plan approval.
 - b. Prior to transfer, if the DoN chooses to impose temporary restrictions on the use of Sites 16 and 24 pending adequate remediation of groundwater, the City of Irvine shall receive from the DoN a statement of temporary restrictions on the use of the sites and the release of the sites for restricted use following implementation of adequate remediation of groundwater. The City of Irvine shall adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are appropriate and shall be established by master plan approval.
- HH 3
- The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, specified fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for “Development Within and Exclusion from Very High Fire Severity Zones” and “Fuel Modification Plans and Maintenance.” Additionally, all demolition, by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the proposed project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.
- HH 4
- Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.

4. *Discussion of Checklist and Mitigation Measures*

- HH 5 Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event that unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DoN shall be responsible for notifying the DoN, appropriate regulatory agencies, and the Director of Community Development of the City of Irvine in a timely manner.
- HH 6 The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells located on the former MCAS El Toro in a geographic information systems database (GIS). The City will review all permit applications on the former air station for monitoring well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to monitoring wells will be limited to authorized personnel.

4.8 HYDROLOGY AND WATER QUALITY

4.8.1 Environmental Setting

The OCGP EIR describes the project site as located within the San Diego Creek watershed, which includes the San Diego Creek, Peters Canyon Channel, and the tributaries to these water courses. The major drainage channels that traverse the site (PA 51) are the Marshburn Channel, Bee Canyon Channel, Agua Chinon Channel, and Borrego Canyon Channel. Serrano Creek and Upper San Diego Creek Channel traverse PA 30 in the southern tip of the project site, south of the existing SCRRA Metrolink railroad tracks.

San Diego Creek and Upper Newport Bay are listed as impaired water bodies under Section 303(d) of the Clean Water Act. Accordingly, Total Maximum Daily Load (TMDL) for pollutants that have impaired these water bodies has been established and was included in the OCGP EIR (Refer to OCGP EIR Table 5.7-2). Figure 4-3 below shows the drainage areas and topography of the project area.

The OCGP EIR also notes the County of Orange and the City of Irvine hold a Nationwide Pollution Discharge Elimination System (NPDES) permit for the storm drain systems, and that the State has issued a NPDES general permit relating to construction activities on sites over five acres in the area. Lastly, the flood control improvements associated with the SR-133 Tollroad were noted in the OCGP EIR as having reduced the 100-year flood zone north and west of the property.

4.8.2 Impacts Identified in the OCGP EIR

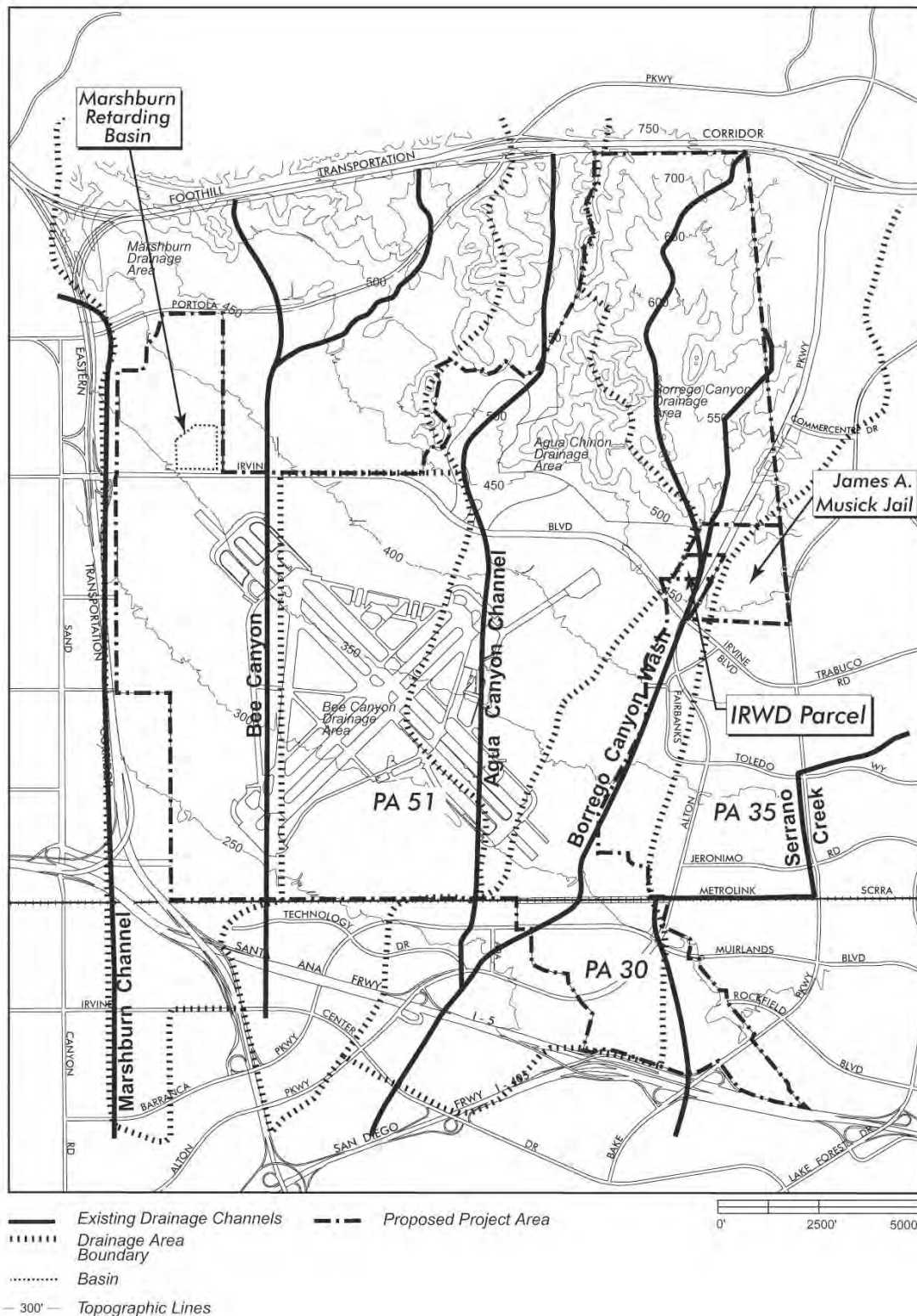
The OCGP EIR identified several significant impacts on hydrology and water quality associated with future development under the adopted Overlay Plan before mitigation. First, grading and excavation activities required for future development could result in the exposure of bare soils to both wind- and water-related erosion and associated significant water quality impacts; specifically, a violation of water quality standards or waste discharge requirements. Compliance with City grading and water quality regulations—including the NPDES discharge permitting requirements and preparation of a Storm Water Pollution Prevention Plan (SWPPP) and a Water Quality Management Plan (WQMP)—are the primary means of controlling the potential

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Drainage Areas and Topography



Source: Orange County Great Park Final EIR

Addendum to the Orange County Great Park EIR

The Planning Center • **Figure 4-3**

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impacts of grading and excavation activities. These City requirements, which are described in mitigation measures H/WQ 1 and H/WQ 2, would reduce the impact to a level less than significant.

According to the OCGP EIR, the existing drainage patterns and stream courses would not be substantially altered by future development under the adopted Overlay Plan. In addition, the potential for inundation was expected to have been reduced by improvements to upstream flood control facilities. Without project-related flood control facilities, the rate or amount of surface runoff due to new development would result in flooding on- and off-site, depending on the nature of the specific development. Although this impact was identified as significant, the effect of increased runoff would be reduced to a less than significant level through preparation and implementation of hydraulic studies and recommendations for the specific development and the construction of flood control improvements commensurate with the specific development (mitigation measure H/WQ 3).

The impact analysis for the adopted Overlay Plan assumed development of the land use patterns created by the zoning for PAs 30 and 51 and a backbone storm drain system. The storm drain system took into consideration and included improvements identified in the San Diego Creek Flood Control Master Plan (Refer to OCGP EIR p. 5.7-16 and Figure 5.7-2). The drainage plan for PAs 30 and 51 included the following improvements to the major drainage areas of the Property, as described in the OCGP EIR:

- Marshburn Channel—The existing Marshburn channel and detention basin would remain substantially the same. Future improvements to serve future development would include an extension of the existing 66-inch pipeline departing the main channel to capture runoff from the westerly most portion of the Property. Although no off-site improvements are necessary to serve the Property, other development projects are expected to improve the Marshburn Channel system.
- Bee Canyon Channel—Downstream (south) of Irvine Boulevard, the existing concrete box culverts and open channels would be demolished and replaced with the drainage corridor cross-section and supporting internal culvert crossings and storm drain laterals. The drainage corridor would extend a distance of about 10,200 linear feet. The new drainage corridor would reconnect to the existing Bee Canyon Channel in the vicinity of the SCRRA railroad tracks. A reinforced concrete box measuring 12 feet wide by 9 feet high would convey storm water to the property line where it would connect to a buried box concrete channel and continue downstream.
- Agua Chinon Channel—The drainage channel upstream of Irvine Boulevard would remain substantially unchanged. Select removal and replacement of the existing concrete box culvert and open channels with a corridor drainage cross-section and supporting culvert crossings and storm drain laterals would occur downstream of Irvine Boulevard. The corridor drainage cross-section would be approximately 8,000 feet in length. The new drainage corridor would reconnect to the existing Agua Chinon Channel in the vicinity of the SCRRA railroad tracks. Downstream from its crossing of the tracks, the channel would convey stormwater in a buried reinforced concrete box measuring 12 feet wide by 10 feet high.
- Borrego Channel, Wildlife Corridor and Serrano Creek—Under the adopted Overlay Plan low flows from the natural wash upstream and east of Irvine Boulevard would be rerouted from the existing wash and into a new Wildlife Corridor that would be created downstream and west of Irvine Boulevard. A concrete structure would be constructed to convey the flow toward and through the existing Magazine Road tunnel below Irvine Boulevard and to the new Wildlife Corridor. The rerouted flows would travel through the new Wildlife Corridor that would traverse the Property in a location generally parallel to the Borrego Channel. At a point near the SCRRA railroad tracks, the Corridor streamline would cross over the existing Borrego Channel, then under the railroad tracks. The Corridor streamline would continue uncovered and in tunnel structures that would be constructed to

4. *Discussion of Checklist and Mitigation Measures*

permit wildlife movement into the existing Serrano Creek Channel as the Corridor proceeds to the Property line east of the I-5 Freeway. From its intersection with the Wildlife Corridor, the Borrego Channel would continue west as an at-grade open channel then as a buried box culvert channel under the railroad tracks and in a southwesterly direction, beyond the Property line at Barranca Parkway.

- San Diego Creek—The existing segment of this creek within PA 30 is an unimproved earthen channel that would be replaced with 1,000 feet of buried storm drain conduit measuring approximately 96 inches in diameter.

4.8.3 Impacts of the Revised Overlay Plan

The project would adjust the boundaries between the Great Park and development areas within PA 51, exchanging land areas in equal amounts such that the total acreage identified for the Great Park and the proposed Lifelong Learning District and the Park District would not change. (Other portions of PA 51 and PA 30 would not be affected by the proposed boundary adjustments.) Additionally, the project proposes land uses and intensities are identical to those allowed under the adopted Overlay Plan; therefore no change in the development assumptions as they pertain to hydrology and water quality would be necessary. Accordingly, the impact analysis presented in OCGP EIR Section 5.7 adequately describes the project effects on hydrology and water quality.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP EIR. The Revised Overlay Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP EIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the certified OCGP EIR.

4. *Discussion of Checklist and Mitigation Measures*

4.8.4 Mitigation from the OCGP EIR and Applicability to the Revised Overlay Plan

The OCGP EIR identified four mitigation measures to reduce the effects of the adopted Overlay Plan on hydrology and water quality. All of the mitigation measures are applicable to implementation of the project and would be carried forward to future development of the project site. Implementation of measures H/WQ 1 through H/WQ 4 (listed below) would reduce project impacts to a less than significant level.

- H/WQ 1 Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City of Irvine adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that “industrial/commercial construction operations that result in a disturbance of one acre or more of total land area...and residential construction sites that result in the disturbance of five acres or more...shall be required to develop and implement BMPs...to control erosion and siltation and contaminated runoff from the construction sites.” Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of one acre or more.

The City’s standard conditions of approval indicate that a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.

Additionally, prior to the issuance of a grading permit, project applicant must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, lessee, etc.), and shall reference the location(s) of structural BMPs.

Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOI) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the Director of Community Development of any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future project are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will

4. *Discussion of Checklist and Mitigation Measures*

acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

- H/WQ 2 Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water quality Control Board Basin Plan, including Total Maximum Daily Load (TMDL) Implementation Plan adopted for this watershed.
- H/WQ 3 Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrologic and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.
- H/WQ 4 Prior to issuance of a building permit, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.

After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process.

4. *Discussion of Checklist and Mitigation Measures*

4.9 LAND USE

4.9.1 Environmental Setting

The OCGP EIR described the existing and former land uses on Planning Areas 30 and 51, and other areas adjoining and surrounding these planning areas. Subsequent to the City's approval of the General Plan Amendment and Zone Change for the Overlay Plan, the DoN initiated an auction process for the sale of the former MCAS El Toro property. To facilitate the transfer, the property was divided into and presented to prospective buyers as four distinct parcels. Interested parties were invited to bid on one or more of the parcels. In 2005, Heritage Fields, LLC, successfully purchased all four parcels from the DoN (3,671 acres), and entered into a Development Agreement with the City of Irvine on July 12, 2005. The Development Agreement sets forth the terms and conditions of subsequent development and implementation of the Great Park Plan, including dedication in fee of 1,096 acres of the property for development of the Great Park Plan.

Existing Land Uses within Planning Areas 30 and 51

The condition of Planning Area 30—generally, the cultivation of agricultural lands—is substantially the same as the OCGP EIR baseline year. Consistent with a provision in the Zoning Code, there are interim uses that reuse existing buildings on-site. These interim uses are currently comprised of administrative offices and are allowed a maximum of two years on-site without a conditional use permit. The City of Irvine, the Great Park Corporation, Heritage Fields, LLC, California State University, Fullerton, and a day care facility have established temporary operations within existing buildings in Planning Area 51.

4.9.2 Impacts Identified in the OCGP EIR

The OCGP EIR identified no significant impact to established communities. There were no residents living within Planning Areas 30 and 51 at the time the EIR was prepared and there has been no change in this regard; there are no residents living within the project site. The OCGP EIR analyzed certain amendments to the City's General Plan that were adopted on May 27, 2003, as part of the City's adoption of the Overlay Plan. The adopted Overlay Plan was determined to be consistent with each element of the General Plan, as summarized below:

Land Use Element: The goal of the Land Use Element is to “promote land use patterns that maintain safe residential neighborhoods, bolster economic prosperity, preserve open space, and enhance the overall quality of life in Irvine.” Creation of the “OCGP, Orange County Great Park” land use category to reflect the types, intensity, and density of uses and activities contemplated in the OCGP were determined consistent with the goal of the Land Use Element.

Circulation Element: The Circulation Element's goal is to “provide a balanced transportation system.” Adoption of the Overlay Plan included the following modifications to the General Plan Circulation Element:

- Policy B-1(c) was changed to include the following provision:

“In conjunction with individual subdivision map level traffic studies for development proposed in Planning Areas 30 and 51, a LOS [level of service] ‘E’ would be considered acceptable for application to intersections impacted in Planning Areas 13, 30, 31, 32, 34, 35, and 39.”

4. *Discussion of Checklist and Mitigation Measures*

- Figure B-1 (Master Plan of Arterial Highways) and Figure B-2 (Operation Characteristics) were amended to reflect the alignment of roadways within the OCGP, including:
 - Marine Way is aligned to join the Bake Parkway north bound exit ramp from Interstate 5 and terminate at Sand Canyon Avenue at Interstate 5.
 - Trabuco Road terminates at proposed Meadows Loop Road.
 - Rockfield Boulevard is realigned to terminate at Marine Way.
 - On-site circulation includes a new commuter highway/collector (Y Street [Ridge Valley]).
 - Research Parkway is renamed College Road and modified to extend from Irvine Boulevard to Marine Way.
- Figure B-3 (Public Transit) was amended to reflect the alignment of roadways within the OCGP.
- Figure B-4 (Trails Network) was amended to reflect the alignment of roadways within the OCGP.

Housing Element: The goal of the Housing Element is to “provide for safe and decent housing for all economic segments of the community.” The adopted Overlay Plan would add up to 3,625 new dwelling units and carry forward all adopted policies and objectives of the Housing Element; specifically, the residential development component would explore opportunities for maintenance of the housing stock and help the City meet its Regional Housing Needs Assessment through year 2025.

Conservation and Open Space Element: The goal of this element is to “maintain and preserve the environmental systems as a major feature in the City.” This goal would be achieved through the implementation of objectives L-1 through L-12 and corresponding policies. Objective L-10 encourages “the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development.” The adopted Overlay Plan includes 1,096 acres of Great Park recreational land, 290 acres of permanent agricultural land, and 974 acres of Habitat Preserve.

Cultural Resources: The goal of the Cultural Resources Element is to “ensure the proper disposition of historical, archaeological, and paleontological resources to minimize adverse impacts, and to develop an increased understanding and appreciation for the community’s historic and prehistoric heritage, and that of the region.” The OCGP EIR identified the flatland area of the property as a low paleontological sensitivity zone and the hillside areas north of Irvine Boulevard as a high paleontological sensitivity zone. No objective of this element was amended by the adopted Overlay Plan and all of the objectives and implementing policies were to be implemented as part of the adopted Overlay Plan.

Noise Element: The Noise Element’s goal is to “contribute to a healthy and safe environment by minimizing noise impacts. The adopted Overlay Plan would not affect the mobile noise, stationary noise, and noise abatement objectives and implementing policies of the Noise Element.

Public Facilities and Services Element: The goal of this element is to “provide a full range of necessary public facilities and services that are convenient to users, economical, reinforce City and community identity, and reflect the participation of citizens.” The facilities and services described in the Urban Service Plan for the adopted Overlay Plan were formulated through a public participatory process and found to implement the goal and adopted objectives and related policies of this element.

4. *Discussion of Checklist and Mitigation Measures*

Integrated Waste Management Element: This element seeks to “encourage solid waste reduction and provide for the efficient recycling and disposal of refuse and solid waste material without deteriorating the environment.” The OCGP EIR disclosed that the Overlay Plan would not affect the adopted objectives and implementing policies regarding solid waste, waste, wastewater, and solid waste facility siting requirements; rather, it would provide the opportunity to better respond to the City’s solid waste reduction requirements and other provisions of the element by broadening the range of design options.

Growth Management Element: The goal of the Growth Management Element is to “ensure that growth and development are integrally planned with, and phased concurrently with, the City of Irvine’s ability to provide an adequate circulation system and public facilities.” When the OCGP EIR was certified it was disclosed that though the project made changes to the Master Plan of Arterial Highways, the project would not change any of the objectives or implementing policies of the Growth Management Element.

Parks and Recreation Element: The goal of the Parks and Recreation Element is to “provide park and recreation opportunities at a level that maximizes available funds and enables residents of all ages to utilize their leisure time in rewarding, relaxing, and creative manner.” The OCGP EIR reported there would be no change to the objectives or implementing policies of this element.

Seismic Element: The goal of the Seismic Element is to “minimize the loss of life, disruption of goods and services, and the destruction of property associated with an earthquake.” Five Seismic Response Area (SRA) designations are used to describe the magnitude and types of potential seismic hazards present within the City, and to provide policy guidance. The OCGP EIR reported that the majority of the El Toro property was in category SRA-2 and that no objectives or implementing policies would be changed as a result of the project.

Safety Element: The goal of the Safety Element is to “minimize the danger to life and property from man made and natural hazards, including fire hazards, flood hazards, non-seismic geologic hazards and air hazards.” The OCGP EIR disclosed the need for fuel modification to mitigate potential wildland fire hazards and drainage improvements to lessen flood hazards associated with implementation of the adopted Overlay Plan, and concluded no objectives or implementing policies would be changed as a result of the adopted Overlay Plan.

4.9.3 *Impacts of the Revised Overlay Plan*

The following analysis discusses the proposed project in consideration of each General Plan element.

Land Use Element: The Land Use Element designates Planning Areas 30 and 51 as “OCGP, Orange County Great Park.” The City-initiated boundary adjustments and associated revisions to the adopted Overlay Plan requested by Heritage Fields would not change the existing land use designation; rather, it would slightly change the perimeter of the parkland area and add a land use category titled Lifelong Learning District (LLD). The proposed boundary adjustments would advance the goal of this element by facilitating opportunities for consideration of a broader range of land use patterns within both the open space/parkland and adjoining development areas.⁶

Through the creation of the mixed-use district, LLD, specific uses assigned to smaller lots would be replaced with a mixed-use district that would advance the stated goal through the master planning process. At that stage the creative arrangement of complementary and synergistic uses and activities can be discerned and deliberated, along with the need to separate homes and schools from incompatible future uses and parcels subject to ongoing evaluation and remediation by the DoN. To maintain consistency with the creation of the

⁶ The goal of the Land Use Element is to “promote land use patterns that maintain safe residential neighborhoods, bolster economic prosperity, preserve open space, and enhance the overall quality of life in [the City of] Irvine.”

4. *Discussion of Checklist and Mitigation Measures*

LLD, modifications were made to Figure A-3(O) and Tables A-1, A-2, and A-5 of the General Plan. The boundary adjustments and creation of the mixed use category will not change the previously approved acreages nor increase the intensity of development for the project area.

Circulation Element: The project would not substantially alter the planned network of arterials and connections to roadways in the surrounding area; nor would they materially change riding and hiking trails and trail linkages; pedestrian and bicycle circulation; and transit, air transportation, and telecommunication opportunities. All of these components of the park and future development under the project would be defined in conjunction with the master planning process, which is a longstanding practice and approach to site planning codified in the City's Zoning Ordinance (Refer to Div. 2, Ch. 2-17 of the Zoning Ordinance). The project would, however, allow a broader range of internal circulation options to be considered in conjunction with the master plan and subdivision map processes.

The goal of the Circulation Element—"to provide a balanced transportation system"—could be accomplished through various circulation alignments equal to or better than the internal roadway alignments shown on the referenced maps. To maintain consistency, Figure B-1 is modified to change the incorrect designation of Marine Way from a Major Highway to a Primary Highway. In addition, Figure B-4 is modified to depict the existing trail network to reflect the previously approved trail linkages as well as the inclusion of the known trail framework connections that will occur in conjunction with the build-out of the Planning Areas 30 & 51. The alignment for roadways, riding and hiking trails and trail connections, and pedestrian and bicycle circulation all would be defined at the master map and master plan stages, when land uses and associated circulation needs and connections can be discerned and the spatial relationships understood relative to the physical setting. Although General Plan Figure A-3(O) and the Zoning Ordinance Map would not depict all of the project streets, the project would implement the circulation improvements—streets, trails, bicycle, and pedestrian facilities—in accordance with the existing Development Agreement.

Housing Element: The proposed boundary adjustments, the creation of the LLD land use category, and distribution of residential dwelling units within the Park District would carry forward the adopted policies and objectives of the Housing Element; specifically, regarding development of up to 3,625 new dwelling units; help the City meet its Regional Housing Needs Assessment through 2025; and implement the provisions of the Development Agreement regarding the residential component of the adopted Overlay Plan.

Conservation and Open Space Element: The project, including the boundary adjustments, would modify the adopted zoning by incorporating minor changes to the parkland boundary and creating the LLD land use category wherein a variety of uses and activities could be established consistent with the intent of the LLD, subject to the approval of a master plan. To maintain consistency with the proposed boundary adjustments, minor modifications will be made to Figure L-2 of the General Plan.

The existing and proposed regulations regarding development intensity, socioeconomic trip generation, use-specific "caps" (i.e., maximum number of Low Density Residential dwelling units), and development standards serve as parameters for future development under the proposed new LLD.

The protection afforded City-reserved and state-designated farmlands would remain in full force and effect, notwithstanding the mixed-use envelope the LLD would create. The zoning stipulations within Section 9-51-3 (Statistical Analysis) include two footnotes as a safety-net, each with the following text:

An additional 173 acres of Exclusive Agriculture shall be located in Planning Area 51. (Refer to section 9-51-3, footnotes * and ***)

Cultural Resources: The project would not affect the adopted goals, objectives, and policies of this element. Subsequent development would be required to comply with its requirements and to implement mitigation

4. *Discussion of Checklist and Mitigation Measures*

measures found in the OCGP EIR. With implementation of OCGP EIR measures P1 and CULT 1 through CULT 4, the impacts of new development on paleontological and cultural resources would be less than significant. Furthermore, the proper disposition of such resources, if any are encountered prior to or during construction would be ensured; and through the information recovered, the community's understanding and appreciation for its historic and prehistoric heritage will have been enhanced.

Noise Element: The project would not affect the goal of this element—"to contribute to a healthy and safe environment by minimizing noise impacts"—or the mobile noise, stationary noise, and noise abatement objectives and implementing policies of the element. The additional flexibility the boundary adjustments and LLD components of the project would further ensure noise sensitive land uses could be arranged within the project site to lessen exposure to noise-generating uses and activities.

Public Facilities and Services Element: The project would not affect facilities and services described in the Urban Service Plan for the adopted Overlay Plan. As no substantive change in the Urban Service Plan is necessary, and that plan was a principle means of demonstrating consistency with the Public Facilities and Services Element, the project also is consistent with this element of the General Plan. Additionally, subsequent development would be required to implement the element's objectives and policies to ensure that a full range of necessary public facilities and services that are convenient to users are provided in conjunction with new development.

Integrated Waste Management Element: Like the adopted zoning, the project would not affect the adopted objectives and implementing policies regarding solid waste, waste, wastewater, and solid waste facility siting requirements; rather, it would provide the opportunity to better respond to the City's solid waste reduction requirements and other provisions of the element by broadening the range of design options. This element seeks to "encourage solid waste reduction and provide for the efficient recycling and disposal of refuse and solid waste material without deteriorating the environment."

Growth Management Element: The goal of the Growth Management Element is to "ensure that growth and development are integrally planned with, and phased concurrently with, the City of Irvine's ability to provide an adequate circulation system and public facilities." When the OCGP EIR was certified it disclosed that though the project made changes to the Master Plan of Arterial Highways, the project would not change any of the objectives or implementing policies of the Growth Management Element. The project likewise would not alter any of the objectives or implementing policies because it would remain consistent with the development phasing already a part of the overall development plan.

Parks and Recreation Element: The goal of the Parks and Recreation Element is to "provide park and recreation opportunities at a level that maximizes available funds and enables residents of all ages to utilize their leisure time in rewarding, relaxing, and creative manner." The OCGP EIR reported there would be no changes to the objectives or implementing policies of the Element. The proposed boundary adjustments and the associated LLD accentuate the General Plan goal by enhancing the park and recreation opportunities for residents of all ages. There will be minor modifications to Figure K-1 of the General Plan as a result of the minor boundary adjustments between City-owned and Heritage Fields, LLC properties. This modification will not result in any losses of park land or increases in development intensity for the project. In addition, the presence of age-qualified housing in proximity to recreation opportunities is one example of how the integrated proposal would promote leisure time "in rewarding, relaxing and creative manner." Furthermore, through the Great Park Development Agreement, Heritage Fields has dedicated 1,096 acres: 367 acres for the park, 165 acres for the sports park, 229 acres for the drainage corridor, 179 acres for the wildlife corridor, and 156 acres for the exposition center south.

Seismic Element: The goal of the Seismic Element is to "minimize the loss of life, disruption of goods and services, and the destruction of property associated with an earthquake." Five Seismic Response Area (SRA)

4. *Discussion of Checklist and Mitigation Measures*

designations are used to describe the magnitude and types of potential seismic hazards present within the City, and provide policy guidance. The OCGP EIR reported that the majority of the El Toro property was in category SRA-2. All of Planning Area 30 and the portions of the proposed LLD and the Park District located southwest of Irvine Boulevard are identified as SRA-2. The areas of the LLD and the Park District situated northeast of Irvine Boulevard are designated SRA-3; the SRA-4 classification has been applied to small areas along the northern edge of the LLD, and the Park District's boundary within the Habitat Preserve area.

The OCGP EIR reported that no objectives or implementing policies would be changed as a result of the project. Likewise, this current proposal would not alter that finding/conclusion because all project development remains within the previously established project boundaries.

Safety Element: The goal of the Safety Element is to “minimize the danger to life and property from man made and natural hazards, including fire hazards, flood hazards, non-seismic geologic hazards, and air hazards.” The OCGP EIR disclosed the need for fuel modification to mitigate potential wildland fire hazards and drainage improvements to lessen flood hazards associated with implementation of the project, and concluded no objectives or implementing policies would be changed as a result of the adopted Overlay Plan. The project does not contain elements that would alter the findings, conclusions and mitigation measures because all project development remains within the previously established project boundaries.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP EIR. The Revised Overlay Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP EIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the certified OCGP EIR.

4.9.4 Mitigation from the OCGP EIR and Applicability to the Revised Overlay Plan

The OCGP EIR identified no significant land use impact; therefore no mitigation measures were proposed.

4. *Discussion of Checklist and Mitigation Measures*

4.10 NOISE

4.10.1 Environmental Setting

The OCGP EIR described mobile noise sources from nearby freeways, roadways, rail facilities, and vehicle use at adjacent commercial businesses, light industrial facilities, and agricultural lands as the dominate noise source in the project area. Stationary sources of noise included temporary and intermittent noise from construction activities and agricultural operations, noise associated with the industrial/business parks located to the east and the business park and entertainment uses to the south.

The OCGP EIR presents the results of a noise survey conducted on December 10–12, 2002, in which noise measurements were conducted at nine locations. The Community Noise Equivalent Level (CNEL) sound levels at the four surveyed representative residential locations ranged from 58 dBA to 65 dBA (Refer to OCGP EIR p. 5.4-18, Figure 5.4-6, and Table 5.4-7).⁷ The audible noise sources included local traffic, distant traffic, birds, aircraft, and human voices, all of which were characterized as typical of suburban areas.

4.10.2 Impacts Identified in the OCGP EIR

The OCGP EIR identified no significant noise effects associated with future development under the adopted Overlay Plan.

The noise assessment considered a worst-case condition of simultaneous demolition and construction activities with the combined sound level of 20 pieces of large mobile equipment operating at a distance of 5,000 feet, five concrete breakers operating at a distance of 6,000 feet, and two crusher plants operating at a distance of 10,000 feet from the nearest off-project area residential location. The distances represented the closest possible location of the construction equipment to the nearest off-project area residences during a heavy construction period. The nearest off-site residential uses (sensitive noise source) were located approximately 4,000 feet from the property boundary. Under this scenario, the analysis estimated sound levels of approximately 56 dBA at the nearest off-site residential location (Refer to OCGP EIR p. 5.4-24 and Table 5.4-8).

As build-out of the project site was assumed to occur over time (years 2007–2025), construction-related noise impacts on residential areas within the project site were also estimated. Using the same construction equipment assumptions and a distance of 600 feet from the nearest residential area, the combined effect of the equipment was estimated at a sound level of 70 dBA at the nearest on-site residential locations during a heavy construction period. While the City of Irvine Noise Ordinance does not specify a limit on construction noise levels, it stipulates the days and hours during which construction activities may occur and when construction would not be allowed unless a temporary waiver is requested and granted; specifically, construction is allowed Monday through Friday between 7:00 a.m. and 7:00 p.m., and on Saturdays between 9:00 a.m. and 6:00 p.m.; no construction is allowed outside those hours, on Sundays, or on federal holidays (Refer to OCGP EIR p. 5.4-31).

⁷ California standards for community noise use the CNEL, in which the energy is averaged over a 24-hour day with a 5-decibel penalty from 7:00 P.M. to 10:00 P.M. and a 10-decibel penalty from 10:00 P.M. to 7:00 A.M. (OCGP EIR p. 5.4-4.) Sound is generated by the propagation of energy in the form of pressure waves, and is characterized by amplitude (sound level) and frequency (pitch) (OCGP EIR p. 5.4-1). Sound levels are measured in decibels (dB) and frequency is measured in hertz (Hz). The A-weighted decibel (dBA) is used for analysis and regulatory purposes because it focuses on the range of sound levels and frequencies more discernible to the human ear.

4. *Discussion of Checklist and Mitigation Measures*

4.10.3 Impacts of the Revised Overlay Plan

The project includes: land use types and intensity identical to the adopted Overlay Plan; no substantial change to the worst-case demolition and construction assumptions of the OCGP EIR; and no substantial change to the traffic volumes and circulation patterns surrounding the project site as presented in the OCGP EIR. The existing setting, however, includes residential development not extant at the time the OCGP EIR was certified, and which is closer to the project, as described in the following paragraph.

The OCGP EIR noise assessment considered a worst-case condition of simultaneous demolition and construction activities. The worst-case assumptions described for the adopted Overlay Plan remain reasonable assumptions for the project; no new information about future demolition and construction has become available that would increase the number of pieces of equipment to be operated simultaneously. The OCGP EIR noise analysis estimated the combined sound level of the following activities as measured from the nearest off-project area residential location:

- 20 pieces of large mobile equipment operating at a distance of 5,000 feet;
- 5 concrete breakers operating at a distance of 6,000 feet; and
- 2 crusher plants operating at a distance of 10,000 feet.

The residential dwelling units that have been constructed since certification of the OCGP EIR are located along the west side of Sand Canyon Avenue in the Woodbury residential development. The residences that front Sand Canyon Avenue are located approximately 1,500 feet from the project site's northwest property line. This distance (1,500 feet) is greater than the distance analyzed for future on-site residential areas (600 feet). The noise analysis for construction impacts to on-site residential areas used the same equipment and activity assumptions, and a distance of 600 feet from the nearest on-site residential area. The results of the analysis estimated construction sound levels at 70 dBA. At a distance of 1,200 feet from the noise source (conservatively assumed to be the project site's northwest property line), which generally represents a doubling of distance, the sound pressure level would be about 6 dB lower than the construction sound levels of 70 dBA estimated for the nearest on-site residential receptor when the noise is located a distance of 600 feet from the residential receptor.⁸ Accordingly, the project's construction-related noise effects on the nearest off-site residential receptor is not expected to be more severe than the noise impacts disclosed in the OCGP EIR.

Compliance with the City's Municipal Code⁹ would reduce construction-related noise impacts on residential areas (off-site and on-site), including the dwelling units that front Sand Canyon Avenue in the Woodbury residential development. In addition, because the project would not substantially change the traffic volumes and circulation patterns in the study area, the operations-related noise impacts from mobile noise sources disclosed in the OCGP EIR adequately describe the potential noise effects the project's mobile noise sources.

⁸ Sound intensity decreases in proportion with the square of the distance from the source. Generally, sound level for a point source will decrease by 6 dBA for each doubling of distance from the source. (Refer to U.S. Department of Transportation, 1995. *Highway Traffic Noise Analysis and Abatement Policy and Guidance*, Federal Highway Administration, June, p. 4.)

⁹ The City of Irvine Municipal Code, Sections 6-8-201 et seq. (Noise) provides regulations to control unnecessary, excessive, and annoying noise. Section 6-8-204 identifies noise zones (uses) and corresponding noise standards for interior and exterior areas. Section 6-8-205 identifies the days and hours during which construction activities may occur and when construction would not be allowed unless a temporary waiver is requested and granted. Construction is allowed Monday through Friday between 7:00 A.M. and 7:00 P.M., and on Saturdays between 9:00 A.M. and 6:00 P.M.; no construction is allowed outside those hours or on Sundays or federal holidays. Other requirements refers to the California Building Standards related to noise and specific uses such as hotels, dormitories, long-term care facilities, and multi-family housing; and California Occupational Safety and Health Administration noise exposure limits.

4. *Discussion of Checklist and Mitigation Measures*

The interim and future land uses (residential, commercial, institutional, recreation, and industrial) within the project site are comparable to those identified in the OCGP EIR. Similar to the adopted Overlay Plan's Transit Oriented Development District, the proposed Lifelong Learning District would allow a broad mix of uses subject to the approval of a master plan pursuant to City Zoning Ordinance Section 2-17. Inherent in a mixed-use planning district is the potential for noise-induced conflicts that can be identified and avoided during master plan review. At that stage the stationary noise sources associated with the on-site equipment, loading/unloading operations, heating/ventilation/air conditioning (HVAC) equipment, and other noise-generating features of the specific use would be evident. Accordingly, appropriate acoustical design features—such as sound insulation, perimeter barrier walls, acoustical equipment enclosures, and operational restrictions—can only be evaluated in the context of a specific project.

Overall, the noise effects associated with construction and operation of future development under the project would be similar to the impacts disclosed in the OCGP EIR for the adopted Overlay Plan. Accordingly, no significant noise effects are anticipated with implementation of the project.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP EIR. The Revised Overlay Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP EIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the certified OCGP EIR.

4.10.4 Mitigation from the OCGP EIR and Applicability to the Revised Overlay Plan

The OCGP EIR identified no significant noise impact; therefore no mitigation measures were proposed.

4. *Discussion of Checklist and Mitigation Measures*

4.11 POPULATION AND HOUSING

4.11.1 Environmental Setting

The OCGP EIR discussed the caretaker status of the base following its closure. At the time the OCGP EIR was prepared there was a limited number of military and civilian staff working on the base. There are no residents living on the base. Consequently, there are 4,380 vacant group quarters units and 1,209 residential dwelling units. The OCGP EIR examined demographics in the context of the existing and projected population of the Orange County region and the City of Irvine. Population and housing information was developed based on the 2000 United States Bureau of Census population, household, and employment census information. The areas surrounding the former base and the Orange County subregion are considered jobs-rich and housing-poor. The Southern California Association of Governments (SCAG) seeks to encourage housing growth over job growth in the Orange County subregion. The OCGP EIR reported that the ratio of jobs to housing in the area has environmental implications related to transportation and air quality. Thus, a major focus of the regional planning efforts has been to improve the ratio of jobs to housing in all affected subregions in order to reduce vehicular trips, costly infrastructure improvements, and resultant air emissions. Despite attempts, according to SCAG projections, the Orange County subregion's jobs/housing balance will worsen through the year 2025 as the number of jobs surpasses housing gains.

4.11.2 Impacts Identified in the OCGP EIR

As noted above the area surrounding the former MCAS El Toro and the Orange County subregion are considered jobs-rich and housing-poor. SCAG seeks to encourage job growth over housing growth in the Orange County subregion. The OCGP EIR reported that regional projections are dynamic and as a compilation of local land use projections, reflect changing community views on the location and the types of growth desired. Although implementation of the adopted Overlay Plan would not have exceeded the Orange County Preferred-2000 employment projections, its impact on employment was considered significant because the Orange County subregion is anticipated to become increasingly jobs-rich over the next 20 years and the Overlay Plan-related employment would exacerbate the subregional jobs/housing imbalance. No significant impact on population and housing were identified (www.scag.ca.gov).

4.11.3 Impacts Associated with the Revised Overlay Plan

The project would not substantially alter the population, housing, and employment information contained in the OCGP EIR. The project would not introduce new levels of development that would improve the ratio of jobs to housing beyond that already considered by the OCGP EIR. Both the proposed project and the adopted Overlay Plan would result in:

- an increase of 9,000 people (resident population);
- development of 3,625 residential dwelling units—1,100 low density, 860 medium density, 1,500 medium-high density, and 165 dwelling units allocated to homeless providers; and
- an approximate increase of 16,510 jobs.

The project's impacts would be the same as under the OCGP EIR, less than significant for population and housing, and significant and unavoidable for employment.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP EIR. The Revised Overlay Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP EIR.

4. *Discussion of Checklist and Mitigation Measures*

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP EIR.

No New Information of Substantial Importance Showing Greater Significant Effects than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the certified OCGP EIR.

4.11.4 Mitigation from the OCGP EIR and Applicability to the Revised Overlay Plan

The OCGP EIR identified a significant impact associated with the jobs/housing ratio. The OCGP EIR also stated that no mitigation is available to rectify conflicts between the numerical objectives of regional planning documents including the jobs/housing ratio.

4.12 PUBLIC SERVICES

4.12.1 Environmental Setting

Law Enforcement

At the time of the certification of the OCGP EIR, law enforcement was provided by the Orange County Sheriff through a contract with the Department of the Navy (DoN) in PA 51 and the Irvine Police Department provided law enforcement within PA 30. Subsequent to the annexation of the property, the City of Irvine Police Department has assumed law enforcement responsibility within both planning areas. The Irvine Police Department is headquartered at the Irvine Civic Center Complex and also has a satellite facility located in the Irvine Spectrum Entertainment Complex. The OCGP EIR stated that the current police facilities are adequate to handle the personnel and equipment that are employed and utilized by the department for PA 30. The OCGP EIR also stated that the Irvine Police Department is researching the expansion of their facilities, although the specific details of constructing a substation were not known.

Fire and Emergency Medical Services

At the time of the certification of the OCGP EIR, primary fire protection to PAs 30 and 51 was provided by Orange County Fire Authority (OCFA) under contract to the County of Orange on an interim basis. Subsequent to the annexation of the property, OCFA has continued to provide fire protection service to the

4. *Discussion of Checklist and Mitigation Measures*

project area. The OCGP EIR stated that OCFA is planning two additional fire stations. OCFA also has in place an agreement with the Irvine Company as part of the Northern Sphere Area that should provide adequate service to all areas surrounding the project.

Parks and Recreation

At the time of the certification of the OCGP EIR, the DoN, acting in a caretaker's role, offered public access to a variety of existing recreational facilities including the existing Marine Memorial Golf Course and equestrian stables. Since there are no residents living on PA 30 and 51, there is no on-site demand for these facilities.

School Services

Planning Areas 30 and 51 are within the school service boundaries of the Irvine Unified School District (IUSD) and the Saddleback Valley Unified School District (SVUSD). Prior to the closure of the base, an IUSD elementary school with a 600-student capacity was located and operated on the former base property.

4.12.2 Impacts Identified in the OCGP EIR

Law Enforcement

The OCGP EIR discussed the law enforcement needs of both PAs 30 and 51 and stated that following annexation the Irvine Police Department would provide law enforcement for the entire project area. The OCGP EIR also analyzed the number of police officers, police supervisors and support staff, as well as the number of vehicles, equipment, and services. The OCGP EIR stated that police protection for the park area would be funded through the use of a special park assessment. As stated in the OCGP EIR, the general impacts associated with construction and operation of public facilities were analyzed in the OCGP EIR as part of the planned land uses which also included the construction of a new police substation.

Fire and Emergency Medical Services

Subsequent to annexation of the property, PAs 30 and 51 continue to be served by OCFA. The OCGP EIR stated that there is likelihood that additional fire services infrastructure will be required to support the proposed project. OCFA had not provided the detailed calculations of the exact extent of new services. The OCGP EIR stated that the final determination of fire station needs and locations would be made at a future date when more information is known about risk, layout and types of occupancy. The specific environmental impact of construction the new fire facilities to serve the project could not be determined at the General Plan level of analysis as specific site plans and locations have not been prepared. However, the general impacts associated with the construction and operation of public facilities has been addressed within the OCGP EIR.

Parks and Recreation

As discussed in detail in OCGP EIR, the parkland acreage under the project will greatly exceed the existing City of Irvine's standards, providing a regional open space amenity for the benefit of all of Orange County. The OCGP EIR calculated a total of 45.1 acres of parkland requirement for the proposed development. A portion of that acreage will be in neighborhood parks, primarily for pools and tot lots within close proximity of homes.

The OCGP EIR also discussed the Implementation Agreement regarding the Natural Community Conservation Plan (NCCP) for the Central/Coastal Orange County Sub-region of the Coastal Sage Scrub NCCP (July 1996), and the Habitat Reserve will be established on approximately 974 acres in the northeastern portion of PA 51. Two drainage corridors and one wildlife corridor are also designated in the

4. *Discussion of Checklist and Mitigation Measures*

project area. The project also includes opportunities for museums, theaters, gardens and other cultural facilities, as well as a sports park and two golf courses and a network of recreational riding and hiking trails throughout the project site.

School Services

The OCGP EIR discussed in detail the proposed project and the related student generation and the required school facilities. Based on an initial analysis, IUSD estimated, at project buildout the need for a 13-acre K-8 site as well as funding for expansion and modernization of existing middle and high school facilities.

4.12.3 Impacts Associated with the Revised Overlay Plan

Law Enforcement

The project does not change the intensity or type of land uses and therefore, the demand on law enforcement is within the envelope of analysis presented in the OCGP EIR.

Fire and Emergency Medical Services

Since the project does not change the intensity or type of land uses, the demand on fire protection is within the envelope of analysis presented in the previously certified OCGP EIR.

Parks and Recreation

The project does not propose changes to the land use intensities and types and maintains all of these facilities and amenities as project features. Therefore, the project remains within the envelope analyzed in the previously certified OCGP EIR.

School Services

Since the project does not propose change to the number and type of residential units or to any of the other land uses, the proposed project remains within the envelope analyzed in the previously certified OCGP EIR.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP EIR. The Revised Overlay Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP EIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has

4. *Discussion of Checklist and Mitigation Measures*

determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP EIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the certified OCGP EIR.

4.12.4 Mitigation from the OCGP EIR and Applicability to the Revised Overlay Plan

The OCGP EIR determined the mitigation measures identified in other sections of the OCGP EIR (Sections 5.1–5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of facilities for police, fire protection, park and recreation, and education to serve new growth expected in the northern portion of the City.

4.13 RECREATION

Issues related to Recreation are discussed above under Section 4.12, *Public Services and Facilities*.

4.14 TRANSPORTATION/TRAFFIC

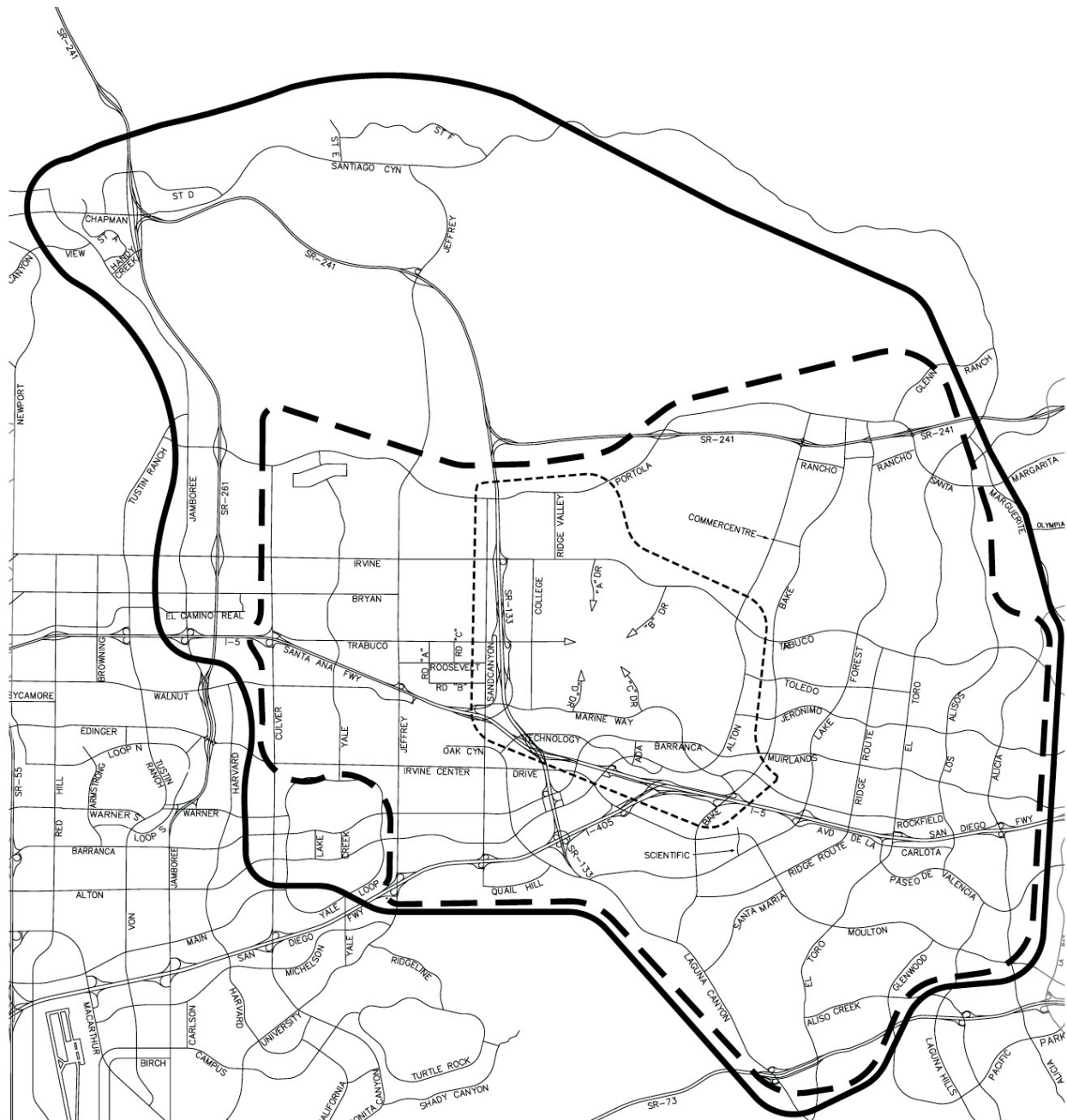
4.14.1 Environmental Setting

The OCGP EIR describes the traffic and circulation conditions of a study area that encompassed 145 existing intersection analysis sites (2007) and an additional 11 future sites (Post 2025) located in the City of Irvine, and portions of 7 adjacent jurisdictions including the Cities of Lake Forest, Mission Viejo, Laguna Hills, Laguna Woods, Aliso Viejo, Laguna Beach, and unincorporated areas of Orange County. Figure 4-4 depicts the study area used in the OCGP EIR and the traffic study for the proposed project.

The OCGP EIR used the City of Irvine Traffic Performance Criteria, which establishes level of service (LOS) “A” to “D” as the peak-hour minimum acceptable service level. In its adoption of the Overlay Plan, the City General Plan Policy B-1 (C), which identified LOS E as acceptable for application to intersections in Planning Areas 13, 31, 32, 34, 35 and 39, was changed to include the effects of future development in Planning Areas 30 and 51 on the intersections in those Planning Areas. The City’s performance criteria also includes a standard of 0.02—roadway volume to capacity (V/C) ratio or the intersection capacity utilization (ICU)—to identify significant project impacts and associated need for improvements at both roadways and intersections.

4. Discussion of Checklist and Mitigation Measures

Traffic Analysis Study Area



Legend

- NITM Program study area boundary.
- - - Great Park FEIR study area boundary.
- GPA/Zone Change study area boundary.

Source: Austin-Foust Associates, Inc.

Addendum to the Orange County Great Park EIR

The Planning Center • **Figure 4-4**

4. *Discussion of Checklist and Mitigation Measures*

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4. *Discussion of Checklist and Mitigation Measures*

At the time the OCGP EIR was prepared the following 10 study area intersections experienced deficient peak hour traffic operations:

- Culver Drive and Walnut Avenue
- Culver Drive and University Drive
- Jeffrey Road and Alton Parkway
- Jeffrey Road and I-405 Northbound Ramps
- Bake Parkway and Irvine Boulevard
- Bake Parkway and Jeronimo Road
- El Toro Road and Aliso Creek Road
- Los Alisos Boulevard and Los Alisos Boulevard
- Muirlands Boulevard and Los Alisos Boulevard
- Trabuco Road and Alicia Parkway

4.14.2 I Impacts Identified in the OCGP EIR

The OCGP EIR concluded that the adopted Overlay Plan would cause an increase in traffic which would be substantial in relation to the existing traffic load and capacity of the street system—that is, a substantial increase in either the number of vehicle trips, the V/C on roadways, or congestion at intersections—in the year 2007, year 2025 and post-2025 scenarios (OCGP EIR page 5.2-66):

Year 2007

- I-5 Freeway at Alton Parkway—southbound off-ramp (A.M.)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (A.M.)

Year 2025

- University Drive from the I-405 Freeway to Michelson Drive (A.M.)
- I-5 Freeway from Sand Canyon Avenue to Jeffrey Road—northbound (P.M.)
- I-5 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-405 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-5 Freeway at Jeffrey Road—southbound on-ramp (A.M.)
- I-5 Freeway at Sand Canyon Avenue—northbound on-ramp (P.M.)
- I-5 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-5 Freeway at Alton Parkway—southbound off-ramp (A.M.)
- I-5 Freeway at Bake Parkway—southbound off-ramp (A.M.)
- I-405 Freeway at Sand Canyon Avenue—northbound direct on-ramp (P.M.)
- I-405 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (A.M.)
- SR-241 Tollway at Lake Forest Drive—southbound off-ramp (A.M.)
- SR-133 Freeway at Barranca Parkway—northbound direct on-ramp (P.M.)

Post-2025

- I-5 Freeway from Sand Canyon Avenue to Jeffrey Road—northbound (P.M.)
- I-5 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-405 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)

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- I-5 Freeway at Jeffrey Road—southbound on-ramp (A.M.)
- I-5 Freeway at Jeffrey Road—northbound off-ramp (P.M.)
- I-5 Freeway at Sand Canyon Avenue—northbound on-ramp (P.M.)
- I-5 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-5 Freeway at Alton Parkway—southbound off-ramp (A.M.)
- I-5 Freeway at Bake Parkway—southbound off-ramp (A.M.)
- I-5 Freeway at El Toro Road—southbound off-ramp (P.M.)
- I-405 Freeway at Sand Canyon Avenue—northbound direct on-ramp (A.M./P.M.)
- I-405 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (A.M.)

Intersections

For the list of impacted intersections by analysis year, please refer to the following OCGP EIR tables:

- Table 5.2-12 for year 2007
- Table 5.2-13 for year 2025
- Table 5.2-15 for post 2025

4.14.3 Impacts Associated with the Revised Overlay Plan

A traffic study was prepared by Austin-Foust Associates, Inc., dated September 2006 (see Appendix B) to determine the impacts of the Revised Overlay Plan. The proposed Revised Overlay Plan calls for boundary adjustments between Heritage Fields and City of Irvine properties involving a total of 90 acres in Planning Area 51 (See Section 2.3.2 of this document). Other limited revisions and clarifications to the Zoning Ordinance include the creation of a mixed-use category to reallocate land uses within the established maximum building intensities for certain portions of Planning Areas 30 and 51.

Many of the abandoned buildings throughout the project site will be demolished with the project. A few of the office buildings on the west side of the project near Trabuco Road are currently occupied by Lennar, GPC, and City of Irvine staff. In addition, other existing buildings are leased to a Montessori school and to California State University, Fullerton. The golf course is also currently in operation. In addition, there are several interim uses that reuse existing buildings on-site consistent with a provision of the Zoning Code. All of the existing land uses on-site generate nominal amounts of vehicle traffic.

Table 4-4 presents a comparison of the Great Park land uses including Heritage Fields and the daily trip generation by planning area for the Adopted and Revised Overlay Plan. According to the table, the Revised Overlay Plan generates 148,806 average daily trips (ADT) compared to 148,811 ADT for the Adopted Overlay Plan. The OCGP EIR established trip thresholds (also known as “trip caps”) for each of the planning areas within the Great Park area. The trip cap is based on socioeconomic data average daily trip generation for the approved Great Park plan referred to as the Overlay Plan of which the Heritage Fields project is a part. Table 4-4 shows that the proposed Revised Overlay Plan project minimally changes the current Adopted Overlay Plan with a total daily trip generation not exceeding the trip cap established for the entire Great Park.

Analysis Scope and Methodology

The traffic study for the project involves the analysis of traffic impacts associated with implementing the proposed GPA/ZC land use plan. This is accomplished by analyzing the traffic analysis study area circulation system based on three time frames: year 2010, year 2025 and post-2025 future traffic conditions. In each case, traffic conditions under no-project and with-project are compared to identify the traffic impacts of the

4. *Discussion of Checklist and Mitigation Measures*

project, and suitable mitigation measures, if necessary, are identified to offset the impacts of the project under each time frame.

Future traffic conditions were prepared using the Irvine Transportation Analysis Model (ITAM) and the Lake Forest Traffic Analysis Model (LFTAM). The traffic conditions also include recent demographic data for the City of Laguna Woods. In addition, since the time that the Adopted Overlay Plan was adopted in 2003, OCP-2004 countywide demographic data and local cumulative projects have been incorporated in the background conditions of ITAM.

Full build-out of the proposed project is assumed in the analysis of future (year 2025 and post-2025) with-project conditions. The year 2025 and post-2025 no-project traffic conditions presented in this report assume build-out of the approved Overlay Plan for PA 30 and PA 51 referred to as the Great Park Overlay Plan. The year 2025 and post-2025 with-project forecasts analyzed here are based on build-out of the proposed Heritage Fields GPA/Zone Change project (also referred to as the Revised Overlay Plan). Twenty (20) percent of build-out of both PA 30 and PA 51 is assumed for year 2010 with-project. The first evaluation compares the No Project, in which the approved development is zeroed out, and the With Project, which is 20 percent of the proposed build-out. The second comparison evaluates 20 percent of the approved overlay zone in the No Build scenario with 20 percent of the proposed overlay zone.

The List of NITM Improvements includes improvements throughout the traffic analysis study area that are either fully funded or partially funded (i.e., fair share funded) through the NITM Program. For this study only the fully funded intersection improvements identified in the NITM Program were included in the year 2010, year 2025, and post-2025 background circulation system settings.

As previously mentioned, buildout of the proposed project generates approximately the same number of daily trips as buildout of the Adopted Overlay Plan and the same number of trips within each of the two planning areas which make up the project area (PA 30 and PA 51). The project only involves moving land uses within the planning areas. Hence the effect of these changes on the circulation system is expected to be minimal. Accordingly, the methodology applied in the 2025 and post-2025 analysis was to determine the area of impact for the Adopted Overlay Plan versus Revised Overlay Plan based on average daily traffic (ADT). Differences of 1,000 ADT or more were used to define the study area within which intersection performance was then evaluated as defined in the next section.

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Table 4-4
PA 30 and PA 51 Buildout Land Use and Trip Generation Comparison –
No-Project (Adopted Overlay Plan) Versus With-Project (Revised Overlay Plan)

Planning Area	Land Use Category	Units	Current		Revised		Difference	
			Amount	ADT	Amount	ADT	Amount	ADT
PA 30	51. Auto Center	TSF	102	4,353	102	4,353	0	0
	58. Research & Development	TSF	1,600	16,666	1,600	16,666	0	0
	60. OCTA Fac./Fly-Away Fac.	TSF	53.5	358	53.5	358	0	0
	61. Transp. Ctr./Fly-Away Ctr.	SPC	675	1,688	675	1,688	0	0
	63. Agriculture	Acre	13	26	13	26	0	0
	70. TOD Residential (Multi)	DU	865	6,179	865	6,179	0	0
	71. TOD Retail	TSF	30	1,642	30	1,642	0	0
	72. TOD Office	TSF	75	941	75	941	0	0
	SUB-TOTAL			31,853		31,853		0
PA 51	52. Education	STU	7,800	20,520	7,800	20,521	0	1
	53. Elementary School	STU	650	812	650	812	0	0
	54. Retail	TSF	225	12,312	225	12,312	0	0
	55. University Residential	DU	60	429	60	429	0	0
	56. Senior Housing	DU	800	4,086	800	4,086	0	0
	57. Transitional Housing	DU	165	1,082	165	1,082	0	0
	58. Research & Development	TSF	1,000	10,416	936.33	9,753	-63.67	-663
	59. Institutional Warehouse	TSF	263	1,655	263	1,655	0	0
	60. OCTA Fac./Fly-Away Fac.	TSF	122.5	821	122.5	821	0	0
	61. Transp. Ctr./Fly-Away Ctr.	SPC	375	938	375	938	0	0
	62. Cultural/Institutional	TSF	768	17,725	768	17,725	0	0
	63. Agriculture	Acre	290	583	290	583	0	0
	64. Golf Course	Acre	526	3,234	366	2,250	-160*	-984
	65. Wildlife Corr./Nature Walk/Habitat	Acre	1,382	231	1,382	231	0	0
	66. OS Park	Acre	367	1,319	367	1,319	0	0
	67. Cemetery	Acre	73	12	73	12	0	0
	68. Chapel/Mortuary	TSF	50	407	50	407	0	0
	69. Sports Park	Acre	165	6,881	165	6,881	0	0
	70. TOD Residential (Multi)	DU	635	4,536	635	4,536	0	0
	71. TOD Retail	TSF	45	2,462	45	2,462	0	0
	73. Residential Golf Village	DU	1,100	9,666	1,100	9,666	0	0
	76. Exposition Center	TSF	708	16,831	708	16,831	0	0
	122. Medical Office	TSF	–	–	63.67	1,641	63.67	1,641
	SUB-TOTAL			116,958		116,953		-5
Total	51. Auto Center	TSF	102	4,353	102	4,353	0	0
	52. Education	STU	7,800	20,520	7,800	20,521	0	1
	53. Elementary School	STU	650	812	650	812	0	0
	54. Retail	TSF	225	12,312	225	12,312	0	0
	55. University Residential	DU	60	429	60	429	0	0
	56. Senior Housing	DU	800	4,086	800	4,086	0	0
	57. Transitional Housing	DU	165	1,082	165	1,082	0	0
	58. Research & Development	TSF	2,600	27,082	2,536.33	26,419	-63.67	-663
	59. Institutional Warehouse	TSF	263	1,655	263	1,655	0	0
	60. OCTA Fac./Fly-Away Fac.	TSF	176	1,179	176	1,179	0	0
	61. Transp. Ctr./Fly-Away Ctr.	SPC	1,050	2,626	1,050	2,626	0	0
	62. Cultural/Institutional	TSF	768	17,725	768	17,725	0	0
	63. Agriculture	Acre	303	609	303	609	0	0
	64. Golf Course	Acre	526	3,234	366	2,250	-160*	-984

4. Discussion of Checklist and Mitigation Measures

Table 4-4
PA 30 and PA 51 Buildout Land Use and Trip Generation Comparison –
No-Project (Adopted Overlay Plan) Versus With-Project (Revised Overlay Plan)

Planning Area	Land Use Category	Units	Current		Revised		Difference	
			Amount	ADT	Amount	ADT	Amount	ADT
	65. Wildlife Corr./Nature Walk/Habitat	Acre	1,382	231	1,382	231	0	0
	66. OS Park	Acre	367	1,319	367	1,319	0	0
	67. Cemetery	Acre	73	12	73	12	0	0
	68. Chapel/Mortuary	TSF	50	407	50	407	0	0
	69. Sports Park	Acre	165	6,881	165	6,881	0	0
	70. TOD Residential (Multi)	DU	1,500	10,715	1,500	10,715	0	0
	71. TOD Retail	TSF	75	4,104	75	4,104	0	0
	72. TOD Office	TSF	75	941	75	941	0	0
	73. Residential Golf Village	DU	1,100	9,666	1,100	9,666	0	0
	76. Exposition Center	TSF	708	16,831	708	16,831	0	0
	122. Medical Office	TSF	–	–	63.67	1,641	63.67	1,641
	TOTAL			148,811		148,806		-5

* 160 acres become part of Residential Golf Village acreage but no change to number of dwelling units.

Note: The analysis uses 20 percent of buildout of the Adopted Overlay Plan and of the proposed project (Revised Overlay Plan).

Abbreviations:

Corr. – Corridor

DU – Dwelling Unit

OCTA Fac./Fly-Away Fac – Orange County Transportation Authority Facility/Fly-Away Facility

OS Park – Open Space Park

SPC – Space

STU – Student

TOD – Transit Oriented Development

Transp. Ctr./Fly-Away Ctr. – Transportation Center/Fly-Away Center

TSF – Thousand Square Feet

Project Impacts

The traffic impacts of the proposed s GPA/ZC project were analyzed by distributing project-related traffic over existing and future traffic conditions. The three future conditions (year 2010, year 2025 and post-2025) are based on the existing circulation system plus fully funded intersection improvements that are planned to be in place in each future time frame and the land use and development growth that is projected in each future time frame. In each case, project impacts were identified by comparing traffic conditions with and without the proposed GPA/ZC project.

The circulation system performance criteria applied in the analysis are the criteria approved in the 2003 NITM Program Nexus Study. The performance criteria are also consistent with the criteria adopted by the jurisdictions that are within the project study area. The criteria include components for arterial roadways, intersections, freeway/tollway ramps, and freeway/tollway mainline segments.

The results of the year 2010, year 2025 and post-2025 analysis, which are presented in detail in Chapters 4.0 through 6.0 of the Austin-Foust Traffic Study, indicate that the proposed GPA/ZC project is not forecast to significantly impact any roadway segment based on the second level of analysis (the City's peak hour link capacity analysis methodology), intersection, freeway/tollway ramp, or any freeway/tollway mainline segment.

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Special Issues

Pedestrian and Bicycle Circulation

The project area is planned to provide a system of private and public sidewalks and pathways to accommodate the recreational and transportation needs of the residents. These facilities will provide access to nearby recreational facilities, schools, public amenities, commercial centers, bus stops, and provide for an alternative mode of transportation for the area residents. Bicycle lanes will be provided along all public arterials in accordance with the City's standards and the General Plan. These facilities in addition to a system of internal pathways within each project area will serve the needs of recreational and experienced cyclists. The planned trails also provide an alternative mode of transportation for those wishing to ride their bicycle to work, shopping, school, and other destinations.

Class I off-street trails for pedestrian and bicycle use, will be located in the project site. Bicycle lanes will be provided along the arterials surrounding the development. The pedestrian and trail linkages will allow users to connect to the City's existing trail system and expanded trail network being developed to the north as part of Planning Area 6 and to the west as part of Planning Area 1 and Planning Area 9, as well as the future Orange County Great Park.

A detailed analysis of traffic control measures, including traffic signals, stop-sign control and pedestrian crossings, will be performed with the associated development's map level traffic study, master plan and street improvement plan reviews, and in coordination with the City Traffic Engineer, when specific project details are available. Appropriate traffic control measures will be in accordance with City Standards and implemented in the design of the development with the approval of the street improvement plans.

Through the implementation of the on-street and off-street trails, and a system of public and private sidewalks within the project area, the goals of the City's General Plan (Objectives B-3 and B-4) for providing alternative modes of transportation and recreational amenities would be met by future development under the proposed project.

Public Transit

The Traffic Study presents that public sidewalks and pedestrian/bike paths that will be provided throughout the Heritage Fields and Great Park developments to allow for access to future transit facilities. The detailed analysis of these needs will occur during the subsequent map level/subdivision map and street improvement plan approval process. In addition, the details of bus stops and future routes serving this area will be coordinated with the Orange County Transportation Authority during the future map level/subdivision map approval process.

The Irvine Transportation Center is adjacent to the Transit Oriented Development (TOD) district of the project area and provides access to the Metrolink commuter rail and Amtrak rail services using the Southern California Regional Rail Authority tracks which bisect the TOD district. Development of Planning Area 30 will include a 20-acre Remote Airport Terminal (also referred to as a "fly-away center"); 53,500 square feet of transit-related building facilities; and 675 parking spaces to encourage and support public transit use.

Congestion Management Program (CMP) Checklist

The CMP legislation requires that the CMP Agency monitor the implementation of the Orange County CMP, including CMP land use coordination component requirements. The goal of the CMP is to ensure that certain key intersections within the CMP Highway System (CMPHS) are operating at acceptable levels. The CMP

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has been developed to monitor impacts on CMPHS intersections. The CMP Monitoring Checklist for the Land Use Coordination Component can be found in Appendix D of the Traffic Study.

There are 18 intersection locations within the study area that are monitored as part of the CMP. The results summarized in the CMP Checklist in Appendix D of the Traffic Study indicate that each of the CMP intersections in the study area is forecast to operate at level of service (LOS) “E” or better, which is within the CMP performance standard for CMP intersections, based on an analysis of short-term (year 2010 in this case assuming 20 percent of project buildout compared with no build conditions, i.e., no development within PA 30 and PA 51) traffic conditions that is required by the CMP. These results demonstrate that the proposed project would not result in any adverse CMP intersection impacts.

Circulation Phasing Report Intersections

There are 11 intersection locations in the study area that are identified as impacted 2002 Circulation Phasing Report intersections. Table 7-1 of the Traffic Study presents the 2010 ICU results for these locations (assuming 20 percent of project buildout compared with no build conditions, i.e., no development within PA 30 and PA 51). It should be noted that the intersection locations within each category are presented according to priority for the need of addressing the intersection’s impacts. The results show that no location within the study area is adversely impacted by the GPA/ZC project under 2010 conditions.

Conclusion

The project would not produce or substantially worsen significant impacts identified in the OCGP EIR. Consistent with the conclusions in the OCGP EIR, traffic and circulation impacts associated with the project would be less than significant as the future development would implement all applicable laws and regulations to reduce impacts on traffic and circulation.

The OCGP EIR also disclosed the traffic analysis assumption that the cumulative impact of the adopted Overlay Plan traffic along with other regional growth at the identified ramp and freeway locations would be mitigated through a combination of regional programs that are the responsibility of other agencies, and if said programs are not implemented the cumulative freeway/tollway ramp impacts would remain significant and unavoidable (OCGP EIR page 7-19). The project would not alter this conclusion.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP EIR. The Revised Overlay Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP EIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

4. *Discussion of Checklist and Mitigation Measures*

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP EIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the certified OCGP EIR.

4.14.4 Mitigation from the OCGP EIR and Applicability to the Revised Overlay Plan

The OCGP EIR identified mitigation measures TRAN 1 through TRAN 8 which, if fulfilled prior to specified development approvals, would eliminate or substantially reduce the traffic and circulation effects of development under the adopted Plan. The measures are applicable to future development under the project.

- TRAN 1 Prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions, and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs. The primary purpose of this mitigation measure is to reduce traffic, air quality and noise impacts. Should annexation into Spectrumotion not be approved, the landowner or subsequent project applicant shall develop and implement a similar transportation management plan containing the elements and meeting the criteria described below:

Transportation Management Plan (TMP)

The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for the Great Park Project. This document summarizes the key elements of the TMP.

1.0 Introduction

The purpose of this document is to provide an outline for a comprehensive TMP for the Great Park. This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.

It is the intent to annex Planning Area 51 and a portion of Planning 35 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed

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restrictions requiring participation in TMA. Membership dues provide the funding for the Association and its program, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.

In the event that annexation of PAs 51 and 35 into Spectrumotion is not approved, a TMP similar to that provided by Spectrumotion will be implemented. This document sets forth the components of the TMP should it be necessary.

2.0 Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

New Hire Orientation: Inform newly hired employees of commuting services available to them.

Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services (i.e., OCTA buses, Metrolink, Amtrak, etc.).

Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.

On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.

Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.

Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.

Website: Maintain a website with all of their program information available.

Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.

Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.

Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.

3.0 Transportation Management Plan Implementation

As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Great Park. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.

- TRAN 2 Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation

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system/infrastructure fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of the FEIR.

- TRAN 3 Prior to issuance of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the project traffic study (Urban Crossroads December 2002) to maintain satisfactory levels of service as defined by the City's General Plan, based on thresholds of significance, performance standards, and methodologies used in the FEIR, Orange County Congestion Management Program, and established in the transportation system/infrastructure fee program described in Mitigation Measure TRAN 2 above.
- TRAN 4 Prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated traffic forecasts. The updated traffic study will evaluate the cumulative impact of the subject map and all previously approved or concurrently submitted maps. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City approved traffic study scope of work. The landowner or subsequent project applicant shall construct, bond for, or enter into a funding agreement for necessary improvements identified in the updated study and/or participate in the City fee program (TRAN 2 above) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of the FEIR. Traffic signals that are on-site or directly related to the Great Park development will be installed as warranted through the mitigation implementation plan process.
- TRAN 5 In conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, that landowner or subsequent project applicant and the City will take the following actions:
1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-tollway ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in the FEIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines.
 2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency.
 3. The landowner or subsequent project applicant shall enter into an agreement with the City prior to recordation of the first final map for each Master Tentative map or

4. *Discussion of Checklist and Mitigation Measures*

equivalent to establish the method and timing of payment of the identified percentage responsibility.

4. The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or funding participation in a regional transportation improvement fee program, if adopted.

TRAN 6 The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.

TRAN 7 Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a new Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-complete clause or any similar agreement restricting a public agency's authority to construct improvement.

TRAN 8 Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of any building permits within the base property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdictions to amend the Orange County Master Plan of Arterial Highways (MPAH). Marine Way, Trabuco Road from the SR-133 tollway to College Road, and Y Street should be included on the MPAH.

4.15 UTILITIES AND SERVICE SYSTEMS

4.15.1 Environmental Setting

Potable Water

The OCGP EIR described the potable water system for the project. The IRWD is the jurisdictional agency responsible for plan approval and water service to the project area. Planning Areas 30 and 51 are located within Zone 3 North and Zone 4 of the IRWD water system. The existing on-site distribution system includes a network of distribution system pipelines, six reservoirs, and two pump stations.

Recycled Water

As stated in the OCGP EIR, IRWD is the jurisdictional agency responsible for plan approval and water service for the project area. Recycled water is currently supplied to Planning Areas 30 and 51 via a 12-inch IRWD Zone B pipeline and connecting to an 8-inch former military base pipeline in the southwest corner of the property.

4. *Discussion of Checklist and Mitigation Measures*

Sewer

As stated in the OCGP EIR, IRWD is the jurisdictional agency responsible for plan approval and sewer service for the project area. Planning Areas 30 and 51 are served by a two-branched system with flow, mainly by gravity, from the northeast to the southwest. The system includes a series of pipes ranging from 6 to 15 inches in diameter.

Solid Waste

The OCGP EIR discussed in detail the environmental setting for solid waste for the project. Solid waste at the project site is collected by Waste Management, Inc., and is disposed of at the Frank R. Bowerman Landfill owned by the County of Orange Integrated Waste Management Department (IWMD).

The IWMD's Countywide Integrated Waste Management Plan (CIWMP) was approved in 1996 pursuant to California Integrated Waste Management Board requirement. The CIWMP shows that there is sufficient solid waste disposal capacity in the County for the next 30 years.

Energy and Communications

Southern California Edison (SCE) serves the project via two primary substations. The Southern California Gas Company serves Planning Areas 30 and 51. AT&T is the communications provider for these Planning Areas. Detailed information regarding the environmental setting of dry utilities was included in the OCGP EIR.

4.15.2 Impacts Identified in the OCGP EIR

Potable Water

The OCGP EIR projected the potable water demand to be less than 1.75 million gallons per day (MGD) calculated for the land uses proposed within the project. Since the project does not include any additional intensity or change in the mix of land uses, the demand projection for the project is consistent with the OCGP EIR. As stated in the OCGP EIR, selected portions of the existing potable water facilities are assumed to remain in place and operational through project build-out. The OCGP EIR stated that the existing system will be expanded and integrated into the IRWD system and thus provide a backbone service to all users in the project site. The OCGP EIR assumed a potable water system that would follow the routing of existing and proposed roadways.

Recycled Water

The OCGP EIR stated that on January 27, 2003, the IRWD Board of Directors approved the assessment of water supply for the project. According to the findings of the assessment, IRWD has determined that a sufficient non-potable water supply is available to serve the project. Since the proposed Revised Overlay Plan does not increase the intensity or change the mix of land uses, the total non-potable water supplies will meet the project demand.

The OCGP EIR stated that the implementation of the project would require the expansion of the recycled water transmission lines to serve the project. It was assumed that selected on-site facilities would remain in place and operational through build-out. The OCGP EIR stated that the existing system will be expanded and integrated into the IRWD system and provide a backbone service to all users in the project site. The OCGP EIR assumed a non-potable system that would follow the routing of existing and proposed roadways within the project.

4. Discussion of Checklist and Mitigation Measures

Sewer

The OCGP EIR stated that the IRWD will continue to provide sewer service to the project. IRWD has indicated that it would have sufficient capacity to meet the future demand; however, additional wastewater treatment capacity may need to be purchased by project proponents as specific development projects come forward. The OCGP EIR stated that projected build-out demand for sewer services based on the land uses in the projected were 0.89 million gallons per day (MGD) and the project would require an increase of sewer transmission capacity to serve the project. The proposed sewer system would preserve selected, existing on-site facilities in place and operational through build-out and would expand the system through extension of existing sewer lines. The OCGP EIR stated that additional IRWD maintenance and equipment could be required to operate and maintain the proposed system.

Solid Waste

As stated in OCGP EIR, demolition of existing runways, buildings and structures within PA 51 will generate debris materials that will have to be disposed at local landfills. Green waste will be also generated as a result of ongoing park and landscaping maintenance. In addition to the City requirement for recycling of construction and demolition material to reduce waste, solid waste reduction will also be achieved through compliance with AB 939, which requires that a minimum of 50 percent of the solid waste generated in cities in California be diverted from landfills. Further, SB 1374 requires that all cities implement measures that require diversion of 75 percent of all construction and demolition waste from landfills.

Energy and Communications

The primary demand for electricity, gas, and communications for the project will be generated by the proposed development of land uses within the project. The OCGP EIR analyzed in detail the fuel and energy consumption projected for the project. The analysis and conclusions in the OCGP EIR do not change due to the project since the intensity and types of land uses in the revised plan have not changed from those previously analyzed in the OCGP EIR. The certified OCGP EIR stated that the implementation of the project will require the expansion of existing electrical, gas and communications systems to serve the project. Due to the outdated nature of the existing electricity, gas and communications systems on the project site, the project proposed to replace the existing systems in their entirety.

4.15.3 Impacts Associated with the Revised Overlay Plan

Potable Water

A portion of the routing, (specifically the portion along the “loop road”) is not included in the project, and will require an adjustment to the routing system for the expansion of the potable water network. However, the expansion of the system will generally coincide with the existing and proposed roadways consistent with the OCGP EIR. The OCGP EIR further stated that specific environmental impacts of the proposed project on the existing and planned MWD facilities, as well as specific impacts of constructing new potable water facilities could not be determined at the program level analysis and project-level environmental review at the time that specific development plans have been prepared will be required. The general significant impacts associated with the project’s construction and operation of public facilities has been addressed in the OCGP EIR.

Recycled Water

A portion of the routing, (specifically the portion along the “loop road”) is not included in the proposed project, and will require an adjustment to the routing system for the expansion of the non-potable water network. However, the expansion of the system will generally coincide with the existing and proposed

4. *Discussion of Checklist and Mitigation Measures*

roadways consistent with the OCGP EIR. The OCGP EIR further stated that the specific environmental impacts of constructing the new recycled water facilities could not be determined at the General Plan level analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the project's construction and operation of public facilities has been addressed in the OCGP EIR.

Sewer

Since the project proposes the same intensity and mix of land uses, demand projections and proposed system expansion would remain the same. The OCGP EIR further stated that the specific environmental impact of constructing new sewer facilities to serve the project cannot be determined at the program level analysis, as site-specific plans for the installation of the sewer backbone system had not been prepared. However, the general significant impacts associated with the construction and operation of public facilities, including the project's construction and operation of the sewer system, have been addressed in the OCGP EIR.

Solid Waste

Since the project is expected to generate significant amounts of construction debris due to demolition, the OCGP EIR considered this a potentially significant impact and included a number of mitigation measures to address those impacts. The project will not generate additional solid waste due to demolition of runways and buildings and therefore the OCGP EIR mitigation measures would reduce the project impacts to less than significant levels.

Energy and Communications

The Adopted Overlay Plan had proposed to install the new systems generally along a routing that coincides with the existing and proposed roadway within the project. A portion of the routing, (specifically the portion along the "loop road") is not included in the project and will require an adjustment to the routing system for the expansion of the dry utilities system. However, the expansion of the system will generally coincide with the existing and proposed roadways consistent with the OCGP EIR. The OCGP EIR further stated that the specific impacts of constructing new energy and communication transmission facilities could not be determined at the program level analysis, as site-specific plans for the installation of the energy and communication transmission backbone system have not been prepared. The general significant impacts associated with the construction and operation of public facilities, including the project's construction and operation of the transmission system, have been addressed in the OCGP EIR.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP EIR. The Revised Overlay Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP EIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP EIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have

4. *Discussion of Checklist and Mitigation Measures*

one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP EIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the certified OCGP EIR.

4.15.4 Mitigation from the OCGP EIR and Applicability to the Revised Overlay Plan

The OCGP EIR determined the mitigation measures identified in other section of the OCGP EIR (5.1-5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of facilities for the following types of utilities to serve new growth expected in the project area:

- potable water
- recycled water
- wastewater
- energy and communication transmission facilities

Mitigation Measures SW 1 through SW 5 apply to future demolition and new construction, and would be carried forward through permit approvals for subsequent development projects. The proposed project would neither change these mitigation measures nor their application to future development projects.

SW 1 It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other deconstruction of the aged structures and property, including but not limited to buildings and runways, at El Toro MCAS is contaminated with lead-based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the El Toro MCAS site by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.

If it is determined by the technical evaluation that material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as “waste-to-energy” (WTE) plants.

4. *Discussion of Checklist and Mitigation Measures*

- SW 2 For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project must submit a written plan to the City and implement such plan to ensure that 75% of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.
- SW3. For that solid waste which the technical study deems to be suitable for recycling, the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75% of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180. ("Recycling" does not include transformation, as defined in Public Resources Code Section 40201.)
- SW 4 To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by "weight ticket" receipts from state-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.
- To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.
- SW 5 For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50% of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.

4.16 DETERMINATION

Based on the information and analysis in this Initial Study/Addendum, and pursuant to Section 15162 of the State CEQA Guidelines, the City has determined that:

1. There are no substantial changes to the project that will require major revisions to the OCGP EIR due to new, significant environmental effects or a substantial increase in the severity of impacts identified in the OCGP EIR;
2. Substantial changes have not occurred in the circumstances under which the project is being undertaken that will require major revisions of the OCGP EIR to disclose new, significant environmental effects or a substantial increase in the severity of the impacts identified in the OCGP EIR; and
3. There is no new information of substantial importance not known at the time the OCGP EIR was certified that shows any of the following:
 - a) The project will have any new significant effects not discussed in the OCGP EIR;

4. Discussion of Checklist and Mitigation Measures

- b) There are impacts that were determined to be significant in the OCGP EIR that will be substantially increased;
- c) There are additional mitigation measures or alternatives to the project that would substantially reduce one or more of the significant effects identified in the OCGP EIR; or
- d) There are additional mitigation measures or alternatives that were rejected by the project proponent that are considerably different from those analyzed in the OCGP EIR that would substantially reduce any significant impact identified in that EIR.

4. *Discussion of Checklist and Mitigation Measures*

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Appendices

Appendix A

OCGP Mitigation Monitoring Program



Appendices

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Appendices

Appendix B *Traffic Study*



Appendices

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**ADDENDUM NO. 3 TO THE
ORANGE COUNTY GREAT PARK FEIR
VESTING TENTATIVE TRACT MAP – VTTM NO. 17008
(MASTER SUBDIVISION MAP – Per Orange County
Great Park Development Agreement)**

SCH #2002101020

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May 2007

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SECTION 1.0

EIR ADDENDUM SUMMARY

1.1 PURPOSE AND SCOPE

This Initial Study/Addendum (Addendum No. 3) augments the environmental review and analysis provided in: (i) the previously certified Final Environmental Impact Report for the Orange County Great Park (OCGP) (State Clearinghouse Number 2002101020); (ii) Addendum to the OCGP Final Environmental Impact Report for the formation of the OCGP Redevelopment Project Area, approved in May 2006 (Addendum No. 1), and (iii) Addendum to the OCGP Final Environmental Impact Report, approved in October 2006 to revise the “Overlay Plan” described in the OCGP Final Environmental Impact Report (Addendum No. 2) (see Figure 1-1). (The Final Environmental Impact Report for the OCGP, Addendum No. 1, and Addendum No. 2 are collectively referred to as the “OCGP FEIR”) The OCGP FEIR and this Addendum serve as the environmental review of a proposal to approve Vesting Tentative Tract Map No. 17008/Master Subdivision Map (VTTM/MSM). The VTTM/MSM covers portions of Planning Areas 30 and 51 in the City of Irvine. This Addendum has been prepared pursuant to the provisions of the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq.; the State CEQA Guidelines, 14 California Code of Regulations Section 15000 et seq.; and the City of Irvine Local Guidelines for Implementing CEQA (Local CEQA Guidelines).

The VTTM/MSM is the “Master Subdivision Map” required to be submitted pursuant to Section 7.1 of the Great Park Development Agreement (Development Agreement), to identify the backbone infrastructure in Planning Areas 30 and 51, including arterials, major thoroughfares and parks, utility rights of way and utility facilities. The VTTM/MSM also delineates the limits of mass grading for the project site that is owned by Heritage Fields El Toro, LLC (Heritage Fields), and a portion of the Orange County Great Park development. The City of Irvine will evaluate the VTTM/MSM application pursuant to the City’s Subdivision Manual and the City’s Subdivision Ordinance, Irvine Municipal Code, § 5-5-103 et seq. . Through that process, the City will determine whether the VTTM/MSM is consistent with applicable general and specific plans. Implementation of the backbone infrastructure installation proposed in the VTTM/MSM will be consistent with the various land uses, densities, and intensities allowed under the adopted General Plan and Zoning. The VTTM/MSM does not introduce new or revised uses beyond what has already been approved and certified in the OCGP FEIR, nor does it alter the intensity or character of the development.

1.2 ENVIRONMENTAL PROCEDURES

In compliance with CEQA, the State CEQA Guidelines and the Local CEQA Guidelines, this Addendum, together with the OCGP FEIR, evaluates the environmental consequences of the VTTM/MSM. The VTTM/MSM depicts greater detail in infrastructure design as previously approved and certified under OCGP FEIR.

Pursuant to Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines, when an EIR has been certified for a project, no subsequent EIR shall be prepared for the project unless the lead agency determines, on the basis of substantial evidence, that one or more of the following conditions are met:

- Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

- Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:
 - The project will have one or more significant effects not discussed in the previous EIR or negative declaration.
 - Significant effects previously examined will be substantially more severe than identified in the previous EIR.
 - Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives.
 - Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.

Section 15164 of the State CEQA Guidelines states that an addendum to an EIR shall be prepared “if some changes or additions are necessary, but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.” This Initial Study/Addendum reviews the changes proposed by the VTTM/MSM and any changes to the existing conditions that have occurred since the certification of the OCGP Final Environmental Impact Report and approval of the first two addenda. It also reviews any new information of substantial importance that was not known and could not have been known with exercise of reasonable diligence at the time that the OCGP FEIR was approved. It further examines whether, as a result of any changes or any new information, a subsequent or supplemental EIR may be required. This examination includes an analysis of the provisions of Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines and their applicability to the proposed project. This Initial Study/Addendum relies on the attached Environmental Analysis (Section 4), which addresses environmental checklist issues on a section-by-section basis.

The City of Irvine Environmental Checklist Form (City of Irvine Environmental Checklist) has been completed by the City and is included in Section 3.0, Environmental Checklist. The Environmental Checklist Form is marked with the findings of the Director of Redevelopment as to the environmental effects of the proposed project in comparison with the findings of the OCGP FEIR. The checklist has been prepared pursuant to Section 15168(c)(4) of the State CEQA Guidelines, which states that “where the subsequent activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR.”

Using that approach, the City of Irvine, as the Lead Agency, determined that an addendum to the previously approved OCGP FEIR was the appropriate environmental clearance for the project application.

1.3 PREVIOUS ENVIRONMENTAL DOCUMENTATION

The OCGP Final Environmental Impact Report was originally certified by the City of Irvine in May 2003. The project analyzed in the OCGP FEIR consisted of the following actions: (1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; (2) Annexation of the unincorporated portion of Planning Area 35 (Irvine Ranch Water District Parcel); (3) General Plan Amendment and Zone Change for Planning Area 30; and (4) Approval of the form of a Development Agreement vesting approval of overlay uses and intensities in consideration for dedication of land for public purposes and for developing and funding certain infrastructure improvements and maintenance of the public uses by the purchaser/developer and subsequent landowners and funding for specific park, roadways, and other circulation facilities and infrastructure. Together, these actions establish the policy and legislative structure to guide the development of the former MCAS El Toro property. Because these actions can be characterized as one large project that is related geographically, and as logical parts in a chain of contemplated actions, the OCGP Final Environmental Impact Report was prepared as a "Program EIR" under State CEQA Guideline Section 15168.

The OCGP Final Environmental Impact Report mitigation measures were provided in the adopted Mitigation Monitoring and Reporting Program (MMRP). The MMRP provides the following information for each mitigation measure:

- Mitigation number and a description of the action
- Timing for implementation
- Approving authority and reviewing agency(s), if any
- Method of compliance

Addendum No. 1 was approved by City of Irvine on May 18, 2006. Addendum 1 addressed the potential for environmental issues associated with the implementation of the OCGP Redevelopment Project Area Plan.

Addendum No. 2 was approved by the City of Irvine on October 24, 2006. The Addendum No. 2 project involved minor adjustments to the boundary between the public and private areas of the OCGP; revisions to zoning code text and figures related to Planning Areas 30 and 51; the creation of a mixed-use zoning category called the Lifelong Learning District (LLD) within Planning Area 51; and minor technical changes to the General Plan, as described in Section 2.3 of Addendum No. 2.

The OCGP Final Environmental Impact Report,, Addendum No. 1, Addendum No. 2, and all of the associated technical documents are on file at the City of Irvine, located at 7000 Trabuco Road, Building 873, Irvine, California 92618. The MMRP for the OCGP Final Environmental Impact Report and addenda are located in Appendix A of this report.

1.4 ENVIRONMENTAL SETTING

The Orange County Great Park (which consists of City of Irvine Planning Areas 30 and 51) is located in the central portion of Orange County, which is approximately 45 miles southeast of Los Angeles. The area is generally bound by the Woodbury residential development to the west, future Portola Springs residential development to the north, Irvine Spectrum to the south, and

the City of Lake Forest to the east. Other nearby local jurisdictions include: the Cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo, and Tustin. The project area includes the Irvine Transportation Center, a major multimodal transit center linking Orange County Transportation Authority (OCTA) bus, Metrolink commuter rail, and Amtrak rail services. The Irvine Transportation Center is located adjacent to the Southern California Regional Rail Authority (SCRRA) Metrolink tracks, which bisect the project area and separate Planning Areas 30 and 51. Existing uses within the project site include the California State University, Fullerton; Marine Memorial Golf Course; equestrian facilities; and agricultural and nursery operations. In addition, offices on site are currently occupied by the City of Irvine Redevelopment Department, Great Park Corporation (GPC), and Heritage Fields, LLC. A day care facility is located immediately adjacent to these office uses. Small portions of the existing runways have been removed within the City's Planning Area 51. A few parcels are being leased on an interim basis prior to development of the site.

Ownership of Planning Areas 30 and 51 has changed since certification of the OCGP Final Environmental Impact Report; certain parcels have been transferred to the Federal Aviation Administration; City of Irvine; County of Orange; and a private developer, Heritage Fields, LLC by the Department of Navy (DoN), or parcels have been leased in furtherance of conveyance as detailed in the Addendum No. 2.

SECTION 2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The Orange County Great Park, encompassing Planning Areas 30 and 51, is located northeast of the freeway junction at Interstate 5 (Santa Ana Freeway) and Interstate 405 (San Diego Freeway), within the City of Irvine. Figure 2-1 depicts the project location in a regional context and Figure 2-2 shows its local context.

Major roadways bordering the project site are Sand Canyon Avenue to the northwest; Portola Parkway and Irvine Boulevard to the north; and Bake Parkway to the northeast. An aerial photograph of the project site and surrounding area is shown on Figure 2-3. As noted, the Irvine Transportation Center is situated adjacent to the Southern California Regional Rail Authority (SCRRA) Metrolink tracks, which traverse the site and separate Planning Areas 30 and 51. Surrounding the site are residential and non-residential uses under construction to the north and west, open space to the northeast, and nonresidential and mixed land uses to the east and southeast within the City of Lake Forest and City of Irvine.

2.2 PROJECT CHARACTERISTICS

2.2.1 PROJECT BACKGROUND

On May 27, 2003, the Irvine City Council certified the OCGP Final Environmental Impact Report and thereafter adopted the General Plan Amendment (GPA), Zone Change (ZC) and development agreement contemplated in the OCGP Final Environmental Impact Report. Under the General Plan and zoning designations studied in the OCGP Final Environmental Impact Report and adopted by the City Council, maximum development intensities were established in the "Overlay Plan." To develop under the "Overlay Plan," the property owners were required to enter into a development agreement, which required the dedication of land and the development or funding of infrastructure improvements in excess of the City's standard requirements and the commitment to long-term maintenance of the public facilities.

In February 2005, Heritage Fields, LLC purchased all four bid parcels making up the development and park portion of the property through a U.S. Department of Navy/General Services Agency online auction process. Subsequent to the land purchase, the GPC and Heritage Fields, LLC developed their respective master design and development processes for the OCGP.

To facilitate additional design options, both the GPC and Heritage Fields, LLC requested and the City initiated amendments to the General Plan (004160079-PGA) and the Zoning Code (00416080-PZC) to reconfigure the boundaries between the two different property owners. In addition, Heritage Fields, LLC also requested the creation of the LLD, along with minor clarifications to the zoning text within Planning Areas 30 and 51.

The City-initiated GPA and ZC (along with Addendum No. 2) were approved by the City Council on October 24, 2006. These changes did not increase the building intensity already approved for Planning Area 30 and Planning Area 51 and did not increase any significant environmental impacts previously identified in the 2003 OCGP FEIR. As noted, the CEQA compliance was established via Addendum No. 2 dated September 2006 and approved October 24, 2006. Addendum No. 2 is on file with the City Redevelopment Agency for review.

On June 28, 2006, and pursuant to Section 7.1. of the Development Agreement, the Applicant, Heritage Fields filed an application for the VTTM/MSM. The OCGP FEIR, together with this Addendum No. 3, is the CEQA compliance document for the proposed VTTM/MSM and associated approvals.

The development analyzed in the OCGP FEIR includes both public park and private development components. The public park component is owned by the City of Irvine and is being developed by the GPC. The private development component is being developed by Heritage Fields.

2.2.2 PROJECT COMPONENTS

This Addendum No. 3 addresses the VTTM/MSM, which will subdivide 3,585 gross acres into 43 numbered lots and 14 lettered lots. The VTTM/MSM does not authorize the construction or development of any trip-generating land uses.

The VTTM/MSM does not alter any land use or associated acreages in the Revised Overlay Plan as identified in the OCGP FEIR, which were most recently adjusted in GPA 004160079-PGA and ZC 00416080-PZC (the "Revised Overlay Plan"), and no new areas are proposed for development.

The VTTM/MSM application was submitted on June 28, 2006, in compliance with Section 7.1 of the Development Agreement by and among the City of Irvine and Heritage Fields. That document states:

- 1) *7.1 Master Subdivision Map. Developer shall be responsible for processing Master Subdivision Map for consideration and approval by the City. Developer shall use the legal descriptions the United States Department of Navy used to convey the Parcels to Developer as a basis for the Master Subdivision Map and shall include on the Master Subdivision Map for the public dedication the arterials, major thoroughfares, and parks shown on the Conceptual Overlay Plan, and all necessary utility rights-of-way and all existing utility facilities including pipes, wires, and appurtenant facilities. Property dedicated to City or City's Designee shall not be subject to future interests, including reversionary, remainder, and executory interests. The City and any applicable City Designee shall cooperate with and assist Developer, as requested by Developer, in its efforts to process and record the Master Subdivision Map. Developer shall exercise reasonable efforts to submit the Master Subdivision Map to the Planning Commission for consideration within 365 days following the Effective Date of this Agreement.*

Consistent with the requirements of Section 7.1 of the Development Agreement, as quoted above, the purposes of the VTTM/MSM are to define the backbone infrastructure, and delineate the limits of rough grading for the infrastructure requirements of the Heritage Fields development and portions of the Orange County Great Park development. The VTTM/MSM also provides boundaries of areas for possible future subdivisions (i.e. "B"-level tentative tract maps) and development, but does not propose or authorize any actual land uses or building intensities.

The VTTM/MSM does not alter the intensity or character of development in Planning Areas 30 and 51. The VTTM/MSM provides additional details of the infrastructure design, the need for

which became apparent during design engineering of the project area. Additional detail is provided related to grading of the project site and infrastructure design.

Backbone Infrastructure

The design of the infrastructure system is depicted on the VTTM/MSM. Utility alignments depicted include:

- Domestic Water Lines
- Sewer Lines
- Storm Drain Lines
- Reclaimed Water Lines
- Street Lights

These utilities and services were anticipated as part of the development and were studied in the OCGP FEIR; however, the specific alignments were not available at that time. The proposed infrastructure was an anticipated part of the development envisioned for Planning Areas 30 and 51, and the proposed alignments do not change the intensity or character of the planned development. Rather, the VTTM/MSM adds a level of detail required for implementation of the project described in the OCGP FEIR in that it shows the proposed preliminary drainage system that would convey storm flows through and from the project site consistent with City of Irvine guidelines. The Master Plan of Drainage, a part of the VTTM/MSM includes supporting hydrologic calculations based on the proposed tributary areas and the drainage system shown on the VTTM/MSM. The Master Plan of Drainage shows consistency of the VTTM/MSM with the Orange County Flood Control Master Plan for San Diego Creek.

Grading

The mass grading for the infrastructure and development on the Heritage Fields property and portions of Planning Areas 30 and 51 is shown on the VTTM/MSM. Grading was an anticipated part of the project and was discussed in the OCGP FEIR; however, a specific grading plan was not available at the time. The mass grading plan included in the VTTM/MSM covers the entire Heritage Fields project area, as well as for the Agua Chinon and the Wildlife Corridor. The grading proposed in the VTTM/MSM does not increase the intensity or character of the grading contemplated or analyzed in the OCGP FEIR. Rather, the VTTM/MSM adds a level of detail required for implementation of the project described in the OCGP FEIR. The approximate raw earthwork quantities for the work envisioned in the VTTM/MSM will be approximately 7,100,000 cubic yards. The earthwork will be balanced on site.

Internal Circulation

The design of the internal street system is depicted on the VTTM/MSM. In a report entitled *City of Irvine Planning Areas 30 and 51, Heritage Fields Master Subdivision Map Internal Circulation Analysis*, dated April 24, 2007 and prepared by Austin-Foust Associates, Inc., the internal circulation system was analyzed (Appendix D). Project intersections were analyzed using intersection capacity utilization (ICU) values to determine the level of service (LOS). The information contained in the report includes site access designations, the type of intersection traffic control measures (i.e., based on traffic signal warrant analyses), intersection approach lane requirements, and recommendations for left-turn and right-turn pocket design features (see Section 4.14, Transportation and Traffic).

2.3 DISCRETIONARY APPROVALS

The VTTM/MSM provides for the backbone infrastructure for the Overlay project as analyzed in the OCGP FEIR. It does not change the intensity or character of the development proposed and approved for the project area. The VTTM/MSM project includes:

1. Mass Grading Plan
2. Design of the backbone infrastructure system

Approval of the VTTM/MSM requires CEQA compliance.

The VTTM/MSM does not authorize the construction or development of any trip-generating land uses.

SECTION 3.0 ENVIRONMENTAL CHECKLIST

The City of Irvine Environmental Information Form and Environmental Checklist Form have been completed by the City and are included on the following pages. The Environmental Checklist Form is marked with the findings of the Redevelopment Department as to the environmental effects of the proposed changes to the project in comparison with the findings of the certified OCGP FEIR.

As explained above, this comparative analysis has been undertaken, pursuant to the provisions of the California Environmental Quality Act, to provide the City with the factual basis for determining whether any changes in the project, any changes in the circumstances under which the project is undertaken, or any new information requires additional environmental review or preparation of a subsequent or supplemental EIR. The basis for each of the findings listed in the attached Environmental Checklist Form is explained in Section 4.0 of the Addendum.

3.1 CITY OF IRVINE INITIAL STUDY AND ENVIRONMENTAL EVALUATION

1. Project Title:

Vesting Tentative Tract Map – VTTM No. 17008, (Master Subdivision Map – Per Orange County Great Park Development Agreement) (Planning Areas 30 and 51) (Heritage Fields, LLC and Great Park Corporation)

2. Lead Agency Name and Address:

City of Irvine
7000 Trabuco Road, Building 873
Irvine, California 92618

3. Contact Person and Phone Number:

David R. Law, AICP, Senior Planner
(949) 724-7459

4. Project Location:

The project area is located north of Interstate 5 (Santa Ana Freeway), east of State Route 133 (Eastern Transportation Corridor), and south of State Route 241 (Foothill Transportation Corridor).

5. Project Sponsor's Name and Address:

Heritage Fields El Toro, LLC
7130 Trabuco Road
Irvine, CA 92618

6. General Plan Designation:

Orange County Great Park (OCGP)

7. Zoning:

1.5 Recreation, 2.2 Low Density Residential, 2.2/1.8 Low Density Residential with Golf Course, 3.2 Transit Oriented Development, 4.3 Vehicle-Related Commercial, 5.4B General Industrial, 6.1 Institutional, 8.1/8.1A Lifelong Learning District.

8. Description of Project:

The project includes a Vesting Tentative Tract Map (VTTM, 17008), which is the Master Subdivision Map as envisioned in and required by Section 7.1 of the Great Park Development Agreement. The VTTM/MSM provides initial detail concerning mass grading, internal circulation, and backbone infrastructure throughout Planning Areas 30 and 51.

9. Surrounding Land Uses and Setting:

The City of Lake Forest and the James A. Musick Branch Jail are located to the southeast; Irvine Spectrum abuts the former base along the eastern and southern boundaries; and existing and developing residential developments are located to the north and west. Further to the south are the residential areas of the Cities of Laguna Woods and Laguna Hills. These latter communities are at higher elevations and could therefore have panoramic views of the site.

The project area is located north of the Santa Ana (I-5) Freeway, east of the Eastern Transportation Corridor (SR-133), and south of the Foothill Transportation Corridor (SR-241). Major roadways bordering the project area include Barranca Parkway to the south, Sand Canyon Avenue to the west, Portola Parkway and Irvine Boulevard to the north, and Alton Parkway to the east.

10. Other Public Agencies Whose Approval Is Required (e.g., permits, financing approval, or participation agreement):

None.

3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology / Soils |
| <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use / Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation / Traffic |
| <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Mandatory Findings of Significance | |

3.3 DETERMINATION

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☒ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

David R. Law, AICP, Senior Planner

Date

3.4 **EVALUATION OF ENVIRONMENTAL IMPACTS**

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (State CEQA Guidelines section 15063(b)(1)(C)). In this case, a brief discussion should identify the following:
 - a. **Earlier Analyses Used.** Identify and state where they are available for review.
 - b. **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c. **Mitigation Measures.** For effects that are “Less Than Significant With Mitigation Incorporated,” describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) **Supporting Information Sources:** A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
- a. the significance criteria or threshold, if any, used to evaluate each question; and
 - b. mitigation measure identified, if any, to reduce the impact to less than significant

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substan- tial Change in Project Requiring Major EIR Revisions	Substan- tial Change in Circum- stances Requiring Major EIR Revisions	New Infor- mation Showing Greater Sig. Effects than Previous EIR	New Infor- mation Showing Ability to Reduce Sig. Effects in Previous EIR	Less Than Sig. Impacts/ No Changes or No New Info. Requiring Prep of EIR	No Impact
I. AESTHETICS: Would the project:						
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway or local scenic expressway, scenic highway, or eligible scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in the visible grading of over 5,000 cubic yards on any 20-acre portion of the project site; or visible cut and fill slope over 25 vertical feet?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in the creation of light spillover and glare effects that present a nuisance to residential land uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Result in the substantial alteration of the existing landform of the site or of a unique topographic feature on the site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
II. AGRICULTURAL RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Mode (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:						
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Sig. Effects than Previous EIR	New Information Showing Ability to Reduce Sig. Effects in Previous EIR	Less Than Sig. Impacts/ No Changes or No New Info. Requiring Prep of EIR	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:						
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IV. BIOLOGICAL RESOURCES: Would the project:						
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Sig. Effects than Previous EIR	New Information Showing Ability to Reduce Sig. Effects in Previous EIR	Less Than Sig. Impacts/ No Changes or No New Info. Requiring Prep of EIR	No Impact
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
V. CULTURAL RESOURCES: Would the project:						
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the CEQA Guidelines and/or identified on the Qualified Historic Structures list of the Anaheim Colony Historic District Preservation Plan (July 20, 1999)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the CEQA Guidelines?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VI. GEOLOGY AND SOILS: Would the project:						
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:						
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.						
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
d) Be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
VII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:						
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter-mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
e) For a project located within an airport land use plan, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■

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f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VIII. HYDROLOGY AND WATER QUALITY: Would the project:						
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on-site or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of pollutant runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IX. LAND USE AND PLANNING: Would the project						
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
X. MINERAL RESOURCES: Would the project:						
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XI. NOISE: Would the project result in:						
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, heliport or helistop, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XII. POPULATION AND HOUSING: Would the project:						
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIII. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:						
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XIV. RECREATION: Would the project:						
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XV. TRANSPORTATION/TRAFFIC: Would the project:						
a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus stops/routes, bicycle lanes, sidewalks, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XVI. UTILITIES AND SERVICE SYSTEMS: Would the project:						
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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d) Have sufficient water supplies available to serve the project (including large scale developments as defined by Public Resources Code Section 21151.9 and described in Question No. 20 of the Environmental Checklist) from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with Federal, State, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Result in a need for new systems or supplies, or substantial alterations related to electricity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Result in a need for new systems or supplies, or substantial alterations related to natural gas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Result in a need for new systems or supplies, or substantial alterations related to telephone service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
k) Result in a need for new systems or supplies, or substantial alterations related to television service/reception?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XVII. MANDATORY FINDINGS OF SIGNIFICANCE						
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>

SECTION 4.0

DISCUSSION OF CHECKLIST AND MITIGATION MEASURES

This section is intended to provide evidence to substantiate the conclusions set forth in the Environmental Checklist. The section will briefly summarize the OCGP FEIR conclusions and then discuss whether the VTTM/MSM is consistent with the findings contained in the OCGP Final Environmental Impact Report certified in May 2003, and addenda.

4.1 AESTHETICS

4.1.1 ENVIRONMENTAL SETTING

The OCGP FEIR addressed in detail the potential visual impacts associated with the conversion of the former MCAS El Toro from a military air station to primarily open space and recreational uses and civilian residential, retail, commercial, and mixed uses. The OCGP FEIR discussed the project's visual setting associated with its location adjacent to various arterial highways and state and federal highways. None of these roadways is designated as a County or State scenic highway, although Sand Canyon Avenue is designated as a highway with rural/natural character. The City of Irvine General Plan also designates the Santa Ana (I-5) Freeway as an urban character Scenic Highway.

Generally, views of the former military base are from the surrounding highways. From these highways, a variety of land uses, structures and facilities of differing ages, sizes, and architectural styles may be viewed. Though agricultural areas are located adjacent to and within the base, the predominant features are associated with the military use of the base, including runways, aprons, hangars, warehouses, barracks housing, recreational facilities, golf course, single-family housing, offices, and commercial structures, some of which are now vacant and deteriorating.

The City of Lake Forest and the James A. Musick Branch Jail are located to the south and east; Irvine Spectrum abuts the former base along the eastern and southern boundaries; and existing and developing residential developments are located to the north and west. Further to the south are the residential areas of the Cities of Laguna Woods and Laguna Hills. These latter communities are at higher elevations and could therefore have panoramic views of the site.

4.1.2 IMPACTS IDENTIFIED IN THE OCGP FEIR

The OCGP FEIR, specifically Addendum No. 2, discussed the potential aesthetic effects of the development of Planning Areas 30 and 51 under the Revised Overlay Plan and found that future development of these two planning areas would introduce new sources of light within the project area. These sources include street lighting along planned roadways and various forms of exterior lighting, including security lighting, parking lots, educational facilities, institutional and commercial developments, and lighting associated with athletic fields. The OCGP FEIR concluded that significant light impacts could have occurred if proposed light sources were directed into or located near existing or planned residential uses, which are sensitive to light intrusion during nighttime hours, but that, with the mitigation ultimately adopted by the City, these potential impacts would be less than significant. The OCGP FEIR concluded there would be no significant impacts under the other six standards and thresholds.¹

¹ All six thresholds of possible significance in the aesthetics section were listed as being contained in Appendix G to the CEQA Guidelines (Title 14, Cal. Code Reg. §1500 et seq.). While the first, third, and fourth standards were derived from the environmental issues in the Appendix G checklist, they are not actually set forth in the Appendix.

4.1.3 IMPACTS ANALYSIS FOR THE VTTM/MSM

The Aesthetics Section of the OCGP FEIR concludes that grading activities associated with the proposed future development of the project area consistent with the Orange County Great Park land use plan “will not [be] expected to adversely affect existing topography of the site.” This Addendum No. 3 is consistent with the OCGP FEIR project description as slightly modified through addenda.

The VTTM/MSM includes grading activities comparable to those evaluated in the OCGP FEIR—that is, the hillside areas will be preserved as a natural habitat area and the physical topographic condition will be comprised of level areas suitable for development and manmade terrain typical of golf course and park developments, with contoured sloping areas to support the drainage needs of the project analyzed in the OCGP FEIR. Visible grading due to implementation of the project on the flatter areas of the project site below 5,000 cubic yards/20 acres would be below the thresholds of possible significance. The OCGP FEIR notes some areas of the project “may require filling to achieve a flat terrain suitable for development” so that the site will continue to be characterized by “relatively flat or sloping terrain,” and “the proposed developments are expected to maintain the flat topography of the site.” The OCGP FEIR indicates that throughout the project site “no grading related aesthetic impacts on [the site] are anticipated to occur.” Implementation of the VTTM/MSM would likewise result in no significant grading-related aesthetic impacts.

The VTTM/MSM will not create any new or increased impacts as compared to the project analysis contained in the OCGP FEIR due to the site’s current developed, deteriorated condition. The VTTM/MSM retains the commitment to satisfy the mitigation measures of the OCGP FEIR and the addenda related to potential light impacts.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the proposed changes to the project would require a major revision to the certified OCGP FEIR or approved addenda due to any new significant environmental impact or a substantial increase in the severity of impacts.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available information that indicates substantial changes in circumstances requiring major changes to the certified OCGP FEIR or approved addenda.

No New Information of Substantial Importance Showing Greater Significant Effects Than the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the times the OCGP FEIR was certified and the addenda were approved which indicate that the project will have one or more significant effects not discussed in the certified OCGP FEIR and/or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. There are no alternatives to the project or additional mitigation measures that would substantially reduce further one or more of the significant aesthetic effects identified in and considered by the certified OCGP FEIR and approved addenda, since all effects were determined to be less than significant with mitigation.

4.1.4 MITIGATION FROM THE OCGP FEIR AND APPLICABILITY TO THE VTTM/MSM

The OCGP FEIR identified Mitigation Measures A1 and A2 which, when fulfilled, will reduce the aesthetic effects of development under the Revised Overlay Plan to a less-than-significant level. Measures A1 and A2 have been adopted by the City and are applicable to future development of the Revised Overlay Plan.

- A1 Prior to issuance of building permits, lighting plans and signage plans for new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent residential areas occurs.
- A2 Prior to the issuance of building permits, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.

The timing of these mitigation measures has been changed from prior to the issuance of grading permits to prior to the issuance of building permits. These measures are typically applied at the issuance of building permits because they are associated with physical development of a site, not the grading of a site.

4.2 AGRICULTURAL RESOURCES

4.2.1 ENVIRONMENTAL SETTING

The OCGP FEIR described the Farmland Mapping and Monitoring Program (FMMP Program) of the California Department of Conservation Division of Land Resources Protection. Under the FMMP Program, classifications of agricultural lands present within a project are as follows:

- **Prime Farmland:** Land which has the best combination of physical and chemical features able to sustain long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for production of irrigated supply needed to produce sustained high yields. Land must have been used for production of irrigated crops at some time during the previous two map updates.
- **Farmland of Statewide Importance:** Similar to Prime Farmland, except this land has minor shortcomings such as greater slopes or less ability to store soil moisture than Prime Farmland. This land has minor shortcomings, such as greater slopes or less ability to store soil moisture than Prime Farmland. Land must have been used for production of irrigated crops at some time during the previous two map updates.
- **Unique Farmland:** Lesser quality soils used for the production of the state's leading crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climate zones in California. This land is used for the production of specific high economic value crops such as oranges, olives, avocados, rice, grapes, or cut flowers. Land must have been cropped at some time during the two previous map updates.

- **Farmland of Local Importance:** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

The OCGP FEIR identified approximately 659 acres of designated Prime Farmland, 70 acres of designated Unique Farmland, and 99 acres of designated Farmland of Statewide Importance. The Orange County Board of Supervisors has not designated any farmland as being of "Local Importance."

City of Irvine Policies and Programs

The City of Irvine General Plan Objective L-10, as amended in 2002 and presented in the OCGP Final Environmental Impact Report, includes the following policies to "encourage the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development: "

Policy (a): Provide for farming opportunities in the community, where feasible and appropriate, through an Agricultural Legacy Program facilitating limited-scale agricultural operations and program on public lands. The program may include components such as edible landscape, metro-farming, heritage farming, model farming, education and community service farming and other farm or farm market programs. Location for implementation of the Agricultural Legacy Program to be considered should, at a minimum, include:

- Designated open space spine network,
- Designated open space areas not subject to the Natural Community Conservation Plan (NCCP), and
- Other appropriate publicly owned lands.

Policy (b): Consider creating a "working model" farm to act as a center for education and enjoyment of all age groups pursuant to the Agricultural Legacy Program in conjunction with the City's planning efforts concerning the reuse of MCAS El Toro, or with the South Coast Research Extension owned by UC Regents.

Policy (c): Permit agricultural use of land which is unsuitable for building because it is within flood plains, or is subject to hazards to public health, safety, and welfare or similar constraints precluding development. Conversion from agricultural use may be allowed where the identified hazard conditions have been eliminated.

Policy (d): Permit agricultural uses, on an interim bases, on land designated for development, and consider agricultural uses as part of the City's planning efforts for the re-use of MCAS El Toro.

Policy (e): Encourage and support federal and state legislation proposed for the purpose of preservation of agricultural lands which are compatible with the City's goals and objectives.

Policy (f): Allow for conversion of interim and permanent agricultural uses to development to provide land for the construction of housing units consistent with the Land Use and Housing Elements, and the development of commercial and industrial buildings consistent with the provision of job opportunities as described in the Land Use Element, where such conversion does not conflict with other L-10 policies.

Policy (g): Pursue the open space policies contained in the Conservation and Open Space Element and address any open space or aesthetic impacts from the conversion of interim and permanent agricultural uses to development as part of the City's existing policies for the

preservation of open space and existing policies for mitigation of views and aesthetic impacts under the policies in the Conservation and Open Space Element.

4.2.2 IMPACTS IDENTIFIED IN THE OCGP FEIR

The OCGP FEIR determined the Revised Overlay Plan would preserve in perpetuity 303 acres² of land for agricultural use, of which 251 acres are classified as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. The locations of the 303 acres of permanent agricultural land are listed below:

- **Planning Area 30:** 13 acres within Planning Area Zone (PAZ) 26
- **Planning Area 51:** 90 acres within PAZ 4; 200 acres within PAZ 1

The Farmlands Map can be found in the OCGP FEIR as Figure 5.8-1. The Revised Overlay Plan also would result in the permanent loss of 802 acres of designated farmland comprised of 651 acres of Prime Farmland, 63 acres of Unique Farmland, and 88 acres of Farmland of Statewide Importance. This impact was considered significant and unavoidable.

It was determined the Revised Overlay Plan would result in a significant impact associated with the conversion of agricultural land to nonagricultural use. The OCGP FEIR noted the context of agricultural production in Orange County—including development pressures that have contributed to the decrease in agricultural production in the County over time—which suggested that conversion of agricultural land to urban uses would occur with or without the development of the Revised Overlay Plan.

4.2.3 IMPACTS ANALYSIS FOR THE VTTM/MSM

The proposed VTTM/MSM identifies the backbone infrastructure in the project area; defines the areas for future subdivision and development; and delineates the limits of mass grading for the Heritage Fields (including the Wildlife Corridor and Agua Chinon) development. Development in accordance with the VTTM/MSM would be consistent with the various land uses, densities, and intensities allowed under the existing General Plan and Zoning Code. The VTTM/MSM does not propose any reduction in agricultural uses.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major revision to the certified OCGP FEIR and approved addenda. This Addendum will not will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR or approved addenda.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available information that indicates substantial changes in circumstances that would require major changes to the certified OCGP FEIR and approved addenda.

No New Information of Substantial Importance Showing Greater Significant Effects Than the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the times

² Please note that there is a typographical error within the OCGP FEIR: Table 1-2 on page 1-8 and Table 3-4 on pages 3-12 and 3-13 identify the total agricultural land as 303 acres; however on page 5.8-10 the agricultural use acreage is noted as 307.

the OCGP FEIR was certified and the addenda were approved that indicate that the project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified and the addenda were approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, which the project proponent declines to adopt or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment but the project proponent declines to adopt them. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant agricultural effects identified in and considered by the certified OCGP FEIR and approved addenda.

4.2.4 MITIGATION FROM THE OCGP FEIR AND APPLICABILITY TO THE VTTM/MSM

Mitigation Measures AG1 through AG3 have been adopted by the City and will be implemented in conjunction with subsequent development permits. Implementation of the VTTM/MSM would neither change these mitigation measures nor their application to future development projects.

- AG1 In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operators, City of Irvine Standard Discretionary Case Condition B.4 and City of Irvine Subdivision Condition 3.4 regarding disclosure statements shall be amended to include the following for subdivisions proposed adjacent to existing agricultural operations:

Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:

- Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.

- AG2 Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.

- AG3 Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operation and adjacent urban uses.

4.3 AIR QUALITY

4.3.1 ENVIRONMENTAL SETTING

The OCGP FEIR described the existing air quality regarding the following regulated pollutants: ozone (O₃), carbon monoxide (CO), suspended particulate matter (PM₁₀), nitrogen oxides (NO_x), sulfur dioxide (SO₂), lead (Pb), volatile organic compounds (VOC), and reactive organic gases (ROG). The South Coast Air Basin (SCAB) is described as a non-attainment area for O₃, CO, and PM₁₀; annual maximum concentrations of O₃, CO, PM₁₀, and SO₂ exceeded both federal and state standards in some or all areas in the SCAB during the reporting period (2000). In contrast, standards for nitrogen dioxide (NO₂), SO₂, and Pb were not exceeded during the reporting period.

The OCGP FEIR also noted the promulgation by the U.S. Environmental Protection Agency (EPA) and California Air Resources Board of separate standards for PM_{2.5} (particulate matter less than 2.5 microns in diameter). The standards are provided in Table 4.3-1 of this document. EPA has identified several counties, including Orange County, as PM_{2.5} non-attainment areas. EPA is in the process of responding to comments on related regulations. The California Air Resources Board adopted the annual standard identified in Table 4.3-2 but has postponed establishing a 24-hour standard for PM_{2.5}. At the local level, the South Coast Air Quality Management District (SCAQMD) is in the process of developing a methodology for calculating PM_{2.5} and PM_{2.5} significance thresholds for the purpose of analyzing local and regional air quality impacts in CEQA documents.

4.3.2 IMPACTS IDENTIFIED IN THE OCGP FEIR

The OCGP FEIR identified significant air quality impacts associated with construction and operation of the Revised Overlay Plan. The construction impact analysis assumed demolition, grading, and new construction would occur in two phases: the first phase would begin in 2007 and end in 2016 and the second phase would begin in 2017 and end in 2025. The emissions associated with demolition of existing structures, including 31.2 million cubic feet of concrete from removal of the runways, site grading, and development would generate construction air emissions above the significance thresholds for ROG, NO_x, and PM₁₀. The OCGP FEIR described the construction air impacts after mitigation as significant and unavoidable. (Refer to OCGP FEIR pp. 5.3-16 through 5.3-20.)

**TABLE 4.3-1
FEDERAL AND STATE STANDARDS^a FOR PM_{2.5}**

Averaging Time	Federal Standards	California Standards ^b
Annual Arithmetic Mean	15 µg/m ³	12 µg/m ³
24-Hour	65 µg/m ³	No Separate Standard
Source: ^a www.epa.gov/pmdesignations/state/California.htm [June 5, 2006]. ^b 17 CFR §70200, Table of Standards.		

The operations-related air quality impacts associated with build-out under the Revised Overlay Plan included emissions associated with energy consumption and vehicular trips. The Urban Emissions (URBEMIS) 2001 model and EMFAC7F (motor vehicle emission factor model) were used in the FEIR to estimate air emissions associated with operation of the project site through the “post 2025” analysis year (i.e., General Plan build-out). The operations air emissions for project area and vehicular mobile sources were estimated at above the significance thresholds for ROG, NO_x, CO, and PM₁₀, are described in the OCGP FEIR as significant after mitigation,

and are an unavoidable consequence of the project (adopted Plan). No other construction- and operations-related significant air quality impacts were identified in the OCGP FEIR. (Refer to OCGP FEIR pp. 5.3-20 through 5.3-58, and 7-19.)

In addition, the OCGP FEIR disclosed the results of the CO “hotspots” analysis, in which levels of CO concentrations were predicted for intersections with a LOS of “D” or higher at AM and PM peak hours using the CALINE 4.0 model and EMFAC7F motor vehicle emission factors. No intersections in the traffic study area were expected to result in one-hour and eight-hour CO concentrations above the state standard of 20 parts per million (ppm) for one-hour concentrations and 9 ppm for eight-hour concentrations. (Refer to OCGP FEIR pp. 5.3-31 through 5.3-53.)

4.3.3 IMPACTS ANALYSIS FOR VTTM/MSM

The air quality analysis in the OCGP FEIR made assumptions regarding the grading for the development of Planning Areas 30 and 51, although a specific grading plan had not been prepared at that point. The assumptions were based on the type and size of development anticipated in the Revised Overlay Plan and used “default” emissions estimates from the URBEMIS 2001 air quality model which are conservative (estimates of emissions from such activity based on empirical data Black and Veatch, 2002 & 2003).

The mass grading for the Heritage Fields property is shown on the VTTM/MSM.³ The grading plan is an anticipated part of the project analyzed in the OCGP FEIR. The intensity, character, and extent of the grading are not being changed. Rather, a level of detail required for project implementation is being added to project plans, permitting more precise calculations of grading and construction activities.

It is proposed that the earthwork will be balanced on site. These volumes are based on initial calculations and are subject to refinement based on actual soil conditions, “district” level planning, final engineering, etc. Detailed grading maps for specific development sites will be included in the maps to process each development and will be subject to CEQA review at that time.

Heidi Rous of PCR Services Corporation prepared an analysis of the emissions for CO, NO_x, PM₁₀, ROG, and SO_x which were assumed and evaluated in the 2003 OCGP FEIR, and the actual grading based on the specific plan now proposed in the VTTM/MSM. The report dated November 15, 2006, was conducted for this Addendum to determine whether the revised grading plan would result in the need to study or change the significance conclusions and analysis for construction emissions. In addition, the emissions inventory was evaluated using URBEMIS 2002, an update of the URBEMIS 2001 model used in the OCGP FEIR. The analysis compares the OCGP FEIR to the emissions anticipated from implementation of the proposed grading plan as depicted in the VTTM/MSM. The results of the analysis are shown in Table 4.3-2 and the analysis is located in Appendix B of this Addendum.

³ Fuscoe Engineering, Inc. prepared the VTTM and the grading plan.

**TABLE 4.3-2
COMPARISON OF DAILY CONSTRUCTION EMISSIONS FOR SITE GRADING**

Emissions Inventory	Emission Totals, lbs./day [tons per day]				
	CO	NO _x	PM ₁₀	VOC	SO _x
Certified EIR	280 [0.14]	840 [0.42]	1440 [0.72]	4660 [2.23]	40 [0.02]
Grading Plan ^a	544 [0.27]	498 [0.25]	451 [0.23]	1169 [0.58]	<1 [0]
SCAQMD Significance Threshold ^b	550 [0.28]	100 [0.05]	150 [0.08]	75 [0.04]	150 [0.08]
Over (Under)	(6)	398	301	1,094	(149)
Significant for Certified FEIR?	No	Yes	Yes	Yes	No
Significant for Proposed Grading Plan?	No	Yes	Yes	Yes	No
^a Compiled using the URBEMIS 2002 emissions inventory model and EPA AP-42 emission factors for PM ₁₀ ^b The FEIR misstated the CEQA Significant Thresholds on Tables 5.3-12 and 5.3-13 for VOC and NO _x as 0.03 tpd, which are the correct thresholds for those pollutants during the operational phase of a project. The significance determination in the FEIR were correctly assessed.					
Source: PCR Services Corporation 2006.					

As expected, the PCR analysis shows that the emissions expected from the actual grading are below those conservative emissions estimated in the OCGP FEIR for all constituents except CO. This is a result of the conservatively high assumptions used in the 2003 model and the significant improvement in construction equipment emissions technology.

As noted in the technical report, the increased numbers shown for CO emissions is a function of updated emissions factors in the current version of URBEMIS 2002, and this increase is not a substantial change in the construction intensity (Black and Veatch 2003). (In effect, the CO emissions will not actually be higher with the currently proposed grading plan; it is simply that the URBEMIS 2002 model was revised to more accurately reflect the full amount of such emissions from developments, which may have been under-reflected in URBEMIS 2001.) Regardless, CO emissions are less than the SCAQMD threshold for significance.

The California Air Resources Board (CARB) has not yet completed a methodology for calculating the 24-hour PM_{2.5}. At the local level, the South Coast Air Quality Management District (SCAQMD) has not yet completed a methodology for calculating PM_{2.5} or PM_{2.5} significance thresholds for the purpose of analyzing local and regional air quality impacts in CEQA documents.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major revision to the certified OCGP FEIR and approved addenda due to any new significant environmental impact or a substantial increase in the severity of impacts.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR and approved addenda.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the times the OCGP FEIR was certified and the addenda were approved, indicating that the project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified and the addenda were approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the certified OCGP FEIR and approved addenda.

4.3.4 MITIGATION FROM THE OCGP FEIR AND APPLICABILITY TO THE VTTM/MSM

The OCGP FEIR identified, and the City has adopted, mitigation measures AQ1 through AQ5, which reduce the air quality effects of construction and operations of development under the adopted Plan. However, as noted above, the OCGP FEIR found that short-term and long-term air quality impacts would remain significant and unavoidable. The measures are applicable to future development under the VTTM/MSM.

- AQ1 Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.
- AQ2 Prior to the commencement of construction activities required to demolish and/or remove existing DoN structures, including runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.
- Evaluate the availability and use, if available, of low-emission (i.e., methanol- or natural gas-powered) construction equipment instead of diesel for each construction phase. Water exposed soils at least twice daily and maintain equipment and vehicle engines in good condition and in proper tune.
 - Wash off trucks leaving the site.
 - Replace ground cover on construction sites when it is determined that the site will be undisturbed for lengthy periods.

- Reduce speeds on unpaved roads to less than 15 miles per hour.
- Halt grading and excavation operations when wind speeds exceed 25 miles per hour.
- Suspend all emission generating activities during smog alerts.
- Use propane- or butane-powered on-site mobile equipment instead of diesel/ gasoline, whenever feasible.
- Properly maintain diesel-powered on-site mobile equipment.
- Sweep streets at the end of the day if substantial visible soil material is carried over to the adjacent streets.
- Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible.
- Evaluate the availability and use, if available, of low-emission (i.e., methanol- or natural gas-powered) construction equipment instead of diesel for each construction phase.
- Use of low-VOC asphalt.
- Cover all trucks hauling dirt, sand, soil or other loose material to and from the site.
- Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic.
- Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible.
- Reroute construction trucks away from congested streets, whenever feasible.
- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible.

AQ3 Prior to the issuance of building permits for any future development, the applicant shall submit, and Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Utilize built-in energy-efficient appliances to reduce energy consumption and emissions.
- Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions.

- Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible.
- Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning.
- Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible.
- Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods.
- Centralize space heating and cooling for multiple-family dwelling units and commercial space.
- Orient buildings north/south for reducing energy-related combustion emissions.
- Use solar energy, when feasible.
- Use high rating insulation in walls and ceilings.

AQ4 At the time of residential and commercial lease and sales agreements, future sales information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find employment nearby.

AQ5 At the time of residential and commercial lease and sales agreements, the applicant shall demonstrate to the satisfaction of the Director of Redevelopment that future employment generating nonresidential development shall include measures to reduce vehicle trips including: the promotion of carpool incentives and alternative work schedules, easy access to public transit systems, trail linkages between uses, low emissions vehicles fleets, and the provision of on-site facilities such as banking and food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.

Timing has been added to the mitigation measures above to be able to effectively implement these measures. As modified the timing language includes the following, "At the time of residential and commercial lease and sales agreements, future sales..."

4.4 BIOLOGICAL RESOURCES

4.4.1 ENVIRONMENTAL SETTING

The OCGP FEIR described the biological resources within Planning Areas 30 and 51, including 995 acres of land retained in federal ownership and designated as both "habitat reserve" and a part of the Orange County Central-Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP).

The areas outside the habitat reserve were described as: (1) providing minimal native or undisturbed habitat and (2) consisting of agricultural, ornamental, and domestic landscapes.

The OCGP FEIR identified nine vegetative communities within the project site, including Venturan-Diegan sage scrub, southern cactus scrub, chaparral, woodland, riparian scrub, grassland, open water, agriculture, and disturbed or developed areas. Several sensitive plant species and a large number of mature trees were also identified as potentially occurring within the project site. The sensitive plant species potentially occurring in both Planning Areas 30 and 51 include the southern tarplant, Palmer's grapplehook, many-stemmed dudleya, Coulter's Matilija poppy, Catalina mariposa lily, and intermediate mariposa lily. The OCGP FEIR also noted the Coulter's saltbush, Laguna Beach dudleya, San Fernando Valley spineflower, and the Lewis's evening-primrose as having a moderate potential for occurrence. Species with a low potential for occurrence include the Los Angeles sunflower, south coast saltscale, Santa Monica Mountains dudleya, heart-leafed pitcher sage, coast wooly-heads, slender-horned spineflower, Santa Barbara morning glory, tecate cypress, and salt spring checkerbloom.

The OCGP FEIR documented that one sensitive wildlife species, the burrowing owl, was observed outside the habitat reserve at the southwestern end of Planning Areas 30 and 51 along Serrano Creek (Chambers Group, September 7, 1999 site visit). Forty other sensitive wildlife species or species of local concern were identified as having a potential to occur on the site. In addition, the areas outside the habitat reserve, such as the agricultural lands, generally provide suitable foraging habitat for raptor species, including Swainson's hawk.

Lastly, the OCGP FEIR described the Wildlife Corridor Concept Plan that would be incorporated into the eastern portion of the project site (Refer to pp. 5.9-9–5.9-14 of the OCGP FEIR). The Wildlife Corridor planning efforts have been ongoing, and the Orange County Great Park Plan land use concepts accommodated this ongoing planning effort. The guidelines presented in the OCGP FEIR were chiefly concerned with the creation and revegetation of wildlife habitats that would flourish in the proposed areas and that would serve as protective cover for target wildlife species that will presumably utilize the proposed corridor. A preliminary design concept for the creation and/or revegetation of the proposed route has also been prepared which is consistent with the guidelines described below (Draft Irvine Wildlife Corridor Master Plan, November 2002). These terms are defined as they are generally used by restoration professionals in California and by the Society for Ecological Restoration (SER):

- Creation (establishes historical ecosystems on lands that did not previously support that ecosystem or on severely altered sites)
- Revegetation
- Reduce the amount of noise pollution and urban influence
- Remove and restore the unnecessary developed (paved) areas within the corridor right-of-way
- Create a protective habitat along the entire length of the corridor
- Apply minimum height and width requirements based on the specific wildlife species

OCGP FEIR Mitigation Measure BIO3, which continues to apply to Addendum No. 3, ensures that the City of Irvine would continue to work with State and federal agencies to implement the revegetation/restoration plan necessary to create a viable wildlife corridor within the project area. The City has already engaged in this process as is demonstrated through the preparation of the Draft Irvine Wildlife Corridor Master Plan, which is independent of this VTTM/MSM process.

4.4.2 IMPACTS IDENTIFIED IN THE OCGP FEIR

The OCGP FEIR disclosed several significant impacts of the Revised Overlay Plan, including potential impacts on: (1) the southern tarplant, a federal species of concern; (2) the limited

amounts of highly disturbed wetland habitat on the project site; and (3) the wide range of species of trees, many of which are mature specimens.

4.4.3 IMPACTS ANALYSIS FOR VTTM/MSM

The VTTM/MSM does not change or intensify the development approved for the project site. The VTTM/MSM provides additional design detail for development purposes and is being processed in compliance with Section 7.1 of the Great Park Development Agreement. The development area and impacts of grading are consistent with the Revised Overlay Plan; therefore the conclusions drawn in the OCGP FEIR adequately describe the environmental effects of the VTTM/MSM relative to biological resources, as well as the severity of the impacts.

The VTTM/MSM is consistent with the land use plan analyzed in the OCGP FEIR, and no additional areas are proposed for development. Further, the VTTM/MSM includes a wildlife corridor consistent with the guidelines described above in Section 4.4.1 (i.e., creation, revegetation), and are defined as they are generally used by restoration professionals in California and by the SER. The Wildlife Corridor planning efforts have been ongoing, and the Orange County Great Park Plan land use concepts accommodated this ongoing planning effort, as does VTTM/MSM.

OCGP FEIR Mitigation Measure (MM) BIO1 stated that prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. MM BIO1 also stated that prior to approval of a subdivision map for development within, or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement or, if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG). Mitigation Measure BIO1 would continue to apply to the VTTM/MSM (see Mitigation Measure BIO1, below).

The OCGP FEIR also stated that prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan sub-area that contains the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a Wetland Mitigation Plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). For wetlands impacted on-site, replacement, recreation (i.e., within the proposed wildlife corridor), and/or re-vegetation is deemed acceptable by the appropriate jurisdictional agencies. Accordingly, Mitigation Measure BIO2 below would also continue to apply to the VTTM/MSM.

The OCGP FEIR required that several focus surveys be conducted on the El Toro property for sensitive plant and wildlife species prior to development. PCR Services prepared a *Biological Resources Assessment for Lennar Heritage Fields, Orange County, California* in November of 2005 (Appendix E) and an updated assessment was prepared in June of 2006.⁴ This biological resources assessment is in direct compliance with mitigation measures BIO1, requiring a focus survey for the southern tarplant, mountain plover, and burrowing owl, and BIO2 requiring a wetlands delineation to be prepared for all areas within the master plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters.

⁴ This report is available for review at the City of Irvine.

Jurisdictional Wetlands and “Waters of the U.S.”

A Jurisdictional Delineation for the site has been performed (*Investigation of Jurisdictional Wetlands and Waters of the U.S. Lennar Heritage Fields*, June 2006, PCR, Appendix F). The Heritage Fields property supports six intermittent drainage systems and a variety of associated ephemeral tributaries. Five of the drainages have their headwaters in undeveloped areas of the Lomas de Santiago Foothills to the north. San Diego Creek originates in an eastern portion of the watershed that is occupied by substantial residential and commercial development.

Disturbances such as channelization of large stretches of the drainages and dumping of debris and trash into portions of drainages have significantly altered several waterways and obscured many drainage features. Other disturbances on site include vegetation clearing to create roads and structures, agricultural runoff, and invasion by exotic species. Current and historic land uses associated with the establishment of MCAS El Toro (military structures, roads, agriculture, and residential development) have significantly changed the overall drainage patterns within the San Diego watershed. The cumulative impact to each wash or creek has resulted in habitat and water quality impairment within the San Diego Creek watershed.

These impacts include increased sediment and debris transport due to concrete-lined stream channels, increased flow velocities and scouring, increased bank erosion, increases in the presence of non-native plant species, and an overall reduction in the amount and the quality of the riparian habitat within the watershed. Alternatively, the disturbances have increased the amount of jurisdictional areas due to the creation of freshwater marsh habitat resulting from impoundment of stormwater runoff within and adjacent to drainages. In total, the site contains 37,102.1 linear feet of jurisdictional streambed that includes 22.02 acres of U.S. Army Corps of Engineers (USACE) jurisdictional “waters of the U.S.,” of which 1.66 acres meet the three-parameter definition of a jurisdictional wetland. CDFG jurisdictional streambed and associated riparian habitat total 38.61 acres.

Grading of the site would result in the permanent discharge of fill material into a total of 1.66 acres of wetland waters of the U.S., as well as temporary impacts to 5.27 acres of non-wetland waters of the U.S. (see Table 4.4-1, below). Mitigation would be implemented for impacts to jurisdictional waters by a combination of aquatic resource creations, restoration and enhancement activities. For example, an existing reach of the Agua Chinon Wash would be restored and a portion of Serrano Creek located within the proposed Irvine Wildlife Corridor would be restored and enhanced. A natural riparian system, including wetland waters within portions of Agua Chinon Wash south of Irvine Boulevard, would also be created.

**TABLE 4.4-1
SUMMARY OF IMPACTS TO JURISDICTIONAL WATERS AND WETLANDS**

Name	Existing*			Permanent Impacts*			Temporary Impacts*		
	Length (ft.)	ACOE/ RWQCB (acres)**	CDFG (acres)**	Length (ft.)†	ACOE/ RWQCB (acres)	CDFG (acres)	Length (ft.)	ACOE/ RWQCB (acres)	CDFG (acres)
Agua Chinon Wash***	4,927.82	2.52	6.10	-	0.42	1.26	4,927.82	2.10	4.83
Tributary AC-1	203.27	0.03	0.14	203.3	0.03	0.14	-	-	-
Tributary AC-2	1,144.43	0.30	.60	1,144.4	0.30	.60	-	-	-
Tributary AC-2.1	133.27	0.01	0.01	133.3	0.01	0.01	-	-	-
Tributary AC-2.2	1,290.77	0.12	0.18	1,290.8	0.12	0.18	-	-	-

TABLE 4.4-1 (Continued)
SUMMARY OF IMPACTS TO JURISDICTIONAL WATERS AND WETLANDS

Name	Existing*			Permanent Impacts*			Temporary Impacts*		
	Length (ft.)	ACOE/ RWQCB (acres)**	CDFG (acres)**	Length (ft.)†	ACOE/ RWQCB (acres)	CDFG (acres)	Length (ft.)	ACOE/ RWQCB (acres)	CDFG (acres)
Tributary AC-2.3	494.64	.04	.08	494.6	0.04	0.08	-	-	-
Tributary AC-3	3,491.76	0.34	1.61	3,491.8	0.34	1.61	-	-	-
Tributary AC-4	1,852.47	0.18 (0.08)	0.39	1,852.5	0.18 (0.08)	0.39	-	-	-
Bee Canyon Wash	3,940.56	0.94	2.76	3,940.6	0.94	2.76	-	-	-
Tributary BeC-1	1,463.86	0.15	0.32	1,463.9	0.15	0.32	-	-	-
Borrego Canyon Wash	3,783.63	1.47 (0.84)	3.38	1042.7	1.33 (0.84)	1.69	-	-	-
Tributary BoC-1	319.57	0.01	0.09	319.6	0.01	0.09	-	-	-
Serrano Creek***	5,718.98	3.17	7.51	-	-	-	5,718.98	3.17	7.51
Tributary SC-1	2,648.38	0.46 (0.26)	1.07	2,648.4	0.46 (0.26)	1.07	-	-	-
Tributary SC-1.1	1,450.06	0.16 (0.08)	0.51	1,450.1	0.16 (0.08)	0.51	-	-	-
Tributary SC-1.1.1	22.12	0.00	0.00	22.1	0.00	0.00	-	-	-
San Diego Creek	696.90	0.33 (0.33)	1.03	696.9	0.33 (0.33)	1.03	-	-	-
Tributary SD-1	580.74	0.08 (0.07)	0.29	580.7	0.08 (0.07)	0.29	-	-	-
Drainage D-1	353.36	0.02	0.07	353.4	0.02	0.07	-	-	-
Drainage D-2	322.79	0.02	0.06	322.8	0.02	0.06	-	-	-
Drainage D-3	889.43	0.06	0.23	899.4	0.06	0.23	-	-	-
Marshburn Channel	1,373.30	0.13	0.70	-	-	-	-	-	-
Retarding Basin	N/A	10.49	10.49	-	-	-	-	-	-
Man-Made Ponds	N/A	0.99	0.99	-	-	-	-	-	-
Total On-Site Jurisdiction	37,102.1	22.02 (1.66)	38.61	22,341.3	5.0 (1.66)	12.54	10,646.8	5.27	12.34
<p>* Acreages have been rounded to the nearest hundredth</p> <p>** Jurisdictional acreages often overlap and are, therefore, not additive (e.g., ACOE acreages are often included in the total RWQCB and CDFG jurisdictional acreages).</p> <p>*** Impacts to Agua Chinon Wash are associated with the creation/restoration of a natural, surface flowing stream channel and associated riparian habitat. Impacts to Serrano Creek are associated with the grading and subsequent habitat restoration associated with the Irvine Wildlife Corridor. Upon completion of these restoration activities, both drainages would flow within natural, vegetated stream corridors.</p> <p>† Length totals may not be additive due to rounding</p> <p>() Jurisdictional wetlands; wetland acreages are included within the total acreages and are not additive.</p> <p>Source: PCR Services Corporation. 2006.</p>									

Sensitive Biological Resources

There are a number of plant and wildlife species present, or potentially present, within the study area that have received special recognition by federal, State, or local resource conservation agencies and organizations. Their status is principally due to the species' declining or limited populations sizes, usually resulting from habitat loss. Protected sensitive species are identified by either State or federal resource management agencies, or both, as threatened or endangered under provisions of the California and Federal Endangered Species Acts.

Sensitive species that occur or could potentially occur within the study are based on one or more of the following:

- The direct observation of the species within the study area during one of the biological surveys.
- A record reported in the California Natural Diversity Database (CNDDDB).
- The study area is within a known distribution of a species and contains appropriate habitat.

Sensitive Plant Communities

The study area is dominated by highly disturbed habitat types with only small areas of native vegetation. A total of 9.7 acres of southern willow scrub occurs in scattered patches throughout the study area. Southern willow scrub is a high priority inventory community in the CNDDDB. This community is considered sensitive because it has experienced a decline in California and because it has the ability to support a number of sensitive species such as least Bell's vireo and southwestern willow flycatcher.

Sensitive Plant Species

Sensitive plants include those that are either candidates or are currently listed by the CDFG and USFWS and those that are considered sensitive by the California Native Plant Society (CNPS). Several sensitive plant species were reported in the CNDDDB from the surrounding region. In accordance with the mitigation measures of the OCGP FEIR, focused surveys for southern tarplant were conducted on June 3 and June 8, 2005. No specimens were found. The highly disturbed character of the site and reduced presence of habitat capable of supporting sensitive plant species make it highly unlikely that any listed plant species will occur on the site.

Sensitive Wildlife Species

Forty-nine sensitive wildlife species were reported in the CNDDDB as occurring with the USGS 7.5-minute El Toro quadrangle map and the eight surrounding maps. Habitat suitability assessments for these species were conducted concurrently with the site investigation throughout the 2005 fieldwork. The intent of the habitat assessment was to evaluate habitat for its ability to support sensitive species and ascertain which sensitive species are likely to be present within the study area based on expected habitat use, geographic range, and information collected in the vicinity of the study area.

Heritage Fields is not within a proposed or final critical habitat area. Six sensitive wildlife species were observed within the study area during initial field investigations: northern harrier (*Circus cyaneus*), merlin (*Falco columbarius*), Cooper's hawk (*Accipiter cooperii*), California horned lark (*Eremophila alpestris actia*), cactus wren (*Campylorhynchus brunneicapillus*), and loggerhead shrike (*Lanius ludovicianus*). Three of these species (northern harrier, merlin, and Cooper's

hawk) were also observed during wintering bird surveys. In addition, the golden eagle (*Aquila chrysaetos*), burrowing owl (*Athene cunicularia*), and ferruginous hawk (*Buteo regalis*) were observed utilizing the site during these subsequent wintering bird surveys.

Surveys for mountain plover (*Charadrius montanus*), in accordance with the OCGP FEIR mitigation measures, were conducted during the wintering bird surveys. No mountain plover were observed on site during those field investigations.

In a follow-up report⁵ on wintering birds dated October 30, 2006 with surveys conducted between October 2005 and March 2006, PCR Services searched the site for activity. No burrowing owls were seen until February 2006. Although the project site is open, its vegetation becomes dense and over two feet tall in most areas. A single owl occupied a burrow during the late winter but abandoned the area as the vegetation surrounding the burrow became three feet high and very dense. There was no indication that breeding activity had been initiated. Because the habitat became unsuitable as a natural result of not being mowed, PCR Services determined that no mitigation would be required. This survey was performed in compliance with Mitigation Measure BIO1 requiring a focused survey for the burrowing owl prior to the approval of a subdivision map for each project area.

Summary of the Biological Status of the Site

The OCGP FEIR required that focus surveys be conducted on the project site for several sensitive plant and wildlife species prior to specific development plans. The required surveys were carried out during 2005 and 2006. No species of endangered plants or wildlife were recorded on site during these investigations, which were conducted by PCR Services. The sensitive plant community of willow scrub extant on site is heavily disturbed and fragmented. As such, PCR Services did not recommend attempting to preserve any of the remnant stands or streambeds as they are now constituted. It was also determined that the presence of several sensitive species of birds would not impact the development process but would be a part of mitigation designed to avoid disturbance of nesting avian species. PCR Services' findings did not indicate a need to consult formally with the USFWS.

The VTTM/MSM is consistent with the analysis and findings in the OCGP FEIR for biological resources as no additional areas are planned for development beyond those already analyzed and approved and the more specific surveys of these areas did not identify any new or significant information or impacts.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major revision to the certified OCGP FEIR and approved addenda. This Addendum will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR or approved addenda.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR and approved addenda.

No New Information of Substantial Importance Showing Greater Significant Effects Than the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the times

⁵ This report is available for review at the City of Irvine

the OCGP FEIR was certified and the addenda were approved that indicate that the project will have one or more significant effects not discussed in the OCGP FEIR or that would result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified and the addenda were approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt them or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt them. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant biological effects identified in and considered by the certified OCGP FEIR and addenda.

4.4.4 MITIGATION FROM THE OCGP FEIR AND APPLICABILITY TO THE VTTM/MSM

Mitigation measures BIO1 through BIO4, since adopted by the City, will be implemented in conjunction with master plan review and subsequent development permits. Implementation of the VTTM/MSM would neither change these mitigation measures nor their application to future development projects.

- BIO1 Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. Prior to approval of a subdivision map for development within or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement. If impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).
- BIO2 Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). Wetlands impacted on-site replacement, recreation (i.e., within the proposed wildlife corridor), and/or re-vegetation as deemed acceptable by the appropriate jurisdictional agencies.
- BIO3 The City shall continue to work with State and federal agencies during the implementation of the proposed project to implement the re-vegetation/restoration plan for the wildlife corridor. Measures such as sight and sound barriers, including artificial sound walls and natural diversions (e.g., hedges and tree lines) shall be incorporated into corridor design to ensure the

viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the EIR.

- BIO4 Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered "Significant Trees" under the City of Irvine's Urban Forestry Ordinance (UFO) (Sections 5-7-401 et seq.) and the UFO shall apply to all trees included in this inventory.

4.5 CULTURAL RESOURCES

4.5.1 ENVIRONMENTAL SETTING

Cultural Resources

The discussion of Cultural Resources includes archaeological and historical resources. The OCGP FEIR presented information pertaining to the regional setting of former MCAS El Toro from both a prehistoric and historic perspective. The OCGP FEIR reported the presence of ten prehistoric archaeological sites and eight isolated prehistoric artifacts which have been recorded in the northeastern habitat preserve portions of Planning Area 51 (Planning Area 51). These sites are generally located on the ridges between Borrego Canyon Wash and the Agua Chiñon Wash. There are two prehistoric sites, CA-ORA-551 and CA-ORA-602, and one prehistoric isolate located within a one-half mile radius of Planning Area 30.

The former MCAS El Toro was surveyed to determine whether any of its structures would be eligible for the National Register. Generally, a structure which has achieved significance in the past 50 years is not considered eligible for the National Register unless it is of exceptional importance. The evaluation was expanded to include eligibility under the Legacy Cold War Project (Public Law No. 101-511, § 8120). Portions of Planning Areas 30 and 51 (the former MCAS El Toro) were established during World War II, and no structure earlier than this period is at the former MCAS El Toro. Therefore, structures at the former military base could be considered historic as part of the Cold War Legacy. Surveys conducted by the USACE and the DoN, in conjunction with the base's closure, concluded that there were no structures eligible for designation as Cold War Legacy or for inclusion in the National Register of Historic Places.

Paleontological Resources

The OCGP FEIR reported that a majority of Planning Areas 30 and 51 are located on the Tustin Plain, a coastal alluvial plain. Alluvium from the Late Pleistocene to Holocene Epochs (approximately 2 million to 11,000 years ago) immediately underlies the majority of the project area, including the part occupying the coastal plain and washes in the eastern portion of Planning Area 51. The Pleistocene Alluvium formation is widespread and believed to extend to depths of 1,000 feet in Planning Area 30. A significant deposit of Pleistocene terrestrial vertebrates was recovered during excavation of a flood control basin four miles from Planning Area 30; thus, it is possible that similar beds underlie Planning Area 30 (Refer to OCGP FEIR 5.10-2).

The eastern portion of Planning Area 51 is located in the western foothills of the northern Santa Ana Mountains. The hills and ridges in the eastern part of Planning Area 51 are composed of older, underlying marine and nonmarine rock units of early Oligocene to late Pleistocene era (23 million to 2 million years ago). In order of decreasing geologic age, these latter rock units include the undifferentiated Sespe and Vaqueros Formations, Topanga and Monterey Formations, Oso Member of the Capistrano Formation, Niguel Formation, and Nonmarine Terrace Deposits. Nonmarine Terrace Deposits also underlie the terraces at the southern corner of Planning Area 51. The northwestern corner of Planning Area 51 contains a small portion of the Santa Ana Mountains foothills, which were separated from the main formation by erosion. This small portion is composed of undifferentiated late Cretaceous era (135 million years ago) marine Williams Formation. The rock units underlying portions of Planning Area 51 have previously yielded important fossil remains at recorded fossil sites on and near the site. There are three recorded fossil sites in Planning Area 51. These sites occur in undifferentiated Sespe and Vaqueros Formations and in the Topanga Formation. Fossil types include marine invertebrates and vertebrates, continental vertebrates, land plants, and land mammals. The three recorded fossil sites lie within the proposed habitat preserve portion of Planning Area 51. No development is proposed in this portion of the project area under the proposed land uses. (Refer to OCGP FEIR p. 5.10-1 and Table 5.10-1.)

4.5.2 IMPACTS IDENTIFIED IN THE OCGP FEIR

Cultural Resources

The OCGP FEIR determined that development according to the Revised Overlay Plan would not cause a substantial adverse change in the significance of any historical structure. The consequence of grading activities associated with future development, however, could potentially result in a substantial adverse change in the significance of an archaeological resource. The OCGP FEIR also stated that grading activities could uncover previously unknown human remains, including those interred outside formal cemeteries.

Paleontological Resources

The OCGP FEIR stated that earthmoving operations associated with grading and trenching have the greatest potential to impact buried paleontological resources in the moderately to highly sensitive areas in the coastal plain and washes, northeastern, northwestern, and southern portions of Planning Area 51. The OCGP FEIR considered the potential impact associated with earthmoving operations as a significant impact for which mitigation was necessary.

4.5.3 IMPACTS ANALYSIS FOR VTTM/MSM

Background

The OCGP FEIR included cultural resources investigations as part of CEQA compliance. Although the entire project area was the subject of previous cultural resources investigations as part of the Base Realignment and Closure process, it was determined that an updated survey and report was necessary to supplement the previous work. PCR Services performed an additional Phase I and II cultural resources investigations, the results of which can be found in the *Cultural Resources Update and Review, Heritage Fields/The Great Park, City of Irvine, Orange County, California* report⁶ dated September 2006.

⁶ This report is available for review at the City of Irvine.

Methodology

PCR Services' cultural resources assessment included an updated cultural resources record search through the California Historic Resources Information System, a Native American Sacred Lands record search through the California Native American Heritage Commission, Native American consultation, a pedestrian survey of the project area, archaeological site testing (i.e., excavation), and archaeological site evaluation. The record search and pedestrian survey were initiated in October 2005 and completed in February 2006. The archaeological test excavations and site evaluations were completed in June 2006.

In addition to the updated Cultural Resources investigation, PCR Services assisted the City of Irvine with SB 18 consultation on August 31 and September 13, 2006. The consultation was attended by representatives from five affiliated tribes or tribal groups who responded to the City's request for Native American comments.

Findings

Archaeologists identified a total of four isolated finds (Iso-1 through Iso-4) and five archaeological sites. The archaeological sites include one historic railroad spur (ORA-1658), one historic standpipe (ORA-1659), one historic debris scatter (ORA-1662), and two prehistoric lithic scatters (ORA-1660 and ORA-1661). Five of these cultural resources were tested to determine if subsurface artifacts and/or features were present: Iso-1, Iso-2, Iso-4, ORA-1660, and ORA-1661. Testing did not reveal significant cultural deposits below the ground surface and consequently, these resources are not recommended as eligible for listing in the National Register of Historic Places or the California Register of Historic Resources. Historic research was conducted to determine the significance of the historic archaeological resources ORA-1658 and ORA-1659. While the railroad spur and the standpipe were likely related to the agricultural operations of the historic Irvine Ranch, these resources lack integrity and are not recommended as eligible for listing on the National Register of Historic Places or the California Register of Historic Resources.

Given the geomorphic location of the project area at the base of the Tustin Plain (i.e., coalescing alluvial fans), it is likely there are deeply buried prehistoric cultural deposits. Evidence to support this includes the discovery of two buried prehistoric archaeological sites, ORA-1529 and ORA-1530, during the construction of the Marshburn Retarding Basin in 1999 (located within the project area adjacent to the commercial nursery). Site ORA-1529 was buried at 1.3 meters (m) beneath the ground surface, and site ORA-1530 was buried 10.4 m beneath the ground surface. Charcoal from a hearth feature at site ORA-1530 yielded calibrated radiocarbon ages of 8,545 and 9,215 years before present.

A review of the entire project described in the OCGP FEIR and the results of the investigations were presented to representatives from the five affiliated Native American tribes or tribal groups who responded to the request for comments. Although no specific issues were raised, the tribal representatives expressed concerns that there may be buried cultural resources and that monitoring by Native American Monitors should be conducted during grading and earth-moving operations.

The updated study of the project area determined that there are no known significant archaeological resources located within the proposed OCGP project area. However, as stated above, there is the likelihood of deeply buried prehistoric cultural deposits due to the location of the project area at the base of the Tustin Plain and as a result of the discovery of two buried prehistoric sites, ORA-1529 and ORA-1530. This potential impact would be less than significant as a result of compliance with the mitigation measure CULT1 requiring a detailed archaeological

report to be prepared with Planning Areas 51 and 30 that also requires the provision of recommendations to prevent degradation of archaeological resources. This mitigation measure has been satisfied as said report has already been prepared and submitted to the City. In addition, CULT2 requiring the monitoring of excavation and grading activities associated with future development of Planning Areas 51 and 30 has been replaced with standard condition 2.1. Mitigation measures CULT3 and CULT4 requiring a detailed mitigation program to address archaeological resources discovered during grading and the accidental discovery of any human remains are still applicable to the VTTM/MSM.

Cultural Resources

The VTTM/MSM is consistent with the General Plan and Zoning for Planning Areas 30 and 51. The proposed VTTM/MSM does not include any change in land use or intensification of the project analyzed in the OCGP FEIR. The VTTM/MSM would not open new areas to disturbance nor cause greater disturbance than reported in the OCGP FEIR. The impacts disclosed in the OCGP FEIR adequately described the effects of the VTTM/MSM in that the VTTM/MSM would not cause a substantial adverse change in the significance of any historical structure; the consequence of grading activities associated with future development could potentially result in a substantial adverse change in the significance of an archaeological resource; and grading activities could uncover previously unknown human remains, including those interred outside formal cemeteries. Mitigation measures were developed to reduce any impacts to less-than-significant levels and remain relevant to the adoption of the VTTM/MSM. As such, no impact beyond what was identified in the OCGP FEIR and the addenda is anticipated to occur.

Archaeological Resources

In accordance with the OCGP FEIR, prior to subdivision for development, a detailed archaeological report(s) will be prepared within Planning Areas 51 and 30. This report(s) will specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. All recommendations contained in the report shall be implemented, and compliance with this measure will be verified by the Community Development Department (see Mitigation Measure CULT1, below).

Paleontological Resources

The VTTM/MSM does not include any land use change or intensification. Adoption of the VTTM/MSM would not open new areas to disturbance beyond what was described in the adopted OCGP FEIR and the approved addenda. The paleontological mitigation measure developed for the OCGP FEIR remains applicable to future development under the VTTM/MSM.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major revision to the certified OCGP FEIR and approved addenda. This Addendum will not will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available that indicates substantial changes in circumstances which would require major changes to the certified OCGP FEIR and approved addenda.

No New Information of Substantial Importance Showing Greater Significant Effects Than the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the times the OCGP FEIR was certified and the addenda were approved, which indicates that the project will have one or more significant effects not discussed in the OCGP FEIR or that would result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified and the addenda were approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt them or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment but the project proponent declines to adopt them. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant cultural effects identified in and considered by the certified OCGP FEIR and approved addenda.

4.5.4 MITIGATION FROM THE OCGP FEIR AND APPLICABILITY TO THE VTTM/MSM

Cultural Resources

The OCGP FEIR identified mitigation measures CULT1 through CULT4, adopted by the City, which will reduce the effects of development under the adopted Plan to a less-than-significant level. Measures CULT1 through CULT4 are applicable to future development under the VTTM/MSM.

- CULT1 Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within Planning Areas 51 and 30. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department. This mitigation measure has been satisfied.
- CULT2 Monitoring of excavation and grading activities associated with future development in Planning Areas 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure CULT1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and an assessment of their importance under CEQA and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.
- CULT3 Prior to the issuance of grading permits and/or building permits for any future development in Planning Areas 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City of Irvine to address archaeological

resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.

CULT4 Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City of Irvine to address the accidental discovery or recognition of any human remains. The program shall include the following:

There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- The county coroner must be contacted to determine that no investigation of the cause of death is required, and

If the coroner determines the remains to be Native American:

- The coroner shall contact the Native American Heritage Commission within 24 hours.
- The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
- The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for the means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods, as provided in Public Resources Code Section 5097.98, or
- Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
 - The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
 - The descendant identified fails to make a recommendation; or
 - The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the

Native American Heritage commission fails to provide measures acceptable to the landowner.

Compliance with this measure shall be verified by the Community Development Department.

Paleontological Resources

The OCGP FEIR identified that mitigation measure P1, adopted by the City, will reduce the effects of development under the Revised Overlay Plan to a less-than-significant level. Measure P1 is applicable to future development under the VTTM/MSM.

- P1 Prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. (A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.

When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossil specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screening-washing operation on-site.

Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.

4.6 GEOLOGY AND SOILS

4.6.1 ENVIRONMENTAL SETTING

The OCGP FEIR describes the topography of the project site as nearly flat and gently sloping down to the west to southwest with elevations ranging from 450 feet above mean sea level (msl) to 200 feet above msl. Planning Area 30 is located at the southeastern margin of the Tustin Plain with elevations ranging from about 260 to 300 feet above msl. Planning Area 51 includes some slopes of the Santa Ana foothills which each have elevations of about 750 feet above msl. Alluvial soils of six major soil associations consisting predominantly of varying sands, silts, and clayey silty sands are present within Planning Area 51. Soils underlying Planning Area 30 contain clayey loam alluvial material, terrace deposits, and old and unconsolidated recent alluvium of the Myford and Sorrento series.

The OCGP FEIR identified the primary potential seismic hazard in the area as ground motion. Seismic Response Area (SRA) designations are used by the City to assess the geologic and seismic risk associated with potential development. All of Planning Area 30 and a majority of Planning Area 51 are located within SRA-2 (denser soils/deeper groundwater) and are considered suitable for development. The planned development area of Planning Area 51 situated north of Irvine Boulevard is designated SRA-3 (alluvium/shallow bedrock) and is also susceptible to ground motion.

No known active faults crossing or projecting into the project area were identified; however, the project site is located within the seismically active southern California region and there are 2 active faults—the Whittier-Elsinore Fault and the Newport-Inglewood Fault—located within 14 miles of the site.

4.6.2 IMPACTS IDENTIFIED IN THE OCGP FEIR

The OCGP FEIR disclosed the potential for future development of the project area to result in the exposure of people or structures to strong ground shaking in the event of a major earthquake along any one of the active faults in the region. The OCGP FEIR noted that new construction would be required to adhere to current seismic safety building codes which address seismic concerns. Existing buildings within Planning Area 51 do not meet current seismic codes; therefore, the temporary or permanent reuse of the existing buildings and the associated exposure of people or structures to potential substantial adverse effects due to strong seismic-related ground shaking were considered significant impacts.

Because of the documented landslides in the northeastern Santa Ana foothills area of the project site, the OCGP FEIR analysis concluded that the development would result in a significant impact associated with landslides in the affected area of Planning Area 51 east of Irvine Boulevard, where future development of habitable structures could occur under the Revised Overlay Plan.

The OCGP FEIR also concluded future development has the potential to result in soil erosion or the loss of topsoils and risk to life and property with the presence of expansive soils, and that these impacts are considered significant. The VTTM/MSM includes the same land uses and development areas as the Revised Overlay Plan; therefore the conclusions drawn in the OCGP FEIR adequately describe the environmental effects of the VTTM/MSM relative to soils, geologic hazards, and seismic safety, as well as the severity of the impacts.

4.6.3 IMPACTS ANALYSIS FOR VTTM/MSM

This Addendum addresses activity that does not increase the intensity or change the type of development within the OCGP. The VTTM/MSM includes the mass grading plan for the Heritage Fields project area. The detail of project design has been developed in accordance with previous approvals. The grading numbers for the VTTM/MSM are provided in Section 4.3, Air Quality. Mitigation Measure GS4 requires a detailed geotechnical and hydrological report. These reports were prepared as part of the VTTM/MSM submission. The Drainage Master Plan was prepared by Fuscoe Engineers, Inc., dated September 2006 to comply with all applicable State, County, and City of Irvine requirements and establishes surface runoff control measures. The Geotechnical Report prepared by Zeiser Kling Consultants⁷ complies with all applicable State, County, and City of Irvine requirements and establishes the standard engineering practices for soil preparation and erosion-control during project implementation. No additional impacts are created by the project and no additional changes in mitigation are required.

⁷ These documents are on file at the City of Irvine Redevelopment Department.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major revision to the certified OCGP FEIR and approved addenda due to any new significant environmental impact or a substantial increase in the severity of impacts.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or any otherwise available information that indicates substantial changes in circumstances which would require major changes to the certified OCGP FEIR and approved addenda.

No New Information of Substantial Importance Showing Greater Significant Effects Than the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the times the OCGP FEIR was certified and the addenda were approved which indicate that the project will have one or more significant effects not discussed in the OCGP FEIR or that would result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified and the addenda approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt them or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt them. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant geology and soils effects identified in and considered by the certified OCGP FEIR and approved addenda.

4.6.4 MITIGATION FROM THE OCGP FEIR AND APPLICABILITY TO THE VTTM/MSM

The OCGP FEIR identified four mitigation measures, since adopted by the City, to reduce the effects of the Revised Overlay Plan on soils, geologic hazards, and seismic safety. All of the mitigation measures are applicable to implementation of the project and would be carried forward to future development of the project site. Implementation of measures GS1 through GS4 (listed below) would reduce project impacts to a less-than-significant level.

- GS1 Prior to issuance of a building permit, the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.
- GS2 Prior to issuance of a building permit, as per existing City policies, geological studies shall be prepared at the time specific development projects are proposed to address site specific geological considerations. The scope of each geological study is based on the underlying geological conditions of the individual site. These reports will provide measures to prevent settlement.

Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be conducted. The purpose of the subsurface evaluation is to:

- a. Further evaluate the subsurface conditions in the area of the proposed structures.
- b. Provide specific data on potential geologic and geotechnical hazards.
- c. Provide information pertaining to the engineering characteristics of earth materials in the project area.

From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural section, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:

- Seismic Ground Shaking – Measures to prevent risk of loss, injury or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.
- Erosion or Loss of Topsoil – Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances.
- Where Expansive Soils Exist – Measures for the design of foundation, slabs, flatwork and other improvements subject to drainage from expansive soils.

Compliance with this measure shall be verified by the Community Development Department.

GS3 Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of any existing structure if a building permit is not issued, a seismic evaluation of the structure including recommendations for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.

GS4 Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

4.7 HAZARDS AND HAZARDOUS MATERIALS

4.7.1 ENVIRONMENTAL SETTING

Hazardous Materials and Hazardous Wastes

The OCGP FEIR discussed an environmental baseline survey that was conducted for the project area. Information was used from the Base Realignment and Closure Business Plan for Marine Corps Air Station (MCAS) El Toro dated May 2002; the environmental baseline survey (EBS) dated 1995; and an update to the EBS—April 2003 Draft Final EBS. The 2003 EBS identified “76 potential release locations, all of which require further evaluation for potential releases to the environment and subsequent remediation, if required” (Refer to OCGP FEIR p. 5.5-5).

Regarding the Installation Restoration Program (IRP), the OCGP FEIR summarizes the status of each IRP site based on the information available at the time the EIR was prepared. Thirteen (13) IRP sites were identified as requiring “No Further Action,” including sites 4, 6, 7, 9, 10, 13, 14, 15, 19, 20, 21, 22, and 25. The IRP sites identified as “Action Required” included sites 1, 2, 3, anomaly 3, 5, 8, 11, 12, 16, 17, 18 (plume), and 24 (Refer to OCGP FEIR pp. 5.5-6 through 5.5-9).

Of the 404 underground storage tanks (USTs) identified, 357 had been remediated and had received findings of “no further action” at the time the OCGP FEIR was prepared. Of the 39 aboveground storage tanks (ASTs) on the property, 36 had been remediated and received findings of “no further action” (Refer to OCGP FEIR p. 5.5-10).

Evaluation and remediation of previously identified IRP sites within the project site continue with the resulting changes in the condition of the property and was largely anticipated in the OCGP FEIR. Subsequent to certification of the OCGP FEIR, the DoN completed environmental-related findings that support the suitability to transfer real property made available through the Base Realignment and Closure process and to support of the lease of areas not yet suitable for transfer.⁸

The areas suitable for lease encompass locations of concern identified in the 1995 and 2003 EBS and in the OCGP FEIR where future evaluation and/or actions are ongoing or required. These areas were identified as “carve-outs” in the DoN documentation.⁹

Progress relative to conveyance of the carve-outs includes DoN transfer of approximately eight acres of the project site to Heritage Fields and the Great Park Corporation on March 22, 2006. At the time of the initial land sale, these properties (carve-outs) were retained by the DoN in order to complete environmental clean up, and have since been approved by the regulatory agencies for transfer (FOST No. 2). The following sites were included in this transfer:

- **Carve-out parcel II-J** – consists of approximately 0.2 acre situated in the central portion of former MCAS El Toro. It contains one building—Building No. 860—and one location of concern.
- **Carve-out parcel II-Q (portion)** – consists of approximately five acres situated in the eastern portion of the former MCAS El Toro. It is an abandoned jet fuel (JP-5) pipeline.

⁸ Irvine, City of, Redevelopment Agency. 2006 (September) *Orange County Great Park General Plan Amendment and Zone Change* (prepared by The Planning Center). Costa Mesa, CA: The Planning Center.

⁹ Ibid.

- **Carve-out parcel II-S** – consists of approximately 1.3 acres situated in the southeastern portion of former MCAS El Toro. It contains six buildings (347, 377, 447, 448, 566, and 726) and 13 locations of concern.
- **Carve-out parcel II-T** – consists of approximately 0.5 acre situated in the southeastern portion of former MCAS El Toro. It contains one building—Building No. 761—and four locations of concern. The facility was a former aircraft wash rack.
- **Carve-out parcel III-C** – consists of approximately one acre situated in the western portion of the former MCAS El Toro. It contains one building—Building No. 240—and seven locations of concern. This site was a former ordnance storage facility.

Emergency Plans

The OCGP FEIR described the former MCAS El Toro site (Planning Areas 30 and 51) as a potential emergency response staging area because of its capacity for processing and storing large quantities of cargo. The Orange County Emergency Plan, which incorporates the statewide standardized emergency management system (SEMS), guides multijurisdictional response to emergency conditions. No substantial change to the description of the setting regarding emergency plans has occurred that would alter the analysis and conclusions of the OCGP FEIR on emergency plans and response.

Wildland Fires

The OCGP FEIR identified high fire hazard areas within open space; that is, within undeveloped land northeast of and adjacent to Planning Area 51. The City has no construction records of existing buildings and structures extant on the property. No substantial change to the description of the setting relative to wildland fires has occurred that would alter the analysis and conclusions of the OCGP FEIR regarding wildland fires.

4.7.2 IMPACTS IDENTIFIED IN THE OCGP FEIR

Hazardous Materials and Wastes

The OCGP FEIR identified no significant impacts associated with the No Further Action IRP sites, which are listed in Table 4.7-1. Table 4.7-2 identifies each Action Required IRP site and its location relative to the Revised Overlay Plan. The OCGP FEIR disclosed the following environmental consequences of the Revised Overlay Plan as significant impacts:

- Construction activities involving demolition and possible substantial remodeling of existing structures in the project area as the project area develops could result in the disturbance of structures and soils containing asbestos-containing building materials (ACM) and lead-based paint.
- IRP site 24 is located in the 6.1 Institutional and 1.5 Recreation zoning districts. The site may be conveyed with temporary restrictions on use that are not appropriate for transportation facility use. This is considered a significant impact.
- Future uses of IRP site 3 may be potentially constrained by the implementation of institutional controls.

IRP SITE 16 (CRASH CREW PIT NO. 2) IS LOCATED IN THE 1.5 RECREATION ZONING DISTRICT THE SITE MAY BE CONVEYED WITH TEMPORARY RESTRICTIONS ON USE THAT ARE NOT APPROPRIATE FOR RECREATIONAL LAND USES.

Table 4.7-1: No Further Action IRP Sites and Zoning

<i>IRP Site</i>	<i>IRP Designation</i>	<i>Overlay Plan Zoning District</i>	<i>Revised Overlay Plan Zoning District</i>
4	Ferrocene Spill Area	4.4 Commercial Recreation	8.1 GP-LLD
6	Drop Tank Drainage Area No. 1	2.2 Low-Density Residential with 1.8 Golf Course Overlay	2.2 Low-Density Residential with 1.8 Golf Course Overlay
9	Crash Crew Pit No. 1	1.5 Recreation	1.5 Recreation
10	Petroleum Disposal Area	1.5 Recreation	1.5 Recreation
13	Oil Change Area	1.5 Recreation	1.5 Recreation
15	Suspended Fuel Tanks	1.5 Recreation	1.5 Recreation
19	Air Craft Expeditionary Refueling	2.2 Low-Density Residential with 1.8 Golf Course Overlay	2.2 Low-Density Residential with 1.8 Golf Course Overlay
20	Hobby Shop	2.3 Medium Density Residential	8.1 LLD
21	Materials Management Group	6.1 Institutional	6.1 Institutional
22	Tactical Air Fuel Dispensing System	1.5 Recreation	1.5 Recreation

Source: OCGP FEIR, Table 5.5-3, p. 5.5-21; Addendum No. 1, Table 4-1.

Table 4.7-2: Action Required IRP Sites and Zoning

<i>IRP Site</i>	<i>IRP Designation</i>	<i>Overlay Plan Zoning District</i>	<i>Revised Overlay Plan Zoning District</i>
1	EOD Range	1.4 Preservation	1.4 Preservation
2	Magazine Road Landfill	1.4 Preservation	1.4 Preservation
3	Original Landfill	1.5 Recreation/ 2.2 Low-Density Residential with 1.8 Golf Course Overlay	8.1 GP-LLD
5	Perimeter Road Landfill	1.5 Recreation	1.5 Recreation
7	Drop Tank Drainage Area No. 2	1.5 Recreation	1.5 Recreation
8	DRMO Storage Yard	6.1 Institutional/ 3.2 Transit Oriented Development	6.1 Institutional/ 3.2 Transit Oriented Development
11	Transformer Storage Area	1.5 Recreation	1.5 Recreation
12	Sludge Drying Beds	6.1 Institutional	6.1 Institutional
14	Battery Acid Disposal Area	1.5 Recreation	1.5 Recreation
16	Crash Crew Pit No. 2	1.5 Recreation	1.5 Recreation
17	Communications Station Landfill	1.4 Preservation	1.4 Preservation
24	VOC Source Area	6.1 Institutional/ 1.5 Recreation/ 3.2 Transit Oriented Development	6.1 Institutional/ 1.5 Recreation/ 3.2 Transit Oriented Development

Source: OCGP FEIR, Table 5.5-4, p. 5.5-22; Addendum No. 1, Table 4-1.

Emergency Plans

The OCGP FEIR determined the Revised Overlay Plan would not be expected to interfere with emergency response and evacuation plans on the basis that other sites within Orange County are already designated as emergency staging areas and portions of the OCGP would remain available to non-aviation emergency response equipment. Accordingly, the OCGP FEIR concluded that the Revised Overlay Plan would not result in a significant impact related to emergency response and evacuation plans.

Wildland Fires

The OCGP FEIR concluded that the Habitat Reserve, Wildlife Corridor, and Recreational areas in the northeastern portion of Planning Area 51 would be exposed to the highest level of fire risk from wildland fires under the Revised Overlay Plan, and that reuse of existing buildings require inspection for conformance to fire life safety code requirements. The OCGP FEIR identified the wildland fire impacts as potentially significant.

4.7.3 IMPACTS ANALYSIS FOR VTTM/MSM

Hazardous Materials and Wastes

The proposed adoption of the VTTM/MSM does not change the land use or intensity of the development and would not alter the findings and conclusions previously certified and adopted in the OCGP FEIR. As such, there would be no change to either land uses or development areas from the OCGP FEIR, which adequately describes the environmental effects of the project relative to hazardous materials and wastes for the project site. No new or modified mitigation measures are required.

Emergency Plans

Like the Revised Overlay Plan, the VTTM/MSM would not change the way emergency response and evacuation plans are executed on the site on the basis that other sites within Orange County are already designated emergency staging areas and portions of the OCGP would remain available to non-aviation emergency response equipment. Accordingly, the proposed implementation of the VTTM/MSM would not change the conclusions certified in the OCGP FEIR and approved addenda; the VTTM/MSM would not result in a significant impact related to emergency response and evacuation plans.

Wildland Fires

As previously stated in the OCGP FEIR, the Habitat Reserve, Wildlife Corridor, and Recreational areas in the northeastern portion of Planning Area 51 would be exposed to the highest level of fire risk from wildland fires and reuse of existing buildings would require inspection for conformance to fire life safety code requirements. The VTTM/MSM would not alter the findings and conclusions of the OCGP FEIR regarding wildland fires.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major revision to the certified OCGP FEIR and approved addenda due to any new significant environmental impact or a substantial increase in the severity of impacts.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available information that indicates substantial changes in circumstances that would require major changes to the certified OCGP FEIR and approved addenda.

No New Information of Substantial Importance Showing Greater Significant Effects Than the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the times the OCGP FEIR was certified and the addenda were approved that indicate that the project will

have one or more significant effects not discussed in the previous FEIR and addenda or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP Final Environmental Impact Report was certified and addenda were approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt them or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt them. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant hazards and hazardous materials effects identified in and considered by the certified OCGP FEIR and the approved addenda.

4.7.4 MITIGATION FROM THE OCGP FEIR AND APPLICABILITY TO THE VTTM/MSM

The OCGP FEIR identified six mitigation measures, since adopted by the City, to reduce the effects of the Revised Overlay Plan on public health and safety (specifically, environmental effects associated with hazardous materials and waste, emergency response, and wildland fires) to a less-than-significant level. All of the mitigation measures are applicable to implementation of the VTTM/MSM and would be carried forward to future development of the project site. Measures HH1 through HH6 are listed below:

- HH1
- a. Prior to the conveyance of the property and issuance of subsequent grading permits, where the presence of ACMs is identified, the DoN or its transference shall ensure that all available information concerning ACMs has been provided to the City of Irvine, and the purchasers of the property, including:
 - The type, location and condition of ACMs
 - The results of any asbestos testing
 - Description of asbestos control measures taken, if any
 - The costs or time necessary to remove existing ACMs
 - The results of any site-specific asbestos inventory updates
 - b. For any structures known to contain ACMs that will be renovated and/or demolished prior to transfer, the DoN shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.
 - c. Prior to transfer of any structure constructed before October 1988, scheduled for renovation and/or demolition, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by the DoN. This requirement can be waived if an architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a

statement that no ACM was specified as a building material, and to the best of their knowledge, no ACMs were used as a building material.

- d. Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.
 - e. Any renovation and/or LBP abatement activities on residential units at former MCAS El Toro, shall be conducted in accordance with all applicable federal, state and local regulatory requirements.
- HH2
- a. Prior to transfer, the City shall receive from the DoN, with the concurrence of the appropriate regulatory agencies, a statement that the “Action Required” IRP Site 3 is to be conveyed for restricted use and that all institutional controls have been identified and implemented. The City Irvine will adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 of the General Development Standards, boundaries and acreages are appropriate and shall be established by master plan approval.
 - b. Prior to transfer, if the DoN chooses to impose temporary restrictions on the use of Sites 16 and 24 pending adequate remediation of groundwater, the City of Irvine shall receive from the DoN a statement of temporary restrictions on the use of the sites and the release of the sites for restricted use following implementation of adequate remediation of groundwater. The City of Irvine shall adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are appropriate and shall be established by master plan approval.
- HH3
- The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, specified fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for “Development Within and Exclusion from Very High Fire Severity Zones” and “Fuel Modification Plans and Maintenance.” Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the proposed project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.

- HH4 Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.
- HH5 Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event that unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DoN shall be responsible for notifying the DoN, appropriate regulatory agencies, and the Director of Community Development of the City of Irvine in a timely manner.
- HH6 The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells located on the former MCAS El Toro in a geographic information systems database (GIS). The City will review all permit applications on the former air station for monitoring well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to monitoring wells will be limited to authorized personnel.

4.8 HYDROLOGY AND WATER QUALITY

4.8.1 ENVIRONMENTAL SETTING

The OCGP FEIR described the project site as located within the San Diego Creek watershed, which includes the San Diego Creek, Peters Canyon Channel, and the tributaries to these water courses. The major drainage channels that traverse Planning Area 51 are the Marshburn Channel, Bee Canyon Channel, Agua Chiñon Channel, and Borrego Canyon Channel. Serrano Creek and the Upper San Diego Creek Channel traverse Planning Area 30 in the southern tip of the project site, south of the existing SCRRA Metrolink railroad tracks.

San Diego Creek and Upper Newport Bay are listed as impaired water bodies under Section 303(d) of the Clean Water Act. Accordingly, a Total Maximum Daily Load (TMDL) for pollutants that have impaired these water bodies has been established and was included in the OCGP FEIR. (Refer to OCGP FEIR Table 5.7-2.) Figure 4-1 shows the drainage areas and topography of the project area.

The OCGP FEIR also noted that the County of Orange and the City of Irvine hold a National Pollutant Discharge Elimination System (NPDES) permit for the storm drain systems, and that the State has issued an NPDES general permit relating to construction activities on sites over five acres in the area. Lastly, the flood-control improvements associated with the SR-133 toll road were noted in the OCGP FEIR as having reduced the 100-year flood zone north and west of the property.

4.8.2 IMPACTS IDENTIFIED IN THE OCGP FEIR

The OCGP FEIR identified several significant impacts on hydrology and water quality associated with future development under the Revised Overlay Plan before mitigation. First, grading and excavation activities required for future development could result in the exposure of bare soils to both wind- and water-related erosion and associated significant water quality impacts (specifically, a violation of water quality standards or waste discharge requirements). Compliance with City grading and water quality regulations—including the NPDES discharge permitting requirements and preparation of a Storm Water Pollution Prevention Plan (SWPPP) and a Water Quality Management Plan (WQMP)—are the primary means of controlling the potential impacts of grading and excavation activities. These City requirements, which are described in mitigation measures H/WQ1 and H/WQ2, will reduce the impact to a less-than-significant level.

According to the OCGP FEIR, the existing drainage patterns and stream courses will not be substantially altered by future development under the Revised Overlay Plan. In addition, the potential for inundation is reduced by improvements to upstream flood-control facilities. Without project-related flood-control facilities, the rate or amount of surface runoff due to new development would result in flooding on- and off-site, depending on the nature of the specific development. Although this impact was identified as significant, the effect of increased runoff will be reduced to a less-than-significant level through preparation and implementation of hydraulic studies and recommendations for the specific development and the construction of flood-control improvements commensurate with the specific development (mitigation measure H/WQ3).

- The impact analysis for the adopted Revised Overlay Plan assumed development of the land use patterns created by the zoning designations for Planning Areas 30 and 51 and a backbone storm drain system. The storm drain system took into consideration and included improvements identified in the San Diego Creek Flood Control Master Plan (Refer to OCGP FEIR p. 5.7-16 and Figure 5.7-2).

4.8.3 IMPACTS ANALYSIS FOR VTTM/MSM

The VTTM/MSM is for (1) defining the backbone infrastructure, and (2) delineating the limits of mass grading for the Heritage Fields development and portions of the Orange County Great Park development. It is in compliance with all requirements of the existing General Plan and Zoning Code and does not propose any change to land uses or increase in intensities. Therefore, no substantial changes to hydrology are planned. As such, no changes to development assumptions or mitigation measures as they relate to hydrology and water quality are needed. The impact analysis presented in OCGP FEIR Section 5.7 sufficiently describes the project effects on hydrology and water quality.

The *Master Plan of Drainage, Fuscoe Engineering Dated May 1, 2007*¹⁰ describes post-development conditions; the on-site channels will continue to drain the project site as under existing conditions. Additional backbone storm drain facilities will be designed to accommodate the changes in the land use surface runoff within the Heritage Fields development and portions of the Orange County Great Park development. The post-development hydrology was analyzed per the Orange County Hydrology Manual for a 100-year peak storm design event.

OCGP FEIR Mitigation Measure H/WQ3 states that prior to approval of the first tentative tract or parcel map in the project area, detailed hydrologic and hydraulic analysis shall be conducted.

¹⁰ This report has been submitted to the City of Irvine as a part of the Master Subdivision Map application.

Studies and analyses shall be prepared in accordance with Orange County Flood Control District (OCFCD) methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. In compliance with the mitigation measure, Fuscoe Engineering, Inc. prepared the *Master Plan of Drainage for Heritage Fields Dated May 1, 2007*. The primary focus of the report was to evaluate the proposed drainage concept for the Heritage Fields project with respect to surface water hydrology. The study identified surface water runoff as well as drainage and flood-control improvements for the proposed project. The report also provides a brief discussion of the local hydrologic regime: an overview which ranges from the watershed delineation of the San Diego Creek Watershed to the physical drainage characteristics of Heritage Fields in Orange County.

Conclusion

The Heritage Fields and OCGP developments will utilize both regional drainage facilities and underground storm drain systems for storm water conveyance. Among regional channels, the OCGP will construct two soft-bottom channels, the Agua Chino Riparian Corridor and the Wildlife Corridor (WLC). The Marshburn Channel and Borrego Channel will remain in-place to drain the site as under existing conditions. In addition, the existing Serrano Creek Channel will be restored in-place, serving as an extension of the WLC, and the existing earthen channel of San Diego Creek will be replaced by a box culvert extension. The existing Bee Canyon drainage will be realigned subject to future designs of the OCGP and Heritage Fields. The Heritage Fields portion of the project would utilize a backbone drainage system that primarily drains to the regional facilities. The discharges from the Heritage Fields backbone system to the regional facilities are in accordance with the requirements of the Orange County Hydrology Manual and are consistent with the proposed drainage system analyzed in the OCGP FEIR, including the provision for a wildlife corridor.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major revision to the certified OCGP FEIR and approved addenda due to any new significant environmental impact or a substantial increase in the severity of impacts.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available information that indicates substantial changes in circumstances that would require major changes to certified OCGP FEIR and approved addenda.

No New Information of Substantial Importance Showing Greater Significant Effects Than the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the times the OCGP FEIR was certified and the addenda were approved that indicate that the project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP Final Environmental Impact Report EIR was certified and addenda were approved, indicating that: (1) mitigation measures or alternatives previously found not to be

feasible would in fact be feasible and would substantially reduce one or more significant effects of the project but the project proponent declines to adopt them or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt them. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant hydrology and water quality effects identified in and considered by the certified OCGP FEIR and the approved addenda.

4.8.4 MITIGATION FROM THE OCGP FEIR AND APPLICABILITY TO THE VTTM/MSM

The OCGP FEIR identified four mitigation measures, since adopted by the City, to reduce the effects of the Revised Overlay Plan on hydrology and water quality. All of the mitigation measures are applicable to implementation of the VTTM/MSM and would be carried forward to future development of the project site. Implementation of measures H/WQ1 through H/WQ4 (listed below) would reduce project impacts to a less-than-significant level.

H/WQ1 Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City of Irvine adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area...and residential construction sites that result in the disturbance of five acres or more...shall be required to develop and implement BMPs...to control erosion and siltation and contaminated runoff from the construction sites." Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of one acre or more.

The City's standard conditions of approval indicate that a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.

Additionally, prior to the issuance of a grading permit, project applicant must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, lessee, etc.), and shall reference the location(s) of structural BMPs. Completed with the WQMP (Fusco, June 28, 2006, Revised September 15, 2006).

Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOI) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the Director of Community Development of any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future project are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

H/WQ2 Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water quality Control Board Basin Plan, including Total Maximum Daily Load (TMDL) Implementation Plan adopted for this watershed. Completed with the SWMP (Fuscoe, September 13, 2006).

H/WQ3 Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrologic and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

H/WQ4 Prior to issuance of a building permit, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.

After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process.

4.9 LAND USE

4.9.1 ENVIRONMENTAL SETTING

The OCGP FEIR described the existing and former land uses on Planning Areas 30 and 51 and other areas adjoining and surrounding these planning areas. Subsequent to the City's approval of the General Plan Amendment and Zone Change for the Revised Overlay Plan, the DoN initiated an auction process for the sale of the former MCAS El Toro property. To facilitate the transfer, the property was divided and presented to prospective buyers as four distinct parcels. Interested parties were invited to bid on one or more of the parcels. In 2005, Heritage Fields, LLC successfully purchased all four parcels from the DoN (3,671 acres), and entered into a Development Agreement with the City of Irvine on July 12, 2005. The Development Agreement sets forth the terms and conditions of subsequent development and implementation of the Great Park Plan, including dedication in fee of 1,096 acres of the property for development of the Great Park.

4.9.2 EXISTING LAND USES WITHIN PLANNING AREAS 30 AND 51

The current condition of Planning Area 30—generally, the cultivation of agricultural lands—is substantially the same as the OCGP FEIR baseline year. Consistent with a provision in the Zoning Code, there are interim uses that reuse existing buildings on site. These interim uses are currently comprised of administrative offices and are allowed for a maximum of two years. A one year extension may be granted pending the approval of the Director of the Redevelopment Department. Existing leases are ongoing on an interim basis prior to development of the site.

Impacts Identified in the OCGP FEIR

The OCGP FEIR identified no significant impact to established communities. There were no residents living within Planning Areas 30 and 51 at the time the EIR was prepared and there has been no change in this regard; there are no residents living within the project site. The OCGP FEIR analyzed certain amendments to the City's General Plan that were adopted on May 27, 2003, as part of the City's adoption of the Revised Overlay Plan. The adopted Revised Overlay Plan was determined to be consistent with each element of the General Plan, as summarized below.

Land Use Element: The goal of the Land Use Element is to “promote land use patterns that maintain safe residential neighborhoods, bolster economic prosperity, preserve open space, and enhance the overall quality of life in Irvine.” The “OCGP, Orange County Great Park” land use category was created to reflect the types, intensity, and density of uses and activities contemplated in the OCGP and was determined to be consistent with the goal of the Land Use Element.

Circulation Element: The Circulation Element's goal is to “provide a balanced transportation system.” Adoption of the Revised Overlay Plan included the following modifications to the General Plan Circulation Element:

- Policy B-1(c) was changed to include the following provision:

“In conjunction with individual subdivision map level traffic studies for development proposed in Planning Areas 30 and 51, a LOS [level of service] ‘E’ would be considered acceptable for application to intersections impacted in Planning Areas 13, 30, 31, 32, 34, 35, and 39.”

- Figure B-1 (*Master Plan of Arterial Highways*) and Figure B-2 (*Operation Characteristics*) were amended to reflect the alignment of roadways within the OCGP, including:
 - Marine Way is aligned to join the Bake Parkway northbound exit ramp from Interstate 5 and terminate at Sand Canyon Avenue at Interstate 5.
 - Trabuco Road terminates at proposed Meadows Loop Road.
 - Rockfield Boulevard is realigned to terminate at Marine Way.
 - On-site circulation includes a new commuter highway/collector (Y Street [Ridge Valley]).
 - Research Parkway is renamed College Road and modified to extend from Irvine Boulevard to Marine Way.
- Figure B-3 (*Public Transit*) was amended to reflect the alignment of roadways within the OCGP.
- Figure B-4 (*Trails Network*) was amended to reflect the alignment of roadways within the OCGP.

Housing Element: The goal of the Housing Element is to “provide for safe and decent housing for all economic segments of the community.” The Revised Overlay Plan would add up to 3,625 new dwelling units and carry forward all adopted policies and objectives of the Housing Element; specifically, the residential development component would explore opportunities for maintenance of the housing stock and help the City meet its Regional Housing Needs Assessment through year 2025.

Conservation and Open Space Element: The goal of this element is to “maintain and preserve the environmental systems as a major feature in the City.” This goal would be achieved through the implementation of Objectives L-1 through L-12 and corresponding policies. Objective L-10 encourages “the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development.” The adopted Revised Overlay Plan includes 1,096 acres of Great Park recreational land, 290 acres of permanent agricultural land, and 974 acres of Habitat Preserve.

Cultural Resources: The goal of the Cultural Resources Element is to “ensure the proper disposition of historical, archaeological, and paleontological resources to minimize adverse impacts, and to develop an increased understanding and appreciation for the community’s historic and prehistoric heritage, and that of the region.” The OCGP FEIR identified the flatland area of the property as a low paleontological sensitivity zone and the hillside areas north of Irvine Boulevard as a high paleontological sensitivity zone. No objective of this element was amended by the Revised Overlay Plan and all of the objectives and implementing policies were to be implemented as part of the Revised Overlay Plan.

Noise Element: The Noise Element’s goal is to “contribute to a healthy and safe environment by minimizing noise impacts.” The Revised Overlay Plan would not affect the mobile noise, stationary noise, and noise abatement objectives and implementing policies of the Noise Element.

Public Facilities and Services Element: The goal of this element is to “provide a full range of necessary public facilities and services that are convenient to users, economical, reinforce City

and community identity, and reflect the participation of citizens.” The facilities and services described in the Urban Service Plan for the Revised Overlay Plan were formulated through a public participatory process and found to implement the goal and adopted objectives and related policies of this element.

Integrated Waste Management Element: This element seeks to “encourage solid waste reduction and provide for the efficient recycling and disposal of refuse and solid waste material without deteriorating the environment.” The OCGP FEIR discloses that the Revised Overlay Plan would not affect the adopted objectives and implementing policies regarding solid waste, waste, wastewater, and solid waste facility siting requirements; rather, it would provide the opportunity to better respond to the City’s solid waste reduction requirements and other provisions of the element by broadening the range of design options.

Growth Management Element: The goal of the Growth Management Element is to “ensure that growth and development are integrally planned with, and phased concurrently with, the City of Irvine’s ability to provide an adequate circulation system and public facilities.” When the OCGP FEIR was certified, it was disclosed that though the project made changes to the *Master Plan of Arterial Highways*, the project would not change any of the objectives or implementing policies of the Growth Management Element.

Parks and Recreation Element: The goal of the Parks and Recreation Element is to “provide park and recreation opportunities at a level that maximizes available funds and enables residents of all ages to utilize their leisure time in a rewarding, relaxing, and creative manner.” The OCGP FEIR reported that there would be no change to the objectives or implementing policies of this element.

Seismic Element: The goal of the Seismic Element is to “minimize the loss of life, disruption of goods and services, and the destruction of property associated with an earthquake.” Five Seismic Response Area (SRA) designations are used to describe the magnitude and types of potential seismic hazards present within the City, and to provide policy guidance. The OCGP FEIR reported that the majority of the El Toro property was in category SRA-2 and that no objectives or implementing policies would be changed as a result of the project.

Safety Element: The goal of the Safety Element is to “minimize the danger to life and property from man-made and natural hazards, including fire hazards, flood hazards, non-seismic geologic hazards and air hazards.” The OCGP FEIR disclosed the need for fuel modification to mitigate potential wildland fire hazards, and drainage improvements to lessen flood hazards associated with implementation of the Revised Overlay Plan, and concluded no objectives or implementing policies would be changed as a result of the Revised Overlay Plan.

In addendum No. 2, the City confirmed that each of the foregoing conclusions is equally applicable under the Revised Overlay Plan.

4.9.3 IMPACTS ANALYSIS FOR THE VTTM/MSM

The VTTM/MSM is consistent with the land uses approved in the OCGP FEIR. No changes or new impacts will occur.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major revision to the certified OCGP FEIR and approved addenda due to any new significant environmental impact or a substantial increase in the severity of impacts.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available information that indicates substantial changes in circumstances that would require major changes to the certified OCGP FEIR and approved addenda.

No New Information of Substantial Importance Showing Greater Significant Effects Than the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the times the OCGP FEIR was certified and the addenda were approved that indicates that the project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP Final Environmental Impact Report was certified and addenda were approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project but the project proponent declines to adopt them or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt them. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant land use effects identified in and considered by the certified OCGP FEIR and the approved addenda.

4.9.4 MITIGATION FROM THE OCGP FEIR AND APPLICABILITY TO THE VTTM/MSM

The OCGP FEIR identified no significant land use impact; therefore no mitigation measures were proposed.

4.10 NOISE

4.10.1 ENVIRONMENTAL SETTING

The OCGP FEIR described mobile noise sources from nearby freeways, roadways, rail facilities, and vehicle use at adjacent commercial businesses, light industrial facilities, and agricultural lands as the dominant noise sources in the project area. Stationary sources of noise included temporary and intermittent noise from construction activities and agricultural operations, noise associated with the industrial/business parks located to the east, and the business park and entertainment uses to the south.

The OCGP FEIR presented the results of a noise survey conducted on December 10–12, 2002, in which noise measurements were conducted at nine locations. The Community Noise Equivalent Level (CNEL) sound levels at the surveyed representative residential locations ranged from 58 dBA to 65 dBA (Refer to OCGP FEIR p. 5.4-18, Figure 5.4-6, and Table 5.4-7).¹¹ The audible noise sources included local traffic, distant traffic, birds, aircraft, and human voices, all of which were characterized as typical of suburban areas.

¹¹ California standards for community noise use the CNEL, in which the energy is averaged over a 24-hour day with a 5-decibel penalty from 7:00 PM to 10:00 PM and a 10-decibel penalty from 10:00 PM to 7:00 AM (OCGP FEIR p. 5.4-4). Sound is generated by the propagation of energy in the form of pressure waves, and is characterized by

4.10.2 IMPACTS IDENTIFIED IN THE OCGP FEIR

The OCGP FEIR identified no significant noise effects associated with future development under the Revised Overlay Plan.

The noise assessment considered a worst-case condition of simultaneous demolition and construction activities with the combined sound level of 20 pieces of large mobile equipment operating at a distance of 5,000 feet; 5 concrete breakers operating at a distance of 6,000 feet; and 2 crusher plants operating at a distance of 10,000 feet from the nearest off-project area residential location. The distances represented the closest possible location of the construction equipment to the nearest off-project area residences during a heavy construction period. The nearest off-site residential uses (sensitive noise source) were located approximately 4,000 feet from the property boundary. Under this scenario, the analysis estimated sound levels of approximately 56 dBA at the nearest off-site residential location. (Refer to OCGP FEIR p. 5.4-24 and Table 5.4-8.)

As buildout of the project site was assumed to occur over time (years 2007–2025), construction-related noise impacts on residential areas within the project site were also estimated. Using the same construction equipment assumptions and a distance of 600 feet from the nearest residential area, the combined effect of the equipment was estimated at a sound level of 70 dBA at the nearest on-site residential locations during a heavy construction period. While the City of Irvine Noise Ordinance does not specify a limit on construction noise levels, it stipulates the days and hours during which construction activities may occur and when construction would not be allowed unless a temporary waiver is requested and granted; specifically, construction is allowed Monday through Friday between 7:00 AM and 7:00 PM, and on Saturdays between 9:00 AM and 6:00 PM; no construction is allowed outside those hours, on Sundays, or on federal holidays. (Refer to OCGP FEIR p. 5.4-31.)

4.10.3 IMPACTS ANALYSIS FOR VTTM/MSM

The adoption of the VTTM/MSM will not change or intensify development on site. The worst-case scenario described in the Revised Overlay Plan remains a reasonable assumption for the project; no new information about future demolition and construction has become available. As previously stated, inherent in a mixed-use planning district is the potential for noise-induced conflicts that can be identified and avoided during master plan review. At that stage, the stationary noise sources associated with the on-site equipment, loading/unloading operations, heating/ventilation/air conditioning (HVAC) equipment, and other noise-generating features of the specific use would be evident. Accordingly, appropriate acoustical design features—such as sound insulation, perimeter barrier walls, acoustical equipment enclosures, and operational restrictions—can only be evaluated in the context of a specific project. Grading will occur in the same locations as those analyzed in the OCGP FEIR. As such, the proposed adoption of the VTTM/MSM would not create any changes to the potentially significant noise effects identified in the FEIR. No changes are expected; therefore, no new mitigation measures are required beyond those required by the OCGP FEIR.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major revision to the certified OCGP FEIR and approved addenda due to any new significant environmental impact or a substantial increase in the severity of impacts.

amplitude (sound level) and frequency (pitch). (OCGP FEIR p. 5.4-1.) Sound levels are measured in decibels (dB) and frequency is measured in hertz (Hz). The A-weighted decibel (dBA) is used for analysis and regulatory purposes because it focuses on the range of sound levels and frequencies more discernible by the human ear.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available information that indicates substantial changes in circumstances that would require major changes to certified OCGP FEIR and approved addenda.

No New Information of Substantial Importance Showing Greater Significant Effects Than the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the times the OCGP FEIR was certified and the addenda were approved which indicate that the project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP Final Environmental Impact Report was certified and addenda were approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project but the project proponent declines to adopt them or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt them. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant noise effects identified in and considered by the certified OCGP FEIR and the approved addenda.

4.10.4 MITIGATION FROM THE OCGP FEIR AND APPLICABILITY TO THE VTTM/MSM

The OCGP FEIR identified no significant noise impact; therefore no mitigation measures were proposed.

4.11 POPULATION AND HOUSING

4.11.1 ENVIRONMENTAL SETTING

The OCGP FEIR discussed the caretaker status of the base following its closure. At the time the OCGP FEIR was prepared, there was a limited number of military and civilian staff working on the base. Currently, there are no residents living on the base. Consequently, there are 4,380 vacant group quarters units and 1,209 residential dwelling units. The OCGP FEIR examined demographics in the context of the existing and projected population of the Orange County region and the City of Irvine. Population and housing information was developed based on the 2000 United States Bureau of Census population, household, and employment census information. The areas surrounding the former base and the Orange County subregion are considered jobs-rich and housing-poor. The Southern California Association of Governments (SCAG) seeks to encourage housing growth over job growth in the Orange County subregion. The OCGP FEIR reported that the ratio of jobs-to-housing in the area has environmental implications related to transportation and air quality. Thus, a major focus of the regional planning efforts has been to improve the ratio of jobs-to-housing in all affected subregions in order to reduce vehicular trips, costly infrastructure improvements, and the resultant air emissions. Despite attempts, according to SCAG projections, the Orange County subregion's jobs/housing balance will worsen through the year 2025 as the number of jobs surpasses housing gains.

4.11.2 IMPACTS IDENTIFIED IN THE OCGP FEIR

As noted above, the area surrounding the former MCAS El Toro and the Orange County subregion are considered jobs-rich and housing-poor. SCAG seeks to discourage job growth over housing growth in the Orange County subregion. The OCGP FEIR reported that regional projections are dynamic and, as a compilation of local land use projections, reflect changing community views on the location and the types of growth desired. Although implementation of the Revised Overlay Plan would not have exceeded the Orange County Projections -2000 employment projections, its impact on employment was considered significant because the Orange County subregion is anticipated to become increasingly jobs-rich over the next 20 years and the Revised Overlay Plan-related employment would exacerbate the subregional jobs/housing imbalance. The Revised Overlay Plan is expected to result in the provision of 3,625 dwelling units. Based on the city's zoning categories planned for this site, the dwelling units could accommodate up to 9,000 people. This increase in population will not substantially exceed projections contained for the site in OCP-2000. No significant impacts to population and housing were identified (www.scag.ca.gov).

4.11.3 IMPACTS ANALYSIS FOR THE VTTM/MSM

The proposed VTTM/MSM does not change or intensify the projected development within the Heritage Fields development and portions of the Orange County Great Park development. The City of Irvine will evaluate the consistency of the VTTM/MSM with the criteria established in Section 3.6.c of the City's Subdivision Manual and the City's Subdivision Ordinance Irvine Municipal Code, § 5-5-103 *et seq.* in that it has been found to be consistent with applicable general and specific plans. Development in accordance with the VTTM/MSM would be consistent with the various land uses, densities, and intensities allowed under the existing General Plan and zoning as modified under the City-initiated General Plan Amendment and Zoning Code for a Revised Overlay Plan in Planning Areas 30 and 51 delineated above. The VTTM/MSM does not propose new or revised population and housing uses beyond what has already been certified in the OCGP FEIR and approved in the addenda. Therefore, no change in impact is projected.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major revision to the certified OCGP FEIR and approved addenda due to any new significant environmental impact or a substantial increase in the severity of impacts.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available information that indicates substantial changes in circumstances that would require major changes to the certified OCGP FEIR and approved addenda.

No New Information of Substantial Importance Showing Greater Significant Effects Than the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the times the OCGP FEIR was certified and the addenda were approved that indicate that the project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which

was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP Final Environmental Impact Report was certified and addenda were approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project but the project proponent declines to adopt them or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt them. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant population and housing effects identified in and considered by the certified OCGP FEIR and the approved addenda.

4.11.4 MITIGATION FROM THE OCGP FEIR AND APPLICABILITY TO THE VTTM/MSM

The OCGP FEIR identified a significant impact associated with the jobs/housing ratio, and also stated that no mitigation is available to rectify conflicts between the numerical objectives of regional planning documents including the jobs/housing ratio. This finding remains applicable to the currently proposed adoption of the VTTM/MSM.

4.12 PUBLIC SERVICES

4.12.1 ENVIRONMENTAL SETTING

Law Enforcement

At the time the OCGP FEIR was certified, law enforcement was provided by the Orange County Sheriff through a contract with the Department of the Navy (DoN) in Planning Area 51, and the Irvine Police Department provided law enforcement within Planning Area 30. Subsequent to the annexation of the property, the City of Irvine Police Department assumed law enforcement responsibility within both planning areas. The Irvine Police Department is headquartered at the Irvine Civic Center Complex and also has a satellite facility located in the Irvine Spectrum Entertainment Complex. The OCGP FEIR stated that the current police facilities are adequate to handle the personnel and equipment that are employed and utilized by the department for Planning Area 30. The OCGP FEIR also stated that the Irvine Police Department is researching the possibilities of expanding their facilities, although the specific details of constructing a substation were not known. At the present time, there is a manned Police Department booth at the entrance to Heritage Fields at the Marine Way Gate. Additionally, an office has been opened for Heritage Fields on the base at 7700 Trabuco Road in Building 11.

Fire and Emergency Medical Services

At the time the OCGP FEIR was certified, primary fire protection to Planning Areas 30 and 51 was provided by Orange County Fire Authority (OCFA) under contract to the County of Orange on an interim basis. Subsequent to the annexation of the property, OCFA continued to provide fire protection service to the project area. The OCGP FEIR stated that OCFA is planning two additional fire stations. OCFA also has an agreement in place with the Irvine Company as part of the Northern Sphere Area that should provide adequate service to all areas surrounding the project site.

Parks and Recreation

At the time the OCGP FEIR was certified, the DoN, acting in a caretaker's role, offered public access to a variety of existing recreational facilities including the existing Marine Memorial Golf

Course and equestrian stables. Since there are no residents living in Planning Area 30 and 51, there is no current demand for these facilities on site.

School Services

Planning Areas 30 and 51 are located within the school service boundaries of the Irvine Unified School District (IUSD) and the Saddleback Valley Unified School District (SVUSD). Prior to the closure of the base, an IUSD elementary school with a 600-student capacity was located and operated on the former base property. To accommodate the expected student growth from the project during buildout of the proposed project and prior to final construction of the new elementary school, IUSD may re-open this elementary school and/or assign students residing in the project area to various schools with available capacity.

4.12.2 IMPACTS IDENTIFIED IN THE OCGP FEIR

Law Enforcement

The OCGP FEIR discussed the law enforcement needs of both Planning Areas 30 and 51 and stated that following annexation, the Irvine Police Department would provide law enforcement for the entire project area. The OCGP FEIR also analyzed the number of police officers, police supervisors and support staff, as well as the number of vehicles, equipment, and services. The OCGP FEIR stated that police protection for the park area would be funded through the use of a special park assessment. As stated in the OCGP FEIR, the general impacts associated with construction and operation of public facilities were analyzed in the OCGP FEIR as part of the planned land uses which also included the construction of a new police substation.

Fire and Emergency Medical Services

Subsequent to annexation of the property, Planning Areas 30 and 51 continue to be served by OCFA. The OCGP FEIR stated that there was the likelihood that additional fire services infrastructure would be required to support the proposed project. OCFA had not provided the detailed calculations of the exact extent of new services. The OCGP FEIR stated that the final determination of fire station needs and locations would be made at a future date when more information is known about risk, layout, and types of occupancy. The specific environmental impact of constructing the new fire facilities to serve the project could not be determined at the General Plan level of analysis as specific site plans and locations had not been prepared. However, the general impacts associated with the construction and operation of public facilities were addressed within the OCGP FEIR.

Parks and Recreation

As discussed in detail in OCGP FEIR, the parkland acreage under the project will greatly exceed the existing City of Irvine's standards, and will provide a regional open space amenity for the benefit of Orange County. The OCGP FEIR calculated a total of 45.1 acres of parkland required for the proposed development. A portion of that acreage will be in neighborhood parks, primarily for pools and tot lots, within close proximity of homes.

The OCGP FEIR also discussed the Implementation Agreement regarding the Natural Community Conservation Plan (NCCP) for the Central/Coastal Orange County Sub-region of the Coastal Sage Scrub NCCP (July 1996), and that the Habitat Reserve will be established on approximately 974 acres in the northeastern portion of Planning Area 51. Two drainage corridors and one wildlife corridor were also designated in the project area. The wildlife corridor is located on the southern portion of the project area. The project also included opportunities for

museums, theaters, gardens and other cultural facilities, as well as a sports park, two golf courses, and network of recreational riding and hiking trails throughout the project site. Project-level environmental review, at the time the specific location of new park and recreational facilities is known, and when specific development plans have been prepared, will be required.

School Services

The OCGP FEIR discussed in detail the proposed project, the related student generation, and the required school facilities. Based on an initial analysis, the IUSD estimated the need for one 13-acre K–8 site as well as funding for expansion and modernization of existing middle and high school facilities by project buildout.

4.12.3 IMPACTS ANALYSIS FOR VTTM/MSM

Law Enforcement

The proposed adoption of the VTTM/MSM does not change the intensity or type of land uses on site. The demand on law enforcement is within the envelope of analysis presented in the OCGP FEIR.

Fire and Emergency Medical Services

Since the VTTM/MSM does not change the intensity or type of land uses on site, the demand on fire protection is within the envelope of analysis presented in the previously certified OCGP FEIR and approved addenda.

Parks and Recreation

The VTTM/MSM does not propose changes to the land use intensities and types and maintains all of these facilities and amenities as VTTM/MSM features. Therefore, the VTTM/MSM remains within the envelope analyzed in the previously certified OCGP FEIR and approved addenda.

School Services

Since the VTTM/MSM does not propose changes to the number and type of residential units or to any other land uses on site, the proposed project remains within the envelope analyzed in the previously certified OCGP FEIR and approved addenda.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major revision to the certified OCGP FEIR and approved addenda due to any new significant environmental impact or a substantial increase in the severity of impacts. The adoption of the VTTM/MSM would not result in any new significant environmental impact, nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR and approved addenda.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available information that indicates substantial changes in circumstances which would require major changes to the certified OCGP FEIR and approved addenda.

No New Information of Substantial Importance Showing Greater Significant Effects Than the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was

unknown and could not have been known with the exercise of reasonable diligence at the times the OCGP FEIR was certified and the addenda were approved that indicate that the project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP Final Environmental Impact Report was certified and addenda were approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt them or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt them. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant public services effects identified in and considered by the certified OCGP FEIR and the approved addenda.

4.12.4 MITIGATION FROM THE OCGP FEIR AND APPLICABILITY TO THE VTTM/MSM

The OCGP FEIR determined that the mitigation measures identified in other sections of the OCGP FEIR (Sections 5.1–5.13) addressed the impacts associated with the construction and operation of public facilities. These measures will be applicable to any new construction and operation of facilities for police, fire protection, park and recreation, and education to serve the new growth expected in the northern portion of the City.

4.13 RECREATION

Issues related to Recreation are discussed above under Section 4.12, Public Services and Facilities.

4.14 TRANSPORTATION/TRAFFIC

4.14.1 ENVIRONMENTAL SETTING

The OCGP FEIR described the traffic and circulation conditions of a study area that encompassed 145 existing intersection analysis sites (2007) and an additional 11 future sites (Post-2025) located in the City of Irvine, and portions of 7 adjacent jurisdictions including the Cities of Lake Forest, Mission Viejo, Laguna Hills, Laguna Woods, Aliso Viejo, Laguna Beach, and unincorporated areas of Orange County. The OCGP FEIR used the City of Irvine Traffic Performance Criteria, which establishes level of service (LOS) “A” to “D” as the peak-hour minimum acceptable service level. In its adoption of the Revised Overlay Plan, the City General Plan Policy B-1(C), which identified LOS E as acceptable for application to intersections in Planning Areas 13, 31, 32, 35 and 39, was changed to include the effects of future development in Planning Areas 30 and 51 on the intersections in those Planning Areas. The City’s performance criteria also include a threshold of 0.02 increase—roadway volume-to-capacity (V/C) ratio or the intersection capacity utilization (ICU)—to identify significant impacts and the associated need for improvements at both roadways and intersections.

At the time the OCGP FEIR was prepared, the following 10 study area intersections experienced deficient peak hour traffic operations:

- Culver Drive and Walnut Avenue
- Culver Drive and University Drive
- Jeffrey Road and Alton Parkway
- Jeffrey Road and I-405 Northbound Ramps
- Bake Parkway and Irvine Boulevard
- Bake Parkway and Jeronimo Road
- El Toro Road and Aliso Creek Road
- Los Alisos Boulevard and Jeronimo Road
- Muirlands Boulevard and Los Alisos Boulevard
- Trabuco Road and Alicia Parkway

4.14.2 IMPACTS IDENTIFIED IN THE OCGP FEIR

The OCGP FEIR concluded that the Revised Overlay Plan would cause an increase in traffic which would be substantial in relation to the existing traffic load and capacity of the street system—that is, a substantial increase in either the number of vehicle trips, the V/C ratio on roadways, or congestion at intersections—in the year 2007, year 2025, and post-2025 scenarios (OCGP FEIR page 5.2-66):

Year 2007

- I-5 Freeway at Alton Parkway—southbound off-ramp (AM)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (AM)

Year 2025

- University Drive from the I-405 Freeway to Michelson Drive (AM)
- I-5 Freeway from Sand Canyon Avenue to Jeffrey Road—northbound (PM)
- I-5 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (AM)
- I-405 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (AM)
- I-5 Freeway at Jeffrey Road—southbound on-ramp (AM)
- I-5 Freeway at Sand Canyon Avenue—northbound on-ramp (PM)
- I-5 Freeway at Sand Canyon Avenue—southbound off-ramp (AM)
- I-5 Freeway at Alton Parkway—southbound off-ramp (AM)
- I-5 Freeway at Bake Parkway—southbound off-ramp (AM)
- I-405 Freeway at Sand Canyon Avenue—northbound direct on-ramp (PM)
- I-405 Freeway at Sand Canyon Avenue—southbound off-ramp (AM)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (AM)
- SR-241 Tollway at Lake Forest Drive—southbound off-ramp (AM)
- SR-133 Freeway at Barranca Parkway—northbound direct on-ramp (PM)

Post-2025

- I-5 Freeway from Sand Canyon Avenue to Jeffrey Road—northbound (PM)
- I-5 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (AM)
- I-405 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (AM)
- I-5 Freeway at Jeffrey Road—southbound on-ramp (AM)
- I-5 Freeway at Jeffrey Road—northbound off-ramp (PM)

- I-5 Freeway at Sand Canyon Avenue—northbound on-ramp (PM)
- I-5 Freeway at Sand Canyon Avenue—southbound off-ramp (AM)
- I-5 Freeway at Alton Parkway—southbound off-ramp (AM)
- I-5 Freeway at Bake Parkway—southbound off-ramp (AM)
- I-5 Freeway at El Toro Road—southbound off-ramp (PM)
- I-405 Freeway at Sand Canyon Avenue—northbound direct on-ramp (AM/PM)
- I-405 Freeway at Sand Canyon Avenue—southbound off-ramp (AM)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (AM)

Intersections

For the list of impacted intersections by analysis year, please refer to the following OCGP FEIR tables:

- Table 5.2-12 for year 2007
- Table 5.2-13 for year 2025
- Table 5.2-15 for post 2025

4.14.3 IMPACTS ASSOCIATED WITH THE 2006 GENERAL PLAN AMENDMENT/ZONE CHANGE (2006 GPA/ZC)

The OCGP FEIR established trip thresholds (also known as “trip caps”) for both Planning Areas 30 and 51. The trip cap is based on socioeconomic data average daily trip generation for the Revised Overlay Plan. The traffic impacts of the 2006 GPA/ZC project were analyzed by distributing project-related traffic over existing and future traffic conditions. The three future conditions (year 2010, year 2025 and post-2025) are based on the existing circulation system plus fully funded intersection improvements that were planned to be in place in each future time frame and the land use and development growth that is projected in each future time frame. In each case, project impacts were identified by comparing traffic conditions with and without the 2006 GPA/ZC project.

The circulation system performance criteria applied in the analysis were the criteria approved in the 2003 North Irvine Transportation Model (NITM) Program Nexus Study. The performance criteria were also consistent with the criteria adopted by the jurisdictions that are within the project study area. The criteria include components for arterial roadways, intersections, freeway/tollway ramps, and freeway/tollway mainline segments.

The results of the year 2010, year 2025 and post-2025 analysis indicated that the proposed 2006 GPA/ZC project was not forecast to significantly impact any roadway segment or impact any intersection, freeway/tollway ramp, or any freeway/tollway mainline segment.

4.14.4 IMPACTS ANALYSIS FOR VTTM/MSM

The Traffic Study (refer to Appendix C) for the VTTM/MSM in Planning Areas 30 and 51 was prepared by Austin-Foust Associates, Inc. (dated May 1, 2007) to address the transportation impacts for the project, i.e. backbone infrastructure with no new land use development in an interim year timeframe consistent with the Tentative Tract Map/Tentative Parcel Map (TTM/TPM) Scope of Work of the North Irvine Transportation Mitigation (NITM) Program Ordinance. The Traffic Study analyzed the impacts of the VTTM/MSM application based on year 2010 traffic conditions in the traffic analysis study area.

The proposed project is presented in Figure 4-2 and includes Marine Way from Sand Canyon Avenue to Bake Parkway, Trabuco Road from the SR-133 to "O" Street, and the extension of Rockfield Boulevard to Marine Way as four-lane primary arterials, Ridge Valley (formerly "Y" Street) from Portola Parkway to Irvine Boulevard and "O" Street (formerly College Road) as four-lane secondary arterials, Trabuco Road east of "O" Street, "A" Street, "B" Street, "C" Street and "D" Street as two-lane local road ways. The mid-block lanes are shown in Figure 4-3. It should be noted that the proposed project includes the construction of two lanes on "O" Street between Trabuco Road and Marine Way. The remaining two lanes will be built by the owner of the adjacent property (west side of "O" Street) when that property is developed. The City and the applicant will continue to work with Caltrans concerning the Marine Way intersection with Bake Parkway and I-5 ramps.

An Internal Circulation Analysis (refer to Appendix D) for the VTTM/MSM was prepared by Austin-Foust Associates, Inc. (dated May 1, 2007) to analyze the access and internal circulation for the full build-out of the development of Planning Areas 30 and 51. Access is illustrated in Figure 4-4, which shows the proposed access locations for the Lifelong Learning District, the Park District, and the Transit Oriented Development (TOD) District. Traffic associated with the full build-out of the development of Planning Areas 30 and 51 loads directly onto the surrounding arterial system at several locations. These include access to Irvine Boulevard via Ridge Valley; "O" Street (formerly College Road), "A" Street and "B" Street to Sand Canyon Avenue via Trabuco Road and Marine Way (and indirectly via Irvine Boulevard); and to Alton Parkway, Barranca Parkway, and Bake Parkway Via Marine Way. Access to the SR-133 is provided directly via a planned interchange at Trabuco Road and indirectly via "O" Street to the Irvine Boulevard interchange.

The intersections shown in Figure 4-5 were analyzed using intersection capacity utilization (ICU) values to determine level of service (LOS). The results of this analysis show that all intersections operate at an acceptable level of service under Post-2025 build-out conditions. The intersections were then analyzed for signalization needs. Traffic signal warrants based on peak hour volumes (as adopted by the Federal Highway Administration and Caltrans) were used to determine the need for signalization. The results of this analysis are illustrated in the previously presented Figure 4-4. Traffic signals will be installed at analyzed intersections based on traffic signal warrants.

Recommended on-site traffic-control measures include site access designations, the type of intersection approach lane requirements, and recommendations for left-turn and right-turn pocket design features.

Left-turn and right-turn pocket lengths for project access intersections are based on the City of Irvine's 2007 Transportation Design Procedures. The estimated left-turn storage length requirements for the analyzed intersections and the estimated right-turn pocket lengths are presented in the Internal Circulation Analysis.

Conclusion

The proposed VTTM/MSM will not produce new or substantially worsen significant impacts identified in the OCGP FEIR or addenda. Consistent with the conclusions in the OCGP FEIR, traffic and circulation impacts associated with the project would be considered less than significant as the future development would implement all applicable laws and regulations to reduce impacts on traffic and circulation.

The OCGP FEIR disclosed the traffic analysis assumption that the cumulative impact of the Revised Overlay Plan traffic along with other regional growth at the identified ramp and freeway

locations would be mitigated through a combination of regional programs that are the responsibility of other agencies and, if said programs are not implemented for the cumulative freeway/tollway ramp, impacts would remain significant and unavoidable (OCGP FEIR page 7-19). The VTTM/MSM will not alter this conclusion. Mitigation measures have been developed for the intersection locations identified as being impacted by the OCGP development. These mitigation measures are not considered new; rather, they are fully funded NITM Improvements identified in previous traffic studies and related CEQA documents.

The May 1, 2007 Master Subdivision Map Traffic Study ("Traffic Study") determined that implementation of the project (construction of the backbone infrastructure) would, absent NITM Ordinance compliance, affect the intersections at (i) Jeffrey Road and Alton Parkway and (ii) Lake Forest Drive and Avenida de la Carlota/I-5 southbound ramps, because non-project traffic would be diverted by construction of new roads. Compliance with OCGP FEIR Mitigation Measures and the NITM Ordinance fully addresses these effects. Based on the Traffic Study, the Jeffrey Road/Alton Parkway intersection improvement required by NITM should be advanced to 2010, as permitted under the NITM Ordinance. These Mitigation Measures are not considered new; rather they are fully funded NITM Improvements identified in previous traffic studies and related CEQA documents.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major revision to the certified OCGP FEIR and approved addenda due to any new significant environmental impact or substantial increase in the severity of impacts.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available information that indicates substantial changes in circumstances that would require major changes to the certified OCGP FEIR and approved addenda.

No New Information of Substantial Importance Showing Greater Significant Effects Than the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the times the OCGP FEIR was certified and the addenda were approved that indicate that the project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP Final Environmental Impact Report was certified and addenda were approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project but the project proponent declines to adopt them or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt them. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant transportation/traffic effects identified in and considered by the certified OCGP FEIR and the approved addenda.

4.14.5 MITIGATION FROM THE OCGP FEIR AND APPLICABILITY TO THE VTTM/MSM

The OCGP FEIR identified mitigation measures TRAN1 through TRAN8, since adopted by the City, which, if fulfilled prior to specified development approvals, will eliminate or substantially reduce the traffic and circulation effects of development under the adopted Plan. The measures, with minor clarifying revisions, as footnoted below, are applicable to future development under the project, as modified.

TRAN1¹² Prior to the approval of any final map (other than a financing and conveyance map) within Planning Areas 30 and 51, and prior to issuances of any building permits for permanent improvements within Planning Areas 30 and 51, the landowner or subsequent project applicant shall either (i) apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions, and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs to reduce traffic, air quality and noise impacts, or (ii) develop and implement a similar transportation management plan containing the elements and meeting the criteria described below as approved by the Director of Public Works:

Transportation Management Plan (TMP)

The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for Planning Areas 30 and 51. This document summarizes the key elements of the TMP.

1.0 Introduction

The purpose of this document is to provide an outline for a comprehensive TMP for Planning Areas 30 and 51 ("Great Park TMP"). This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.

The applicant may elect to annex Planning Area 51 and a portion of Planning 30 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in TMA. Membership dues provide the funding for the Association and its program, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.

¹² This mitigation measure has been slightly revised, as compared to the mitigation measure in the OCGP FEIR. The revised language gives the landowner or subsequent applicant the flexibility either to annex into Spectrumotion or to develop a similar transportation management plan, rather than allowing a management plan option only if annexation is not approved. Because the mitigation measures – i.e. annexation into Spectrumotion or development of a transportation management plan – remain the same, this change does not affect analysis of the impacts or the environmental conclusions from the OCGP FEIR.

In the event that the applicant elects not to annex into Spectrumotion, a TMP similar to that provided by Spectrumotion will be developed and implemented. This document sets forth the components of the TMP should it be necessary.

2.0 Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

New Hire Orientation: Inform newly hired employees of commuting services available to them.

Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services (i.e., OCTA buses, Metrolink, Amtrak, etc.).

Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.

On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.

Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.

Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.

Website: Maintain a website with all of their program information available.

Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.

Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.

Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.

3.0 Transportation Management Plan Implementation

As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in Planning Areas 30 and 51. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.

TRAN2 Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of the FEIR. This mitigation measure has been satisfied.

TRAN3¹³ Prior to issuance of any building permits for permanent improvements within Planning Areas 30 and 51, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the NITM Ordinance.

TRAN4¹⁴ Prior to approval of each Master Tentative Map or Master Plan for numbered lots, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map or Master Plan for numbered lots. The traffic study area shall be the same as the study area utilized in the NITM Nexus Study. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated traffic forecasts. The updated traffic study will evaluate at a minimum the cumulative impact of the subject map and/or Master Plans and all previously approved or concurrently submitted maps and/or Master Plans. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City approved traffic study scope of work. The landowner or subsequent project applicant shall construct or bond for and enter into a funding agreement for necessary improvements identified in the updated traffic study and/or participate in the City fee program (OCGP FEIR Mitigation Measure TRAN2) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of the OCGP FEIR.

Traffic signals that are on-site or directly related to the development in Planning Areas 30 and 51 will be installed as warranted through the mitigation implementation plan process.

With regard to the subdivision maps compliance with the NITM Program and the other traffic conditions of approval shall satisfy the requirements of Mitigation Measure TRAN4.

TRAN5 In conjunction with the preparation of any updated traffic study as required in Mitigation Measure TRAN4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, that

¹³ This mitigation measure has been slightly modified, as compared to the mitigation measure in the OCGP FEIR, to reflect the fact that the NITM program serves as the implementing mechanism for the mitigation measure as originally drafted. Implementation of the requirements of the NITM ordinance satisfies the obligations of this mitigation measure.

¹⁴ Although this mitigation measure originally references “each Master Tentative Map,” it is apparent from the language of the measure that it applies to tentative maps and master plans which propose actual development and hence would generate traffic trips. The VTTM/MSM does not propose or authorize trip-generating development. Traffic studies in compliance with the mitigation measure and the NITM Scope of Work are required for each tentative map for development of any portion of the site. An additional change has been made to the second to last sentence of the mitigation measure – clarifying that the applicant must bond for and/or enter into a funding agreement for necessary improvements if it does not take on the obligation to construct such improvements.

landowner or subsequent project applicant and the City will take the following actions:

1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-tollway ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in the FEIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines.
2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency.
3. The landowner or subsequent project applicant shall enter into an agreement with the City prior to recordation of the first final map for each Master Tentative map or equivalent to establish the method and timing of payment of the identified percentage responsibility.
4. The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or funding participation in a regional transportation improvement fee program, if adopted.

TRAN6 The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.

TRAN7 Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a new Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-complete clause or any similar agreement restricting a public agency's authority to construct improvement.

TRAN8 Following adoption of a land use plan and circulation plan for Planning Areas 30 and 51 and before the issuance of any building permits within the MCAS El Toro property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdictions to amend the Orange County Master Plan of Arterial Highways (MPAH). Marine Way, Trabuco Road from the SR-133 tollway to College Road, and Y Street should be included on the MPAH.

4.15 UTILITIES AND SERVICE SYSTEMS

4.15.1 ENVIRONMENTAL SETTING

Potable Water

The OCGP FEIR described the potable water system for the project. The Irvine Ranch Water District (IRWD) is the jurisdictional agency responsible for plan approval and water service to the project area. Planning Areas 30 and 51 are located within Zone 3 North and Zone 4 of the IRWD water system. The existing on-site distribution system includes a network of distribution system pipelines, six reservoirs, and two pump stations.

Recycled Water

As stated in the OCGP FEIR, the IRWD is the jurisdictional agency responsible for plan approval and water service for the project area. Recycled water is currently supplied to Planning Areas 30 and 51 via a 12-inch IRWD Zone B pipeline that connects to an 8-inch former military base pipeline in the southwestern corner of the project area.

Sewer

As stated in the OCGP FEIR, the IRWD is the jurisdictional agency responsible for plan approval and sewer service for the project area. Planning Areas 30 and 51 are served by a two-branched system with flow, mainly by gravity, from the northeast to the southwest. The system includes a series of pipes ranging from 6 to 15 inches in diameter.

Solid Waste

The OCGP FEIR discussed, in detail, the environmental setting for solid waste for the project analyzed in the OCGP FEIR. Solid waste at the project site is collected by Waste Management, Inc. and is disposed of at the Frank R. Bowerman Landfill owned by the County of Orange Integrated Waste Management Department (IWMD).

The IWMD's Countywide Integrated Waste Management Plan (CIWMP) was approved in 1996 pursuant to the California Integrated Waste Management Board requirement. The CIWMP shows that there is sufficient solid waste disposal capacity in the County for the next 30 years.

Energy and Communications

Southern California Edison (SCE) serves the project via two primary substations. The Southern California Gas Company serves Planning Areas 30 and 51. AT&T is the communications provider for these Planning Areas. Detailed information regarding the environmental setting of dry utilities was included in Section 5.15 of the OCGP FEIR.

4.15.2 IMPACTS IDENTIFIED IN THE OCGP FEIR

Potable Water

The OCGP FEIR projected the potable water demand to be less than 1.75 million gallons per day (MGD) calculated for the land uses proposed within the project. Since the project does not include any additional intensity or change in the mix of land uses, the demand projection for the project is consistent with the OCGP FEIR. As stated in the OCGP FEIR, selected portions of the existing potable water facilities are assumed to remain in place and operational through project

buildout. The OCGP FEIR stated that the existing system will be expanded and integrated into the IRWD system and thus provide a backbone service to all users on the project site. The OCGP FEIR assumed a potable water system that would follow the routing of existing and proposed roadways.

Recycled Water

The OCGP FEIR stated that on January 27, 2003, the IRWD Board of Directors approved the assessment of water supply for the project. According to the findings of the assessment, the IRWD has determined that a sufficient non-potable water supply is available to serve the project. Since the VTTM/MSM does not increase the intensity or change the mix of land uses, the total non-potable water supplies will meet the project demand.

The OCGP FEIR stated that the implementation of the Revised Overlay Plan would require the expansion of the recycled water transmission lines to serve the project. It was assumed that selected on-site facilities would remain in place and operational through buildout. The OCGP FEIR stated that the existing system will be expanded and integrated into the IRWD system and provide a backbone service to all users in the project site. The OCGP FEIR assumed a non-potable system that would follow the routing of existing and proposed roadways within the area.

Sewer

The OCGP FEIR stated that the IRWD will continue to provide sewer service to the project area. The IRWD has indicated that it would have sufficient capacity to meet the future demand; however, additional wastewater treatment capacity may need to be purchased by project proponents as specific development projects come forward. The OCGP FEIR stated that projected buildout demand for sewer services based on the land uses in the project were 0.89 MGD and that the project would require an increase of sewer transmission capacity to serve the project. The proposed sewer system would preserve selected, existing on-site facilities in place and operational through buildout and would expand the system through extension of existing sewer lines. The OCGP FEIR stated that additional IRWD maintenance and equipment could be required to operate and maintain the proposed system.

Solid Waste

As stated in OCGP FEIR, demolition of existing runways, buildings, and structures within Planning Area 51 will generate debris materials that will have to be disposed of at local landfills. Green waste will also be generated as a result of ongoing park and landscaping maintenance. In addition to the City requirement for recycling of construction and demolition material to reduce waste, solid waste reduction will also be achieved through compliance with AB 939, which requires that a minimum of 50 percent of the solid waste generated in cities in California be diverted from landfills. Further, SB 1374 requires that all cities implement measures that require diversion of 75 percent of all construction and demolition waste from landfills. While the OCGP FEIR identified a potential impact related to solid waste, it concluded that, with the recommended mitigation measures, since adopted by the City, the impact would be less than significant.

Energy and Communications

A greater demand for electricity, gas, and communications will be generated by the proposed development of land uses within the project. The OCGP FEIR analyzed, in detail, the fuel and energy consumption projected for the project area. The certified OCGP FEIR stated that the implementation of the project will require the expansion of existing electrical, gas, and

communications systems to serve the project. Due to the outdated nature of the existing electricity, gas, and communications systems on the project site, the OCGP FEIR proposed to replace the existing systems in their entirety.

4.15.3 IMPACTS ANALYSIS FOR THE VTTM/MSM

Potable Water

The proposed adoption of the VTTM/MSM does not include any additional intensity or change in the mix of land uses; therefore, the demand projection for potable water is consistent with the OCGP FEIR. The OCGP FEIR stated that the specific environmental impact of constructing new water facilities to serve the project cannot be determined at the program level analysis, as site-specific plans for the installation of the sewer backbone system had not been prepared. However, the general significant impacts associated with the construction and operation of public facilities, including the project's construction and operation of the potable water system, were identified as being addressed in the OCGP FEIR.

Selected portions of the existing potable water facilities are assumed to remain in place and operational through project buildout. The OCGP FEIR stated that the existing system would be expanded and integrated into the IRWD system and would thus provide backbone service to all users on the project site. The OCGP FEIR assumed a potable water system that would follow the routing of existing and proposed roadways. The VTTM/MSM includes the alignment for water lines throughout Heritage Fields. This is an additional project design detail and not a change in the project. No additional mitigation measures or change in any mitigation measure is required.

Recycled Water

The OCGP FEIR stated that on January 27, 2003, the IRWD Board of Directors approved the assessment of water supply for the project area. According to the findings of the assessment, the IRWD has determined that a sufficient non-potable water supply is available to serve the project. The proposed adoption of the VTTM/MSM, does not increase the intensity or change the mix of land uses, and the total non-potable water supplies would meet the project demand. The OCGP FEIR stated that the specific environmental impact of constructing new recycled water facilities to serve the project area cannot be determined at the program level analysis, as site-specific plans for the installation of the recycled water backbone system had not been prepared. However, the general significant impacts associated with the construction and operation of public facilities, including the project's construction and operation of the recycled water system, were identified as being addressed in the OCGP FEIR.

The OCGP FEIR stated that implementation of the project analyzed in the OCGP FEIR would require the expansion of the recycled water transmission lines to serve the project area. It was assumed that selected on-site facilities would remain in place and operational through buildout. The OCGP FEIR stated that the existing system would be expanded and integrated into the IRWD system and provide a backbone service to all users on the project site. The OCGP FEIR assumed a non-potable system that would follow the routing of existing and proposed roadways within the project.

The VTTM/MSM includes the alignment for the recycled water lines throughout Heritage Fields. This is an additional project design detail and is not a change in the project. As stated in the OCGP FEIR, when the backbone recycled water system is devised, a project-level assessment of impacts would occur. No additional mitigation measure or change in any mitigation measure is required.

Sewer

The adoption of the VTTM/MSM would ensure that any project use of the existing sewer system would be in conformance with all applicable regional and state requirements and the mitigation requirements of the OCGP FEIR.

Since the proposed adoption of the VTTM/MSM does not propose to change the previously adopted intensity and mix of land uses, demand projections and proposed system expansion would remain the same. The OCGP FEIR stated that the specific environmental impact of constructing new sewer facilities to serve the project cannot be determined at the program level, as site-specific plans for the installation of the sewer backbone system had not been prepared. However, the general significant impacts associated with the construction and operation of public facilities, including the project's construction and operation of the sewer system, were identified as being addressed in the OCGP FEIR.

The VTTM/MSM includes the alignment for the sewer lines throughout Heritage Fields. This is an additional project design detail and did not change the project description. No additional mitigation measures or changes to any mitigation measure is required.

Solid Waste

As stated in OCGP FEIR, demolition of existing runways, buildings, and structures within Planning Area 51 would generate debris materials that would have to be disposed of at local landfills. Green waste would also be generated as a result of ongoing park and landscaping maintenance. The VTTM/MSM has not changed the land uses or intensity; therefore, no change in impact to solid waste is anticipated. No additional mitigation measure or change in any mitigation measure is required.

Energy and Communications

It has been established that the design of the OCGP provides for future passive or natural heating or cooling opportunities within the project site. Specific provision of such opportunities would be covered in subsequent subdivision actions. The primary demand for electricity, gas, and communications for the project will be generated by the proposed development of land uses within the project area. The OCGP FEIR analyzed, in detail, the fuel and energy consumption projected for the VTTM/MSM. The analysis and conclusions in the OCGP FEIR would not change due to the project since the intensity and types of land uses proposed in the VTTM/MSM have not changed from those previously analyzed in the certified OCGP FEIR and approved addenda. The certified OCGP FEIR stated that the implementation of the project would require the expansion of existing electrical, gas, and communications systems to serve the project. Due to the outdated nature of the existing electricity, gas, and communications systems on the project site, the project proposed to replace the existing systems in their entirety.

The VTTM/MSM includes the alignment for the utility lines throughout Heritage Fields. This is an additional project design detail and did not change the project. No additional mitigation measures or change in any mitigation measure is required.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major revision to the certified OCGP FEIR and approved addenda due to any new significant environmental impact or a substantial increase in the severity of impacts.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available information that indicates substantial changes in circumstances which would require major changes to certified OCGP FEIR and approved addenda.

No New Information of Substantial Importance Showing Greater Significant Effects Than the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the times the OCGP FEIR was certified and the addenda were approved that indicate that the project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in the Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP Final Environmental Impact Report was certified and addenda were approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project but the project proponent declines to adopt them or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt them. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant utilities and service systems effects identified in and considered by the certified OCGP FEIR and the approved addenda.

4.15.4 MITIGATION FROM THE OCGP FEIR AND APPLICABILITY TO THE VTTM/MSM

The OCGP FEIR determined the mitigation measures identified in other sections of the OCGP FEIR (5.1–5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of facilities for the following types of utilities to serve new growth expected in the project area:

- potable water
- recycled water
- sewer
- energy and communication transmission facilities

Mitigation Measures SW1 through SW5, since adopted by the City, apply to future demolition and new construction and will be carried forward through permit approvals for subsequent development projects. The VTTM/MSM would change neither these mitigation measures nor their application to future development projects.

- SW1 It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other deconstruction of the aged structures and property, including but not limited to buildings and runways, at MCAS El Toro is contaminated with lead-based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the MCAS El Toro site by ordinary means, a technical evaluation by a qualified environmental consultant must be

conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.

If it is determined by the technical evaluation that material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as “waste-to-energy” (WTE) plants.

- SW2 For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project must submit a written plan to the City and implement such plan to ensure that 75% of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.
- SW3 For that solid waste which the technical study deems to be suitable for recycling, the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75% of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180. (“Recycling” does not include transformation, as defined in Public Resources Code Section 40201.)
- SW4 To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by “weight ticket” receipts from state-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.
- To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.
- SW5 For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50% of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.

4.16 DETERMINATION

Based on the information and analysis in this Initial Study/Addendum, and pursuant to Section 15162 of the State CEQA Guidelines, the City of Irvine has determined the following:

1. There are no substantial changes proposed to the project that will require major revisions to the OCGP FEIR due to new, significant environmental effects or due to a substantial increase in the severity of significant impacts identified in the OCGP FEIR.
2. Substantial changes have not occurred with respect to the circumstances under which the project is being undertaken that will require major revisions of the OCGP FEIR to disclose and analyze new, significant environmental effects or a substantial increase in the severity of the impacts identified in the OCGP FEIR.
3. There is no new information of substantial importance that was not known and would not have been known at the time the OCGP FEIR was certified that shows that:
 - a. The project will have any new significant effects not discussed in the OCGP FEIR.
 - b. There are impacts that were determined to be significant in the OCGP FEIR that will be substantially more severe.
 - c. There are additional mitigation measures or alternatives to the project previously found not to be feasible that would in fact be feasible and would substantially reduce one or more of the significant effects identified in the OCGP FEIR.
 - d. There are additional mitigation measures or alternatives that were rejected by the project proponent that are considerably different from those analyzed in the OCGP FEIR that would substantially reduce any significant impact identified in that FEIR.

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APPENDIX A

MITIGATION MONITORING AND REPORTING PLAN

APPENDIX B

EVALUATION OF REGIONAL CONSTRUCTION IMPACTS AIR QUALITY ANALYSIS

APPENDIX C
TRAFFIC STUDY

APPENDIX D
INTERNAL CIRCULATION ANALYSIS

APPENDIX E
BIOLOGICAL REPORT

APPENDIX F
JURISDICTIONAL DELINEATION REPORT

**Addendum No. 4 to the
Orange County Great Park
Final Program EIR**

(SCH#2002101020)

**ORANGE COUNTY
GREAT PARK
MASTER PLAN**

00434337-PMP

Lead Agency:
CITY OF IRVINE
7000 Trabuco Road, Bldg. 873
Irvine, California 92618

JULY 2007

**Addendum No. 4 to the
Orange County Great Park
Final Program EIR**

(SCH#2002101020)

**ORANGE COUNTY
GREAT PARK
MASTER PLAN
00434337-PMP**

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CITY OF IRVINE**

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JULY 2007

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1. Addendum Summary

1.1 PURPOSE AND SCOPE

This document is an Addendum (No. 4) to the Orange County Great Park (OCGP) Final Program Environmental Impact Report (State Clearinghouse Number 2002101020) certified by the Irvine City Council via Resolution No. 03-60 on May 27, 2003. This addendum (Addendum No. 4) augments the environmental review and analysis provided in: (i) the previously certified Final Environmental Impact Report for the Orange County Great Park (OCGP) (State Clearinghouse Number 2002101020); (ii) the Addendum to the OCGP Final Environmental Impact Report for the formation of the OCGP Redevelopment Project Area, approved in May 2006 (Addendum No. 1), (iii) the Addendum to the OCGP Final Environmental Impact Report, approved in October 2006 to revise the "Overlay Plan" described in the OCGP Final Environmental Impact Report (Addendum No. 2) and (iv) the Addendum to the OCGP Final Program EIR approved in May 2007 for Vesting Tentative Tract Map 17008, Master Subdivision Map (Addendum No. 3). The Final Environmental Impact Report for the OCGP, Addendum No. 1, Addendum No. 2, and Addendum No. 3 are collectively referred to as the "OCGP FEIR".

This Addendum has been prepared pursuant to the provisions of the California Environmental Quality Act (CEQA), Public Resources Code Sections 21000 et seq., the State CEQA Guidelines, and the City of Irvine Local Guidelines for Implementing CEQA (Local CEQA Guidelines). It contains analyses and other information that, in concert with the OCGP FEIR, serves as the environmental review of the proposed Orange County Great Park Master Plan (OCGP Master Plan) (File No. 00434337 PMP).

The OCGP Master Plan provides a conceptual design of the Orange County Great Park that will include physical improvements and activity nodes varying widely with regard to type, scale and purpose. For example, while some proposed improvements exclusively involve created, re-established and/or enhanced natural habitats, others range from newly constructed civic/institutional buildings to an extensive active recreation-oriented sports complex with a variety of playing fields and courts.

The OCGP Master Plan conceptually identifies each of the aforementioned physical improvements as Park Districts, as noted below.

- | | |
|-----------------------------------|---------------------------------------|
| • <i>Upper Canyon</i> | • <i>Sports Park</i> |
| • <i>Bowling Green</i> | • <i>Cultural Terrace</i> |
| • <i>Great Lawn/Fields</i> | • <i>Lake</i> |
| • <i>Bosque</i> | • <i>Botanical Gardens</i> |
| • <i>Trabuco Entry</i> | • <i>Promenade</i> |
| • <i>Berm Garden</i> | • <i>Orchard Parking</i> |
| • <i>Memorial Site</i> | • <i>The Linear Ramble</i> |
| • <i>Aircraft Museum</i> | • <i>The Agua Chinon</i> |
| • <i>Timeline</i> | • <i>The Wildlife Corridor</i> |

The above Park Districts, attendant vehicular/pedestrian circulation systems, parking facilities, maintenance facilities and other support components comprise approximately 1,145.3 acres and includes approximately 494,000 square feet of primary building facilities, with 15,000 square feet of ancillary uses. A more detailed description of these features is provided in Section 2, *Project Description*.

1. Addendum Summary

1.2 ENVIRONMENTAL PROCEDURES

The OCGP Master Plan is subject to consideration by the Irvine Community Services Commission (as a recommending body) and the Irvine Planning Commission (as the final approval body). As such, the City is the Lead Agency for the OCGP Master Plan and is responsible for its environmental review. Pursuant to CEQA, the State CEQA Guidelines, and the Local CEQA Guidelines, the City's environmental review of the OCGP Master Plan is focused on determining if the project would cause a change in the conclusions of the OCGP FEIR, and/or identify any change in circumstances or new information of substantial importance that would substantially change the conclusions of the OCGP FEIR.

Pursuant to Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines, when an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for the project unless the Lead Agency determines, on the basis of substantial evidence, that one or more of the following conditions are met:

- Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:
 - 1) The project will have one or more significant effects not discussed in the previous EIR or negative declaration.
 - 2) Significant effects previously examined will be substantially more severe than identified in the previous EIR.
 - 3) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives.
 - 4) Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.

Section 15164 of the State CEQA Guidelines states that an Addendum to an EIR shall be prepared "if some changes or additions are necessary, but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred." This Addendum (No. 4) addresses changes to the overall OCGP project and changes to the existing conditions that have occurred, and reviews new information of substantial importance that was not known and could not have been known with the exercise of reasonable diligence at the time that the OCGP FEIR was certified. It further examines whether, as a result of any changes or any new information, a subsequent or supplemental EIR may be required. This examination also includes an analysis of the provisions of Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines and their applicability to the proposed project.

1. Addendum Summary

This Addendum (No. 4) has been prepared and organized to track the organization of the City of Irvine Environmental Checklist Form. The completed Environmental Checklist form is provided herein in its entirety as Section 3.0, *Environmental Checklist*. The checklist is marked with the Lead Agency's findings as to the environmental effects of the proposed project in comparison with the findings of the OCGP FEIR. The checklist has been prepared pursuant to Section 15168(c)(4) of CEQA, which states that "where the subsequent activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR." The basis for the City's conclusions is the analysis provided in Section 4, *Discussion of Checklist and Mitigation Measures*, of this document. Using the foregoing approach, the City of Irvine, as the Lead Agency, determined that an Addendum to the previously approved OCGP FEIR was the appropriate environmental clearance for the project application.

1.3 PREVIOUS ENVIRONMENTAL DOCUMENTATION

The Orange County Great Park (OCGP) Final Program EIR

The OCGP Final Program EIR was certified by the City of Irvine in May 2003. The project as analyzed in the OCGP Final Program EIR consisted of the following actions: (1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; (2) Annexation of the unincorporated portion of Planning Area 35 (Irvine Ranch Water District Parcel); (3) General Plan Amendment and Zone Change for Planning Area 30; and (4) Approval of the form of a Development Agreement vesting approval of overlay uses and intensities in consideration for (i) dedication of land for public purposes, (ii) developing and funding certain infrastructure improvements and maintenance of the public uses, and (iii) funding specific park, roadways, and other circulation facilities and infrastructure. Together, these actions established the policy and legislative structure to guide the development of the former Marine Corps Air Station El Toro (MCAS El Toro) property.

Since certification of the OCGP Final Program EIR, a variety of actions in furtherance of the programmatic project (i.e. OCGP Project) addressed therein have transpired. Those actions and their related environmental reviews under CEQA are summarized below.

Addendum No. 1 to the OCGP Final Program EIR

On May 18, 2006, the City of Irvine approved the Orange County Great Park Redevelopment Plan (OCGPRP). The OCGPRP was based upon a Preliminary Redevelopment Plan previously formulated and adopted by the City of Irvine Planning Commission and Irvine Redevelopment Agency on January 15, 2004 and January 27, 2004, respectively. The OCGPRP set forth a process and framework within which specific development plans would be presented and priorities for specific development projects would be established, and did not present specific plans for any redevelopment, rehabilitation, and/or revitalization activities for any areas within the Orange County Great Park project area. The OCGPRP covers approximately 3,905.6 acres within Planning Areas 30 and 51. The environmental review for the OCGPRP was documented in Addendum No. 1 and was approved by the City of Irvine on May 18, 2006. In overview, Addendum No. 1 concluded that the OCGPRP would not result in any environmental effects not already addressed by the OCGP Final Program EIR.

Addendum No. 2 to the OCGP Final Program EIR

On October 24, 2006, Addendum No. 2 was approved by the City of Irvine for a General Plan Amendment (00416079-PGA) and Zone Change (00416080-PZC) for a Revised Overlay Plan. The General Plan Amendment and Zone Change was comprised of minor adjustments to the boundary between the public and private areas of the OCGP, revisions to text and figures related to Planning Areas 30 and 51, and the creation of a mixed-use zoning category called the Lifelong

1. Addendum Summary

Learning District (LLD) within Planning Area 51. The General Plan Amendment also included minor technical changes to the General Plan. The LLD zoning allows for a combination of residential, commercial, and educational uses that promote and support a mixed-use environment.

The aforementioned General Plan Amendment and Zone Change did not result in any changes to the approved land use intensities or allowable land uses in Planning Areas 30 and 51. Further, Addendum No. 2 did not address any refinements to the land use development program within those Planning Areas on lands under the auspices of the Orange County Great Park Corporation that are collectively identified in this current Addendum (No. 4) as the proposed OCGP Master Plan. In overview, Addendum No. 2 concluded that the aforementioned modifications to the OCGP project would not result in any environmental effects not already adequately addressed in the OCGP Program Final EIR.

Addendum No. 3 to the OCGP Final Program EIR

Addendum No. 3 was approved by the City of Irvine on May 17, 2007. Addendum No. 3 addressed Vesting Tentative Tract Map (VTTM) No. 17008 (Master Subdivision Map). The VTTM subdivided 3,585 gross acres into 44 numbered lots and 13 lettered lots consistent with the minor boundary adjustments in Addendum No. 2. It did not, however, authorize the construction of any trip-generating land uses, nor alter any land use or associated acreages to the approved project identified in the OCGP Final Program EIR, as augmented by Addendum No. 1 and Addendum No. 2. In addition to the subdivision of land, the VTTM: 1) defined the backbone infrastructure; 2) defined boundaries of areas for future subdivision (i.e. "B"-level tentative tract maps) and development; and 3) delineated the limits of rough grading for the infrastructure requirements of Heritage Fields development. In overview, Addendum No. 3 concluded that the VTTM and attendant features would not result in any environmental effects not already adequately addressed in the OCGP Program Final EIR.

The OCGP Final Program EIR and Addendums No. 1, No. 2, and No. 3, as well as all associated technical and other documents comprising the environmental record for the overall OCGP project are on file at the City of Irvine, Community Development Department, 7000 Trabuco Road, Building 873, Irvine, CA 92618.

The OCGP Mitigation Monitoring Program

The OCGP Final Program EIR incorporated mitigation measures that were ultimately provided in a **Mitigation Monitoring Program (MMP)** adopted by the Irvine City Council as part of Resolution No. 03-60. The MMP, included herein as **Appendix A**, provides the following information for each mitigation measure:

- Mitigation number and a description of the action;
- Timing for implementation;
- Approving authority and reviewing agency(s), if any; and
- Method of compliance

Minor clarifying amendments to several mitigation measures were made in connection with the approval of Addendum No. 3. Those amendments are also reflected in the MMP (Appendix A).

1. Addendum Summary

1.4 ENVIRONMENTAL SETTING

The Orange County Great Park (which consists of portions of City of Irvine Planning Areas 30 and 51) is located in the central portion of Orange County, approximately 45 miles southeast of Los Angeles. With the exception of north-south aligned wildlife corridor improvements in Irvine Planning Area 30, the OCGP Master Plan is located entirely within Irvine Planning Area 51. The OCGP Master Plan covers property that is located on the former MCAS El Toro site, and is also surrounded by Heritage Fields El Toro, LLC (Heritage Fields) property, which is roughly bounded by SR-133 to the west, Alton Parkway to the east, I-5 to the south and Irvine Boulevard to the north.

Proximal local jurisdictions include: the Cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo, and Tustin. The Irvine Station (formerly known as Irvine Transportation Center), a major multi-modal transit center linking Orange County Transportation Authority (OCTA) bus, Metrolink commuter rail, and Amtrak rail services is located adjacent to the Southern California Regional Rail Authority (SCRRA) Metrolink tracks, which bisect the project area and separate City of Irvine Planning Areas 30 and 51. Existing uses within the project site include a California State University at Fullerton satellite campus, Marine Memorial Golf Course, equestrian facilities, and agricultural and nursery operations.

Consistent with the OCGP FEIR, several interim activities and uses are currently occurring on-site, including short-term use of the land or existing buildings. Small portions of the existing runways have been removed within the City's Planning Area 51. A few parcels are being leased on an interim basis prior to development of the site.

Ownership of Planning Areas 30 and 51 has changed since certification of the OCGP FEIR. Certain parcels have been or will be transferred to the Federal Aviation Administration, designated Homeless Provider organizations, City of Irvine, County of Orange, and Heritage Fields by the Department of Navy (DoN). Other parcels have been leased in furtherance of conveyance (LIFOC) to those entities.

2. *Project Description*

2.1 **PROJECT LOCATION**

The OCGP Master Plan, encompassing portions of Planning Areas 30 and 51, is located northeast of the freeway junction at Interstate 5 (Santa Ana Freeway) and Interstate 405 (San Diego Freeway), within the City of Irvine. **Figure 2-1 (Regional Location Map)** depicts the project location in a regional context and **Figure 2-2 (Local Vicinity Map)** shows its local context. Major existing roadways bordering the project are Sand Canyon Avenue to the northwest, Portola Parkway and Irvine Boulevard to the north, and Bake Parkway to the northeast. As depicted on **Figure 2-3 (Aerial Photograph)**, surrounding the site are residential and nonresidential uses under construction to the north and west, open space to the northeast, and nonresidential and mixed land uses to the east and southeast, within the Cities of Lake Forest and Irvine. Irvine Station is situated adjacent to the SCRRA Metrolink tracks, which traverse the site and separate Planning Areas 30 and 51.

2.2 **PROJECT OBJECTIVES**

With regard to the OCGP Master Plan, the OCGP Final Program EIR identified the following objectives:

- Convert the former MCAS El Toro to a Great Park with regional open space, cultural and recreational facilities.
- Create a wildlife corridor connection through the property that may potentially connect the Cleveland National Forest to the north and the coastal open space preserves to the south.
- Respond positively to private interests by allowing private development of some land while ensuring the implementation of park and open space amenities.

2.3 **PROJECT CHARACTERISTICS**

2.3.1 **Project Background**

On May 27, 2003, the Irvine City Council, via Resolution No. 03-60, certified a Final Program Environmental Impact Report (SCH#2002101020) that addressed and adopted a General Plan Amendment (47782-GA) and Zone Change (47785-ZC) to implement the development of the Orange County Great Park. In order to develop at the maximum intensities allowed in the Overlay Plan shown in the General Plan and zoning, the property owners entered into a development agreement that required the development or funding of infrastructure improvements, the dedication of land for park and City uses, as well as the commitment to long-term maintenance of the public facilities.



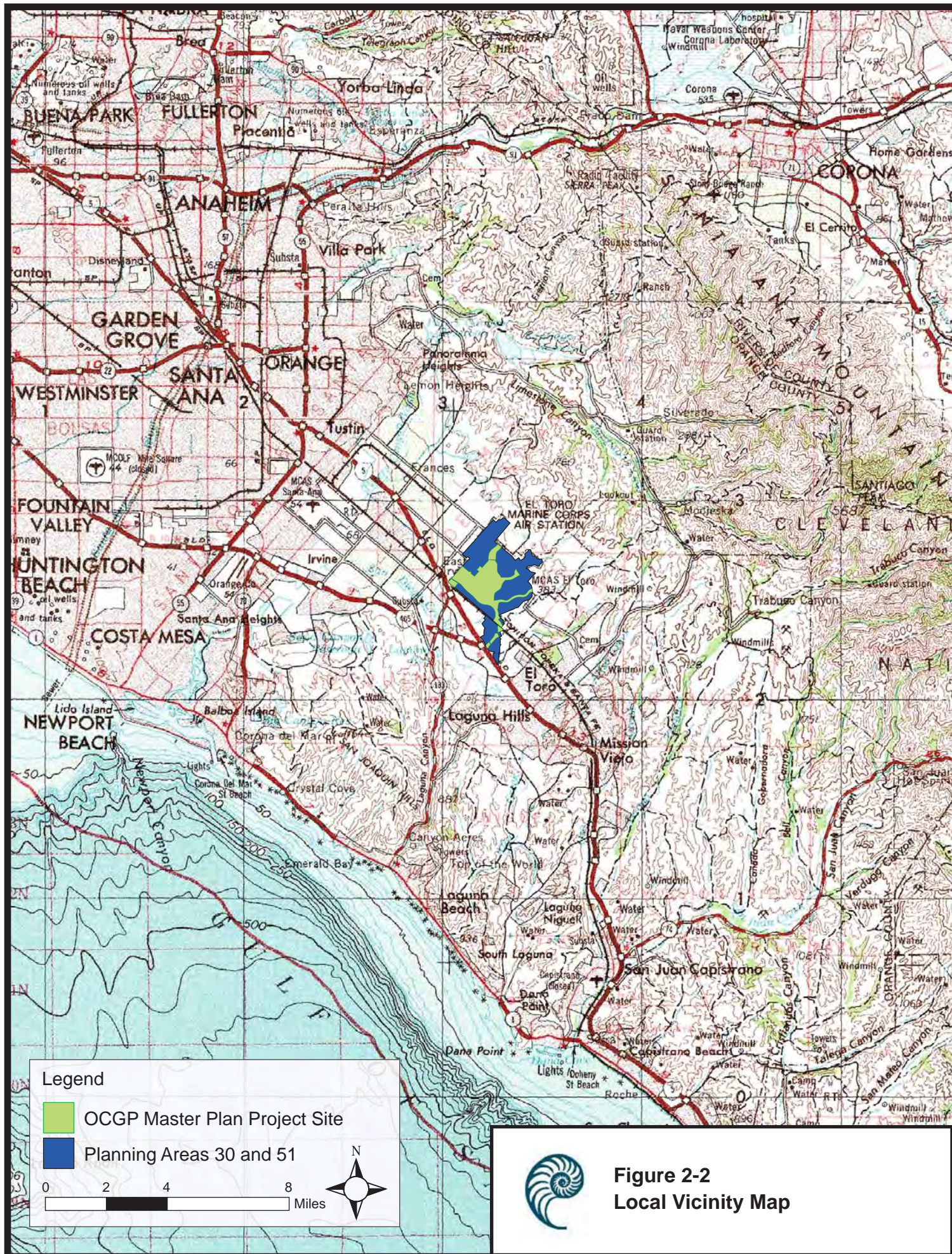




Figure 2-3
Aerial Photograph

2. Project Description

On May 18, 2006, the City of Irvine approved the Orange County Great Park Redevelopment Plan (OCGPRP). The OCGPRP was based upon a Preliminary Redevelopment Plan previously formulated and adopted by the City of Irvine Planning Commission and Irvine Redevelopment Agency on January 15, 2004 and January 27, 2004, respectively. The OCGPRP set forth a process and framework within which specific development plans would be presented and priorities for specific development projects would be established. The OCGPRP did not in and of itself, however, present specific plans for any redevelopment, rehabilitation, and/or revitalization activities for any areas within the Orange County Great Park project area. The OCGPRP pertains to approximately 3,905 acres within Planning Areas 30 and 51. The environmental review for the OCGPRP was memorialized in Addendum No. 1.

In February 2005, Heritage Fields purchased all four bid parcels from the U.S. Department of Navy/General Services Agency through an online auction process. Subsequent to the land purchase, the Orange County Great Park Corporation and Heritage Fields initiated their respective master design and development processes for the OCGP. To facilitate additional design options both the Great Park Corporation and Heritage Fields requested amendments to the General Plan and the Zoning Code to reconfigure district boundaries. In addition, Heritage Fields requested the creation of a new mixed-use zoning district called the "8.1/8.1A Lifelong Learning District" and proposed minor clarifications to the zoning text within Planning Areas 30 and 51. The General Plan Amendment and Zoning Code modifications, which primarily refined the scope of future development on lands owned by Heritage Fields El Toro, LLC, were addressed in Addendum No. 2.

On June 28, 2006, Heritage Fields filed an application to the City of Irvine for approval of Vesting Tentative Tract Map (VTTM) No. 17008 (Master Subdivision Map). The VTTM subdivided 3,585 gross acres into 44 numbered lots and 13 lettered lots. It did not, however, authorize the construction of any trip-generating land uses, nor alter any land use or associated acreages to the approved project identified in the OCGP Final Program EIR, as augmented by Addendum No. 1 and Addendum No. 2. In addition to the subdivision, the VTTM also: 1) defined the backbone infrastructure; 2) defined boundaries of areas for future subdivision (i.e. "B"-level tentative tract maps) and development; and 3) delineated the limits of rough grading for the infrastructure requirements of Heritage Fields development. OCGP Final Program EIR Addendum No. 3 was approved by the Irvine Planning Commission on May 17, 2007.

This OCGP Final Program EIR Addendum (No. 4) addresses refinements to the scope of future development on lands under the auspices of the Orange County Great Park Corporation. As indicated above, development associated with the overall OCGP project will occur entirely within Planning Areas 30 and 51. The development parameters are depicted in tabular form on **Table 2-1 (OCGP Master Plan – Irvine General Plan Land Use Designations, Irvine Zoning Code District Designations, and Development Assumption Breakdown)** on a Planning Area Zone basis.

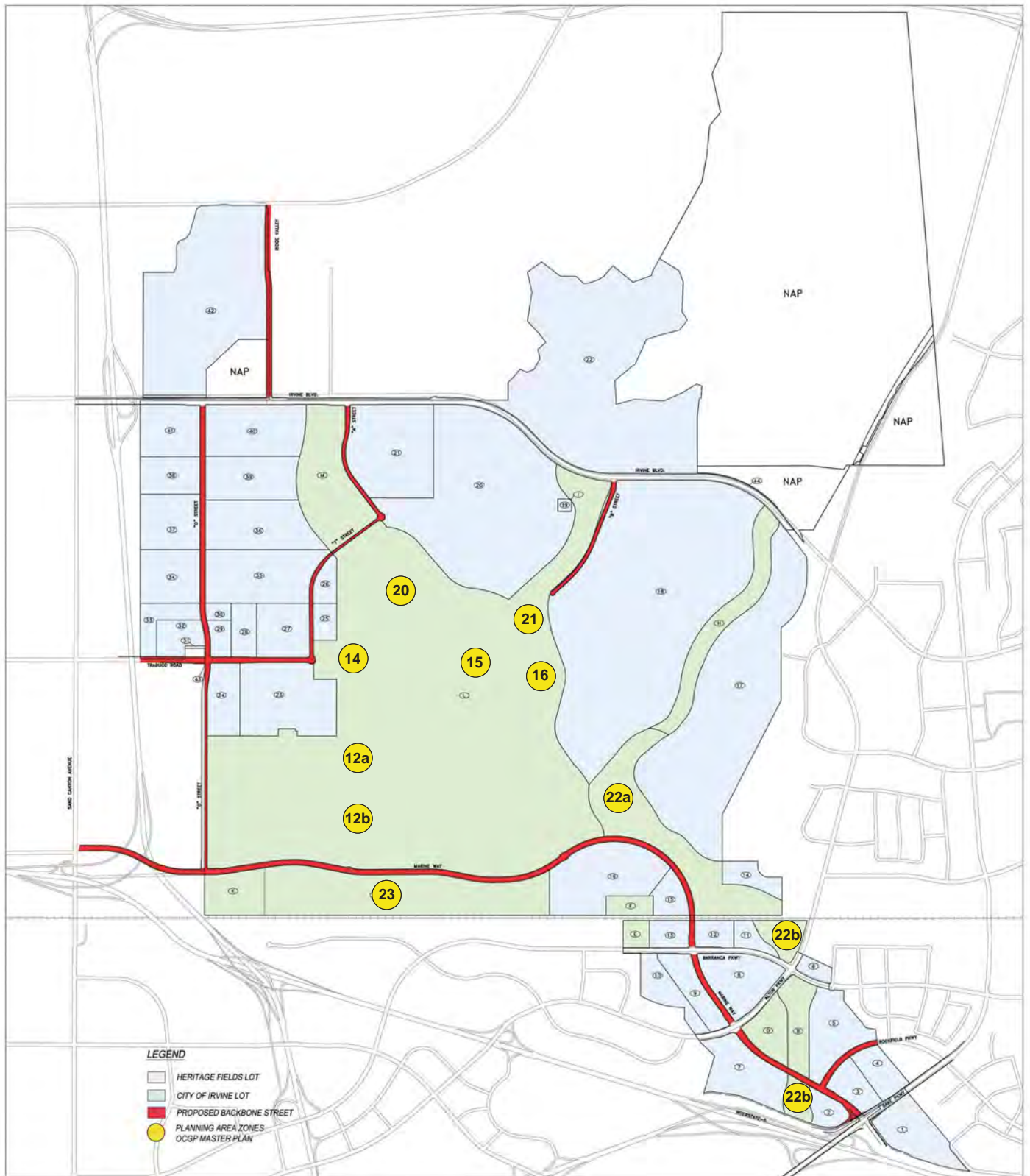


Figure 2-4
Planning Area Zones Comprising
the Proposed OCGP Master Plan

2. Project Description

Table 2-1

OCGP Master Plan – Irvine General Plan Land Use Designations, Irvine Zoning Code District Designations and, Development Assumption Breakdown

Irvine Planning Area (PA)	Planning Area Zone No. (PAZ)	General Plan Designation (2003 FEIR)	General Plan Land Use (Overlay)	Zoning District (Overlay)	Development Data – Overlay Plan 2025
51	12a	Orange County Great Park (OCGP)	OCGP Sports Park	1.5 Recreation	26,000 s.f. (Sports Park)
51	12b	Orange County Great Park (OCGP)	OCGP Sports Park	1.5 Recreation	
51	13	Orange County Great Park (OCGP)	OCGP Exposition Center	1.5 Recreation	468,000 s.f. (Museum/Library Facilities)
51	14	Orange County Great Park (OCGP)	OCGP Open Space/Park	1.5 Recreation	
51	15	Orange County Great Park (OCGP)	OCGP Open Space/Park	1.5 Recreation	
51	16	Orange County Great Park (OCGP)	OCGP Open Space/Park	1.5 Recreation	
51	20	Orange County Great Park (OCGP)	OCGP Drainage Corridor	1.5 Recreation	
51	21	Orange County Great Park (OCGP)	OCGP Drainage Corridor	1.5 Recreation	
51	22a	Orange County Great Park (OCGP)	OCGP Wildlife Corridor	1.4 Preservation	
51	23 (Portion)	Orange County Great Park (OCGP)	OCGP Institutional	6.1 Institutional	
30	22b	Orange County Great Park (OCGP)	OCGP Wildlife Corridor	1.4 Preservation	

Sources: OCGP Master Plan (07/07 submittal); OCGP Final Program EIR Addendum No.2

2.3.2 Project Features

The land area within the boundaries of the proposed OCGP Master Plan totals approximately 1,145.3 acres. The OCGP Master Plan presents a conceptual design for the future build out of the area within its boundaries. It does so for the entirety of its land area on both a Planning Area Zone and Park District basis. Previous Table 2-1 provided tabular data regarding the development parameters for all lands within the Great Park Boundaries on a Planning Area Zone Basis. **Table 2-2 (OCGP Master Plan Park District Land Area Summary)** itemizes the land areas specific to each Park District within the OCGP Master Plan boundary. **Figure 2-5 (OCGP Master Plan – Site Plan)** graphically illustrates the spatial relationships between the various distinctive land use types comprising the OCGP Master Plan. The following discussion describes each of the project Park Districts.

2. Project Description

Table 2-2
OCGP Master Plan Park District Land Area Summary

OCGP Master Plan Park District	Land Area (acres)
• <i>Upper Canyon</i>	151.4
• <i>Bowling Green</i>	34.2
• <i>Great Lawn/Fields</i>	55.4
• <i>Bosque</i>	65.7
• <i>Trabuco Entry</i>	13.1
• <i>Berm Garden</i>	12.4
• <i>Memorial Site</i>	15.2
• <i>Secondary Maintenance</i>	7.1
• <i>Aircraft Museum</i>	23.4
• <i>Timeline</i>	11.5
• <i>Sports Park</i>	158.2
• <i>Cultural Terrace</i>	92.7
• <i>Lake</i>	26.2
• <i>Botanical Gardens</i>	59.0
• <i>Promenade</i>	21.4
• <i>Orchard Parking</i>	93.0
• <i>Linear Ramble</i>	17.7
• <i>Agua Chinon</i>	84.3
• <i>Wildlife Corridor (Upper)</i>	133.0
• <i>Wildlife Corridor (Lower)</i>	45.6
• <i>Primary Maintenance</i>	24.8
<i>TOTAL OCGP Master Plan Acreage</i>	1,145.3

Source: Great Park Design Studio, July 2007

Following are descriptions of each OCGP Master Plan Park District as presented in the OCGP Master Plan dated May 2007.

OCGP Master Plan Park District: Upper Canyon

The Upper Canyon comprises PAZ 20 and essentially mirrors the current onsite Bee Canyon drainage channel. At present, Bee Canyon exists as either a box culvert or an open channel and drains to a double Reinforced Concrete Pipe (RCP) in the vicinity of the Irvine Station. When completed, the Upper Canyon, located in the northwest quadrant of the project site will become its most dominant physical feature. The OCGP Master Plan indicates that it will be a manmade canyon with side-slopes from channel bottom to the crest of berms lining the canyon as high as 60 feet (30 feet below grade and 30 above grade resulting 3,060,000 cubic yards of cut and 1,825,000 cubic yards of fill) and variable in width ranging from approximately 100 feet to more than 500 feet.

The Upper Canyon provides a series of natural environments to hikers and bicyclists. Most of the trails parallel the overall north-south axis of the Upper Canyon. Within the Upper Canyon, pedestrian access from one side to the other (i.e. east-west) is provided by a series of planned

2. Project Description

footbridges. A vehicular bridge crossing the canyon in an east-west alignment, currently identified as "T" Street on the approved Vesting Tentative Tract Map No. 17008, is provided at the approximate midpoint of the Upper Canyon. Vehicular access within the Upper Canyon is limited to maintenance and emergency vehicles. Within the Upper Canyon, one emergency pathway (unpaved) is required; it will be a minimum of 20 feet in width and have a 13.5-foot vertical clear zone. Landscaping within the Upper Canyon will include native plant communities including Coastal Sage Scrub, Oak Walnut Woodland, Riparian, Fresh Water Marsh, Vernal Pools, Wildflower Meadows, and Oak Grassland Savannah supplemented by Palm Grove, Fern Grotto, Coniferous Forest and Tecate Cypress stands. The Upper Canyon will accommodate onsite runoff along a soft bottom channel and drain southerly into a lake adjoining the Cultural Terrace.

OCGP Master Plan Park District: Bowling Green

The Bowling Green Park District is located at the northern portion of the project site and includes a portion of the former MCAS El Toro runway to be preserved onsite. It will include Bocce Courts and open fields for unplanned playing opportunities.

OCGP Master Plan Park District: Great Lawn/Fields

The Great Lawn/Fields Park District will include open field play areas, agricultural fields, and picnic groves. Located between the Bosque and the Upper Canyon, this portion of the OCGP Master Plan will include groves of citrus trees, nut and avocado trees. The Great Lawn will accommodate a variety of passive recreational activities. It will be planted with a drought tolerant, low maintenance turf grass.

OCGP Master Plan Park District: Bosque

The Bosque, located along the western edge of the Great Park, will include pocket parks, children's' play areas, an exercise circuit and meditative spaces. Located in the Bosque is a flowering arboretum defining the edge of the Great Park adjacent to the future Heritage Fields El Toro development to the west. The Bosque will be planted with a blend of native and non-invasive California flowering trees.

OCGP Master Plan Park District: Trabuco Entry

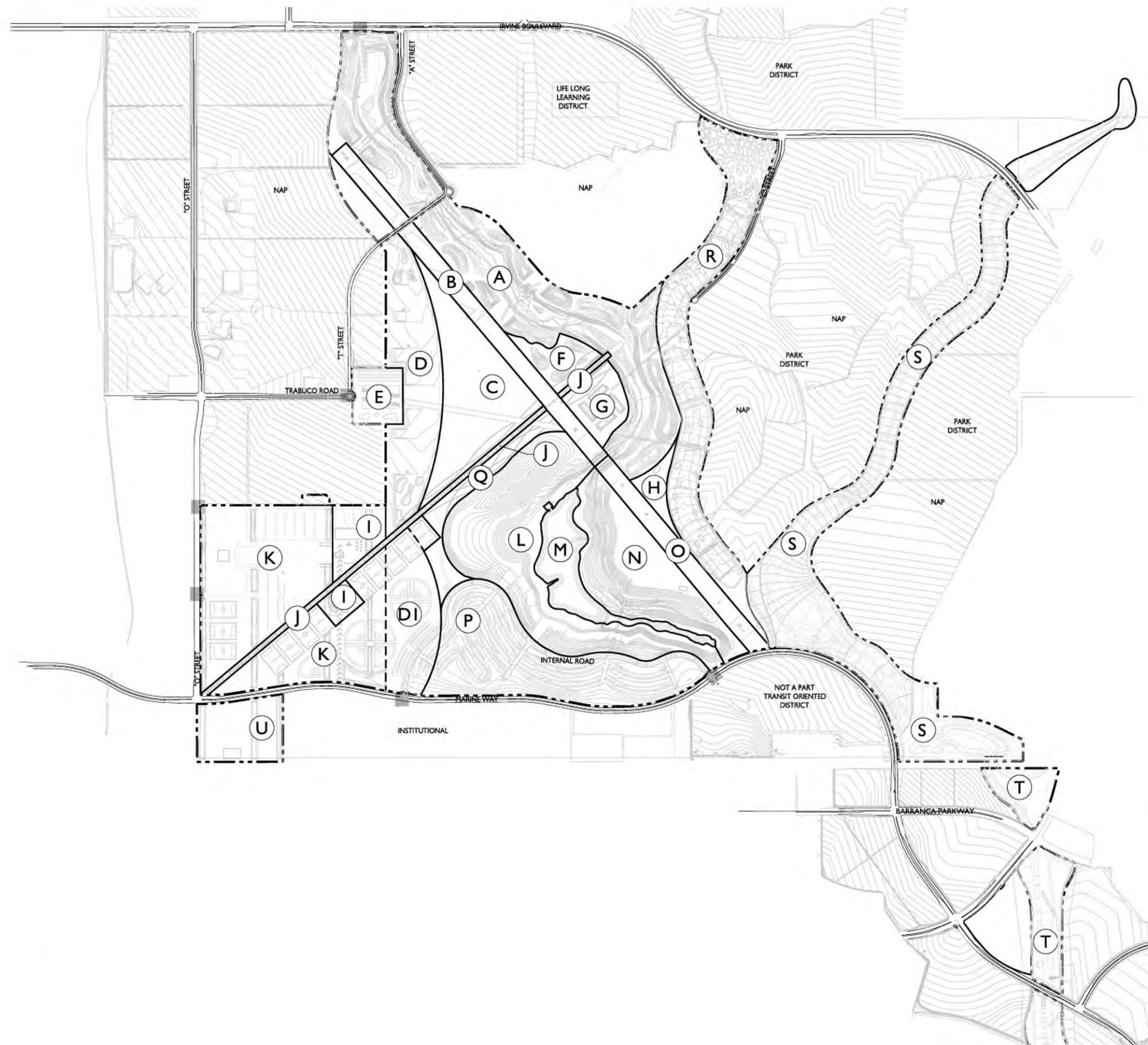
The Trabuco Entry is designed to introduce visitors to the Great Park through its formal landscaping and water features. It will be planted with a large hedge of California Bay around its central plaza. High canopy shade trees will be planted within the plaza and in the background.

OCGP Master Plan Park District: Berm Garden

The Berm Garden is located in the northeast quadrant, where the Timeline crosses the alignment of the preserved runway. It will be landscaped with a motif similar to that associated with the Great Lawn/Fields described earlier.

OCGP Master Plan Park District: Memorial Site

The Memorial Site is located in the southeast quadrant, where the Timeline crosses the alignment of the preserved runway. It will also be landscaped with a motif similar to that associated with the Great Lawn/Fields described earlier.



ACREAGE SUMMARY TABLE

(A)	UPPER CANYON	= 151.4 ac
(B)	BOWLING GREEN	= 34.2 ac
(C)	GREAT LAWN / FIELDS	= 55.4 ac
(D)	BOSQUE	= 65.7 ac
(DI)	BOSQUE OVERLAY	= 35.4 ac
(E)	TRABUCO ENTRY	= 13.1 ac
(F)	BERM GARDEN	= 12.4 ac
(G)	MEMORIAL SITE	= 15.2 ac
(H)	SECONDARY MAINTENANCE	= 7.1 ac
(I)	AIRCRAFT MUSEUM	= 23.4 ac
(J)	TIMELINE	= 11.5 ac
(K)	SPORTS PARK	= 133.3 ac
(L)	CULTURAL TERRACE	= 92.7 ac
(M)	LAKE	= 26.2 ac
(N)	BOTANICAL GARDENS	= 59.0 ac
(O)	PROMENADE	= 21.4 ac
(P)	ORCHARD PARKING	= 82.5 ac
(Q)	LINEAR RAMBLE	= 17.7 ac
(R)	AGUA CHINON	= 84.3 ac
(S)	WILDLIFE CORRIDOR (UPPER)	= 133 ac
(T)	WILDLIFE CORRIDOR (LOWER)	= 45.6 ac
(U)	PRIMARY MAINTENANCE	= 24.8 ac
TOTAL OCGP ACREAGE		= 1,145.3 ac

LEGEND:

- PARK DISTRICT BOUNDARY LINE
- VEHICULAR ENTRY



Figure 2-5
OCGP Master Plan
Site Plan

2. Project Description

OCGP Master Plan Park District: Secondary Maintenance

The Secondary Maintenance facility will be located between the Lower Canyon and Agua Chinon, immediately east of, and adjacent to the Promenade. As the name implies, it will serve as an adjunct to the Primary Maintenance Facility for overall maintenance of the Great Park.

OCGP Master Plan Park District: Aircraft Museum

The Aircraft Museum will be located in close proximity to the Sports Park in the southwest quadrant of the project site and will include a restored existing hangar, and static aircraft displays. The Aircraft Museum complex will be planted with California friendly plant materials and will include a Palm Parade promenade providing a visual pedestrian connection to the Sports Park. Simple formal planting around the hangar will be planted reminiscent of the landscape and plantings that would have been at the base during its most active times.

OCGP Master Plan Park District: Timeline

The Timeline is an east-west oriented linear feature that is perpendicular to the alignment of the preserved runway mentioned previously. It will provide seating, an historical timeline and artifacts, and serve as a backbone access corridor within the project by connecting several Park Districts.

OCGP Master Plan Park District: Sports Park

The Sports Park is located in the southwestern corner of the Great Park and will be comprised of sports fields, sport courts, and, as mentioned under the Aircraft Museum above, a portion of the Palm Parade promenade. Table 2-3 (*OCGP Sports Park Facilities and Components*) identifies the sports amenities to be provided within the Sports Park District of the OCGP Master Plan. In addition to the sports amenities identified below, the Sports Park will also include a Field House, parking areas, and a Plaza/Pedestrian Mall. These aspects of the Sports Park District are discussed elsewhere in this Project Description.

Table 2-3
OCGP Sports Park Facilities and Components

FACILITY TYPE	NUMBER OF COMPONENTS
OPEN SPORTS FIELDS	
<i>Soccer/Overlay</i>	12
<i>Soccer Jr./Overlay</i>	8
BAT AND BALL FIELDS	
<i>Baseball-Little League</i>	4
<i>Softball</i>	5
MIXED SMALL COURTS	
<i>Tennis Courts</i>	12
<i>Frontenis/Handball</i>	2
<i>Basketball</i>	15
ACTION SPORTS AMENITIES	
<i>Skateboard Park</i>	1
<i>Multi-Use Fields</i>	4
OTHER SPORTS-RELATED AMENITIES	
<i>Walking/Jogging Track</i>	1
<i>Children's Play Areas</i>	2
<i>Youth Play Areas</i>	3
<i>Other (Concessions; Lavs; Group Picnic)</i>	5

Source: (OCGP Master Plan – June 2007 Submittal)

2. Project Description

OCGP Master Plan Park District: Cultural Terrace

The Cultural Terrace is situated in the southwest quadrant of the OCGP Master Plan north of the Orchard Parking, east of the Sports Park, west of the Lake and south of the Linear Ramble. It will contain three new structures proposed for civic museum uses and a library that collectively comprise a total of 274,000 square feet. The Cultural Terrace will provide an overview of the Lake to its east and also include space for unplanned outdoor dancing and a food concession offered through the museums. The Cultural Terrace will be landscaped with a mixture of California Native and California Friendly plant materials. Wildflower meadows will be incorporated on berms between the terrace and the Orchard Parking area to its south. Oak Walnut Woodland will be located on berms between the Great Lawn and the Lake. In addition, high canopy flowering shade trees will be located at various locations on the Cultural Terrace to create shaded areas.

OCGP Master Plan Park District: Lake

The Lake is a perennial water feature at the southern terminus of the Upper Canyon and is situated between the Botanical Garden to the east and Cultural Terrace to the west. It is a two-tiered lake with the northern tier having a depth of approximately 16 feet (Elev. 250 ft. to 266 ft.) and the southern tier having a depth of approximately 11 feet (Elev. 230 ft. to 241 ft.) Grading for construction of the Lake will require 1,670,000 cubic yards of cut. The Lake is a water feature that will allow park users the opportunity to use paddleboats and rowboats.

OCGP Master Plan Park District: Botanical Garden

The Botanical Garden is intended to support a diverse landscape and will exhibit a variety of programmed spaces including, but not necessarily limited to: the Southern California Flora Biome, Nature Discovery Zone, Home Garden Zone, Food and Health Zone, Plant Nursery Zone, Transformation Zone, and Events Zone. The visitor's center is anticipated to include accessory uses such as a gift shop, café, and indoor theater.

OCGP Master Plan Park District: Promenade

The Promenade, located at the southern end of the preserved runway between the Botanical Gardens and Agua Chinon, also referred to as the "Promenade of the Senses", has a very linear and focused layout and comprise a plant palette to support the formality of the space and enhance the senses through: smell, sight, sound, taste and touch. The planting will be a mixture of California Native and California Friendly plants and will include high limb canopy trees for shade purposes.

OCGP Master Plan Park District: Orchard Parking

This Great Park main parking facility is located along, and is accessed by, Marine Way along the southern boundary of the Great Park. Fifty-six (56) acres of parking facilities have been interwoven with thirty-seven (37) acres of active citrus orchards to commemorate Orange County's citrus heritage. A shuttle system will provide internal circulation throughout the Great Park connecting the parking lots with various uses on-site.

OCGP Master Plan Park District: Linear Ramble

The Linear Ramble is located between the Cultural Terrace and Timeline. It provides bicycle and pedestrian access and passive recreational opportunities and will be landscaped with a motif similar to that associated with the Great Lawn/Fields described earlier.

2. Project Description

OCGP Master Plan Park District: Agua Chinon

The Agua Chinon, originally a viable drainage course that was subsequently covered over with MCAS-related uses, will be re-established near its original northeast-southwest alignment through the central portion of the Great Park. It will range in width from approximately 250 feet to 450 feet, include multi-use trails for the hiking and cycling public and be landscaped to create new native habitat. The Agua Chinon will have one 15-foot wide service/emergency vehicle pathway along the easterly perimeter. It will also serve as a year-round drainage corridor and will be engineered to minimize flow velocities for water conservation purposes. Natural water channels will be bordered with riparian vegetation. Transitions from wetter to drier areas will include Coastal Sage Scrub and Oak Walnut Woodlands.

OCGP Master Plan Park District: Wildlife Corridor (Upper and Lower Sections)

Along its eastern periphery, the OCGP Master Plan includes a wildlife corridor that will eventually link a 995-acre habitat preserve and the Limestone-Whiting Wilderness Park to the north with the Laguna Coast Wilderness Park to the south. The corridor will be of variable width, but will in no case be less than 330 feet wide. Side slopes will also vary, but will only in limited cases be greater than 3:1. The corridor will for the most part be soft bottom, and has been designed to accommodate natural and manmade runoff from both upstream areas and along Borrego Creek.

In order to discourage human interaction, nearly the entire length of the corridor will have either a fence or landscape barrier constructed on both sides. Details regarding fences and walls will be provided during the park design phase of the project. Where a landscape barrier is located, it will be comprised primarily of a dense thicket of coastal sage mixed with canopy trees. Internally, the corridor will be enhanced with the planting of the following vegetation types: riparian mix blended with grasses and forbs, riparian forest with intermittent marsh type planting, and marsh type that is not fully persistent but more so than vernal pools. A maintenance and emergency road will be constructed along the western perimeter of the corridor adjacent to the fence within the conservation zone.

OCGP Master Plan Park District: Primary Maintenance

The Primary Maintenance facility is located at the southwest corner of the project site south of Marine Way. It will serve as the main maintenance facility and house maintenance equipment and supplies.

Vehicular Access

Vehicular access to the Great Park will be available from various roadways along its periphery including Marine Way to the south, "O" Street and Trabuco Road to the west, and Irvine Boulevard to the north. However, due to the location of on-site visitor oriented amenities, the OCGP Master Plan reflects a design that encourages primary vehicular access to occur from Marine Way. Vehicular access to the Great Park from the east is restricted due primarily to the Wildlife Corridor along the Great Park's eastern periphery that is intended to be free of human access. Figure **2-6 (OCGP Master Plan – Vehicular Access Locations)** highlights the primary points of vehicular access to the Great Park.



(A) UPPER CANYON



(B) AGUA CHION ENTRY



(C) ORCHARD ENTRY AT BOSQUE



(D) ORCHARD ENTRY



(E) TRABUCO ENTRY

LEGEND

- ← VEHICULAR CIRCULATION
- PROPOSED CONCEPTUAL PARK SHUTTLE ROUTE
- PROPOSED OVERFLOW PARKING ACCESS
- PROPOSED CONCEPTUAL PARK SHUTTLE STOPS
- 1/8 MILE (660 ft) RADIUS FROM CONCEPTUAL PARK SHUTTLE PRIMARY STOPS (2-4 MINUTE WALK)
- 1/6 MILE (880 ft) RADIUS FROM CONCEPTUAL PARK SHUTTLE PRIMARY STOPS (3-5 MINUTE WALK)
- VEHICULAR ENTRY
- ▲ POTENTIAL BICYCLE RENTAL LOCATION



Figure 2-6
OCGP Master Plan
Vehicular Access
Locations

2. Project Description

Parking Facilities

The OCGP Master Plan identifies a variety of on-site parking facilities that in aggregate provide a total of 5,505 permanent parking spaces. A parking study prepared by LSA Associates dated July 18, 2007 identified the Zoning requirement for 3,589 parking spaces and a peak (weekend) parking demand of 3,623 parking spaces. The subject study is provided herein as **Appendix B**. The OCGP Master Plan will provide more permanent parking spaces than the peak parking demand requirement identified in the aforementioned study. It is noted that the OCGP Master Plan also identifies a potential to provide additional parking along the preserved runway to accommodate overflow parking for any special event overflow. **Figure 2-7 (OCGP Master Plan – Parking Facility Locations)** identifies the location of all parking areas presently contained within the OCGP Master Plan. Please note that special event overflow parking would be accommodated on the preserved runway and be coordinated with a shuttle system. **Table 2-4 (OCGP Master Plan – Permanent Parking Space Breakdown By Facility Location)** provides a breakdown of the number of OCGP Master Plan parking spaces by location. The location identifiers within Table 2-4 correspond to those presented in Figure 2-7. It is intended that the project parking will incorporate the City's Sustainable Travelway Guidelines such as bio-swales, permeable paving and shade trees.

Table 2-4
OCGP Master Plan –
Permanent Parking Space Breakdown By Facility Location

Parking Facility Identifier*	Parking Facility Name	Number of Parking Spaces Provided
A1	<i>Sports Parking 1</i>	720
A2	<i>Sports Parking 2</i>	207
A3	<i>Sports Parking 3</i>	265
A4	<i>Sports Parking 4</i>	110
B1	<i>Air Museum</i>	200
B2	<i>Air Museum</i>	150
C	<i>Orchard Parking</i>	3,232
D	<i>Trabuco Entry</i>	302
E	<i>Upper Canyon</i>	100
TOTAL	OCGP Master Plan	5,505

Source: OCGP Master Plan (July 2007 Submittal)

*As shown on Figure 2-7.



MINIMUM PARKING REQUIREMENTS PER SECTION 4-3-4 OF IRVINE ZONING ORDINANCE

REQUIRED NET PEAK PARKING BY AREA*

PROPOSED PARKING BY GPDS

SPORTS PARK / AIR MUSEUM PARKING

FIELD SPORTS (12 soccer fields/ overlay fields)	180 spaces	420 spaces	(A1) SPORTS PARKING 1	720 spaces
OUTDOOR SOCCER STADIUM (400 seats)	132 spaces	120 spaces	(A2) SPORTS PARKING 2	207 spaces
SOFTBALL / LITTLE LEAGUE FIELD (9 fields)	135 spaces	315 spaces	(A3) SPORTS PARKING 3	265 spaces
ACTION SPORTS PARK	286 spaces	286 spaces	(A4) SPORTS PARKING 4	110 spaces
OPEN RAQUET COURTS (14 tennis / frontenis courts)	42 spaces	28 spaces	(B1) AIR MUSEUM PARKING 1	200 spaces
BASKETBALL COURTS (15 fields)	45 spaces	263 spaces	(B2) AIR MUSEUM PARKING 2	150 spaces
FIELD HOUSE (26,000 sq. ft.) See callout 1, drawing I-104	173 spaces	100 spaces		
AIR MUSEUM (PROPOSED) (60,000 sq. ft.) See callout 6, drawing I-104	180 spaces	162 spaces		
AIR MUSEUM (EXISTING) See callout 7, drawing I-104	32 spaces	28 spaces		
CONCESSIONS / RETAIL See callout 14, drawing I-104	39 spaces	35 spaces		
BALLOON RIDE	80 spaces	72 spaces		
TOTAL	1,324 spaces	TOTAL 1,829 spaces	TOTAL	1,871 spaces

CULTURAL TERRACE PARKING

MUSEUMS (274,400 sq. ft.) See callouts 9-11, drawing I-104	823 spaces	741 spaces	(C) ORCHARD PARKING	3,232 spaces
LIBRARY (39,000 sq. ft.) See callout 8, drawing I-104	390 spaces	91 spaces		
BOTANIC PROGRAM (13,900 sq. ft.) See callout 12, drawing I-104	42 spaces	45 spaces		
BOTANIC GARDEN	295 spaces	212 spaces		
TEA HOUSE See callout 13, drawing I-104	11 spaces	10 spaces		
ANCILLARY BUILDINGS/USES	45 spaces	81 spaces		
CULTURAL TERRACE / LAKE	184 spaces	165 spaces		
TIMELINE	15 spaces	13 spaces		
MAINTENANCE See callouts 2-5, drawing I-104	34 spaces	53 spaces		
TOTAL	1,839 spaces	TOTAL 1,411 spaces	TOTAL	3,232 spaces

TRABUCO ENTRY / OTHER PARK USES PARKING

GREAT LAWN/BOSQUE	176 spaces	158 spaces	(D) TRABUCO ENTRY PARKING	302 spaces
UPPER CANYON / AGUA CHINON	239 spaces	215 spaces	(E) UPPER CANYON PARKING	100 spaces**
POCKET PARKS	11 spaces	10 spaces		
TOTAL	426 spaces	TOTAL 383 spaces	TOTAL	402 spaces

TOTAL REQUIRED 3,589 spaces **3,623 spaces** **PROPOSED 5,505 spaces**

(F) SPECIAL EVENT OVERFLOW PARKING

* Parking demand prepared by LSA "Orange County Great Park Tip Generation and Parking Demand Analysis." Date: July 2007.

** Parking lot E serves the Upper Canyon from Irvine Blvd. ADA accessible trails, as well as hiking trails will provide access to the Canyon. (See drawing I-110).

*** Overflow parking to be provided by special event supplemental parking on runway, see parking symbol F. Such use would be coordinated with shuttle system. A special event permit, with standard parking operations plan, to be provided in subsequent applications. See Drawing I-112 circulation sections for details.

NOTES:

- ALL PARKING WILL INCORPORATE BIOSWALES, PERVIOUS PAVING, AND SHADE TREES. (CONSISTENT WITH THE GREEN STREET TRAVELWAY GUIDELINES)
- PARKING TREE SPACING INCLUDES PARKING PERIMETER TREES AND 1 TREE FOR EVERY 4 STALLS. LANDSCAPING CONSISTENT WITH CHAPTER 3-15 OF THE ZONING CODE.
- PARKING TO HAVE PERVIOUS OPEN SOIL AREA AT TREES.
- PARKING STALL DIMENSIONS COMPLY WITH CITY STANDARDS PER CHAPTER 4 OF ZONING CODE.
- PERVIOUS PAVING EXAMPLES ARE VEHICULAR RATED CONCRETE PAVERS, TURF BLOCK ETC.
- OPEN PARKING LOT SETBACKS WILL COMPLY WITH SECTION 3-27 OF THE ZONING CODE.
- PRECISE PARKING LOT SHUTTLE STOPS WILL BE DETERMINED WITH SUBSEQUENT APPLICATIONS.
- FOR BUILDING SQUARE FOOTAGE SEE DRAWING I-105 BUILDING SITE PLAN.



Figure 2-7
OCGP Master Plan
Parking Facilities
Locations

2. Project Description

OCGP Master Plan Buildings

Figure 2-8 (OCGP Master Plan – Building Locations) depicts the conceptual locations of buildings planned within the OCGP Master Plan area. As shown, the greatest concentration of buildings will occur in the southwestern portion of the park and are associated primarily with the Sports Park, Aircraft Museum, and the Cultural Terrace. In total, approximately 494,000 square feet of building area is proposed. Of this amount, 10,540 square feet is associated with an existing hangar that is proposed for refurbishment. **Table 2-5 (OCGP Master Plan – Building Square Footage Breakdown)** provides a breakdown of the square footages associated with each OCGP Master Plan building.

Table 2-5
OCGP Master Plan – Building Square Footage Breakdown

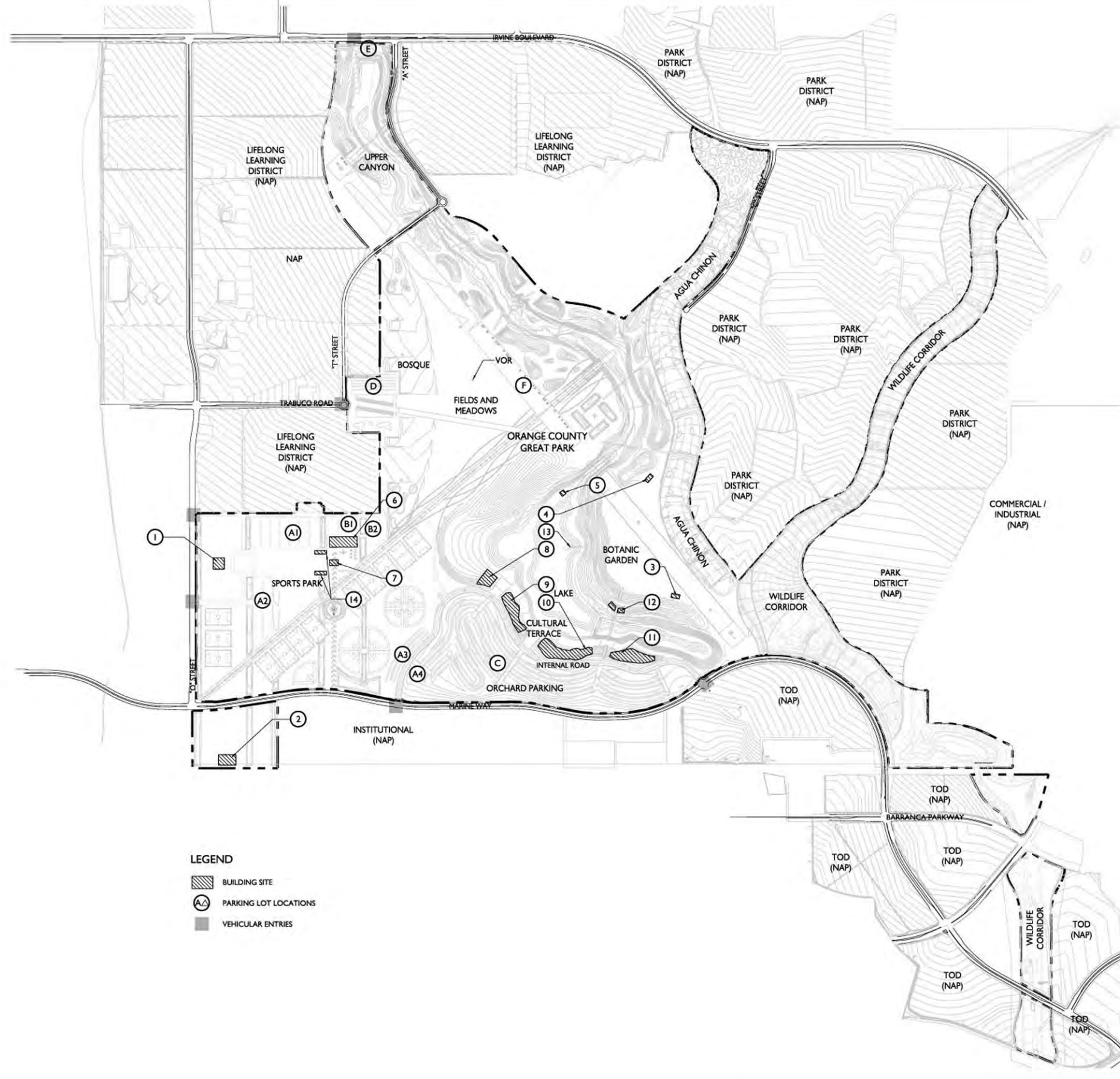
Building Identifier*	Building Type/Function	Building Area (sq. ft.)**
1	Field House	26,000
2	Main Maintenance	37,500
3	Botanic Garden Maintenance	7,200
4	Upper Canyon Maintenance	7,200
5	Pump House	4,400
6	Aircraft Museum (Proposed)	60,000
7	Aircraft Museum (Existing)	10,540
8	Library	39,000
9	Civic Museum 1	81,000
10	Civic Museum 2	108,400
11	Civic Museum 3	85,000
12	Botanic Program	13,900
13	Tea House	800
14	Concession/Accessory Retail Uses	13,060
TOTAL		494,000***

(Source: Great Park Design Studio, June 2007)

*As shown on Figure 2-8

**The total building area proposed is consistent with the allowable square footage identified in the OCGP FEIR. Please refer to previous Table 2-1 in this regard.

***Building square footage for additive uses such as restrooms, concessions are approximately 15,000 square feet.



PROPOSED BUILDING AREA LEGEND

SPORTS PARK		
1	FIELD HOUSE Served by parking lots A1 and A2	26,000 sq. ft.
		TOTAL SPORTS PARK 26,000 sq. ft.
MAINTENANCE		
2	MAIN MAINTENANCE Served by maintenance parking only	37,500 sq. ft.
3	BOTANIC GARDEN MAINTENANCE Served by parking lot C	7,200 sq. ft.
4	UPPER CANYON MAINTENANCE Served by parking lot E	7,200 sq. ft.
5	PUMP HOUSE Served by parking lot C	4,400 sq. ft.
CIVIC / MUSEUM		
6	AIR MUSEUM (PROPOSED) Served by parking lots A1, B1 and B2	60,000 sq. ft.
7	AIR MUSEUM HANGER (EXISTING) Served by parking lots A1, B1 and B2	10,540 sq. ft.
8	LIBRARY Served by parking lot C	39,000 sq. ft.
9	CIVIC / MUSEUM 1 Served by parking lot C	81,000 sq. ft.
10	CIVIC / MUSEUM 2 Served by parking lot C	108,400 sq. ft.
11	CIVIC / MUSEUM 3 Served by parking lot C	85,000 sq. ft.
12	BOTANIC GARDEN BUILDING (includes visitor center, gift shop, cafe, etc.) Served by parking lot C and F (special event supplemental parking)	13,900 sq. ft.
13	TEA HOUSE Served by parking lot C	800 sq. ft.
14	CONCESSIONS / RETAIL AT SPORTS PARK (EXISTING) Served by parking lot A1, A2, B1, B2	13,060 sq. ft.
		TOTAL GREAT PARK 468,000 sq. ft.

TOTAL PROPOSED BUILDING SQ. FT. 494,000 sq. ft.

*Ancillary or additive buildings throughout Great Park (See Drawing ID-100.3 for itemized building sq. ft.)

TOTAL ANCILLARY 15,000 sq. ft.

OCGP SPORTS PARK FACILITIES AND COMPONENTS

FACILITY	OCGP COMPONENTS
OPEN SPORTS FIELDS Soccer (11 Regulation fields, 1 outdoor soccer stadium with 400 seats) Soccer Jr. (Overlaid fields)	12 8
BAT & BALL FIELDS Baseball-Little League Softball	4 5
MIXED SMALL COURTS AREA (not shown) Tennis Courts Frontenis / Handball (27.88 x 42.65 feet) Basketball	12 2 15
BUILDINGS Field House (26,000 sf)	1
ACTION SPORTS PARK (20 acres) Skateboard Park (Approx. 30,000 sq. ft.) Water Park (Approx. 10,000 sq. ft.) Multi-use Fields Plaza/Ped. Mall (375,000 sq. ft.)	1 1 1 4 1 (Not A Part)
OTHER SUPPORT FACILITIES Walking/Jogging Track (over 30 miles of internal primary trail system, approx. 6 miles within the sports district, including distance markers) Children's Play Area Youth Play Area Other (Concessions; Lavs; Group Picnic)	Included 2 3 5
SPORTS PARK MAINTENANCE Served by maintenance facility (2)	1



Figure 2-8
OCGP Master Plan
Building Locations

2. Project Description

Circulation System

Figure 2-9 (OCGP Master Plan – Comprehensive Circulation System) identifies the elements of the circulation system proposed for the OCGP Master Plan. Included are: Proposed Conceptual Park Shuttle Stops, Paved and Unpaved Fire and Emergency Access Routes, Paved and Unpaved Maintenance Access Routes, Equestrian Trails, Paved and Unpaved Bicycle and Pedestrian Trails, Paved and Unpaved Pedestrian Trails, proposed Class II (on-street) Trails, and proposed Class I (off-street) Trails. The trail circulation system proposed within the project boundaries connects to the surrounding Heritage Fields neighborhoods as well as existing regional trails. Class II (on-street) bikeways are located along Sand Canyon Road, Irvine Boulevard, Alton Parkway, and Trabuco Road, which provides access to the OCGP. Existing Class I (off-street) regional bicycle and pedestrian trails requiring connections are located in the vicinity of the OCGP as follows:

- Walnut Trail to the west;
- Venta Spur Trail to the west;
- Modjeska Trail to the north; and
- San Diego Creek Trail to the south.

Infrastructure and Grading

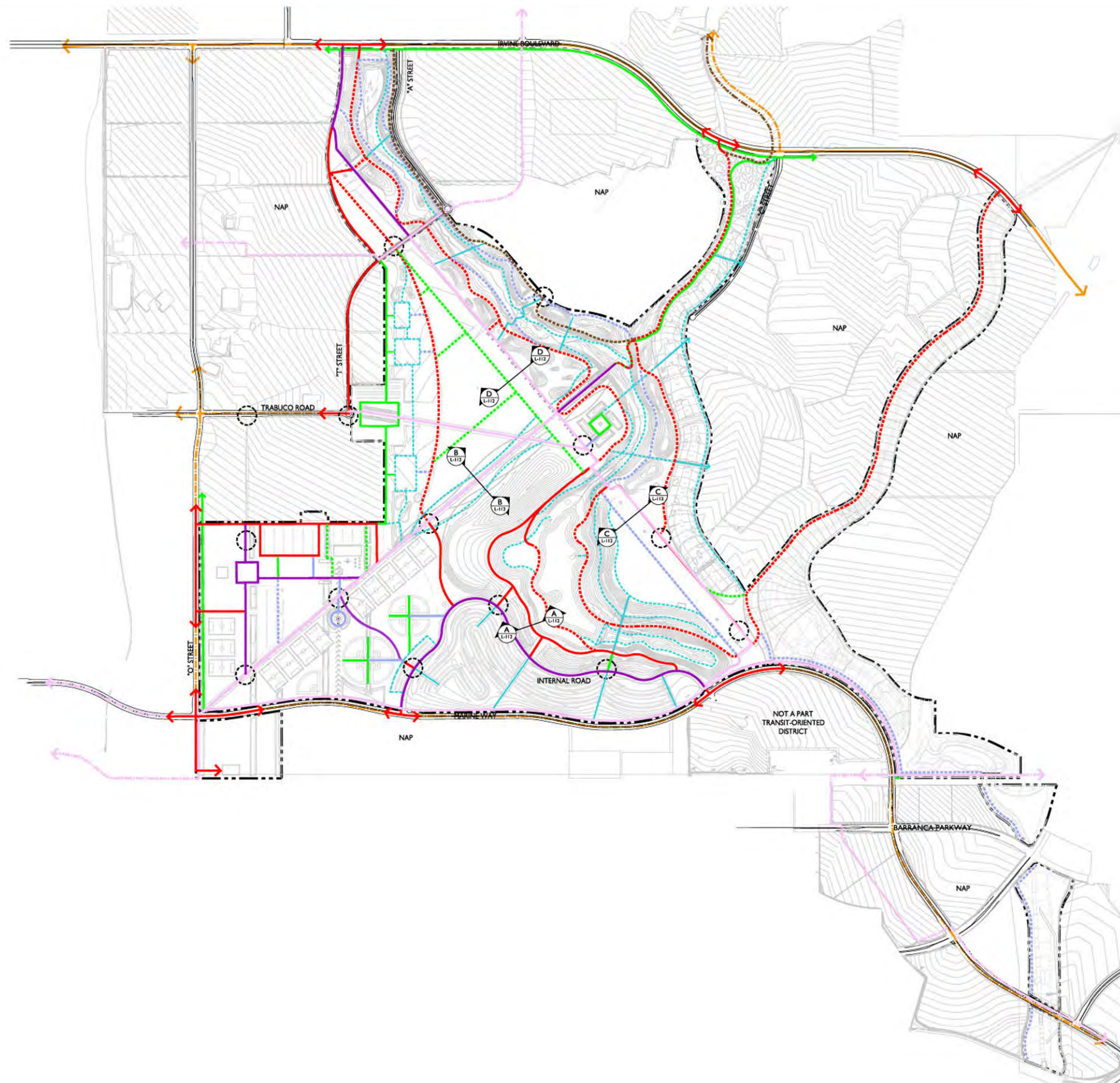
The backbone infrastructure serving the entire property including the Great Park will be constructed by Heritage Fields, El Toro, LLC per the Orange County Great Park Development Agreement. For information regarding the backbone infrastructure components to be constructed, refer to OCGP Final Program EIR Addendum No. 3. With regard to grading, portions of the OCGP Master Plan area will be graded by Heritage Fields, El Toro, LLC. The areas to be graded in this regard are the Agua Chinon and Wildlife Corridor. For information regarding the grading to be undertaken by Heritage Fields, El Toro, LLC, refer to Addendum No. 3. The remainder of the grading within the project site is depicted on **Figure 2-10 (OCGP Master Plan – Grading Plan)**. The volume of grading depicted on Figure 2-10 is an estimated 13.2 million cubic yards and will be balanced on-site.

2.4 DISCRETIONARY APPROVALS

Implementation of the OCGP Master Plan will first require approval of the following discretionary actions by the City of Irvine:

- CEQA related actions and approvals;
- Approval of the OCGP Master Plan (Case No.00434337-PMP);
- Subsequent Master Plan or Park Design applications; and
- Public Facility Review.

The OCGP Final Program EIR (See OCGP FEIR pages 3-29 and 3-30) lists additional discretionary actions to be taken by the City and other public agencies at or as part of the completion of the proposed project.



LEGEND

- PROPOSED CONCEPTUAL PARK SHUTTLE STOPS
- FIRE AND EMERGENCY, MAINTENANCE, BICYCLE AND PEDESTRIAN ACCESS (PAVED)
- FIRE AND EMERGENCY, MAINTENANCE, BICYCLE AND PEDESTRIAN ACCESS (UNPAVED)
 - Decomposed granite
 - Turf block
- MAINTENANCE, BICYCLE AND PEDESTRIAN ACCESS (PAVED)
- MAINTENANCE, BICYCLE AND PEDESTRIAN ACCESS (UNPAVED), MAINTENANCE ONLY IN WILDLIFE CORRIDOR
 - Decomposed granite
 - Turf block
- RIDING AND HIKING ACCESS
 - Decomposed granite
- REGIONAL CLASS I BICYCLE AND PEDESTRIAN TRAIL (WITHIN PARK)
- CLASS I BICYCLE AND PEDESTRIAN TRAIL
- BICYCLE AND PEDESTRIAN ACCESS (PAVED)
- BICYCLE AND PEDESTRIAN ACCESS (UNPAVED)
 - Decomposed granite
 - Turf block
- PEDESTRIAN ACCESS ONLY (PAVED)
- PEDESTRIAN ACCESS ONLY (UNPAVED)
 - Possible material may include decomposed granite, compacted soil, or other material subject to future city approval
- CLASS II ON-STREET BIKE LANE (EXISTING OUTSIDE OF PARK)
- CLASS II ON-STREET BIKE LANE (PROPOSED OUTSIDE OF PARK)
- CLASS I OFF-STREET TRAIL (PROPOSED OUTSIDE OF PARK)
- RIDING AND HIKING TRAIL (PROPOSED OUTSIDE OF PARK)

0 300 600 1200
SCALE 1" = 600'



Figure 2-9
OCGP Master Plan
Comprehensive
Circulation System



Figure 2-10
OCGP Master Plan
Grading Plan

3. Environmental Checklist

3.1 CITY OF IRVINE INITIAL STUDY AND ENVIRONMENTAL EVALUATION

The City of Irvine Environmental Information and Environmental Checklist Forms have been completed by the City and are included on the pages that follow. The Environmental Checklist Form is marked with the City's findings regarding the environmental effects of the proposed OCGP Master Plan in comparison with the findings of the certified OCGP Final Program EIR and subsequent Addenda. This comparative analysis has been undertaken, pursuant to the provisions of the California Environmental Quality Act, to provide the City, in its capacity as Lead Agency, with the factual basis for determining whether any changes in the project, any changes in the circumstances, or any new information requires additional environmental review. The basis for each of the findings listed in the attached Environmental Checklist is explained in Section 4.0, *Discussion of Checklist and Mitigation Measures*, provided later herein.

1. Project Title:

Orange County Great Park Master Plan – Case No. 00434337-PMP

2. Lead Agency Name and Address:

City of Irvine Community Development Department

7000 Trabuco Road, Building 873

Irvine, California 92618

3. Contact Person and Phone Number:

Diane Vu, Senior Planner

(949) 724-7460

4. Project Location:

The project site is located on the former MCAS El Toro site, and is also surrounded by Heritage Fields El Toro, LLC property, which is roughly bounded by SR-133 to the west, Alton Parkway to the east, I-5 to the south and Irvine Boulevard to the north in Planning Areas 30 and 51.

5. Project Sponsor's Name and Address:

Orange County Great Park Corporation

7000 Trabuco Road, Building 873

Irvine, California 92618

6. General Plan Designation: OCGP (Orange County Great Park)

7. Zoning: 1.5 Recreation, 6.1 Institutional, 1.4 Preservation

3. Environmental Checklist

8. Description of Project:

The proposed project is a Master Plan for the conceptual design of the Orange County Great Park, a 1,145-acre multi-use public park facility located on a portion of the former MCAS El Toro military base encompassing passive and active recreational uses, preservation-oriented, and institutional uses. Please refer to Section 2, *Project Description*, for a more detailed description of the proposed OCGP Master Plan.

9. Surrounding Land Uses and Setting (Briefly describe the project's surroundings):

The proposed project area (which consists of Planning Areas 30 and 51) is located in the central portion of Orange County, approximately 45 miles southeast of Los Angeles. The OCGP Master Plan project site and the Heritage Fields development areas that nearly completely surrounds it, is generally bounded by the Irvine Spectrum to the south, City of Lake Forest to the east, the Woodbury residential community to the west, and the future Portola Springs residential development to the north.

The project area is located north of the Santa Ana (I-5) Freeway, east of the Eastern Transportation Corridor (SR-133), and south of the Foothill Transportation Corridor (SR-241). Major roadways bordering the project area include Barranca Parkway to the south, Sand Canyon Avenue to the west, Portola Parkway and Irvine Boulevard to the north, and Alton Parkway to the East

10. Other Public Agencies Whose Approval Is Required (e.g., permits, financing approval, or participation agreement):

None

3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology / Soils |
| <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use / Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation / Traffic |
| <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Mandatory Findings of Significance | |

3.3 DETERMINATION

On the basis of this initial evaluation:

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☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☒ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Diane Vu, Senior Planner

Date

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3.4 EVALUATION OF ENVIRONMENTAL IMPACTS

- 1) *A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).*
- 2) *All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.*
- 3) *Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.*
- 4) *“Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.*
- 5) *Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an affect has been adequately analyzed in an earlier EIR or negative declaration. Section 1 5063(c) (3)(D). In this case, a brief discussion should identify the following:*
 - a) **Earlier Analysis Used.** *Identify and state where they are available for review.*
 - b) **Impacts Adequately Addressed.** *Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.*
 - c) **Mitigation Measures.** *For effects that are “Less Than Significant With Mitigation Incorporated,” describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.*
- 6) *Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.*
- 7) *Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.*

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- 8) *This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.*
- 9) *The explanation of each issue should identify:*
- a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significant.

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I. AESTHETICS: Would the project:						
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway or local scenic expressway, scenic highway, or eligible scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in the visible grading of over 5,000 cubic yards on any 20-acre portion of the project site; or visible cut and fill slope over 25 vertical feet?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in the creation of light spillover and glare effects that present a nuisance to residential land uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Result in the substantial alteration of the existing landform of the site or of a unique topographic feature on the site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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II. AGRICULTURAL RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Mode (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:						
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:						
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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IV. BIOLOGICAL RESOURCES: Would the project:						
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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V. CULTURAL RESOURCES: Would the project:						
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the CEQA Guidelines.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the CEQA Guidelines?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VI. GEOLOGY AND SOILS: Would the project:						
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:						
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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ENVIRONMENTAL ISSUES						
become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?						
d) Be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:						
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter-mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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emergency evacuation plan?						
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VIII. HYDROLOGY AND WATER QUALITY: Would the project:						
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on-site or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of pollutant runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of levee or dam failure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IX. LAND USE AND PLANNING: Would the project						
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
X. MINERAL RESOURCES: Would the project:						
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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XI. NOISE: Would the project result in:						
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, heliport or helistop, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XII. POPULATION AND HOUSING: Would the project:						
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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XIII. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:						
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XIV. RECREATION: Would the project:						
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XV. TRANSPORTATION/TRAFFIC: Would the project:						
a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3. Environmental Checklist

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus stops/routes, bicycle lanes, sidewalks, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XVI. UTILITIES AND SERVICE SYSTEMS: Would the project:						
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project (including large scale developments as defined by Public Resources Code Section 21151.9 and described in Question No. 20 of the Environmental Checklist) from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3. Environmental Checklist

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with Federal, State, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Result in a need for new systems or supplies, or substantial alterations related to electricity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Result in a need for new systems or supplies, or substantial alterations related to natural gas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Result in a need for new systems or supplies, or substantial alterations related to telephone service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
k) Result in a need for new systems or supplies, or substantial alterations related to television service/reception?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XVII. MANDATORY FINDINGS OF SIGNIFICANCE						
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3. Environmental Checklist

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4. Discussion of Checklist and Mitigation Measures

4.1 AESTHETICS

4.1.1 Environmental Setting

The OCGP FEIR addressed, in detail, the potential visual impacts associated with the development of the former MCAS El Toro. The OCGP FEIR discussed the project's visual setting associated with its location adjacent to various arterial highways and state and federal highways. None of these roadways are designated County or State scenic highways, although Sand Canyon Avenue is designated as a highway with rural/natural character. The City's General Plan also designates the Santa Ana (I-5) Freeway as an urban character Scenic Highway. Generally, views of the former military base are from the surrounding highways. From these highways, a variety of land uses, structures, and facilities of differing ages, sizes, and architectural styles may be viewed. Though agricultural areas are located adjacent to and within the base, the predominant features are associated with the military use of the property, including runways, aprons, hangars, warehouses, barracks housing, recreational facilities, golf course, single-family housing, offices, and commercial structures. The City of Lake Forest and the James A. Musick Branch Jail are located to the east; Irvine Spectrum abuts the former base along the eastern and southern boundaries; and existing and developing residential communities are located to the north and west. Further to the south are the residential communities of the Cities of Laguna Woods and Laguna Hills. These communities are at higher elevations and therefore have panoramic views of the project.

4.1.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR discussed the potential aesthetic effects associated with the development of Planning Areas 30 and 51, under the Overlay Plan, and found that future development of these two planning areas would introduce new sources of light within the project area. These sources include street lighting along planned roadways and various forms of exterior lighting, including security lighting, parking lots, educational facilities, institutional and commercial developments, and lighting associated with athletic fields. The OCGP FEIR concluded that significant light impacts may occur should proposed light sources be directed into or located near existing or planned residential uses, which are sensitive to light intrusion during nighttime hours. The OCGP FEIR further concluded that the proposed mitigation measures for the project would reduce potentially significant light impacts to less than significant levels.

With regard to the other aesthetics-related impact significance thresholds presented in the OCGP FEIR, no other significant or potentially significant aesthetics impacts were identified. These other thresholds primarily concern visual aesthetics impacts and include such evaluative factors as view-shed obstruction or impairment, landform alteration, and the degradation of valued or unique scenic resources or features.

4.1.3 Impacts Associated with the OCGP Master Plan

Overall, exterior light sources associated with the proposed OCGP Master Plan fall into the same categories previously identified in the OCGP FEIR, such as security lighting, parking lot lighting, lighting associated with cultural and institutional structures and/or venues, and athletic field lighting. As such, impacts associated with nighttime illumination attributable specifically to the project would area would be within the scope of that already addressed in the OCGP FEIR. The

4. *Discussion of Checklist and Mitigation Measures*

OCGP Master Plan does identify one potential source of nighttime illumination not previously identified in OCGP FEIR that of illuminated iconic park elements, such as the helium tethered balloon attraction. No other iconic elements were identified. In this regard, it is noted that such lighting is focused on the iconic element and not away from it. It is further noted that lighting of this type would exhibit a degree of luminosity substantially lower than some of the other types already considered in the OCGP FEIR, such as lighting associated with athletic fields. As a consequence, it is concluded that the extent of any impact associated with the illumination of iconic park elements has already been adequately addressed in the OCGP FEIR.

The overall OCGP project evaluated in the OCGP FEIR essentially established the City's land use policies and development controls (i.e. General Plan and Zoning) to which all future development within the overall OCGP boundaries would be subject. The OCGP Master Plan represents the first step toward formalizing a specific development template in accord with those same policies and controls. In doing so, the level of detail regarding attributes of the Great Park's physical development depicted in the proposed OCGP Master Plan is more refined than the programmatic land use plan profiles provided in the OCGP FEIR. This is particularly the case with regard to grading and landform alteration.

As indicated in previous Section 4.1.2, with regard to the non-lighting related significance thresholds presented in the OCGP FEIR, no other significant or potentially significant aesthetics-related impacts were identified. The OCGP FEIR also noted that these other thresholds related primarily to determining impacts on visual quality based upon a variety of measurable factors that either directly or indirectly involves some aspect of construction-related earth movement activities. With regard to the proposed OCGP Master Plan, further discussion of two specific thresholds of this nature is merited. The two significance thresholds are framed in the two questions that follow. The thresholds themselves are highlighted - Will the proposed project: 1) result in the *visible grading of over 5,000 cubic yards on any 20-acre portion of the project site; or visible cut and fill slope over 25 vertical feet*; and 2) result in the *substantial alteration of the existing landform of the site or of a unique topographic feature on the site*?

The OCGP Master Plan indicates that mass grading associated with Great Park development will involve the movement of more than thirteen million cubic yards of earth materials within the Master Plan boundaries, excluding, as previously described in Section 2.3.2, *Project Features*, the Agua Chinon and Wildlife Corridor. Given this, visible grading of more than 5,000 cubic yards of earth materials on any portion of the Great Park is highly likely. The proposed OCGP Master Plan comprises several physical elements that by their nature, create, re-establish or enhance natural environments that will necessitate the creation of numerous cut and fill slopes, many of which will exceed 25 feet in height. The relevant Master Plan elements in the foregoing regards are the Upper Canyon (a planned new manufactured environment), the Agua Chinon (a planned re-established environment), and the Wildlife Corridor (an enhanced habitat environment).

It is noted that, at present, the predominance of land area comprising the OCGP Master Plan is relatively flat with a slight (1.5 to 2.5 percent) west and southwest trending down gradient. Constructing the aforementioned Master Plan features within the Great Park will both incise into, and create undulating berms atop, the project site's relatively flat topographic expression. For example, construction of the Upper Canyon will involve a serpentine linear excavation approximately 30 feet below-grade with both sides of the excavated alignment lined with berms up to 30 feet in height. Overall, the Upper Canyon is designed to be two miles long, up to 60 feet

4. *Discussion of Checklist and Mitigation Measures*

deep, and more than 70 feet wide at its narrowest point before it widens near the southern end to accommodate the Cultural Terrace and adjacent two-tiered 26.2-acre lake.¹

During grading operations, some residents within Portola Springs may have distant views of the project site since they are located at a higher elevation. In addition, travelers on nearby freeways including the I-5, SR-133, and SR-241 will have distant views of the project site. However, during construction, slopes and soil stockpiles will be hydroseeded to control erosion in accordance with the City's Grading Ordinance and NPDES requirements. As a result, slopes and soil stockpiles will be similar in appearance to native grassland and no significant aesthetic impacts are anticipated during construction.

Notwithstanding the foregoing, it would appear that implementation of the proposed OCGP Master Plan will exceed the aforementioned screening thresholds of potential significance. However, due to the nature of and reasons for those exceedances, and due to the fact that the total area of disturbed land (as opposed to the total volume of grading) will not materially differ from that envisioned in the OCGP FEIR, implementation of the project will not result in any significant aesthetic impact. The basis for this conclusion is, among other things, rooted in understanding the context in which the aforementioned thresholds normally apply. Essentially, the foregoing thresholds are employed to evaluate the potential impacts of grading that is done principally for a "utilitarian purpose" such as the construction of homes, office buildings, or shopping centers. In that circumstance, the grading arguably results in a degradation of the existing environment's unique physical characteristics (including, valued natural attributes and topographic variability). In contrast, here the earth movement is not for a "utilitarian purpose"; rather, it is largely designed to create aesthetically pleasing topographic variability where none currently exists. Put another way, the earth movement is in-and-of-itself, the development. Even in its initial stages, when comprised of little more than bare articulated topographic expressions, that development will constitute an aesthetic enhancement over existing conditions. The degree of that aesthetic improvement over existing conditions will only improve as the Master Plan implementation progresses and varied habitat environments and activity nodes for the visiting public, replete with lush vegetation and numerous multi-faceted and variable hard- and soft-scape recreational amenities will come into existence.

Further, it is acknowledged that while the landforms created by project-related grading will be visible to the interested observer, the City concludes that the long-term beneficial aesthetic impacts attributable to OCGP Master Plan implementation more than offset any short-term adverse grading-related aesthetic impacts, especially given the absence of any significant visual resources in the area to be graded. Given the foregoing, the findings of the OCGP FEIR and subsequent addenda regarding aesthetic impacts remains valid when applied to the OCGP Master Plan as currently proposed.

Major FEIR Revisions Not Required. Based on the analysis of the OCGP Master Plan there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The OCGP Master Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

¹ The Master Plan includes a more refined definition of the park project, which includes features such as the Upper Canyon, Lower Canyon, and Lake that will require a substantial amount of grading that was not specifically discussed in the Program EIR. However, as detailed in this Addendum, that more refined project description does not yield adverse aesthetic impacts.

4. *Discussion of Checklist and Mitigation Measures*

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the approved OCGP FEIR.

4.14 Mitigation from the OCGP FEIR and Applicability to the OCGP Master Plan

The OCGP FEIR identified two mitigation measures, which, if fulfilled, would reduce the aesthetic effects of development under the Overlay Plan (as revised in Addendum No. 2; the “Revised Overlay Plan”) to a less than significant level.

- A1 Prior to issuance of building permits, lighting plans and signage plans for new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent residential areas occurs.
- A2 Prior to the issuance of building permits, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.

The timing of these mitigation measures has been changed from prior to the issuance of grading permits to prior to the issuance of building permits. These measures are typically applied at the issuance of building permits because they are associated with physical development of a site, not the grading of a site.

4. *Discussion of Checklist and Mitigation Measures*

4.2 **AGRICULTURAL RESOURCES**

4.2.1 **Environmental Setting**

The OCGP FEIR described the Farmland Mapping and Monitoring Program (FMMP Program) of the California Department of Conservation Division of Land Resources Protection. Under the FMMP Program, classifications of agricultural lands present within the site are as follows:

- **Prime Farmland:** Land which has the best combination of physical and chemical features able to sustain long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for production of irrigated supply needed to produce sustained high yields. Land must have been used for production of irrigated crops at some time during the previous two map updates.
- **Farmland of Statewide Importance:** Similar to Prime Farmland, except this land has minor shortcomings such as greater slopes or less ability to store soil moisture than Prime Farmland. This land has minor shortcomings, such as greater slopes or less ability to store soil moisture than Prime Farmland. Land must have been used for production of irrigated crops at some time during the previous two map updates.
- **Unique Farmland:** Lesser quality soils used for the production of the State's leading crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climate zones in California. This land is used for the production of specific high economic value crops such as oranges, olives, avocados, rice, grapes, or cut flowers. Land must have been cropped at some time during the two previous maps updates.
- **Farmland of Local Importance:** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. **Figure 4-1 (Agricultural Resources)** depicts the farmland classifications within the project site and surrounding area. The OCGP FEIR identifies approximately 659 acres of designated Prime Farmland, 70 acres of designated Unique Farmland, and 99 acres of designated Farmland of Statewide Importance. The Orange County Board of Supervisors has not designated any farmland as being of "Local Importance."

City of Irvine Policies and Programs

The City of Irvine General Plan Objective L-10, as amended in 2002 and presented in the OCGP FEIR, includes the following policies to "encourage the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development":

Policy (a): Provide for farming opportunities in the community, where feasible and appropriate, through an Agricultural Legacy Program facilitating limited-scale agricultural operations and program on public lands. The program may include components such as edible landscape, metro-farming, heritage farming, model farming, education and community service farming and other farm or farm market program. Location for implementation of the Agricultural Legacy Program to be considered should, at a minimum, include:

- designated open space spine network,
- designated open space areas not subject to the Natural Community Conservation Plan (NCCP), and,
- other appropriate publicly-owned lands.

4. *Discussion of Checklist and Mitigation Measures*

Policy (b): Consider creating a “working model” farm to act as a center for education and enjoyment of all age groups pursuant to the Agricultural Legacy Program in conjunction with the City’s planning efforts concerning the reuse of MCAS El Toro, or with the South Coast Research Extension owned by UC Regents.

Policy (c): Permit agricultural use of land which is unsuitable for building because it is within flood plains, or is subject to hazards to public health, safety, and welfare or similar constraints precluding development. Conversion from agricultural use may be allowed where the identified hazard conditions have been eliminated.

Policy (d): Permit agricultural uses, on an interim bases, on land designated for development, and consider agricultural uses as part of the City’s planning efforts for the re-use of MCAS El Toro.

Policy (e): Encourage and support federal and state legislation proposed for the purpose of preservation of agricultural lands which are compatible with the City’s goals and objectives.

Policy (f): Allow for conversion of interim and permanent agricultural uses to development to provide land for the construction of housing units consistent with the Land Use and Housing Elements, and the development of commercial and industrial buildings consistent with the provision of job opportunities as described in the Land Use Element, where such conversion does not conflict with other L-10 policies.

Policy (g): Pursue the open space policies contained in the Conservation and Open Space Element and address any open space or aesthetic impacts from the conversion of interim and permanent agricultural uses to development as part of the City’s existing policies for the preservation of open space and existing policies for mitigation of views and aesthetic impacts under the policies in the Conservation and Open Space Element.

4.2.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR determined that the Revised Overlay Plan would preserve in perpetuity 303 acres² of land for agricultural use, of which 251 acres are classified as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. The locations of the 303 acres of permanent agricultural land are listed below and the Farmlands Map can be found in the OCGP FEIR as Figure 5.8-1:

- **Planning Area 30:** 13 acres within Planning Analysis Zone (PAZ) 26; and
- **Planning Area 51:** 90 acres within PAZ 4; and 200 acres within PAZ 1.

The Revised Overlay Plan also resulted in the permanent loss of 802 acres of designated farmland comprised of 651 acres of Prime Farmland, 63 acres of Unique Farmland, and 88 acres of Farmland of Statewide Importance. This impact was considered significant and unavoidable.

² Please note that there is a scrivener’s error within the OCGP FEIR: Table 1-2 on page 1-8 and Table 3-4 on pages 3-12 and 3-13 identify the total agricultural land as 303 acres; however on page 5.8-10 the agricultural use acreage is noted as 307.



Source: California Department of Conservation, Farmland Mapping and Monitoring Program, 2000.

- | | |
|---------------------------------------|--------------------------------|
| --- Orange County Great Park Boundary | Other Land |
| Urban and Built-Up Land | 17C Planning Area Zone |
| Grazing Land | T Irvine Transportation Center |
| Prime Farmland | |
| Farmland of Statewide Importance | |
| Unique farmland | |



Figure 4-1
Agricultural Resources

Note: Exhibit from previous version.
Roadway configuration has changed.

4. *Discussion of Checklist and Mitigation Measures*

It was determined the Revised Overlay Plan resulted in a significant impact associated with the conversion of agricultural land to nonagricultural use. The OCGP FEIR noted the context of agricultural production in Orange County—including development pressures that have contributed to the decrease in agricultural production in the County over time—which suggested that conversion of agricultural land to urban uses would occur with or without the development of the Overlay Plan.

4.2.3 Impacts Associated with the OCGP Master Plan

The OCGP Master Plan will affect the same proportion of the 802-acres of lost designated farmland as articulated in the OCGP FEIR. Consequently, its contribution to the significance and unavoidability of this impact remains. Concomitantly, the OCGP Master Plan will also account for the same proportion of agricultural land converted to nonagricultural use as articulated in the OCGP FEIR.

While a contributor to the aforementioned significant and unavoidable impacts concerning the loss of designated farmland and the permanent conversion of agricultural lands to other uses, it is noted that the OCGP Master Plan has incorporated a variety of agriculture-oriented features into its current design. These include, but are not limited to: 48.3 acres of planted citrus and avocado groves interspersed throughout the Orchard Parking Park District; California native gardens, and food and health gardens within the Botanical Garden Park District; citrus, nut and avocado orchards within the Great Lawn/Fields Park District, and fruit and nut trees within the Bosque Park District.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the approved OCGP FEIR. The OCGP Master Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the approved OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to the OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified and the addenda were approved, indicating that the project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant effects on agricultural resources identified in and considered by the approved OCGP FEIR.

4. Discussion of Checklist and Mitigation Measures

4.2.4 Mitigation from the OCGP FEIR and Applicability to the OCGP Master Plan

Mitigation measures AG1 - AG3 would be implemented in conjunction with master plan review and subsequent development permits. The project would neither change these mitigation measures nor their application to future developments.

AG1 In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to listing agricultural operators, City of Irvine Standard Discretionary Case Condition B.4 and City of Irvine Subdivision Condition 3.4 regarding disclosure statements shall be amended to include the following for subdivisions proposed adjacent to existing agricultural operations:

Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:

- Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants

AG2 Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.

AG3 Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operation and adjacent urban uses.

4. Discussion of Checklist and Mitigation Measures

4.3 AIR QUALITY

4.3.1 Environmental Setting

The OCGP FEIR described the existing air quality regarding the following regulated pollutants: ozone (O₃), carbon monoxide (CO), suspended particulate matter (PM₁₀), nitrogen oxides (NO_x), sulfur dioxide (SO₂), lead (Pb), volatile organic compounds (VOC), and reactive organic gases (ROG). The South Coast Air Basin (SCAB) is described as a non-attainment area for O₃, CO, and PM₁₀; annual maximum concentrations of O₃, CO, PM₁₀, and SO₂ exceeded both federal and state standards in some or all areas in the SCAB during the reporting period (2000). In contrast, standards for nitrogen dioxide (NO₂), SO₂, and Pb were not exceeded during the reporting period. The OCGP FEIR also noted the pending promulgation by the U.S. Environmental Protection Agency (EPA) and California Air Resources Board of standards for PM_{2.5} (particulate matter less than 2.5 microns in diameter). The standards are provided in **Table 4-1 (Federal and State Standards for PM_{2.5})** below.

Table 4-1
Federal and State Standards¹ for PM_{2.5}

Averaging Time	Federal Standards	California Standards ²
Annual Arithmetic Mean	15 µg/m ³	12 µg/m ³
24-Hour	65 µg/m ³	No Separate Standard
Sources: ¹ www.epa.gov/pmdesignations/state/California.htm [June 5, 2006]. ² 17 CFR §70200, Table of Standards.		

The California Air Resources Board adopted the annual standard identified above but has postponed establishing a 24-hour standard for PM_{2.5}. EPA has identified several counties, including Orange County, as PM_{2.5} non-attainment areas. EPA is in the process of responding to comments on related regulations. At the local level, the South Coast Air Quality Management District (SCAQMD) is in the process of developing a methodology for calculating PM_{2.5} and PM_{2.5} significance thresholds for the purpose of analyzing local and regional air quality impacts in CEQA documents. A draft communication issued in May 2006 by the SCAQMD to its working group indicated that the methodology for calculating PM₁₀ could also be used to calculate PM_{2.5}.

4.3.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR reported that construction and operation of the overall OCGP project pursuant to the development parameters set forth in the adopted Overlay Plan would result in significant impacts on air quality. With regard to construction, the OCGP FEIR indicated that demolition of existing structures, including 31.2 million cubic feet of concrete from removal of the runways, site

4. *Discussion of Checklist and Mitigation Measures*

grading, and development would generate emissions at levels above the significance thresholds for ROG, NO_x, and PM₁₀. The OCGP FEIR described the construction air impacts after mitigation as significant and unavoidable. (Refer to OCGP FEIR pp. 5.3-16 through 5.3-20.)

The operations-related air quality impacts associated with build-out under the adopted Overlay Plan included emissions associated with energy consumption and vehicular trips. The Urban Emissions (URBEMIS) 2001 model and EMFAC7F (motor vehicle emission factor model) were used to estimate air emissions associated with operation of the project site through the analysis year post-2025. The operations air emissions for project area and vehicular mobile sources were estimated at above the significance thresholds for ROG, NO_x, CO, and PM₁₀, and described in the OCGP FEIR as significant after mitigation, and an unavoidable consequence of the project (adopted Plan). No other construction- and operations-related significant air quality impacts were identified in the OCGP FEIR. (Refer to OCGP FEIR pp. 5.3-20 through 5.3-58, and 7-19.)

In addition, the OCGP FEIR disclosed the results of the CO “hotspots” analysis, in which CO concentrations were predicted for intersections with a LOS of “D” or higher at a.m. and p.m. peak hours using the CALINE 4.0 model and EMFAC7F motor vehicle emission factors. No intersections in the traffic study area were expected to result in one-hour and eight-hour CO concentrations above the state standard of 20 parts per million (ppm) for one hour concentrations and 9 ppm for eight hour concentrations (Refer to OCGP FEIR pp. 5.3-31 through 5.3-53).

4.3.3 Impacts Associated with the OCGP Master Plan

Operations Phase

Among the various sources of a project’s operations-phase emissions, those attributable to mobile sources (i.e. vehicular traffic) comprise the largest proportion by far and is a function of both the number and trip length characteristics of vehicle trips directly and indirectly associated with the project under consideration. As discussed in preceding Section 4.3.2, OCGP FEIR estimates of the daily mobile source emission volumes attributable to OCGP project implementation, were based on traffic volumes and average trip lengths associated with build out of the overall OCGP project pursuant to adopted Overlay Plan development parameters. The development parameters for the OCGP project as a whole under the Overlay Plan were provided in OCGP FEIR Table 3-4 beginning at Page 3-12.

In the foregoing regard, previous **Table 2-1** herein identifies the General Plan land use designations, Zoning Districts, attendant Planning Area Zones and acreages, allowable land uses, and the types and quantities of development solely within the OCGP Master Plan portion of the overall OCGP project and is based exclusively on data provided in the aforementioned OCGP FEIR Table 3-4. It is noted that they have remained essentially unchanged since the OCGP Final Program EIR was certified in 2003. Furthermore, a review of the current OCGP Master Plan proposal indicates that all of the land use types and building intensities exhibited are within the scope of the development parameters identified in the subject table.

As a consequence, since future development the OCGP Master Plan portion of the overall OCGP project is consistent with the development parameters that served as the basis for determining the operations phase-related mobile source emissions provided in the OCGP FEIR, the results of the operations phase-related emissions provided in the OCGP FEIR adequately characterize the potential air quality effects of the project and further analysis is neither warranted nor required.

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Construction Phase

With regard to OCGP Master Plan construction, more precise and refined information regarding earth movement quantities, locations and anticipated demolition activities and timeframes than what was known and analyzed in the July 2003 OCGP FEIR has become available. As a consequence, PCR Services Corporation prepared a report in which they conducted an analysis to determine whether the projected emissions associated with the more recent, precise and refined information regarding OCGP Master Plan earthmoving activities would be consistent with the emissions inventory assumed in the certified OCGP FEIR and within the envelope of the original air quality impact analysis. The subject report is provided herein as **Appendix C**. The following assumptions regarding OCGP Master Plan area grading (excluding the Agua Chinon and Wildlife Corridor) were provided by Duke Dunn with Gafcon Inc. and employed in the analysis:

- Earthmoving activities to total 13.23 million cubic yards
- Earthmoving activities to start in 2008
- Equipment Mix - 12 scrapers, 3 slope cats, 2 compactors, 1 motor grader, 2 rubber tire dozer, and 2 other pieces of equipment (e.g., water trucks)

The analysis was conducted using SCAQMD's recommended CEQA emissions inventory model URBEMIS. A new version of URBEMIS (URBEMIS 2007 Version 9.2) was released in June 2007 and was used in this analysis in accordance with SCAQMD's most recent recommendations for preparation of air quality analyses. The new version of URBEMIS is considered a major overhaul to URBEMIS 2002. It incorporates the current version of California Air Resources Board's OFFROAD model (OFFROAD 2007) construction equipment emission factors and reflects a better estimate of the population, activity, and emissions estimate of the varied types of off-road equipment. The emissions estimates from the proposed grading equipment mix are provided in **Table 4-2 (Comparison of Daily Construction Emissions for OCGP Construction Activities)**.

Table 4-2

Comparison of Daily Construction Emissions for OCGP Construction Activities

Emissions Inventory	Emission Totals, lbs/day				
	VOC	NO _x	CO	SO _x	PM ₁₀
Certified EIR	4,660 ^b	840	280	40	1,440
OCGP Site Grading	37	343	174	<1	663
SCAQMD Significance Threshold	75	100	550	150	150
Over (Under)	(38)	243	(376)	(149)	513
Significant for Certified FEIR?	Yes	Yes	No	No	Yes
Significant for OCGP Equipment Mix?	No	Yes	No	No	Yes
^a Compiled using the URBEMIS2007 emissions inventory model.					
^b VOC emissions presented in the Certified EIR are for application of architectural coatings. VOC emissions for site grading would result in a slight decrease based on the other pollutant trends.					
Source: PCR Services Corporation, 2007.					

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As shown in **Table 4-2**, the OCGP equipment mix results in an overall decrease in daily emissions associated with equipment exhaust and fugitive dust PM₁₀, as compared to those levels estimated for the FEIR. The equipment mix identified above could complete the grading associated with the Upper Canyon, Lake, and remaining components of the OCGP Master Plan within 10 months, which is well within the assumptions contained in the OCGP FEIR. No new significant impacts and no substantial increase in the severity of previously identified impacts would occur as a result of implementation of the OCGP equipment mix. Addendum No. 4 does not address other construction activities, such as painting and paving, which resulted in the VOC emissions reported previously in the FEIR.

Concurrent Grading and Demolition Activities

The site grading and demolition will most likely occur in a phased approach, over the course of numerous years. PCR also conducted an analysis to determine whether the construction emissions inventory for a maximum plausible worst case day (consisting of concurrent grading of the OCGP Master Plan along with site grading activities for Heritage Fields, the Agua Chionon, and the wildlife corridor and runway demolition activities) is consistent with the emissions inventory presented in the certified FEIR and is within the envelope of the original air quality impact assessment.

Assumptions were developed and refined consistent with the requirements for the proposed demolition and grading activities. A total of 31.2 million cubic feet of concrete and asphalt would be generated from removal of the runways with an average daily amount of 20,000 cubic feet. The equipment mix would be comprised of: (Source: Duke Dunn with Gafcon Incorporated)

- 4 off-highway trucks, 1 excavator, 1 motor grader, 1 water truck, 1 rubber tired dozer, 2 rubber tired loaders, 2 portable concrete crushing plants, and 2 other pieces of equipment.

The equipment mix and grading assumptions for Heritage Fields (including the wildlife corridor and Agua Chionon) were based on information provided in Addendum No. 3 to the OCGP FEIR (SCH #2002101020). Heritage Fields would require a total of 7.1 million cubic yard (maximum daily 47,000 cubic yards) of earth moving activities. The equipment mix would be comprised of:

- 10 scrapers, 4 compactors, 6 rubber tire dozers, 1 tractor /loader/backhoe, and 3 other pieces of equipment (e.g., water trucks).

The equipment mix and grading assumptions for the OCGP Master Plan that could occur concurrent with demolition activities and grading of Heritage Fields are provided above. The analysis was conducted using SCAQMD's recommended CEQA emissions inventory model URBEMIS 2007 Version 9.2. The emission inventory prepared for Addendum No. 3 used the previous version of URBEMIS (URBEMIS 2002) and was therefore updated using URBEMIS 2007. As discussed above, the new version of URBEMIS is considered a major overhaul to URBEMIS 2002. The details of these calculations are shown in the attachments to this technical memorandum. The emissions from the concurrent construction activities are provided in **Table 4-3 (Comparison of Daily Construction Emissions for Concurrent OCGP Construction Activities)**.

As shown, concurrent grading and demolition activities results in a slight decrease in equipment exhaust emissions and fugitive dust PM₁₀ emissions, as compared to those levels estimated for the FEIR. While CO emissions show an increase, it is a function of updated emission factors in the current version of URBEMIS2007 and not a substantial change in the construction intensity. Regardless, CO emissions are less than the SCAQMD significance threshold and no new significant impacts and no substantial increase in the severity of previously identified impacts would occur as a result of concurrent construction activities. It should be noted that these

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emission estimates do not address other construction activities, such as painting and paving, which resulted in the VOC emissions reported previously in the FEIR.

Table 4-3

Comparison of Daily Construction Emissions for Concurrent OCGP Construction Activities

Emissions Inventory	Emission Totals, lbs/day				
	VOC	NO _x	CO	SO _x	PM ₁₀
Certified EIR	4,660 ^b	840	280	40	1,440
OCGP Site Grading	37	343	174	<1	663
Heritage Fields Site Grading	37	332	171	<1	663
Runway Demolition	17	165	66	<1	76
Total	91	839	411	<1	1,402
SCAQMD Significance Threshold	75	100	550	150	150
Over (Under)	16	739	(139)	(149)	1,252
Significant for Certified FEIR?	Yes	Yes	No	No	Yes
Significant for concurrent activities?	Yes	Yes	No	No	Yes

^a Compiled using the URBEMIS2007 emissions inventory model.

^b VOC emissions presented in the Certified EIR are for application of architectural coatings. VOC emissions for site grading would result in a slight decrease based on the other pollutant trends.

Source: PCR Services Corporation, 2007.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the approved OCGP FEIR. The OCGP Master Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the approved OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to approved OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, indicating that: (1) mitigation measures or alternatives

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previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant air quality effects identified in and considered by the approved OCGP FEIR and subsequent Addenda.

4.3.4 Mitigation from the OCGP FEIR and Applicability to the OCGP Master Plan

The OCGP FEIR identified mitigation measures AQ 1 through AQ 5, which reduce the air quality effects of construction and operations of development under the adopted Plan. However, as noted above, the OCGP FEIR found that short-term and long-term air quality impacts would remain significant and unavoidable. The measures are applicable to future development under the project.

AQ1 Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors; etc.; shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.

AQ2 Prior to the commencement of construction activities required to demolish and/or remove existing DON structure, including, runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plans shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Evaluate the availability and use, if available, of low-emission (i.e., methanol- or natural gas-powered) construction equipment instead of diesel for each construction phase.
- Water exposed soils at least twice daily and maintain equipment and vehicle engines in good condition and in proper tune.
- Wash off trucks leaving the site.
- Replace ground cover on construction sites when it is determined that the site will be undisturbed for lengthy periods.
- Reduce speeds on unpaved roads to less than 15 miles per hour.

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- Halt all grading and excavation operations when wind speeds exceed 25 miles per hour.
- Suspend all emission generating activities during smog alerts.
- Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible.
- Properly maintain diesel-powered on-site mobile equipment.
- Sweep streets at the end of the day if substantial visible soil material is carried over to the adjacent streets.
- Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible.
- Use of low-VOC asphalt.
- Cover all trucks hauling dirt, sand, soil or other loose material to and from the site.
- Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic.
- Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible.
- Reroute construction trucks away from congested streets, whenever feasible.
- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible.

AQ3 Prior to the issuance of building permits for any future development, the applicant shall submit, and the Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Utilize built-in, energy-efficient appliances to reduce energy consumption and emissions.
- Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions.
- Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible.
- Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning.

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- Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible.
- Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods.
- Centralize space heating and cooling for multiple-family dwelling units and commercial space.
- Orient buildings north-south for reducing energy-related combustion emissions.
- Use solar energy, when feasible.
- Use high rating insulation in walls and ceilings.

AQ4 At the time of residential and commercial lease and sales agreements, future sales information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find employment nearby.

AQ5 At the time of residential and commercial lease and sales agreements, the applicant shall demonstrate to the satisfaction of the Director of Redevelopment that future employment generating nonresidential development shall include measures to reduce vehicle trips including: the promotion of carpool incentives and alternative work schedules, easy access to public transit systems, trail linkages between uses, low emissions vehicles fleets, and the provision of on-site facilities such as banking and food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.

Timing has been added to the mitigation measures above to be able to effectively implement these measures. As modified, the timing language includes the following, "At the time of residential and commercial lease and sales agreements, future sales..."

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4.4 **BIOLOGICAL RESOURCES**

4.4.1 **Environmental Setting**

The OCGP FEIR described the biological resources within Planning Areas 30 and 51, including a 995-acre parcel of land in the easternmost portion of Planning Area 51 retained in federal ownership and designated as both “habitat reserve” and a part of the Orange County Central-Coastal Sub-region Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP). The areas outside the habitat reserve were described as: 1) providing minimal native or undisturbed habitat, and, 2) consisting of agricultural, ornamental, and domestic landscapes.

The OCGP FEIR identified nine vegetative communities within the project site, including Venturan-Diegan sage scrub, southern cactus scrub, chaparral, woodland, riparian scrub, grassland, open water, agriculture, and predominately disturbed or developed areas. Several sensitive plant species and a large number of mature trees also were identified as potentially occurring within the project site. The sensitive plant species potentially occurring in Planning Areas 30 and 51 include the southern tarplant, Palmer’s grapplinghook, many-stemmed dudleya, Coulter’s Matilija poppy, Catalina mariposa lily, and intermediate mariposa lily. The OCGP FEIR also noted the Coulter’s saltbush, Laguna Beach dudleya, San Fernando Valley spineflower, and the Lewis’s evening-primrose as having a moderate potential for occurrence. Species with a low potential for occurrence include the Los Angeles sunflower, south coast saltscale, Santa Monica Mountains dudleya, heart-leafed pitcher sage, coast wooly-heads, slender-horned spineflower, Santa Barbara morning glory, tecate cypress, and salt spring checkerbloom.

The OCGP FEIR documented an observation made of one sensitive wildlife species, a burrowing owl. This individual, observed during the conductance of protocol focus studies for a nearby development proposal, was outside the habitat reserve at the southwest end of Planning Areas 30 and 51 along Serrano Creek. Forty other sensitive wildlife species or species of local concern were identified as having a potential to occur on the site.

The OCGP FEIR also describes Wildlife Corridor Concept Plan that would be incorporated into the eastern portion of the project site (Refer to pp. 5.9-9 through 5.9-14 of the OCGP FEIR) and explains the guidelines pursuant to which the ultimate corridor will be designed and constructed. The subject guidelines are primarily concerned with the creation and re-vegetation of wildlife habitats that would flourish in the proposed areas and serve as protective cover for target wildlife species that will presumably utilize the proposed corridor. A preliminary design concept for the creation and/or re-vegetation of the proposed route has also been prepared which is consistent with the guidelines described below (Draft Irvine Wildlife Corridor Master Plan, November 2002). The draft recommends a series of actions to improve the environmental quality for wildlife:

- Creation (establishes historical ecosystems on lands that did not previously support that ecosystem or on severely altered sites)
- Revegetation
- Reduce the amount of noise pollution and urban influence.
- Remove and restore the unnecessary developed (paved) areas within the corridor right-of-way.
- Create a protective habitat along the entire length of the corridor.
- Apply minimum height/width requirements based on the specific wildlife species.

OCGP FEIR Mitigation Measure BIO3, which continues to apply to Addendum No. 4, ensures that the City of Irvine will continue to work with State and federal agencies to implement the re-

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vegetation/restoration plan necessary to create a viable wildlife corridor within the project area. The City has already engaged in this process as is demonstrated through the preparation of the Draft Irvine Wildlife Corridor Master Plan, which is independent of this project.

4.4.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR concluded that implementation of the overall OCGP project could result in the occurrence of the following potentially significant effects:

- The southern tar-plant, a federal species of concern, might be adversely affected by project development.
- Although very limited in aerial extent and highly disturbed, there exist isolated riparian habitat remnants that could be adversely impacted by project implementation.

The project site contains a large number of trees, many of them mature, representing a wide range of species. Project implementation may result in damage and destruction to the trees. A significant impact related to conflicts with the City of Irvine's Urban Forestry Ordinance could occur.

4.4.3 Impacts Associated with the OCGP Master Plan

The OCGP Master Plan portion of the overall OCGP project includes essentially the same land uses and encompasses the same land area as depicted in the OCGP FEIR. Therefore, the OCGP FEIR adequately describes the nature and severity of the environmental effects of OCGP Master Plan implementation on biological resources.

OCGP FEIR Mitigation Measure (MM) BIO1 stated that prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. MM BIO1 also stated that prior to approval of a subdivision map for development within, or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement or, if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG). Mitigation Measure BIO1 would continue to apply to this proposed project (see Mitigation Measure BIO1, below).

The OCGP FEIR also stated that prior to approval of a subdivision map for each project area, a jurisdictional wetland delineation shall be performed for all areas within the Master Plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a Wetland Mitigation Plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). For wetlands impacted on-site replacement, recreation (i.e., within the proposed wildlife corridor), and/or re-vegetation is deemed acceptable by the appropriate jurisdictional agencies. Accordingly, Mitigation Measure BIO2 below would also continue to apply to the proposed project.

The OCGP FEIR required that several focus surveys be conducted on Planning Areas 30 and 51 for sensitive plant and wildlife species prior to development. PCR Services prepared a *Biological*

4. *Discussion of Checklist and Mitigation Measures*

Resources Assessment for Lennar Heritage Fields, Orange County, California in November of 2005 and an updated assessment was prepared in June of 2006.³ This biological resources assessment complies with mitigation measures BIO1, requiring a focus survey for the southern tarplant, mountain plover, and burrowing owl, and BIO2 requiring a wetlands delineation to be prepared for all areas within the Master Plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The subject study and each of its constituent focus technical studies cover a land area of approximately 3,700 acres and includes the OCGP Master Plan.

Jurisdictional Wetlands and "Waters of the U.S."

A Jurisdictional Delineation for the site has been performed (*Investigation of Jurisdictional Wetlands and Waters of the U.S. Lennar Heritage Fields*, June 2006, PCR). The property supports six intermittent drainage systems and a variety of associated ephemeral tributaries. Five of the drainages have their headwaters in undeveloped areas of the Lomas de Santiago Foothills to the north. San Diego Creek originates in an eastern portion of the watershed that is occupied by substantial residential and commercial development. Disturbances such as channelization of large stretches of the drainages and dumping of debris and trash into portions of drainages have significantly altered several waterways and obscured many drainage features. Other disturbances on site include vegetation clearing to create roads and structures, agricultural runoff, and invasion by exotic species. Current and historic land uses associated with the establishment of MCAS El Toro (military structures, roads, agriculture, and residential development) have significantly changed the overall drainage patterns within the San Diego watershed. The cumulative impact to each wash or creek has resulted in habitat and water quality impairment within the San Diego Creek watershed.

These impacts include increased sediment and debris transport due to concrete-lined stream channels, increased flow velocities and scouring, increased bank erosion, increases in the presence of non-native plant species, and an overall reduction in the amount and the quality of the riparian habitat within the watershed. Alternatively, the disturbances have increased the amount of jurisdictional areas due to the creation of freshwater marsh habitat resulting from impoundment of storm water runoff within and adjacent to drainages. In total, the site contains 31,102.11 linear feet of jurisdictional streambed that includes 22.02 acres of U.S. Army Corps of Engineers (USACE) jurisdictional "Waters of the U.S.," and, of which, 1.66-acres meet the three-parameter definition of a jurisdictional wetland. CDFG jurisdictional streambed and associated riparian habitat total 38.61 acres.

Sensitive Biological Resources

There are a numerous plant and wildlife species present, or potentially present within the study area that have received special recognition by federal, State, or local resource conservation agencies and organizations. Their status is principally due to the species decline or limited population size, usually resulting from habitat loss. Protected sensitive species are those species identified by either State or federal resource management agencies, or both, as threatened or endangered under provisions of the California and Federal Endangered Species Acts, respectively.

³ This report is available for review at the City of Irvine.

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Sensitive species that occur or could potentially occur within the study area are based on one or more of the following:

- The direct observation of the species within the study area during one of the biological surveys.
- A record reported in the California Natural Diversity Database (CNDDDB).
- The study area is within a known distribution of a species and contains appropriate habitat.

Sensitive Plant Communities

The study area is dominated by highly disturbed habitat types and only small areas of native vegetation exist. A total of 9.7 acres of southern willow scrub occurs in scattered patches throughout the study area. Southern willow scrub is a high priority inventory community in the CNDDDB. This community is considered sensitive because it has experienced a sharp decline in California and because it has the ability to support a number of sensitive bird species such as least Bell's vireo and southwestern willow flycatcher.

Sensitive Plant Species

Sensitive plants include those that are either candidates or are currently listed by the CDFG and USFWS and those that are considered sensitive by the California Native Plant Society (CNPS). Several sensitive plant species were reported in the CNDDDB from the surrounding region. In accordance with the mitigation measures of the OCGP FEIR, focused surveys for southern tarplant were conducted on June 3 and June 8, 2005. No specimens were found. The highly disturbed character of the site and reduced presence of habitat capable of supporting sensitive plant species make it highly unlikely that any listed plant species will occur on the site.

Sensitive Wildlife Species

Forty-nine sensitive wildlife species were reported in the CNDDDB as occurring with the USGS 7.5-minute El Toro quadrangle map and the eight surrounding maps. Habitat suitability assessments for these species were conducted concurrently with the site investigation throughout the 2005 fieldwork. The intent of the habitat assessment was to evaluate habitat for its ability to support sensitive species and ascertain which sensitive species are likely to be present within the study area based on expected habitat use, geographic range, and information collected in the vicinity of the study area.

The OCGP Master Plan is not within a proposed or final critical habitat area. Six sensitive wildlife species were observed within the study area during initial field investigations: northern harrier (*Circus cyaneus*), merlin (*Falco columbarius*), Cooper's hawk (*Accipiter cooperii*), California horned lark (*Eremophila alpestris actia*), cactus wren (*Campylorhynchus brunneicapillus*), and loggerhead shrike (*Lanius ludovicianus*). Three of these species (northern harrier, merlin, and Cooper's hawk) were also observed during wintering bird surveys. In addition, the golden eagle (*Aquila chrysaetos*), burrowing owl (*Athene cunicularia*), and ferruginous hawk (*Buteo regalis*) were observed utilizing the site during these subsequent wintering bird surveys. Surveys for mountain plover (*Charadrius montanus*), in accordance with the OCGP FEIR mitigation measures, were conducted during the wintering bird surveys as a part of Addendum No. 3. No mountain plover were observed on site during those field investigations.

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In a follow-up report⁴ on wintering birds dated October 30, 2006 with surveys conducted between October 2005 and March 2006, PCR Services searched the site for activity. No burrowing owls were seen until February 2006. Although the project site is open, its vegetation becomes dense and over two feet tall in most areas. A single owl occupied a burrow during the late winter but abandoned the area as the vegetation surrounding the burrow became three feet high and very dense. There was no indication that breeding activity had been initiated. Because the habitat became unsuitable as a natural result of not being mowed, PCR Services determined that no mitigation would be required.

Summary of the Biological Status of the Site

The OCGP FEIR required that focus surveys be conducted on the project site for several sensitive plant and wildlife species prior to development. The required surveys were carried out during 2005 and 2006. No species of endangered plants or wildlife were recorded on site during these investigations, which were conducted by PCR Services. The sensitive plant community of willow scrub extant on site is heavily disturbed and fragmented. As such, PCR Services did not recommend attempting to preserve any of the remnant stands or streambeds as they are now constituted. It was also determined that the presence of several sensitive species would be addressed through mitigation designed to avoid disturbance of nesting avian species. PCR Services' findings did not indicate a need to consult formally with the USFWS.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The Revised Overlay Plan, of which the OCGP Master Plan is a part, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures

⁴ This report is available for review at the City of Irvine

4. *Discussion of Checklist and Mitigation Measures*

or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant biological effects identified in and considered by the certified OCGP FEIR.

4.4.4 ***Mitigation from the OCGP FEIR and Applicability to the OCGP Master Plan***

- BIO1** Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl, shall be conducted. Prior to approval of a subdivision map for development within, or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).
- BIO2** Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, re-creation (i.e. within the proposed wildlife corridor), and/or re-vegetation as deemed acceptable by the appropriate jurisdictional agencies.
- BIO3** The City shall continue to work with State and federal agencies during the implementation of the proposed project to implement the re-vegetation/restoration plan for the wildlife corridor. Measures such as sight and sound barriers, including artificial sound walls and natural diversions (e.g. hedges and tree lines) shall be incorporated into corridor design to ensure the viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the Final Program FEIR.
- BIO4** Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered "Significant Trees" under the City of Irvine's Urban Forestry Ordinance (UFO) (Section 5-7-401 et al) and the UFO shall apply to all trees included in this inventory.

4. *Discussion of Checklist and Mitigation Measures*

4.5 **CULTURAL RESOURCES**

4.5.1 **Environmental Setting**

Archaeological and Historical Resources

The discussion of Cultural Resources in the OCGP FEIR includes both archaeological and historical resources. The OCGP FEIR presents information pertaining to the regional setting of former MCAS El Toro from both a prehistoric and historic perspective. The OCGP FEIR reported the presence of ten prehistoric archaeological sites and that eight isolated prehistoric artifacts had been recorded in the northeastern habitat preserve portions of Planning Area 51 (PA 51). These sites are generally located on the ridges between Borrego Canyon Wash and the Agua Chion Wash.

The former MCAS El Toro was surveyed to determine whether any of the structures would be eligible for the National Register of Historic Places. Generally, any structure having achieved significance only during the last 50 years is not considered eligible for the National Register unless it is of exceptional importance. The evaluation was expanded to include eligibility under the Legacy Cold War Project (Public Law No. 101-511, § 8120). Portions of Planning Areas 30 and 51 (the former MCAS El Toro) were established during WWII, and no structure earlier than this period is at the former MCAS El Toro. Therefore, structures at the former military base would be classified as being part of the Cold War Legacy. Surveys conducted by the US Army Corps of Engineers and the Department of the Navy in conjunction with the base's closure concluded there were no structures eligible for designation as Cold War Legacy or for inclusion in the National Register of Historic Places.

Paleontological Resources

The OCGP FEIR reported that a majority of Planning Areas 30 and 51 is located on the Tustin Plain, a coastal alluvial plain. Alluvium from the Late Pleistocene to Holocene Epochs (approximately 2 million to 11,000 years ago) immediately underlies the majority of the project area, including the part occupying the coastal plain and washes in the eastern portion of Planning Area 51. The Pleistocene Alluvium formation is widespread and believed to extend to depths of 1,000 feet in Planning Area 30. A significant deposit of Pleistocene terrestrial vertebrates was recovered during excavation of a flood control basin four miles from PA 30; thus, it is possible that similar beds underlie Planning Area 30 (Refer to OCGP FEIR 5.10-2).

The eastern portion of PA 51 is located in the western foothills of the northern Santa Ana Mountains. The hills and ridges in the eastern part of Planning Area 51 are composed of older, underlying marine and non-marine rock units of early Oligocene to late Pleistocene (23 million to 2 million years ago). In order of decreasing geologic age, these latter rock units include the undifferentiated Sespe and Vaqueros Formations, Topanga, and Monterey Formations, Oso Member of the Capistrano Formation, Niguel Formation, and Non-marine Terrace Deposits. Non-marine Terrace Deposits also underlie the terraces at the south corner of Planning Area 51.

The northwestern corner of Planning Area 51 contains a small portion of the Santa Ana Mountains foothills, which were separated from the main formation by erosion. This small portion is composed of undifferentiated late Cretaceous (135 million years ago) marine Williams Formation. The rock units underlying portions of Planning Area have previously yielded important fossil remains at recorded fossil sites on and near the site.

4. Discussion of Checklist and Mitigation Measures

There are three recorded fossil sites in Planning Area 51. These sites occur in undifferentiated Sespe and Vaqueros Formations and in the Topanga Formation. Fossil types include marine invertebrates and vertebrates, continental vertebrates, land plants, and land mammals and lie within the proposed habitat preserve portion of Planning Area 51 (Refer to OCGP FEIR p. 5.10-1 and Table 5.10-1).

4.5.2 Impacts Identified in the OCGP FEIR

Archaeological and Historical Resources

The OCGP FEIR determined that development according to the Overlay Plan would not cause a substantial adverse change in the significance of any historical structure. The consequence of grading activities associated with future development, however, could potentially result in a substantial adverse change in the significance of an archaeological resource. The OCGP FEIR also stated that grading activities could uncover previously unknown human remains, including those interred outside formal cemeteries.

Paleontological Resources

The OCGP FEIR stated that earthmoving operations associated with grading and trenching have the greatest potential to impact buried paleontological resources in the moderately to highly sensitive areas in the coastal plain and washes, northeast, northwest and southern portions of Planning Area 51. The OCGP FEIR considered the potential impact associated with earthmoving operations as a significant impact for which mitigation was necessary.

4.5.3 Impacts Associated with the OCGP Master Plan

Archaeological and Historical Resources

The OCGP Master Plan reflects a development program that is consistent with the General Plan Land Use and Zoning designations for Planning Areas 30 and 51. Further, the extent of earth movement activities required to facilitate development of the Great Park, as depicted in the OCGP Master Plan, is projected to be essentially the same as that assessed and presented in the OCGP FEIR. Given the foregoing, the discussion of impacts on archaeological and historical resources attributable to the Great Park portion of the overall OCGP Project disclosed in the OCGP FEIR remains valid. As with project's component of the Revised Overlay Plan in the OCGP FEIR, the OCGP Master Plan as currently proposed would still not cause a substantial adverse change in the significance of any historical structure, but grading associated with future development could still potentially result in a substantial adverse change in the significance of an archaeological resource, or uncover previously unknown human remains. As such, the cultural resources mitigation measures developed for the OCGP FEIR remain applicable to, and sufficient to mitigate impacts of, future development pursuant to the OCGP Master Plan.

Paleontological Resources

The OCGP Master Plan reflects a development program that is consistent with the General Plan Land Use and Zoning designations for Planning Areas 30 and 51. Further, the extent of earth movement activities required to facilitate development of the Great Park, as depicted in the OCGP Master Plan, is projected to be essentially the same as that assessed and presented in the OCGP FEIR. Given the foregoing, the discussion of potential impacts on paleontological resources attributable to the Great Park portion of the overall OCGP Project disclosed in the OCGP FEIR remains valid. As such, the paleontological mitigation measure developed for the

4. *Discussion of Checklist and Mitigation Measures*

OCGP FEIR remains applicable to, and sufficient to mitigate impacts of, future development pursuant to the OCGP Master Plan.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The OCGP Master Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant cultural and/or paleontological resources effects identified in and considered by the certified OCGP FEIR.

4.5.4 Mitigation from the OCGP FEIR and Applicability to the OCGP Master Plan

Archaeological and Historical Resources

CULT1 Prior to subdivision for development, a detailed archaeological report(s) shall be prepared for areas within Planning Areas 51 and 30. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

CULT2 Monitoring of excavation and grading activities associated with future development in Planning Areas 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure Cult-1 above. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an

4. *Discussion of Checklist and Mitigation Measures*

archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and an assessment of their importance under CEQA and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.

CULT3 Prior to the issuance of grading permits and/or building permits for any future development in Planning Areas 51 and 30 a detailed mitigation measure program shall be submitted by the applicant, to the City of Irvine, to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.

CULT4 Prior to the issuance of any grading and/or building permits, the developer shall submit a mitigation program to the City of Irvine to address the accidental discovery or recognition of any human remains. The program shall include the following:

There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- *The county coroner must be contacted to determine that no investigation of the cause of death is required, and*

If the coroner determines the remains to be Native American:

- *The coroner shall contact the Native American Heritage Commission within 24 hours.*

- *The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.*

- *The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or*

- *Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.*

- *The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a*

4. *Discussion of Checklist and Mitigation Measures*

recommendation within 24 hours after being notified by the commission.

- *The descendant identified fails to make a recommendation; or*
- *The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.*

Compliance with the above measure shall be verified by the Community Development Department.

Paleontological Resources

- P1** Prior to the issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City, or designee, to carry out an appropriate paleontological investigation of the area proposed for grading. (A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.

When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossils specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screen-washing operation on-site.

Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.

4. Discussion of Checklist and Mitigation Measures

4.6 GEOLOGY AND SOILS

4.6.1 Environmental Setting

The OCGP FEIR describes the topography of the project site as nearly flat and gently sloping down to the west to southwest with elevations ranging from 450 feet above mean sea level (MSL) to 200 feet above MSL. Planning Area 30 is located at the southeast margin of the Tustin plain with elevations ranging from about 260 to 300 feet above MSL. Planning Area 51 includes some slopes of the Santa Ana foothills that reach elevations of about 750 feet above MSL. Alluvial soils of six major soil associations consisting of predominantly of varying sands, silts, and clayey silty sands are present within Planning Area 51. Soils underlying Planning Area 30 contain clayey loam alluvial material, terrace deposits, and old and unconsolidated recent alluvium of the Myford and Sorrento series.

The OCGP FEIR identified the primary potential seismic hazard in the area as ground motion. Seismic Response Areas (SRA) designations are used by the City to assess the geologic and seismic risk associated with potential development. All of Planning Area 30 and a majority of Planning Area 51 are located within SRA-2 (denser soils/deeper groundwater) and are considered suitable for development. The planned development area of Planning Area 51 situated north of Irvine Boulevard is designated SRA-3 (alluvium/shallow bedrock) and also susceptible to ground motion.

No known active faults crossing or projecting into the project area were identified; however, the project site is located within the seismically active Southern California region and there are two active faults—Whittier- Elsinore Fault and Newport-Inglewood Fault—located within 14 miles of the site.

4.6.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR disclosed the potential for future development of the project area to result in the exposure of people or structures to strong ground shaking in the event of a major earthquake along any one of the active faults in the region. The OCGP FEIR noted new construction would be required to adhere to current seismic safety building codes which address seismic concerns. Existing buildings within Planning Area 51 do not meet current seismic codes; therefore, the temporary or permanent reuse of the existing buildings and the associated exposure of people or structures to potential substantial adverse effects due to strong seismic-related ground shaking were considered a significant impact.

Because of documented landslides in the northeastern Santa Ana foothills area of the project site, the OCGP FEIR analysis concluded the project would result in a significant impact associated with landslides in the affected area of Planning Area 51 east of Irvine Boulevard, where future development of habitable structures could occur under the Revised Overlay Plan. The OCGP FEIR also concluded future development had the potential to result in soil erosion, loss of topsoil, and risks to life and property due to the presence of expansive soils; and that these impacts are considered significant. With regard to the OCGP Master Plan, the OCGP FEIR essentially includes the same land uses and development areas as under the Revised Overlay Plan; therefore the conclusions drawn in the OCGP FEIR adequately describe the environmental effects of the proposed project relative to soils, geologic hazards, and seismic safety, as well as the severity of the impacts.

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4.6.3 ***Impacts Associated with the OCGP Master Plan***

The OCGP Master Plan essentially includes the same land uses and development areas assumed under the Revised Overlay Plan; therefore the conclusions drawn in the OCGP FEIR adequately describe the environmental effects of the proposed project relative to soils, geologic hazards, and seismic safety, as well as the severity of the impacts.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed OCGP Master Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that the project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was certified, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant geology and soils-related effects identified in and considered by the certified OCGP FEIR.

4.6.4 ***Mitigation from the OCGP FEIR and Applicability to the OCGP Master Plan***

The OCGP FEIR identified four mitigation measures to reduce the effects of the Revised Overlay Plan on soils, geologic hazards and seismic safety. All of the mitigation measures are applicable to implementation of the project and would be carried forward to future development of the project site. Implementation of measures GS1 through GS4 (listed below) would reduce Project impacts to a level less than significant.

- GS1** Prior to issuance of a building permit, the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.

4. Discussion of Checklist and Mitigation Measures

GS2 Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.

1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be conducted. The purpose of the subsurface evaluation is to:

- a. Further evaluate the subsurface conditions in the area of the proposed structures.
- b. Provide specific data on potential geologic and geotechnical hazards.
- c. Provide information pertaining to the engineering characteristics of earth materials in the project area.

From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural sections, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:

- Seismic Ground Shaking - Measures to prevent risk of loss, injury or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.
- Erosion or Loss of Topsoil – Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances.
- Where Expansive Soils Exist – Measures for the design of foundations, slabs, flatwork and other improvements subject to drainage from expansive soils. Compliance with this measure shall be verified by the Community Development Department.

GS3 Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of any existing structure if a building permit is not issued, a seismic evaluation of the structure including recommendations for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.

GS4 Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specifically address erosion control and surface runoff for both

4. Discussion of Checklist and Mitigation Measures

construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

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4.7 HAZARDS AND HAZARDOUS MATERIALS

4.7.1 Environmental Setting

Hazardous Materials and Hazardous Wastes

The OCGP FEIR discussed an environmental baseline survey that was conducted for the project area. Information was used from the Base Realignment and Closure Business Plan for Marine Corps Air Station (MCAS) El Toro dated May 2002; the environmental baseline survey (EBS) dated 1995; and an update to the EBS—April 2003 Draft Final EBS. The 2003 EBS identified “76 potential release locations, all of which require further evaluation for potential releases to the environment and subsequent remediation, if required” (Refer to OCGP FEIR p. 5.5-5).

Regarding the Installation Restoration Program (IRP), the OCGP FEIR summarizes the status of each IRP site based on the information available at the time the FEIR was prepared. Thirteen (13) IRP sites were identified as requiring “No Further Action,” including sites 4, 6, 7, 9, 10, 13, 14, 15, 19, 20, 21, 22 and 25. The IRP sites identified as “Action Required” included sites 1, 2, 3, anomaly 3, 5, 8, 11, 12, 16, 17, 18 (plume), and 24 (Refer to OCGP FEIR pp. 5.5-6 thru 5.5-9).

Of the 404 underground storage tanks (USTs) identified, 357 had been remediated and received findings of “no further action” at the time the OCGP FEIR was prepared. Of the 39 aboveground storage tanks (ASTs) on the property, 36 had been remediated and received findings of “no further action” (Refer to OCGP FEIR p. 5.5-10).

Evaluation and remediation of previously identified IRP sites within the project site continues with the resulting changes in the condition of the property largely anticipated in the OCGP FEIR. The IRP sites are depicted in **Figure 4-2 (OCGP Master Plan – Active Installation Restoration Program (IRP) Site Locations)**. Subsequent to certification of the OCGP FEIR, the DoN completed environmental related findings that support the suitability to transfer real property made available through the Base Realignment and Closure process and to support the lease of areas not yet suitable for transfer.⁵

The areas suitable for lease encompass locations of concern identified in the 1995 and 2003 EBS, and in the OCGP FEIR, where future evaluation and/or actions are ongoing or required. These areas were identified as “carve-outs” in the DoN documentation.⁶ Progress relative to conveyance of the carve-outs includes DoN transfer of approximately eight acres of the project site to Heritage Fields and the Great Park Corporation on March 22, 2006. At the time of the initial land sale, these properties (carve-outs) were retained by the DoN in order to complete environmental clean up, and have since been approved by the regulatory agencies for transfer (FOST #2). The following sites were included in the transfer:

⁵ U.S. Department of the Navy, 2004, Final Finding of Suitability to Transfer, Parcel IV and Portions of Parcels I, II, and III, Former Marine Corps Air Station, El Toro, California, July 2004; Final Finding of Suitability to Lease for Carve-outs Within Parcels I, II, and III, Former Marine Corps Air Station, El Toro, California, July 2004.

⁶ U.S. Department of the Navy, 2004a. Final Finding of Suitability to Lease for Carve-outs within Parcels I, II, and III, Former Marine Corps Air Station, El Toro, California, July 2004.



**Figure 4-2
Installation Restoration Program
(IRP) Locations**

4. *Discussion of Checklist and Mitigation Measures*

- **Carve-out Parcel II-J** – consists of approximately 0.2 acre situated in the central portion of former MCAS El Toro. It contains one building—Building No. 860—and one location of concern.
- **Carve-out Parcel II-Q (portion)** – consists of approximately five acres situated in the eastern portion of the former MCAS El Toro. It is an abandoned jet fuel (JP-5) pipeline.
- **Carve-out Parcel II-S** – consists of approximately 1.3 acres situated in the southeastern portion of former MCAS El Toro. It contains six buildings (347, 377, 447, 448, 566, and 726) and 13 locations of concern.
- **Carve-out Parcel II-T** – consists of approximately 0.5 acre situated in the southeastern portion of former MCAS El Toro. It contains one building—Building No. 761—and four locations of concern. The facility was a former aircraft wash rack.
- **Carve-out Parcel III-C** – consists of approximately one acre situated in the western portion of the former MCAS El Toro. It contains one building—Building No. 240—and seven locations of concern. This site was a former ordnance storage facility.

Emergency Plans

The OCGP FEIR described the former MCAS El Toro site (Planning Areas 30 and 51) as a potential emergency response staging area because of its capacity for processing and storing large quantities of cargo. The Orange County Emergency Plan, which incorporates the state-wide standardized emergency management system (SEMS), guides multi-jurisdictional response to emergency conditions. No substantial change to the description of the setting regarding emergency plans has occurred that would alter the analysis and conclusions of the OCGP FEIR on emergency plans and response.

Wild Land Fires

The OCGP FEIR identified high fire hazard areas within open space, undeveloped land northeast of and adjacent to Planning Area 51. The City has no construction records of existing buildings and structures extant on the property. No substantial change to the description of the setting relative to wild land fires has occurred that would alter the analysis and conclusions of the OCGP FEIR regarding wild land fires.

4.7.2 Impacts Identified in the OCGP FEIR

Hazardous Materials and Wastes

The OCGP FEIR identified no significant impacts associated with the No Further Action IRP sites, which are listed in **Table 4-4 (No Further Action IRP Sites Numbers, IRP Designations and Zoning)**. **Table 4-5 (Action Required IRP Sites and Zoning)** identifies each Action Required IRP site and its location relative to the adopted Overlay Plan.

4. *Discussion of Checklist and Mitigation Measures*

Table 4-4

**No Further Action IRP Sites Numbers,
IRP Designations and Zoning**

IRP Site	IRP Designation	Revised Overlay Plan Zoning District
4	Ferrocene Spill Area	8.1 LLD
6	Drop Tank Drainage Area No. 1	2.2 Low-Density Residential with 1.8 Golf Course Overlay
9	Crash Crew Pit No. 1	1.5 Recreation
10	Petroleum Disposal Area	1.5 Recreation
13	Oil Change Area	1.5 Recreation
15	Suspended Fuel Tanks	1.5 Recreation
19	Air Craft Expeditionary Refueling	2.2 Low-Density Residential with 1.8 Golf Course Overlay
20	Hobby Shop	8.1 LLD
21	Materials Management Group	6.1 Institutional
22	Tactical Air Fuel Dispensing System	1.5 Recreation

Table 4-5

Action Required IRP Sites and Zoning

IRP Site	IRP Designation	Revised Overlay Plan Zoning District
1	EOD Range	1.4 Preservation
2	Magazine Road Landfill	1.4 Preservation
3	Original Landfill	8.1 LLD
5	Perimeter Road Landfill	1.5 Recreation
7	Drop Tank Drainage Area No. 2	1.5 Recreation
8	DRMO Storage Yard	6.1 Institutional/ 3.2 Transit Oriented Development
11	Transformer Storage Area	1.5 Recreation
12	Sludge Drying Beds	6.1 Institutional
14	Battery Acid Disposal Area	1.5 Recreation
16	Crash Crew Pit No. 2	1.5 Recreation
17	Communications Station Landfill	1.4 Preservation
24	VOC Source Area	6.1 Institutional/ 1.5 Recreation/ 3.2 Transit Oriented Development

The OCGP FEIR disclosed the following environmental consequences of the Overlay Plan as significant impacts:

4. Discussion of Checklist and Mitigation Measures

-
- Construction activities involving demolition and possible substantial remodeling of existing structures in the project area as the project area develops could result in the disturbance of structures and soils containing asbestos-containing building materials (ACM) and lead-based paint.
 - IRP site 24 is located in zoning districts categorized as 3.2 Transit Oriented Development, 6.1 Institutional and 1.5 Recreation. The site may be conveyed with temporary restrictions on use that are not appropriate for transportation facility use. This is considered a significant impact.
 - Future uses of IRP site 3 may be potentially constrained by the implementation of institutional controls.
 - IRP site 16 (Crash Crew Pit No. 2) is located in zoning district designation 1.5 Recreation. The site may be conveyed with temporary restrictions on use that are not appropriate for recreational land uses.

Emergency Plans

The OCGP FEIR determined the Overlay Plan would not be expected to interfere with emergency response and evacuation plans on the basis that other sites within Orange County are already designated emergency staging areas and portions of the OCGP would remain available to non-aviation emergency response equipment. Accordingly, the OCGP FEIR concluded the adopted Overlay Plan would not result in a significant impact related to emergency response and evacuation plans.

Wild Land Fires

The OCGP FEIR concluded the Habitat Reserve, Wildlife Corridor, and recreational areas in the northeastern portion of Planning Area 51 would be exposed to the highest level of fire risk from wild land fires under the Overlay Plan, and that reuse of existing buildings requires inspection for conformance to fire life safety code requirements. The OCGP FEIR identified the wild land fire impacts as potentially significant.

4.7.3 Impacts Associated with the OCGP Master Plan

Hazardous Materials and Wastes

Previous **Table 4-4** listed each No Further Action IRP site, its designation, and its zoning designation relative to the site, and **Table 4-5** listed each Action Required IRP site with similar information. **Figure 4-2** depicts the general location of Action Required IRP sites. In July 2004, two reports were completed under the auspices of the DoN for the property. The Finding of Suitability to Transfer (FOST) documented the environmental condition of the property and the appropriateness of its conveyance. The FOST concluded that 2,798 acres are suitable for transfer by deed for residential purposes and that the parcels can be used with acceptable risk to human health and the environment, and without interference with the environmental restoration process (refer to FOST, Ch. 8). The companion report, the Finding of Suitability for Lease (FOSL) documents the suitability for lease of 41 carve-out areas totaling approximately 921 acres (refer to the FOSL p. 2-2). The carve-outs are locations within the Property where the potential or known release or disposal of hazardous substances or petroleum products has occurred. Based on the information provided in the FOSL, carve-outs have been deemed suitable for lease subject to specified conditions, notifications, and restrictions set forth in the FOSL and the terms of the

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leases. Use of these sites has been determined by the DoN to be appropriate, subject to use restrictions in the leases, with acceptable risk to human health and the environment and without interference with the environmental restoration process. The carve-out parcels remain in U.S. Department of Defense ownership. Overall, the proposed project would not change the OCGP FEIR conclusions; with mitigation measures HH1, HH2, HH5, and HH6, the project would result in less than significant impacts related to hazardous materials and wastes. No new or modified mitigations measures are required.

Emergency Plans

Like the Overlay Plan, the proposed implementation of the OCGP Master Plan would not be expected to interfere with emergency response and evacuation plans on the base since other sites within Orange County are already designated emergency staging areas and portions of the OCGP would remain available to emergency response equipment. Accordingly, the proposed OCGP Master Plan would not change the OCGP FEIR conclusions; the project would not result in a significant impact related to emergency response and evacuation plans.

Wild Land Fires

Under the OCGP Master Plan the Habitat Reserve, Wildlife Corridor, and recreational areas in the northeastern portion of Planning Area 51 would be exposed to the highest level of fire risk from wild land fires would require inspection for conformance to fire life safety code requirements. As the potential significant wild land fire impacts of the OCGP Master Plan are similar to those disclosed in the OCGP FEIR, the OCGP Master Plan would not substantially change the findings and conclusions of the OCGP FEIR regarding wild land fires.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The OCGP Master Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was certified, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant

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effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant hazards/hazardous waste-related effects identified in and considered by the certified OCGP FEIR.

4.7.4 Mitigation from the OCGP FEIR and Applicability to the OCGP Master Plan

The OCGP FEIR identified six mitigation measures to reduce the effects of the Revised Overlay Plan on public health and safety. Specifically, environmental effects associated with hazardous materials and waste, emergency response, and wild land fires to a level less than significant. All of the mitigation measures are applicable to implementation of the proposed project and would be carried forward to future development of the project site. Measures HH1 through HH6 are listed below:

- HH1**
- a. Prior to the conveyance of the property and issuance of subsequent grading permits, where the presence of ACMs is identified, the DON or its transference shall ensure that all available information concerning ACMs has been provided to the City of Irvine, and the purchasers of the property, including:
 - The type, location and condition of ACMs,
 - The results of any asbestos testing
 - Description of asbestos control measures taken, if any
 - The costs or time necessary to remove existing ACMs
 - The results of any site-specific asbestos inventory updates
 - b. For any structures known to contain ACMs that will be renovated and/or demolished prior to transfer, the DON shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.
 - c. Prior to transfer of any structure constructed before October 1988, scheduled for renovation and/or demolition, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by the DON. This requirement can be waived if an architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building material, and to the best of their knowledge, no ACMs were used as a building material.
 - d. Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.
 - e. Any renovation and/or LBP abatement activities on residential units a former MCAS El Toro, shall be conducted in accordance with all applicable federal, state and local regulatory requirements.

4. Discussion of Checklist and Mitigation Measures

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- HH2** a. Prior to transfer, the City of Irvine shall receive from the DON, with the concurrence of the appropriate regulatory agencies, a statement that the "Action Required" IRP Site 3 is to be conveyed for restricted use and that all institutional controls have been identified and implemented. The City of Irvine will adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.
- b. Prior to transfer, if the DON chooses to impose temporary restrictions on the use of Sites 16 and 24 pending adequate remediation of groundwater, the City of Irvine shall receive from the DON a statement of temporary restrictions on the use of the sites and the release of the sites for unrestricted use following implementation of adequate remediation of groundwater. The City of Irvine shall adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Section 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.
- HH3** The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Project potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for "Development Within and Exclusion from Very High Fire Severity Zones" and "Fuel Modification Plans and Maintenance." Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the proposed project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.
- HH4** Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.
- HH5** Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown

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hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the aforementioned development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director of Community Development of the City of Irvine in a timely manner.

- HH6** The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells located on the former MCAS El Toro on a GIS database. The City will review all permit applications on the former air station for monitoring well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to monitoring wells will be limited to authorized personnel.

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4.8 **HYDROLOGY AND WATER QUALITY**

4.8.1 **Environmental Setting**

The OCGP FEIR describes the project site as located within the San Diego Creek watershed, which includes the San Diego Creek, Peters Canyon Channel, and the tributaries to these water courses. The major drainage channels that traverse the site (Planning Area 51) are the Marshburn Channel, Bee Canyon Channel, Agua Chinon Channel, and Borrego Canyon Channel. Serrano Creek and Upper San Diego Creek Channel traverse Planning Area 30 in the southern tip of the project site, south of the existing SCRRA Metrolink railroad tracks.

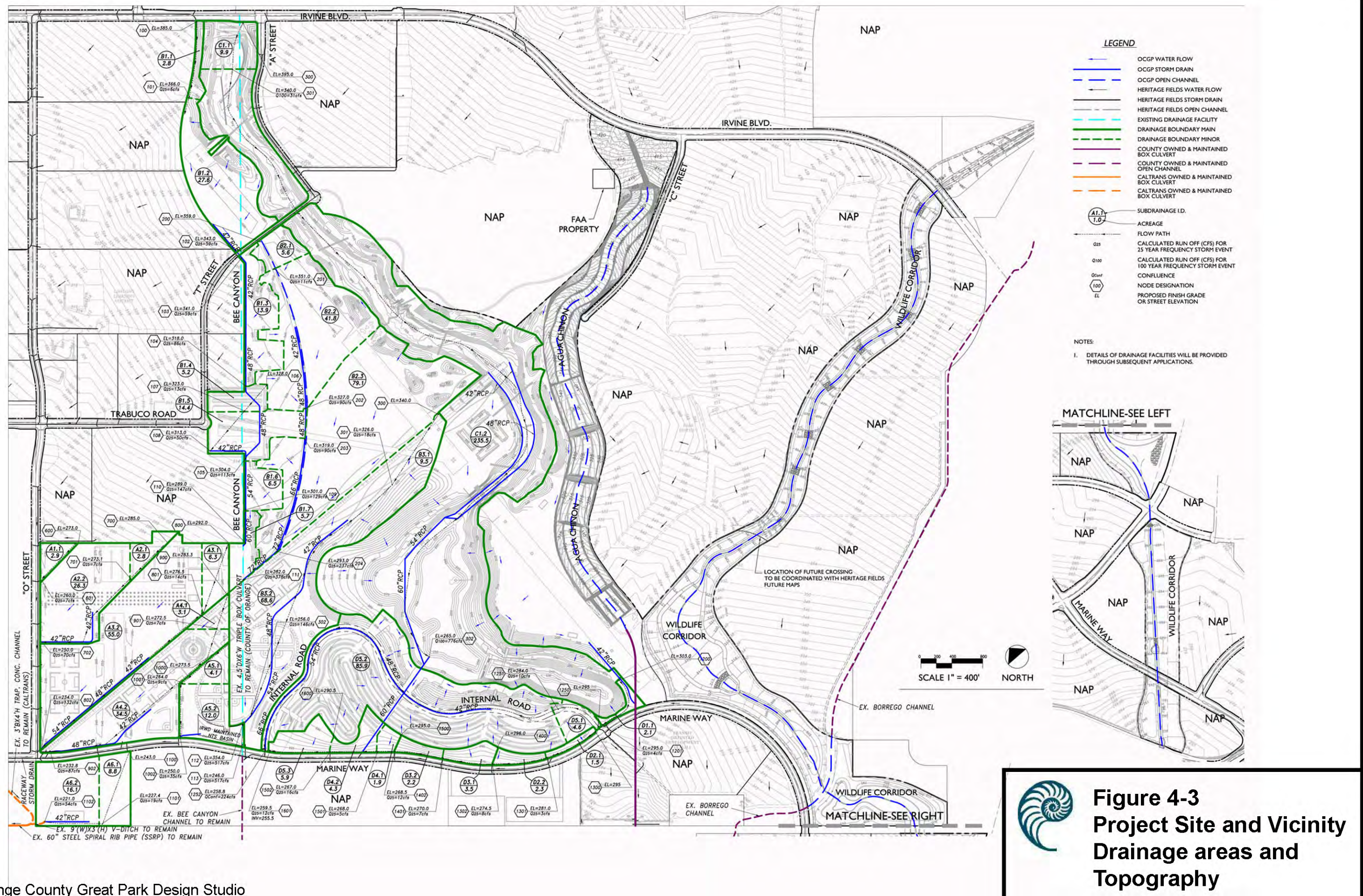
San Diego Creek and Upper Newport Bay are listed as impaired water bodies under Section 303(d) of the Clean Water Act. Accordingly, Total Maximum Daily Loads (TMDL) for pollutants that have impaired these water bodies have been established and included in the OCGP FEIR (Refer to OCGP FEIR Table 5.7-2). **Figure 4-3 (OCGP Master Plan – Project Site and Vicinity Drainage Areas and Topography)** below shows the drainage areas and topography of the project area.

The OCGP FEIR also notes the County of Orange and the City of Irvine hold a National Pollution Discharge Elimination System (NPDES) permit for the storm drain systems, and that the State has issued a NPDES general permit relating to construction activities on sites over five acres in the area. Lastly, the flood control improvements associated with the Eastern Transportation Corridor (SR-133) were noted in the OCGP FEIR as having reduced the 100-year flood zone north and west of the property.

4.8.2 **Impacts Identified in the OCGP FEIR**

The OCGP FEIR identified several significant impacts on hydrology and water quality associated with future development before mitigation. First, grading and excavation activities required for future development could result in the exposure of bare soils to both wind- and water-related erosion and associated significant water quality impacts. Specifically, a violation of water quality standards or waste discharge requirements. Compliance with City grading and water quality regulations—including the NPDES discharge permitting requirements and preparation of a Storm Water Pollution Prevention Plan (SWPPP) and a Water Quality Management Plan (WQMP)—are the primary means of controlling the potential impacts of grading and excavation activities. These requirements, which are described in mitigation measures H/WQ 1 and H/WQ 2, would reduce the impact to a level less than significant.

According to the OCGP FEIR, the existing drainage patterns and stream courses would not be substantially altered by future development under the Revised Overlay Plan. In addition, the potential for inundation will be reduced by improvements to upstream flood control facilities. Without project-related flood control facilities, the rate or amount of surface runoff due to new development would result in flooding on- and off-site, depending on the nature of the specific development. Although this impact was identified as significant, the effect of increased runoff would be reduced to a less than significant level through preparation and implementation of hydraulic studies and recommendations for the specific development and the construction of flood control improvements commensurate with the specific development (mitigation measure H/WQ 3).



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The impact analysis for the Revised Overlay Plan assumed development of the land use patterns created by the zoning for Planning Areas 30 and 51 and a backbone storm drain system. The storm drain system took into consideration and included improvements identified in the San Diego Creek Flood Control Master Plan (Refer to OCGP FEIR p. 5.7-16 and Figure 5.7-2). The drainage plan for Planning Areas 30 and 51 included the following improvements to the major drainage, as described in the OCGP FEIR:

Marshburn Channel—The existing Marshburn Channel and detention basin would remain substantially the same. Future improvements to serve future development would include an extension of the existing 66-inch pipeline departing the main channel to capture runoff from the westerly most portion of the Property. Although no off-site improvements are necessary to serve the Property, other development projects are expected to improve the Marshburn Channel system.

Bee Canyon Channel—Downstream (south) of Irvine Boulevard, the existing concrete box culverts and open channels would be demolished and replaced with the drainage corridor cross-section and supporting internal culvert crossings and storm drain laterals. The drainage corridor would extend a distance of about 10,200 linear feet. The existing open channel across the future county property will be upgraded and will join the existing open channel at the northerly SCRRA R/W.

Agua Chinon Channel—The drainage channel upstream of Irvine Boulevard would remain substantially unchanged. Select removal and replacement of the existing concrete box culvert and open channels with a corridor drainage cross-section and supporting culvert crossings and storm drain laterals would occur downstream of Irvine Boulevard. The corridor drainage cross-section would be approximately 8,000 feet in length. The new drainage corridor would reconnect to the existing Agua Chinon Channel in the vicinity of the SCRRA railroad tracks. Downstream from its crossing of the tracks, the channel would convey stormwater in a buried reinforced concrete box measuring 12 feet wide by 10 feet high.

Borrego Channel, Wildlife Corridor and Serrano Creek—Under the Revised Overlay Plan low flows from the natural wash upstream and east of Irvine Boulevard would be rerouted from the existing wash and into a new Wildlife Corridor that would be created downstream and west of Irvine Boulevard. A structure would be constructed to convey the flow toward and through the existing Magazine Road tunnel below Irvine Boulevard and to the new Wildlife Corridor. The existing Magazine Road tunnel may require upgrading to accommodate the additional flow from Borrego Channel. The rerouted flows would travel through the new Wildlife Corridor that would traverse the Property in a location generally parallel to the Borrego Channel. At a point near the SCRRA railroad tracks, the Wildlife Corridor once again intersects the Borrego Channel where the rerouted flow would be returned to the Borrego Channel and then under the railroad tracks. The Corridor would continue uncovered to permit wildlife movement into the existing Serrano Creek Channel as the Corridor proceeds to the Property line east of the I-5 Freeway. From its intersection with the Wildlife Corridor, the Borrego Channel would continue west as an at-grade open channel then as a buried box culvert channel under the railroad tracks and in a southwesterly direction, beyond the Property line at Barranca Parkway.

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San Diego Creek—The existing segment of this creek within Planning Area 30 is an unimproved earthen channel that would be replaced with 1,000 feet of buried reinforced concrete box measuring double 12 feet wide by 6 feet high.

While relatively conceptually defined in the 2003 OCGP FEIR, the foregoing area-wide drainage and flood control facility system has since been undergoing increasingly more definitive design engineering refinement. The latest formal expression of these system enhancements is memorialized in the following document: Fuscoe Engineering, Inc., *Orange County Great Park Master Plan of Drainage*, dated April 25, 2007. The subject document merely refines the drainage control system components described just above, focuses primarily on off-site facilities and issues, is on file with the City, and available for inspection at the Irvine Community Development Department during normal business hours.

4.8.3 *Impacts Associated with the OCGP Master Plan*

The OCGP Master Plan proposes a development program consistent with those allowed under the Revised Overlay Plan; therefore, no change in the development assumptions as they pertain to hydrology and water quality would be necessary. Accordingly, the impact analysis presented in OCGP FEIR Section 5.7 adequately describes the project effects on hydrology and water quality. However, just as the area-wide and off-site drainage and flood control system facility components have undergone continued design engineering refinement, so has been the concurrent refinement of on-site drainage and flood control systems. For the OCGP Master Plan, the formal expression of such facilities are generally referred to in the MP planning packet, but objectively articulated in the following document: Fuscoe Engineering, Inc., *Orange County Great Park – Hydrology/Hydraulic Report*, dated June 12, 2007. This document too is on file with the City, and available for inspection at the Irvine Community Development Department during normal business hours.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The OCGP Master Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR. The off-site Bee Canyon drainage north of Irvine Boulevard has been diverted to the Marshburn Basin and will not run onto the Great Park. On-site drainage that would have been collected by the Bee Canyon system will be conveyed across the property in the same manner as before, within a park feature called the Bee Creek Bosque.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that: (1) mitigation measures or alternatives previously

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found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant effects on hydrology and/or water quality identified in and considered by the certified OCGP FEIR.

4.8.4 Mitigation from the OCGP FEIR and Applicability to the OCGP Master Plan

The OCGP FEIR identified four mitigation measures to reduce effects on hydrology and water quality. All of the mitigation measures are applicable to implementation of the project and would be carried forward to future development of the project site. Implementation of measures H/WQ 1 through H/WQ 4 (listed below) would reduce project impacts to a less than significant level:

H/WQ1 Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City of Irvine adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area . . . and residential construction sites that result in the disturbance of five acres or more . . . shall be required to develop and implement BMPs . . . to control erosion and siltation and contaminated runoff from the construction sites." Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of one acre or more.

The City's standard conditions of approval indicate that a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as de-silting basins and construction site chemical control management measures.

Additionally, prior to the issuance of a grading permit, project applicants must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, lessee, etc.), and shall reference the location(s) of structural BMPs.

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Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the Director of Community Development for any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES Permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

H/WQ2 Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all storm-water runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TDML) Implementation Plan adopted for this watershed.

H/WQ3 Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrology studies and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

H/WQ4 Prior to issuance of a building permit, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.

After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process

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4.9 **LAND USE**

4.9.1 **Environmental Setting**

The OCGP FEIR described the existing and former land uses in Planning Areas 30 and 51, and other areas adjoining and surrounding these planning areas. Subsequent to the City's approval of the General Plan Amendment and Zone Change for the Overlay Plan, the DoN initiated an auction process for the sale of the former MCAS El Toro property. To facilitate the transfer, the property was divided into and presented to prospective buyers as four distinct parcels. Interested parties were invited to bid on one or more of the parcels.

In 2005, Heritage Fields, El Toro, LLC successfully purchased all four parcels from the DoN (3,671 acres), and entered into a Development Agreement with the City of Irvine on July 12, 2005. The Development Agreement sets forth the terms and conditions of subsequent development and implementation of the Great Park, including the dedication in fee of 1,096 acres of the property for development of the Great Park Master Plan.

The condition of Planning Area 30—generally, cultivated agricultural lands—is substantially the same as the OCGP FEIR baseline year. Consistent with a provision in the Zoning Code, there are interim uses that reuse existing buildings on-site in Planning Area 51. These interim uses are currently comprised of administrative offices and are allowed a maximum of two years on-site without a conditional use permit. The City of Irvine, the Orange County Great Park Corporation, Heritage Fields, El Toro, LLC, California State University, Fullerton, The Great Park Design Studio, and a day care facility have established temporary operations within existing buildings. A few parcels have been leased and operating on an interim basis.

4.9.2 **Impacts Identified in the OCGP FEIR**

The OCGP FEIR identified no significant impact to established communities. There were no residents living within Planning Areas 30 and 51 at the time the FEIR was prepared and there has been no change in this regard; there are no residents living within the project site. The OCGP FEIR analyzed certain amendments to the City's General Plan that were adopted on May 27, 2003, as part of the City's adoption of the Overlay Plan. The adopted Overlay Plan was determined to be consistent with each element of the General Plan, as summarized below:

Land Use Element: The goal of the Land Use Element is to “promote land use patterns that maintain safe residential neighborhoods, bolster economic prosperity, preserve open space, and enhance the overall quality of life in Irvine.” Creation of the “OCGP, Orange County Great Park” land use category to reflect the types, intensity, and density of uses and activities contemplated in the OCGP was determined to be consistent with the goal of the Land Use Element.

Circulation Element: The Circulation Element's goal is to “provide a balanced transportation system.” Adoption of the Overlay Plan included the following modifications to the General Plan Circulation Element:

- Policy B-1(c) was changed to include the following provision:

“In conjunction with individual subdivision map level traffic studies for development proposed in Planning Areas 30 and 51, a LOS [level of service] ‘E’ would be considered acceptable for application to intersections impacted in Planning Areas 13, 30, 31, 32, 34, 35, and 39.”

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- Figure B-1 (Master Plan of Arterial Highways) and Figure B-2 (Operation Characteristics) were amended to reflect the alignment of roadways within the OCGP, including:
 - Marine Way is aligned to join the Bake Parkway north bound exit ramp from Interstate 5 and terminate at Sand Canyon Avenue at Interstate 5.
 - Trabuco Road terminates at the Trabuco Entry Park District.
 - Rockfield Boulevard is realigned to terminate at Marine Way.
 - On-site circulation includes a new commuter highway/collector (Y Street [Ridge Valley]).
 - Research Parkway is renamed College Road and modified to extend from Irvine Boulevard to Marine Way.
- Figure B-3 (Public Transit) was amended to reflect the alignment of roadways within the OCGP.
- Figure B-4 (Trails Network) was amended to reflect the alignment of roadways within the OCGP.

Housing Element: The goal of the Housing Element is to “provide for safe and decent housing for all economic segments of the community.” The Overlay Plan would add up to 3,625 new dwelling units and carry forward all adopted policies and objectives of the Housing Element; specifically, the residential development component would explore opportunities for addition to the housing stock to help the City meet its Regional Housing Needs Assessment through year 2025.

Conservation and Open Space Element: The goal of this element is to “maintain and preserve the environmental systems as a major feature in the City.” This goal would be achieved through the implementation of objectives L-1 through L-12 and corresponding policies. Objective L-10 encourages “the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development.” The Overlay Plan includes 1,096 acres of Great Park recreational land, 290 acres of permanent agricultural land, and 974 acres of Habitat Preserve.

Cultural Resources: The goal of the Cultural Resources Element is to “ensure the proper disposition of historical, archaeological, and paleontological resources to minimize adverse impacts, and to develop an increased understanding and appreciation for the community’s historic and prehistoric heritage, and that of the region.” The OCGP FEIR identified the flatland area of the property as a low paleontological sensitivity zone and the hillside areas north of Irvine Boulevard as a high paleontological sensitivity zone. No objective of this element was amended by the adopted Overlay Plan and all of the objectives and implementing policies were to be implemented as part of the adopted Overlay Plan.

Noise Element: The Noise Element’s goal is to “contribute to a healthy and safe environment by minimizing noise impacts. The adopted Overlay Plan would not affect the mobile noise, stationary noise, and noise abatement objectives and implementing policies of the Noise Element.

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Public Facilities and Services Element: The goal of this element is to “provide a full range of necessary public facilities and services that are convenient to users, economical, reinforce City and community identity, and reflect the participation of citizens.” The facilities and services described in the Urban Service Plan for the adopted Overlay Plan were formulated through a public participatory process and found to implement the goal and adopted objectives and related policies of this element.

Integrated Waste Management Element: This element seeks to “encourage solid waste reduction and provide for the efficient recycling and disposal of refuse and solid waste material without deteriorating the environment.” The OCGP FEIR disclosed that the Overlay Plan would not affect the adopted objectives and implementing policies regarding solid waste, waste, wastewater, and solid waste facility siting requirements; rather, it would provide the opportunity to better respond to the City’s solid waste reduction requirements and other provisions of the element by broadening the range of design options.

Growth Management Element: The goal of the Growth Management Element is to “ensure that growth and development are integrally planned with, and phased concurrently with, the City of Irvine’s ability to provide an adequate circulation system and public facilities.” When the OCGP FEIR was certified it was disclosed that though the project made changes to the Master Plan of Arterial Highways, the project would not change any of the objectives or implementing policies of the Growth Management Element.

Parks and Recreation Element: The goal of the Parks and Recreation Element is to “provide park and recreation opportunities at a level that maximizes available funds and enables residents of all ages to utilize their leisure time in rewarding, relaxing, and creative manner.” The OCGP FEIR reported there would be no change to the objectives or implementing policies of this element.

Seismic Element: The goal of the Seismic Element is to “minimize the loss of life, disruption of goods and services, and the destruction of property associated with an earthquake.” Five Seismic Response Area (SRA) designations are used to describe the magnitude and types of potential seismic hazards present within the City, and to provide policy guidance. The OCGP FEIR reported that the majority of the El Toro property was in category SRA-2 and that no objectives or implementing policies would be changed as a result of the project.

Safety Element: The goal of the Safety Element is to “minimize the danger to life and property from man made and natural hazards, including fire hazards, flood hazards, non-seismic geologic hazards and air hazards.” The OCGP FEIR disclosed the need for fuel modification to mitigate potential wild land fire hazards and drainage improvements to lessen flood hazards associated with implementation of the adopted Overlay Plan, and concluded no objectives or implementing policies would be changed as a result of the adopted Overlay Plan.

4.9.3 **Impacts Associated with the OCGP Master Plan**

The following analysis discusses the proposed project in consideration of each General Plan element.

4. Discussion of Checklist and Mitigation Measures

Land Use Element:

The City's Land Use Element designates the project site as Orange County Great Park. This land use category is defined as the development of regionally significant conservation and open space, parks and recreation, educational facilities, and other public-oriented land uses, integrated with privately developed multi-use, residential, commercial, and industrial properties, at the former Marine Corp Air Station El Toro site. The OCGP Master Plan implements the core open space component of this definition by providing habitat restoration, conservation and open space areas, parks and recreational amenities, and other public oriented land uses consistent with the intent of Measure W, adopted by the citizens of Orange County in March 2002. In addition, the OCGP Master Plan conceptually identifies the design for museums and other institutional uses on-site.

Circulation Element:

The goal of the Circulation Element—"to provide a balanced transportation system"—could be accomplished through various circulation alignments equal to or better than the internal roadway alignments shown on the referenced maps. The project would not substantially alter the planned network of arterials and connections to roadways in the surrounding area; nor would they materially change riding and hiking trails and trail linkages; pedestrian and bicycle circulation; and transit, air transportation, and telecommunication opportunities. The OCGP Master Plan will implement a series of paved and unpaved pedestrian and bicycle trail connecting the surrounding communities to the park. As required per the City's General Plan, the OCGP Master Plan will provide regional connections to existing Class I (off-street) regional bicycle and pedestrian trails located in the vicinity of the OCGP as follows:

- Walnut Trail to the west and east;
- Venta Spur Trail to the west;
- Modjeska Trail to the north; and
- San Diego Trail to the south.

Housing Element:

The goal of the Housing Element is to "provide for safe and decent housing for all economic segments of the community." Development of the overall Orange County Great Park project (including Heritage Fields Development) will provide for 3,625 new dwelling units and carry forward all adopted policies and objectives of the Housing Element; specifically, the residential development component would explore opportunities for addition to the housing stock to help the City meet its Regional Housing Needs Assessment through year 2025. By contrast, the OCGP Master Plan portion of the overall OCGP project includes no housing and when considered in that context alone, is unlikely to significantly be affected by, significantly affect the City's Housing Element.

Conservation and Open Space Element:

The protection afforded City-reserved and state-designated farmlands would remain in full force and effect. The zoning stipulations within Section 9-51-3 (Statistical Analysis) include two footnotes as a safety net, each with the following text: An additional 173 acres of Exclusive Agriculture shall be located in Planning Area 51. (Refer to section 9-51-3, footnotes * and **.) In addition to the foregoing, OCGP Master Plan represents the major and primary feature of the overall OCGP project in that its approximately 1,096 acres of recreational land, 290 acres of permanent agricultural land, and 974 acres of Habitat Preserve encompasses perhaps the best

4. Discussion of Checklist and Mitigation Measures

opportunity to conserve and facilitate open space-related public pursuits at this scale in Orange County for the foreseeable future.

Cultural Resources:

The project would not affect the adopted goals, objectives, and policies of this element. Subsequent development would be required to comply with its requirements and to implement mitigation measures found in the OCGP FEIR. With implementation of OCGP FEIR measures P1 and CULT 1 through CULT 4, the impacts of new development on paleontological and cultural resources would be less than significant. Furthermore, the proper disposition of such resources, if any are encountered prior to or during construction would be ensured; and through the information recovered, the community's understanding and appreciation for its historic and prehistoric heritage will have been enhanced.

Noise Element:

The project would not affect the goal of this element—"to contribute to a healthy and safe environment by minimizing noise impacts"—or the mobile noise, stationary noise, and noise abatement objectives and implementing policies of the element. The OCGP MP would further ensure noise sensitive land uses could be arranged within the project site to lessen exposure to noise-generating uses and activities.

Public Facilities and Services Element:

The project would not affect facilities and services described in the Urban Service Plan for the Overlay Plan. As no substantive change in the Urban Service Plan is necessary, and that plan was a principal means of demonstrating consistency with the Public Facilities and Services Element, the project also is consistent with this element of the General Plan. Additionally, subsequent development would be required to implement the element's objectives and policies to ensure that a full range of necessary public facilities and services that are convenient to users are provided in conjunction with new development.

Integrated Waste Management Element:

The project would not affect the adopted objectives and implementing policies regarding solid waste, waste, wastewater, and solid waste facility siting requirements; rather, it would provide the opportunity to better respond to the City's solid waste reduction requirements and other provisions of the element by broadening the range of design options. This element seeks to "encourage solid waste reduction and provide for the efficient recycling and disposal of refuse and solid waste material without deteriorating the environment. In this regard, implementation of the OCGP Master Plan will include a focused commitment on solid waste reduction and recycling. For example, Master Plan implementation will entail the removal of more than 600 acres of hard pavement and the dismantling of more than 120 buildings. All pavements will be recycled at a recycling center located adjacent to the Great Park. Gravels and cobbles will be reused for infiltration media and roadbed support. Large leaves of concrete will be stacked for retaining walls and waterfalls, as well as laid down for trails steps as Toro Tiles. Organic building materials (drywall and wood) will be used as soil amendment while reusable components (redwood beams) would be used in new construction. In the foregoing regard, the OCGP Master Plan fully complies with the provisions of the City's Integrated Waste Management Element.

4. *Discussion of Checklist and Mitigation Measures*

Growth Management Element:

The goal of the Growth Management Element is to “ensure that growth and development are integrally planned, and concurrently phased with, the City of Irvine’s ability to provide an adequate circulation system and public facilities.” When the OCGP FEIR was certified, it disclosed that though the project made changes to the Master Plan of Arterial Highways, the project would not change any of the objectives or implementing policies of the Growth Management Element. The project likewise would not alter any of the objectives or implementing policies because it would remain consistent with the development phasing already assumed as a part of the overall development plan.

Parks and Recreation Element:

The goal of the Parks and Recreation Element is to “provide park and recreation opportunities at a level that maximizes available funds and enables residents of all ages to utilize their leisure time in rewarding, relaxing, and creative manner.” The proposed project accentuates the General Plan goal by enhancing the park and recreation opportunities for residents of all ages. Implementation of the OCGP MP will allow for a variety of amenities ranging from passive to active recreational uses.

Seismic Element:

The goal of the Seismic Element is to “minimize the loss of life, disruption of goods and services, and the destruction of property associated with an earthquake.” Five Seismic Response Area (SRA) designations are used to describe the magnitude and types of potential seismic hazards present within the City, and provide policy guidance. The OCGP FEIR reported that the majority of the El Toro property was in category SRA-2. The OCGP FEIR reported that no objectives or implementing policies would be changed as a result of the project. Likewise, this current proposal would not alter that finding/conclusion because all project development remains within the previously established project boundaries.

Safety Element:

The goal of the Safety Element is to “minimize the danger to life and property from man made and natural hazards, including fire hazards, flood hazards, non-seismic geologic hazards, and air hazards.” The OCGP FEIR disclosed the need for fuel modification to mitigate potential wild land fire hazards and drainage improvements to lessen flood hazards associated with implementation of the project, and concluded no objectives or implementing policies would be changed as a result of the Overlay Plan. The project does not contain elements that would alter the findings, conclusions and mitigation measures because all project development remains within the previously established project boundaries.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed project will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

4. Discussion of Checklist and Mitigation Measures

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. In that the OCGP FEIR did not identify any significant land use impacts there is no need for further alternatives to the project or the imposition of mitigation measure requirements.

4.9.4 Mitigation from the OCGP FEIR and Applicability to the OCGP Master Plan

The OCGP FEIR identified no significant land use impact; therefore no mitigation measures were proposed.

4. Discussion of Checklist and Mitigation Measures

4.10 NOISE

4.10.1 Environmental Setting

The OCGP FEIR described mobile noise sources from nearby freeways, roadways, rail facilities, and vehicle use at adjacent commercial businesses, light industrial facilities, and agricultural lands as the dominant noise source in the project area. Stationary noise sources included temporary and intermittent noise from construction activities and agricultural operations, noise associated with the industrial/business parks located to the east and the business park and entertainment uses to the south.

The OCGP FEIR presents the results of a noise survey conducted on December 10–12, 2002, in which noise measurements were conducted at nine locations. The Community Noise Equivalent Level (CNEL) sound levels at the four surveyed representative residential locations ranged from 58 dBA to 65 dBA (Refer to OCGP FEIR p. 5.4-18, Figure 5.4-6, and Table 5.4-7).⁷ The audible noise sources included local traffic, distant traffic, birds, aircraft, and human voices, all of which were characterized as typical of suburban areas.

4.10.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR concluded that development of the Overlay Plan would not result in any significant noise effects. The noise assessment considered a worst-case condition of simultaneous demolition and construction activities with the combined sound level of 20 pieces of large mobile equipment operating at a distance of 5,000 feet, five concrete breakers operating at a distance of 6,000 feet, and two crusher plants operating at a distance of 10,000 feet from the nearest off-project area residential location. The distances represented the closest possible location of the construction equipment to the nearest off-project area residences during a heavy construction period. The nearest off-site residential uses (sensitive noise source) were located approximately 4,000 feet from the property boundary. Under this scenario, the analysis estimated sound levels of approximately 56 dBA at the nearest off-site residential location (Refer to OCGP FEIR p. 5.4-24 and Table 5.4-8).

As build-out of the project site was assumed to occur over time (years 2007–2025), construction-related noise impacts on residential areas within the project site were also estimated. Using the same construction equipment assumptions and a distance of 600 feet from the nearest residential area, the combined effect of the equipment was estimated at a sound level of 70 dBA at the nearest on-site residential locations during a heavy construction period. While the City of Irvine Noise Ordinance does not specify a limit on construction noise levels, it stipulates the days and hours during which construction activities may occur and when construction would not be allowed unless a temporary waiver is requested and granted; specifically, construction is allowed Monday through Friday between 7:00 a.m. and 7:00 p.m., and on Saturdays between 9:00 a.m. and 6:00 p.m.; no construction is allowed outside those hours, on Sundays, or on federal holidays (Refer to OCGP FEIR p. 5.4-31).

4.10.3 Impacts Associated with the OCGP Master Plan

As discussed previously in Section 1.3 of this document, the proposed project addressed in the 2003 OCGP FEIR included an Overlay Plan that was ultimately adopted. The adopted Overlay Plan was subsequently modified and the environmental effects of this “Revised Overlay Plan” evaluated in a September 2006 GPA/ZC Addendum to the OCGP FEIR.

4. *Discussion of Checklist and Mitigation Measures*

The OCGP FEIR noise assessment considered a worst-case condition of simultaneous demolition and construction activities. The worst-case assumptions described for the adopted Overlay Plan remain reasonable assumptions for the project; no new information about future demolition and construction has become available that would increase the number of pieces of equipment to be operated simultaneously. The OCGP FEIR noise analysis estimated the combined sound level of the following activities as measured from the nearest off-project area residential location:

- 20 pieces of large mobile equipment operating at a distance of 5,000 feet;
- concrete breakers operating at a distance of 6,000 feet; and
- 2 crusher plants operating at a distance of 10,000 feet.

The residential dwelling units that have been constructed since certification of the OCGP FEIR are located along the west side of Sand Canyon Avenue in the Woodbury residential development. The residences that front Sand Canyon Avenue are located approximately 1,500 feet from the project site's northwest property line. This distance (1,500 feet) is greater than the distance analyzed for future on-site residential areas (600 feet). The noise analysis for construction impacts to on-site residential areas used the same equipment and activity assumptions, and a distance of 600 feet from the nearest on-site residential area. The results of the analysis estimated construction sound levels at 70 dBA. At a distance of 1,200 feet from the noise source (conservatively assumed to be the project site's northwest property line), which generally represents a doubling of distance, the sound pressure level would be about 6 dB lower than the construction sound levels of 70 dBA estimated for the nearest on-site residential receptor when the noise is located a distance of 600 feet from the residential receptor.⁷ Accordingly, the project's construction-related noise effects on the nearest off-site residential receptor is not expected to be more severe than the noise impacts disclosed in the OCGP FEIR.

Compliance with the City's Municipal Code⁸ would reduce construction-related noise impacts on residential areas (off-site and on-site), including the dwelling units that front Sand Canyon Avenue in the Woodbury residential development. In addition, because the project would not substantially change the traffic volumes and circulation patterns in the study area from that assumed in the OCGP Program EIR, the operations-related noise impacts from mobile noise sources disclosed in the OCGP FEIR adequately describe the potential noise effects the project's mobile noise sources. Overall, the noise effects associated with construction and operation of future development under the project would be similar to the impacts disclosed in the OCGP FEIR for the adopted Overlay Plan. Accordingly, no significant noise effects are anticipated with implementation of the project.

⁷ Sound intensity decreases in proportion with the square of the distance from the source. Generally, sound level for a point source will decrease by 6 dBA for each doubling of distance from the source. (Refer to U.S. Department of Transportation, 1995. *Highway Traffic Noise Analysis and Abatement Policy and Guidance*, Federal Highway Administration, June, p. 4.)

⁸ The City of Irvine Municipal Code, Sections 6-8-201 et seq. (Noise) provides regulations to control unnecessary, excessive, and annoying noise. Section 6-8-204 identifies noise zones (uses) and corresponding noise standards for interior and exterior areas. Section 6-8-205 identifies the days and hours during which construction activities may occur and when construction would not be allowed unless a temporary waiver is requested and granted. Construction is allowed Monday through Friday between 7:00 A.M. and 7:00 P.M., and on Saturdays between 9:00 A.M. and 6:00 P.M.; no construction is allowed outside those hours or on Sundays or federal holidays unless approved by the Chief Building Official. Other requirements refer to the California Building Standards related to noise and specific uses such as hotels, dormitories, long-term care facilities, and multi-family housing; and California Occupational Safety and Health Administration noise exposure limits.

4. *Discussion of Checklist and Mitigation Measures*

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the OCGP Master Plan as currently defined would require a major change to the certified OCGP FEIR. The OCGP Master Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. Since no significant noise impacts were identified, no further discussion in this regard is warranted.

4.10.4 Mitigation from the OCGP FEIR and Applicability to the OCGP Master Plan

The OCGP FEIR identified no significant noise impact; therefore no mitigation measures were proposed.

4. Discussion of Checklist and Mitigation Measures

4.11 POPULATION AND HOUSING

4.11.1 Environmental Setting

The OCGP FEIR discussed the caretaker status of the base following its closure. At the time the OCGP FEIR was prepared there was a limited number of military and civilian staff working on the base. There are no residents living on the base. Consequently, there are 4,380 vacant group quarters units and 1,209 residential dwelling units. The OCGP FEIR examined demographics in the context of the existing and projected population of the Orange County region and the City of Irvine. Population and housing information was developed based on the 2000 United States Bureau of Census population, household, and employment census information. The areas surrounding the former base and the Orange County sub-region are considered jobs-rich and housing-poor. The Southern California Association of Governments (SCAG) seeks to encourage housing growth over job growth in the Orange County sub-region. The OCGP FEIR reported that the ratio of jobs to housing in the area has environmental implications related to transportation and air quality. Thus, a major focus of the regional planning efforts has been to improve the ratio of jobs to housing in all affected sub-regions in order to reduce vehicular trips, costly infrastructure improvements, and resultant air emissions. Despite attempts, according to SCAG projections, the Orange County sub-region's jobs/housing balance will worsen through the year 2025 as the number of jobs surpasses housing.

4.11.2 Impacts identified in the OCGP FEIR

As noted above, the area surrounding the former MCAS El Toro and the Orange County sub-region are considered jobs-rich and housing-poor. SCAG seeks to encourage job growth over housing growth in the Orange County sub-region. The OCGP FEIR reported that regional projections are dynamic and as a compilation of local land use projections, reflect changing community views on the location and the types of growth desired. Although implementation of the adopted Overlay Plan would not have exceeded the Orange County Preferred-2000 employment projections, its impact on employment was considered significant because the Orange County sub-region is anticipated to become increasingly jobs-rich over the next 20 years and the Overlay Plan-related employment would exacerbate the sub-regional jobs/housing imbalance. No significant impact on population and housing were identified (www.scag.ca.gov).

4.11.3 Impacts Associated with the OCGP Master Plan

The OCGP Master Plan would not alter the population, housing, and employment information contained in the OCGP FEIR. The project would not introduce new levels of development that would improve the ratio of jobs to housing beyond that already considered by the OCGP FEIR. In that the Great Park itself will be absent any new residential dwelling units, implementation of the master plan would be expected to have almost no impact on either population or housing, except on an indirect basis.

The impacts of the proposed OCGP Master Plan on population, housing and employment would be the same as under the OCGP FEIR, less than significant for population and housing, and significant and unavoidable for employment.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR.

4. Discussion of Checklist and Mitigation Measures

The OCGP Master Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant population/housing/employment-related effects identified in and considered by the certified OCGP FEIR.

4.11.4 Mitigation from the OCGP FEIR and Applicability to the OCGP Master Plan

The OCGP FEIR identified a significant impact associated with the jobs/housing ratio. The OCGP FEIR also stated that no mitigation is available to rectify conflicts between the numerical objectives of regional planning documents including the jobs/housing ratio.

4. Discussion of Checklist and Mitigation Measures

4.12 PUBLIC SERVICES

4.12.1 Environmental Setting

Law Enforcement

At the time of the certification of the OCGP FEIR, the Orange County Sheriff provided law enforcement through a contract with the Department of the Navy (DoN) in Planning Area 51 and the Irvine Police Department provided law enforcement within Planning Area 30. Subsequent to the annexation of the property, law enforcement responsibility within both planning areas has been assumed by the Irvine Police Department. The Irvine Police Department is headquartered at the Irvine Civic Center Complex and also has a satellite facility located in the Irvine Spectrum Entertainment Complex. The OCGP FEIR stated that the current police facilities are adequate to handle the personnel and equipment that are employed and utilized by the department for Planning Area 30. The OCGP FEIR also stated that the Irvine Police Department is discussing expansion of facilities, although the specific details of constructing a substation were not known. At the present time, there is a manned Police Department Booth at the entrance to Heritage Fields at the Marine Way Gate.

Fire and Emergency Medical Services

At the time of the certification of the OCGP FEIR, Planning Areas 30 and 51 were provided fire protection by the Orange County Fire Authority (OCFA) under contract to the County of Orange on an interim basis. Subsequent to the annexation of the property, OCFA has continued to provide fire protection service to the project area. The OCGP FEIR stated that OCFA is planning two additional fire stations in the general vicinity to serve Planning Areas 30 and 51.

Parks and Recreation

Regional Recreational Facilities

The County of Orange currently owns and operates approximately 37,000 acres of parkland and open space, including regional and wilderness parks, nature preserves and recreational trails, historic sites, and harbors and beaches. William R. Mason Regional Park is located within five miles of the OCGP. In addition, there are several regional bicycle and pedestrian trails located within the vicinity of the site as described below.

The Orange County Transportation Authority adopted a Strategic Bikeways Plan in 2001, which contains a comprehensive blueprint of the existing bikeways network with Orange County, and proposed new facilities that would complete the bikeway network.

Several bikeways are identified within the vicinity of the OCGP. Class II (on-street) bikeways are located along Sand Canyon Road, Irvine Boulevard, Alton Parkway, and Trabuco Road, which provides access to the OCGP.

Existing Class I (off-street) regional bicycle and pedestrian trails requiring connections are located in the vicinity of the OCGP as follows:

- Walnut Trail to the west;
- Venta Spur Trail to the west;
- Modjeska Trail to the north; and
- San Diego Creek Trail to the south.

4. Discussion of Checklist and Mitigation Measures

Existing Parks and Recreational Opportunities

The site presently contains no parks, trails, bike lanes or other recreation facilities that are open to the public. However, many public facilities are located within five miles of the OCGP including neighborhood and community parks, recreational trails, and open space.

There are approximately 506 acres of neighborhood and community parks and recreational trails in the City of Irvine's public park system, including one aquatic complex containing three competition size pools. William R. Mason Regional Park, a County of Orange facility, and numerous private parks and recreation facilities are also available throughout Irvine that provide additional recreational opportunities for the City's residents.

The City of Irvine, through its Conservation and Open Space Element has established an open space program comprehensively aggregating open space, adjoining other regional open space, promoting conservation and passive recreational opportunities (e.g. Bommer Canyon, Shady Canyon and Limestone Canyon).

At the time of the certification of the OCGP FEIR, the DoN, acting in a caretaker's role, offered public access to a variety of existing recreational facilities including the existing Marine Memorial Golf Course and equestrian stables. Currently, these facilities remain closed and are under demolition and preparation for future development.

City of Irvine Park Standards and Current Inventory of Parks and Recreation Facilities

The City of Irvine has adopted a standard of providing a total of five acres of parks per each 1,000 residents. This standard is applied to new residential developments and is generally met with three acres of neighborhood parkland and two acres of community parkland. Through the acquisition of parkland by dedication and purchase, the City develops park sites in accordance with the following standards:

- Public neighborhood parks – minimum of four acres in size, excluding greenbelts off-street trails and school grounds. May provide joint use with elementary schools. Primary uses include passive open space, active play areas, and picnic area, and playing fields.
- Private neighborhood parks – minimum one-third (1/3) contiguous acres in size excluding greenbelts, trails, windows, setbacks or other development features, such as swimming pools, spas, clubhouses and tennis courts. Primary uses include swimming pools, spas, club houses, and tennis courts.
- Community parks – Generally a minimum of 20 acres in size, excluding greenbelts, trails and school grounds. May provide joint use with secondary schools. Will be designed to serve more than one planning area and provide a variety of uses such as swimming pools, athletic fields, community/recreation centers, cultural centers, picnic areas and gardens.

Specific park locations, sizes and improvement requirements for new residential projects are determined in conjunction with tentative subdivision map applications. Unless otherwise specified in a recorded development agreement for the project, parkland requirements are met by dedication of the amount of land dictated by the 5 acres per 1,000 persons standard, by payment of fees in-lieu of the land, by construction of park facilities, or by a combination of any of these methods. Private neighborhood park sites can also be used to satisfy the parkland standard, however, such sites must meet size and design standards specified in the City's Subdivision Ordinance in order to receive credit toward fulfilling the parkland requirement.

4. Discussion of Checklist and Mitigation Measures

School Services

Planning Areas 30 and 51 are within the school service boundaries of the Irvine Unified School District (IUSD) and the Saddleback Valley Unified School District (SVUSD). A 600-student capacity elementary school was operated by IUSD on the former base property prior to the closure of the base.

4.12.2 Impacts Identified in the OCGP FEIR

Law Enforcement

The OCGP FEIR discussed the law enforcement needs of both Planning Areas 30 and 51 and stated that following annexation the Irvine Police Department would provide law enforcement for the entire project area. The OCGP FEIR also analyzed the number of police officers, police supervisors and support staff, as well as the number of vehicles, equipment, and services. The OCGP FEIR stated that police protection for the park area would be funded through the use of a special park assessment. As stated in the OCGP FEIR, the general impacts associated with construction and operation of public facilities were analyzed in the OCGP FEIR as part of the planned land uses which also included the dedication of 5 acres from Heritage Fields to the City for a Police substation.

Fire and Emergency Medical Services

Subsequent to annexation of the property, Planning Areas 30 and 51 continue to be served by OCFA. The OCGP FEIR stated that there is likelihood that additional fire services infrastructure will be required to support the proposed project. OCFA had not provided the detailed calculations of the exact extent of new services. The OCGP FEIR stated that the final determination of fire station needs and locations would be made at a future date when more information is known about risk, layouts and types of occupancy. The specific environmental impact of constructing the new facilities to serve the project could not be determined at the General Plan level of analysis as specific site plans and locations have not been prepared. However, the general impacts associated with the construction and operation of public facilities has been addressed within the OCGP FEIR.

Parks and Recreation

As discussed in detail in the OCGP FEIR, the parkland acreage under the project will greatly exceed the existing City of Irvine's standards, providing a regional open space amenity for the benefit of all Orange County. The OCGP FEIR calculated a total of 45.1 acres of parkland requirement for the proposed Heritage Fields portion of the overall OCGP development. The community park requirement for the future Heritage Fields development has been addressed through the Development Agreement between the City and Heritage Fields (Recorded on July 12, 2005). Conveyance of the OCGP to the City satisfied any requirement imposed on the developer for the dedication or development of community parks as required by the City's General Plan and Municipal Ordinance. The neighborhood park requirements for the future Heritage Fields development will be met within the Heritage Fields development, outside the OCGP. Details of specific park locations, ownership, sizes, and improvements will be presented to the Community Services Commission as a part of the Park Plan for the new residential developments. In that the OCGP Master Plan does not create a demand for parks and recreation but is itself a park and recreation amenity no impacts upon parks and recreation attributable to the OCGP Master Plan are anticipated. This is consistent with the findings of the OCGP FEIR.

4. *Discussion of Checklist and Mitigation Measures*

The OCGP FEIR also discussed the Implementation Agreement regarding the Natural Community Conservation Plan (NCCP) for the Central/Coastal Orange County Sub-region of the Coastal Sage Scrub NCCP (July 1996), and the Habitat Reserve will be established on approximately 974 acres in the northeastern portion of Planning Area 51. It is noted that that acreage was not sold by the Navy, but rather transferred to the Federal Aviation Administration (FAA). The FAA has an agreement with the Department of the Interior (DOI) for the maintenance of extant gnatcatcher habitat. There are two designated drainage corridors and one wildlife corridor in the site area. The OCGP also includes opportunities for museums, theaters, gardens and other cultural facilities, as well as a sports park, and a network of recreational riding and hiking trails throughout the site.

School Services

Since the project does not propose change to the number and type of residential units or to any of the other land uses, the proposed project remains within the impact envelope analyzed in the OCGP FEIR.

4.12.3 Impacts Associated with the OCGP Master Plan

Law Enforcement

The project does not change the intensity or type of the land uses and therefore, the demand on law enforcement is within the envelope of analysis presented in the OCGP FEIR.

Fire and Emergency Medical Services

Since the project does not change the intensity or type of land uses, the demand on fire protection is within the envelope of analysis presented in the OCGP FEIR.

Parks and Recreation

The project does not propose changes to the land use intensities and types and maintains all of these facilities and amenities as project features. Therefore, the project remains within the envelope analyzed in the OCGP FEIR.

School Services

Since the project does not propose change to the number and type of residential units or to any of the other land uses, the proposed project remains within the envelope analyzed in the previously certified OCGP FEIR.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The OCGP Master Plan will not result any new significant environmental impacts nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

4. Discussion of Checklist and Mitigation Measures

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that the project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was certified and addenda were approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant public services-related effects identified in and considered by the certified OCGP FEIR.

4.12.4 Mitigation from the OCGP FEIR and Applicability to the OCGP Master Plan

The OCGP FEIR determined the mitigation measures identified in other sections of the OCGP FEIR (Sections 5.1-5.3) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of facilities for police, fire protection, park and recreation, and education to serve new growth expected in the northern portion of the city.

4. Discussion of Checklist and Mitigation Measures

4.13 RECREATION

4.13.1 Environmental Setting

Issues related to Recreation are discussed above under Section 4.12, *Public Services and Facilities*.

4.13.2 Impacts Identified in the OCGP FEIR

Issues related to Recreation are discussed above under Section 4.12, *Public Services and Facilities*.

4.13.3 Impacts Associated with the OCGP Master Plan

Issues related to Recreation are discussed above under Section 4.12, *Public Services and Facilities*.

4.13.4 Mitigation from the OCGP FEIR and Applicability to the OCGP Master Plan

Issues related to Recreation are discussed above under Section 4.12, *Public Services and Facilities*.

4. *Discussion of Checklist and Mitigation Measures*

4.14 **TRANSPORTATION/TRAFFIC**

4.14.1 **Environmental Setting**

The OCGP FEIR describes the traffic and circulation conditions of a study area that encompassed 145 existing intersections (2007) and an additional 11 future intersections (Post 2025) located in the City of Irvine, and portions of seven adjacent jurisdictions including the cities of Lake Forest, Mission Viejo, Laguna Hills, Laguna Woods, Aliso Viejo, Laguna Beach, and unincorporated areas of Orange County. **Figure 4-4 (OCGP FEIR – Traffic Impact Study Area)** depicts the study area covered by the traffic study contained in the OCGP FEIR.

The OCGP FEIR used the City of Irvine Traffic Performance Criteria, which establishes level of service (LOS) “A” to “D” as the peak-hour minimum acceptable service level. In its adoption of the Overlay Plan, the City General Plan Policy B-1(C), which identified LOS E as acceptable for application to intersections in Planning Areas 13, 31, 32, 34, 35 and 39, was changed to include the effects of future development in Planning Areas 30 and 51 on the intersections in those Planning Areas.

The City’s performance criteria also include a standard of 0.02—roadway volume to capacity (V/C) ratio or the intersection capacity utilization (ICU)—to identify significant project impacts and associated need for improvements at both roadways and intersections. At the time the OCGP FEIR was prepared the following 10 study area intersections experienced deficient peak hour traffic operations:

- Culver Drive and Walnut Avenue
- Culver Drive and University Drive
- Jeffrey Road and Alton Parkway
- Jeffrey Road and I-405 Northbound Ramps
- Bake Parkway and Irvine Boulevard
- Bake Parkway and Jeronimo Road
- El Toro Road and Aliso Creek Road
- Los Alisos Boulevard and Los Alisos Boulevard
- Muirlands Boulevard and Los Alisos Boulevard
- Trabuco Road and Alicia Parkway

4.14.2 **Impacts Identified in the OCGP FEIR**

The OCGP FEIR assessed the traffic impacts of two development scenarios for the overall OCGP project – the Base Plan and the Overlay Plan. Both Plans included the future development of lands currently comprising the proposed OCGP Master Plan. Amongst the two Plans, the Overlay Plan comprised the more intensive level of development. The OCGP FEIR estimated that at full build out and thereafter (Year 2025 and Post 2025), the Overlay Plan would generate approximately 148,811 average daily trips (ADT). The OCGP FEIR went on to conclude that this volume of daily traffic would be substantial in relation to the existing traffic load and capacity of the street system both before, at, or subsequent to full build out. More specifically, the OCGP FEIR determined that the following area intersections would be significantly impacted by Overlay Plan implementation under Year 2007, 2025, and post-2025 conditions:

4. *Discussion of Checklist and Mitigation Measures*

Year 2007

- I-5 Freeway at Alton Parkway—southbound off-ramp (A.M.)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (A.M.)

Year 2025

- University Drive from the I-405 Freeway to Michelson Drive (A.M.)
- I-5 Freeway from Sand Canyon Avenue to Jeffrey Road—northbound (P.M.)
- I-5 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-405 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-5 Freeway at Jeffrey Road—southbound on-ramp (A.M.)
- I-5 Freeway at Sand Canyon Avenue—northbound on-ramp (P.M.)
- I-5 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-5 Freeway at Alton Parkway—southbound off-ramp (A.M.)
- I-5 Freeway at Bake Parkway—southbound off-ramp (A.M.)
- I-405 Freeway at Sand Canyon Avenue—northbound direct on-ramp (P.M.)
- I-405 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (A.M.)
- SR-241 Tollway at Lake Forest Drive—southbound off-ramp (A.M.)
- SR-133 Freeway at Barranca Parkway—northbound direct on-ramp (P.M.)

Post-2025

- I-5 Freeway from Sand Canyon Avenue to Jeffrey Road—northbound (P.M.)
- I-5 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-405 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-5 Freeway at Jeffrey Road—southbound on-ramp (A.M.)
- I-5 Freeway at Jeffrey Road—northbound off-ramp (P.M.)
- I-5 Freeway at Sand Canyon Avenue—northbound on-ramp (P.M.)
- I-5 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-5 Freeway at Alton Parkway—southbound off-ramp (A.M.)
- I-5 Freeway at Bake Parkway—southbound off-ramp (A.M.)
- I-5 Freeway at El Toro Road—southbound off-ramp (P.M.)
- I-405 Freeway at Sand Canyon Avenue—northbound direct on-ramp (A.M./P.M.)
- I-405 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (A.M.)

For details regarding the degree of impact associated with the above list of impacted intersections by analysis year, please refer to the following OCGP FEIR tables:

- Table 5.2-12 for year 2007
- Table 5.2-13 for year 2025
- Table 5.2-15 for post 2025

The Overlay Plan was ultimately adopted as the template for the future development of the overall OCGP project. However, the Overlay Plan was subsequently modified and the

4. Discussion of Checklist and Mitigation Measures

environmental effects of the “Revised Overlay Plan” were evaluated in OCGP FEIR Addendum No. 2. The Revised Overlay Plan called for boundary adjustments between Heritage Fields and City of Irvine properties involving a total of 90 acres in Planning Area 51. Other limited revisions and clarifications to the Zoning Ordinance included the creation of a mixed-use category to reallocate land uses within the established maximum building intensities for certain portions of Planning Areas 30 and 51. As a consequence, OCGP FEIR Addendum No. 2 included an updated traffic study prepared by Austin-Foust Associates, Inc., dated September 2006. The subject study is available for inspection at the Irvine Redevelopment Department during normal business hours.

The purpose of the updated traffic study was to determine the impacts of the Revised Overlay Plan in relation to the impacts presented for the adopted Overlay Plan in the 2003 OCGP FEIR. The OCGP Master Plan development assumptions were also included in the updated Austin-Foust traffic study. In essence, the updated assessment concluded that only an insignificant difference would exist between the impacts of the adopted Overlay Plan and those of the Revised Overlay Plan on the area circulation system. Given this, it appears reasonable to conclude that the proportion of overall OCGP project-related traffic-related impacts directly attributable to the OCGP Master Plan would also be similar. As such it is concluded that the findings of the traffic study update prepared for the Revised Overlay Plan adequately address the impacts of OCGP Implementation on traffic and circulation.

As also discussed previously in Section 1.3 of this document, subsequent to the City’s approval of the “Revised Overlay Plan” that was the subject of Addendum No.2, Heritage Fields El Toro, LLC. (Heritage Fields) filed an application to the City of Irvine for approval of Vesting Tentative Tract Map (VTTM) No. 17008. The VTTM was approved by the City of Irvine on May 17, 2007. The subject VTTM included all lands under the auspices of Heritage Fields El Toro, LLC, and the Orange County Great Park Corporation and as a result, also the OCGP Master Plan. The environmental effects associated with approval of the VTTM were addressed in OCGP FEIR Addendum No. 3. Included in OCGP FEIR Addendum No. 3 was a Traffic Study prepared by Austin-Foust Associates, Inc. (dated May 1, 2007) that addressed the transportation impacts of constructing the backbone circulation infrastructure for the overall OCGP project with no new land use development, and in an interim year timeframe consistent with the TTM scope of work of the North Irvine Transportation Mitigation (NITM) Program Ordinance. The Traffic Study analyzed the impacts of the Master Subdivision Map (MSM) application based on year 2010 traffic conditions in the traffic analysis study area. The subject study is available for inspection at the Irvine Redevelopment Department during normal business hours.

The backbone circulation system includes Marine Way from Sand Canyon Avenue to Bake Parkway, Trabuco Road from the SR-133 to “O” Street, and the extension of Rockfield Boulevard to Marine Way as four-lane primary arterials, Ridge Valley (formerly “Y” Street) from Portola Parkway to Irvine Boulevard and “O” Street (formerly College Road) as four-lane secondary arterials, Trabuco Road east of “O” Street, “A” Street, “B” Street, “C” Street and “D” Street as two-lane local road ways. It should be noted that the backbone system improvements also includes the construction of “O” Street between Trabuco Road and Marine Way to its half width (two lanes) The remaining two lanes will be built by the owner of the adjacent property (west side of “O” Street) when that property is developed.

In addition, OCGP FEIR Addendum No.3 included an Internal Circulation Analysis prepared by Austin-Faust Associates, Inc. (dated May 1, 2007) that analyzed the access and internal circulation for the overall OCGP, including the OCGP Master Plan. This study is also available for inspection at the Irvine Redevelopment Department during normal business hours.

4. Discussion of Checklist and Mitigation Measures

Primary access is provided to Irvine Boulevard via Ridge Valley; “O” Street (formerly College Road), “A” Street and “B” Street to Sand Canyon Avenue via Trabuco Road and Marine Way (and indirectly via Irvine Boulevard); and to Alton Parkway, Barranca Parkway, and Bake Parkway Via Marine Way. Project access to the SR-133 is provided directly via a planned interchange at Trabuco Road and indirectly via “O” Street to the Irvine Boulevard interchange.

The study employed Intersection Capacity Utilization (ICU) values to determine levels of service (LOS). The results of this analysis show that all intersections operate at an acceptable level of service under Post-2025 build out conditions. The intersections were then analyzed for signalization needs. Traffic signal warrants based on peak hour volumes (as adopted by the Federal Highway Administration and Caltrans) were used to determine the need for signalization. Based this analysis, traffic signals should be installed at all of the analyzed intersections.

Recommended on-site traffic-control measures include one-way stop signs, signals, and roundabouts. Left-turn pocket lengths for project access intersections with exclusive left-turn lanes were estimated using the County of Orange Environmental Management Agency (EMA) Highway Design Manual. The estimated left-turn storage length requirements for the analyzed intersections were based on peak hour volumes.

Right-turn lanes will be provided for select project access locations on site where additional intersection capacity is needed. The length of the right-turn lane is a function of the adjacent through-traffic queue and LOS at the intersection. A minimum length of 250 feet plus a 120-foot transition will be provided at these locations. Right-turn deceleration lanes are provided along the periphery of the project site and along major roadways within the project site where higher speeds prevail (i.e., Irvine Boulevard, Trabuco Road, and on Marine Way with the exception of locations within the TOD District). The right-turn deceleration lane will be a minimum of 150 feet with a 120-foot transition, in order to provide a safe transition from the through lane to the right-turn lane.

4.14.3 Impacts Associated with the OCGP Master Plan

As discussed above, the updated traffic study addressing the Revised Overlay Plan adequately covers the range of potential impacts of the OCGP Master Plan on the area circulation system. The same conclusion can be drawn with regard to the backbone circulation infrastructure and internal circulation studies described above as they pertain to the OCGP Master Plan. Since the proposed land uses within the OCGP Master Plan are consistent with those analyzed in the OCGP FEIR and the updated traffic study for the Revised Overlay Plan, no additional traffic analysis is necessary and no new significant impacts related to traffic are anticipated.

Special Issues

Pedestrian and Bicycle Circulation

The project area is planned to provide a system of private and public sidewalks and pathways to accommodate the recreational and transportation needs of the residents. These facilities will provide access to nearby recreational facilities, schools, public amenities, commercial centers, bus stops, and provide for an alternative mode of transportation for the area residents. Bicycle lanes will be provided along all public arterials in accordance with the City’s standards and the General Plan. These facilities in addition to a system of internal pathways within each project area will serve the needs of recreational and experienced cyclists. The planned trails also provide an alternative mode of transportation for those wishing to ride their bicycle to work, shopping, school, and other destinations.

4. Discussion of Checklist and Mitigation Measures

Class I off-street trails for pedestrian and bicycle use, will be located in the project site. Bicycle lanes will be provided along the arterials surrounding the development. The pedestrian and trail linkages will allow users to connect to the City's existing trail system and expanded trail network being developed to the north as part of Planning Area 6 and to the west as part of Planning Area 1 and Planning Area 9, as well as the future Orange County Great Park.

A detailed analysis of traffic control measures, including traffic signals, stop-sign control and pedestrian crossings, will be performed with the associated development's map level traffic study, Master Plan and street improvement plan reviews, and in coordination with the City Traffic Engineer, when specific project details are available. Appropriate traffic control measures will be in accordance with City Standards and implemented in the design of the development with the approval of the street improvement plans. Through the implementation of the on-street and off-street trails, and a system of public and private sidewalks within the project area, the goals of the City's General Plan (Objectives B-3 and B-4) for providing alternative modes of transportation and recreational amenities would be met by future development under the proposed project.

Public Transit

The Traffic Study indicates that public sidewalks and pedestrian/bike paths will be provided throughout the Heritage Fields and Great Park developments to allow for access to future transit facilities. The detailed analysis of these needs will occur during the subsequent map level/subdivision map and street improvement plan approval process. In addition, the details of bus stops and future routes serving this area will be coordinated with the Orange County Transportation Authority during the future map level/subdivision map approval process.

The Irvine Transportation Center is adjacent to the Transit Oriented Development (TOD) district of the project area and provides access to the Metrolink commuter rail and Amtrak rail services using the Southern California Regional Rail Authority tracks that bisect the TOD district. Development of Planning Area 30 will include a 20-acre Remote Airport Terminal (also referred to as a "fly-away center"); 53,500 square feet of transit-related building facilities; and 675 parking spaces to encourage and support public transit use.

Congestion Management Program (CMP) Checklist

CMP legislation requires that the CMP Agency monitor the implementation of the Orange County CMP, including CMP land use coordination component requirements. The goal of the CMP is to ensure that certain key intersections within the CMP Highway System (CMPHS) are operating at acceptable levels. The CMP has been developed to monitor impacts on CMPHS intersections. The CMP Monitoring Checklist for the Land Use Coordination Component can be found in Appendix D of the Traffic Study.

There are 18 intersection locations within the study area that are monitored as part of the CMP. The results summarized in the CMP Checklist in Appendix D of the Traffic Study indicate that each of the CMP intersections in the study area is forecast to operate at level of service (LOS) "E" or better, which is within the CMP performance standard for CMP intersections, based on an analysis of short-term (year 2010 in this case assuming 20 percent of project build-out compared with no build conditions, i.e., no development within PA 30 and PA 51) traffic conditions that is required by the CMP. These results demonstrate that the proposed project would not result in any adverse CMP intersection impacts.

4. *Discussion of Checklist and Mitigation Measures*

Circulation Phasing Report Intersections

There are 11 intersection locations in the study area that are identified as impacted 2002 Circulation Phasing Report intersections. Table 7-1 of the Traffic Study presents the 2010 ICU results for these locations (assuming 20 percent of project build-out compared with no build conditions, i.e., no development within PA 30 and PA 51). It should be noted that the intersection locations within each category are presented according to priority for the need of addressing the intersection's impacts. The results show that no location within the study area is adversely impacted by the GPA/ZC project under 2010 conditions.

Conclusion

The project would not produce new or substantially increase the severity of significant impacts previously identified in the OCGP FEIR. Consistent with the conclusions in the OCGP FEIR, traffic and circulation impacts associated with the project would be less than significant as the future development would implement all applicable laws and regulations to reduce impacts on traffic and circulation.

The OCGP FEIR also disclosed the traffic analysis assumption that the cumulative impact of the adopted Overlay Plan traffic along with other regional growth at the identified ramp and freeway locations would be mitigated through a combination of regional programs that are the responsibility of other agencies, and if said programs are not implemented the cumulative freeway/toll-way ramp impacts would remain significant and unavoidable (OCGP FEIR page 7-19). The project would not alter this conclusion.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the features of the proposed OCGP Master Plan require a major change to the certified OCGP FEIR. The proposed OCGP Master Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP OCGP FEIR was certified, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was certified, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant

4. *Discussion of Checklist and Mitigation Measures*

effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant transportation/circulation-related effects identified in and considered by the certified OCGP FEIR.

4.14.4 Mitigation from the OCGP FEIR and Applicability to the OCGP Master Plan

The OCGP FEIR identified mitigation measures TRAN 1 through TRAN 8, which, if fulfilled prior to specified development approvals, would eliminate or substantially reduce the traffic and circulation effects of development under the adopted Plan. The measures are applicable to future development under the project.

Locations experiencing peak hour deficiencies and significantly impacted by the project have been evaluated to determine what improvements are necessary to provide acceptable levels of service in accordance with City of Irvine and adjacent jurisdiction standards. Project mitigation in the form of (1) constructing new on-site arterial highways, (2) constructing new off-site roadway improvements, and (3) participating on a fair share basis to needed off-site freeway/toll-way ramp improvements, have all been determined as part of the traffic analysis. The traffic impact study has presented a multi-phase analysis of the potential traffic related impacts that would be anticipated to occur under the Orange County Great Park proposed network and land use concepts. The following identifies the measures needed to mitigate the impacts that have been identified. As the planning process for the project proceeds, and the land use plan becomes more defined and refined, additional analyses will be required to determine the cost, assign responsibility and refine the phasing of mitigation measures.

TRAN⁹ Prior to the approval of any final map (other than a financing and conveyance map) within Planning Areas 30 and 51, and prior to issuances of any building permits for permanent improvements within Planning Areas 30 and 51, the landowner or subsequent project applicant shall either (i) apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions, and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs to reduce traffic, air quality and noise impacts, or (ii) develop and implement a similar transportation management plan containing the elements and meeting the criteria described below as approved by the Director of Public Works:

Transportation Management Plan (TMP)

The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for Planning Areas 30 and 51. This document summarizes the key elements of the TMP.

1.0 Introduction

The purpose of this document is to provide an outline for a comprehensive TMP for Planning Areas 30 and 51 ("Great Park TMP"). This report is not intended to

⁹This mitigation measure has been slightly revised, as compared to the mitigation measure in the OCGP FEIR. The revised language gives the landowner or subsequent applicant the flexibility either to annex into Spectrumotion or to develop a similar transportation management plan, rather than allowing a management plan option only if annexation is not approved. Because the mitigation measures – i.e. annexation into Spectrumotion or development of a transportation management plan – remain the same, this change does not affect analysis of the impacts or the environmental conclusions from the OCGP FEIR.

4. *Discussion of Checklist and Mitigation Measures*

provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.

The applicant may elect to annex Planning Area 51 and a portion of Planning 30 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in TMA. Membership dues provide the funding for the Association and its program, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.

In the event that the applicant elects not to annex into Spectrumotion, a TMP similar to that provided by Spectrumotion will be developed and implemented. This document sets forth the components of the TMP should it be necessary.

2.0 Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

New Hire Orientation: Inform newly hired employees of commuting services available to them.

Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services (i.e., OCTA buses, Metrolink, Amtrak, etc.).

Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.

On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.

Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.

Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.

Website: Maintain a website with all of their program information available.

Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.

Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.

Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.

4. *Discussion of Checklist and Mitigation Measures*

3.0 **Transportation Management Plan Implementation**

As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in Planning Areas 30 and 51. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.

- TRAN2 Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of the certified Final OCGP Program FEIR.
- TRAN3¹⁰ Prior to issuance of any building permits for permanent improvements within Planning Areas 30 and 51, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the NITM Ordinance.
- TRAN4¹¹ Prior to approval of each Master Tentative Map or Master Plan for numbered lots, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map or Master Plan for numbered lots. The traffic study area shall be the same as the study area utilized in the NITM Nexus Study. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated traffic forecasts. The updated traffic study will evaluate at a minimum the cumulative impact of the subject map and/or Master Plans and all previously approved or concurrently submitted maps and/or Master Plans. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City approved traffic study scope of work. The landowner or subsequent project applicant shall construct or bond for and enter into a funding agreement for necessary improvements identified in the updated traffic study and/or participate in the City fee program (OCGP FEIR Mitigation Measure TRAN2) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of the OCGP FEIR.

Traffic signals that are on-site or directly related to the development in Planning Areas 30 and 51 will be installed as warranted through the mitigation implementation plan process.

¹⁰ This mitigation measure has been slightly modified, as compared to the mitigation measure in the OCGP FEIR, to reflect the fact that the NITM program serves as the implementing mechanism for the mitigation measure as originally drafted. Implementation of the requirements of the NITM ordinance satisfies the obligations of this mitigation measure.

¹¹ Although this mitigation measure originally references "each Master Tentative Map," it is apparent from the language of the measure that it applies to tentative maps and master plans which propose actual development and hence would generate traffic trips. The VTTM/MSM does not propose or authorize trip-generating development. Traffic studies in compliance with the mitigation measure and the NITM Scope of Work are required for each tentative map for development of any portion of the site. An additional change has been made to the second to last sentence of the mitigation measure – clarifying that the applicant must bond for and/or enter into a funding agreement for necessary improvements if it does not take on the obligation to construct such improvements.

4. Discussion of Checklist and Mitigation Measures

With regard to the subdivision maps compliance with the NITM Program and the other traffic conditions of approval shall satisfy the requirements of Mitigation Measure TRAN4.

TRAN5 In conjunction with the preparation of any updated traffic study as required in Mitigation Measure TRAN4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/toll-way ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the following actions:

1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-toll-way ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in this FEIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines.
2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency.
3. The landowner or subsequent project applicant shall enter into an agreement with the City prior to recordation of the first final map for each Master Tentative Map or equivalent to establish the method and timing of payment of the identified percentage responsibility.
4. The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or funding participation in a regional transportation improvement fee program, if adopted.

TRAN6 The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 of the Final OCGP FEIR show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.

TRAN7 Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation

4. *Discussion of Checklist and Mitigation Measures*

Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-compete clause or any similar agreement restricting a public agency's authority to construct improvement.

TRAN8 Following adoption of a land use plan and circulation plan for Planning Areas 30 and 51 and before the issuance of any building permits within the MCAS El Toro property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdictions to amend the Orange County Master Plan of Arterial Highways (MPAH). Marine Way, Trabuco Road from the SR-133 tollway to College Road, and Y Street should be included on the MPAH.

4. Discussion of Checklist and Mitigation Measures

4.15 UTILITIES AND SERVICE SYSTEMS

4.15.1 Environmental Setting

Potable Water

The OCGP FEIR described the potable water system for the project. The IRWD is the jurisdictional agency responsible for plan approval and providing water service to the project area. Planning Areas 30 and 51 are located within Zone 3 North and Zone 4 of the IRWD water system. The existing on-site distribution system includes a network of distribution system pipelines, six reservoirs, and two pump stations.

Recycled Water

As stated in the OCGP FEIR, IRWD is the jurisdictional agency responsible for plan approval and providing water service for the project area. Recycled water is currently supplied to Planning Areas 30 and 51 via a 12-inch IRWD Zone B pipeline and connecting to an 8-inch former military base pipeline in the southwest corner of the property.

Sewer

As stated in the OCGP FEIR, IRWD is the jurisdictional agency responsible for plan approval and sewer service for the project area. Planning Areas 30 and 51 are served by a two-branched system with flow, mainly by gravity, from the northeast to the southwest. The system includes a series of pipes ranging from 6 to 15 inches in diameter.

Solid Waste

The OCGP FEIR discussed in detail the environmental setting for solid waste for the project. Solid waste at the project site is collected by Waste Management, Inc., and is disposed of at the Frank R. Bowerman Landfill owned by the County of Orange Integrated Waste Management Department (IWMD). The IWMD's Countywide Integrated Waste Management Plan (CIWMP) was approved in 1996 pursuant to California Integrated Waste Management Board requirement. The CIWMP shows that there is sufficient solid waste disposal capacity in the County for the next 30 years.

Energy and Communications

Southern California Edison (SCE) serves the project via two primary substations. The Southern California Gas Company serves Planning Areas 30 and 51. AT&T is the communications provider for these Planning Areas. Detailed information regarding the environmental setting of dry utilities was included in the OCGP FEIR.

4.15.2 Impacts Identified in the OCGP FEIR

Potable Water

The OCGP FEIR projected the potable water demand to be less than 1.75 million gallons per day (MGD) calculated for the land uses proposed within the project. Since the project does not include any additional intensity or change in the mix of land uses, the demand projection for the project is consistent with the OCGP FEIR. As stated in the OCGP FEIR, selected portions of the existing potable water facilities are assumed to remain in place and operational through project

4. Discussion of Checklist and Mitigation Measures

build-out. The OCGP FEIR stated that the existing system will be expanded and integrated into the IRWD system and thus provide a backbone service to all users in the project site. The OCGP FEIR assumed a potable water system that would follow the routing of existing and proposed roadways.

Recycled Water

The OCGP FEIR stated that on January 27, 2003, the IRWD Board of Directors approved the assessment of water supply for the project. According to the findings of the assessment, IRWD has determined that a sufficient non-potable water supply is available to serve the project. Since the OCGP Master Plan does not increase the intensity or change the mix of land uses, the total non-potable water supplies will meet the project demand.

The OCGP FEIR stated that the implementation of the project would require the expansion of the recycled water transmission lines to serve the project. It was assumed that selected on site facilities would remain in place and operational through build-out. The OCGP FEIR stated that the existing system will be expanded and integrated into the IRWD system and provide a backbone service to all users in the project site. The OCGP FEIR assumed a non-potable system that would follow the routing of existing and proposed roadways within the project.

Sewer

The OCGP FEIR stated the IRWD will continue to provide sewer service to the project. IRWD has indicated that it would have sufficient capacity to meet the future demand; however, additional wastewater treatment capacity may need to be purchased by project proponents as specific development projects come forward. The OCGP FEIR stated that projected build out demand for sewer services based on the land uses in the projected area were .89 million gallons per day (MGD) and the project would require an increase of sewer transmission capacity to serve the project. The proposed sewer system would preserve selected, existing on site facilities in place and operational through build-out and would expand the system through extension of existing sewer lines. The OCGP FEIR stated that additional IRWD maintenance and equipment could be required to operate and maintain the proposed system.

Solid Waste

As stated in the OCGP FEIR, demolition of existing runways, buildings and structures within Planning Area 51 will generate debris materials that will require disposal at local landfills. Green waste will be also generated as a result of ongoing park and landscaping maintenance. In addition to the City requirement for recycling of construction and demolition material to reduce waste, solid waste reduction will also be achieved through compliance with AB 939, which requires that a minimum of 50 percent of the solid waste generated in cities in California be diverted from landfills. Further, SB 1374 requires that all cities implement measures that require diversion of 75 percent of all construction and demolition waste from landfills.

Energy and Communications

The Overlay Plan has proposed to install the new systems generally along a routing that coincides with the existing and proposed roadway within the project. A portion of the routing, (specifically the portion along the "loop road") is not included in the project and will require an adjustment to the routing system for the expansion of the dry utilities system. However, the expansion of the system will generally coincide with the existing and proposed roadways consistent with the OCGP FEIR. The OCGP FEIR further stated that the specific impacts of

4. Discussion of Checklist and Mitigation Measures

constructing new energy and communication transmission facilities could not be determined at the program level analysis, as site-specific plans for the installation of the energy and communication transmission backbone system have not been prepared. The general significant impacts associated with the construction and operation of public facilities, including the project's construction and operation of the transmission system, were addressed in the OCGP FEIR.

4.15.3 Impacts Associated with the OCGP Master Plan

Potable Water

A portion of the routing, (specifically the portion along the "loop road") is not included in the project, and will require an adjustment to the routing system for the expansion of the potable water network. However, the expansion of the system will generally coincide with the existing and proposed roadways consistent with the OCGP FEIR. The OCGP FEIR further stated that specific environmental impacts of the proposed project on the existing and planned MWD facilities, as well as specific impacts of constructing new potable water facilities could not be determined at the program level analysis and project-level environmental review at the time that specific development plans have been prepared will be required. The general significant impacts associated with the project's construction and operation of public facilities has been addressed in the OCGP FEIR.

Recycled Water

A portion of the routing, (specifically the portion along the "loop road") is not included in the proposed project, and will require an adjustment to the routing system for the expansion of the non-potable water network. However, the expansion of the system will generally coincide with the existing and proposed roadways consistent with the OCGP FEIR. The OCGP FEIR further stated that the specific environmental impacts of constructing the new recycled water facilities could not be determined at the General Plan level analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the project's construction and operation of public facilities has been addressed in the OCGP FEIR.

Sewer

Since the project proposes the same intensity and mix of land uses, demand projections and proposed system expansion would remain the same. The OCGP FEIR further stated that the specific environmental impact of constructing new sewer facilities to serve the project cannot be determined at the program level analysis, as site-specific plans for the installation of the sewer backbone system had not been prepared. However, the general significant impacts associated with the construction and operation of public facilities, including the project's construction and operation of the sewer system, was addressed in the OCGP FEIR.

Solid Waste

Since the project is expected to generate significant amounts of construction debris due to demolition, the OCGP FEIR considered this a potentially significant impact and included a number of mitigation measures to address those impacts. The project will not generate additional solid waste due to demolition of runways and buildings and therefore the OCGP FEIR mitigation measures would reduce the project impacts to less than significant levels.

4. *Discussion of Checklist and Mitigation Measures*

Energy and Communications

The Overlay Plan had proposed to install the new systems generally along a routing that coincides with the existing and proposed roadway within the project. A portion of the routing, (specifically the portion along the “loop road”) is not included in the project and will require an adjustment to the routing system for the expansion of the dry utilities system. However, the expansion of the system will generally coincide with the existing and proposed roadways consistent with the OCGP FEIR. The OCGP FEIR further stated that the specific impacts of constructing new energy and communication transmission facilities could not be determined at the program level analysis, as site-specific plans for the installation of the energy and communication transmission backbone system have not been prepared. The general significant impacts associated with the construction and operation of public facilities, including the project’s construction and operation of the transmission system, were addressed in the OCGP FEIR.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The OCGP Master Plan will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant utilities/service systems-related effects identified in and considered by the certified OCGP FEIR.

4.15.4 Mitigation from the OCGP FEIR and Applicability to the OCGP Master Plan

The OCGP FEIR determined the mitigation measures identified in other sections of the OCGP FEIR (5.1-5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of facilities for the following types of utilities to serve new growth expected in the project area:

4. Discussion of Checklist and Mitigation Measures

-
- potable water
 - recycled water
 - wastewater
 - energy and communication transmission facilities

Mitigation Measures SW1 through SW5 apply to future demolition and new construction, and would be carried forward through permit approvals for subsequent development projects. The proposed project would neither change these mitigation measures nor their application to future developments.

SW1 It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other deconstruction of the aged structures and property, including but not limited to buildings and runways, at El Toro MCAS is contaminated with lead-based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the El Toro MCAS site by ordinary means, technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.

If it is determined by the technical evaluation that material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as “waste-to-energy” (WTE) plants.

SW2 For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project must submit a written plan to the City and implement such plan to ensure that 75% of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.

SW3 For that solid waste which the technical study deems to be suitable for recycling, the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, recycling agent, and that a minimum of 75% of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180. (“Recycling” does not include transformation, as defined in Public Resources Code Section 40201.)

SW4 To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by “weigh ticket” receipts from state-certified disposal, non-disposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these

4. Discussion of Checklist and Mitigation Measures

required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.

To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.

- SW5** For green waste, the project applicant must submit a written plan to the city and implement such plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50% of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.

5. *Organizations and Persons Consulted*

5.1 **PREPARERS**

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5.2 **ORGANIZATIONS AND PERSONS CONSULTED**

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Orange County Great Park Corporation

Glen Worthington.....Manager of Planning and Environmental Services

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APPENDIX A

**ORANGE COUNTY GREAT PARK
MITIGATION MONITORING PROGRAM
JUNE 2003 (Modified July 2007)**

ORANGE COUNTY GREAT PARK

Mitigation Monitoring Program

JUNE 2003

(Modified July 2007)

City of Irvine
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Irvine, California 92623-9575



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**ORANGE COUNTY GREAT PARK
FINAL EIR
CITY OF IRVINE
MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST**

1.0 INTRODUCTION

Section 21081.6 to the State of California Public Resources Code requires a lead or responsible agency that approves or carries out a project where an environmental impact report (EIR) has identified significant environmental effects to adopt a “reporting or monitoring program for adopted or required changes to mitigate or avoid significant environmental effects.” The City of Irvine is the lead agency for the Great Park Plan EIR, and therefore is responsible for implementation of the mitigation monitoring program. An EIR has been prepared for this project which addresses potential environmental impacts and, where appropriate, recommends measures to mitigate these impacts. As such, a mitigation reporting or monitoring program is required to ensure that adopted mitigation measures are implemented.

The project is located in the center of Orange County and includes land within the City of Irvine as well as unincorporated area. The project area encompasses approximately 4,701 acres, or 7.5 square miles. The total area proposed for annexation is 4,287 acres.

The project area is bounded by the City of Lake Forest to the south and southeast, the City of Irvine to the west and southwest, and the County of Orange to the north. The former MCAS El Toro is generally located north of the Santa Ana (I-5) Freeway, east of the Eastern Transportation Corridor (SR-133), and south of the Foothill Transportation Corridor (SR-241). Major roadways bordering the project area include Barranca Parkway to the south, Sand Canyon Avenue to the west, Portola Parkway and Irvine Boulevard to the north, and Alton Parkway to the east. The James A. Musick Jail Facility is located on a 105-acre site northwest of existing Bake Parkway and east of the future extension of Alton Parkway. The northern boundary of the Musick Jail abuts the former MCAS El Toro. Existing buildings of the Irvine Spectrum abut the Musick Jail site to the west/southwest. An eight-acre parcel west of the Musick Jail contains the IRWD East Irvine Pumping Station, Zone III 5-million gallon potable water reservoir, and a 7-million gallon potable water reservoir.

The project consists of the following actions: 1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; 2) Annexation of the unincorporated portion of Planning Area 35 (the Irvine Ranch Water District Parcel); 3) General Plan Amendment and Zone Change for Planning Area 30 with is presently in the City of Irvine; and, 4) Approval in the form of a Development Agreement vesting approval of higher intensity overlay uses in consideration of dedication of land for public purposes and for funding certain infrastructure improvements and maintenance of the public uses by the

purchaser/developer and subsequent landowners and funds for specified park, roadways, and other circulation facilities and infrastructure. The proposed project also includes the dedication of approximately 21 acres to be used for the Jeffrey Pine Open Space Spine (JOSS). The JOSS acreage will serve as a connector to the regional open space system and will provide recreational opportunities in the Northern Sphere.

2.0 PROGRAM MANAGEMENT

The mitigation monitoring and reporting program (MMRP) for the Great Park Plan will be in place through all phases of project approval. Enforcement of the MMRP will be the responsibility of a Project Manager (PM) at the City of Irvine.

2.1 Roles and Responsibilities: Project Manager

The role is assigned by the Community Development Director. The PM assigned to the proposed project will supervise the MMRP during design, construction, and operation of the project and is responsible for the overall management of the MMRP. The PM is thoroughly familiar with the project and qualified to determine if an adopted measure is being properly implemented. The PM oversees the MMRP and reviews the Reporting and Implementation (R&I) Forms to ensure they are filled out correctly and proper action is being taken on each measure. The PM and/or an assignee will also be responsible for the filling and updating of the R&I Forms during all phases of the project. The PM will determine the need for a measure to be modified and ensure the use of a mitigation specialist if technical expertise beyond the PM's is required. If it is found that an adopted mitigation measure is not being properly implemented, the PM will require corrective actions to ensure adequate implementation. The responsibilities of the PM include the following:

1. An MMRP Reporting Form will be prepared for each potential significant impact and its corresponding mitigation, as identified in the list of significant impacts and mitigation measures attached hereto.
2. Appropriate specialists will be retained, as needed, to monitor specific mitigation activities and provide appropriate written approvals to the PM.
3. The PM and/or an assignee will approve, by signature and date, the completion of each action item that was identified on the MMRP Reporting Form.
4. All MMRP Reporting Forms for an impact issue requiring no further monitoring will be signed off as completed by the PM and/or an assignee at the bottom of the MMRP Reporting Form.

5. Unanticipated circumstances may arise requiring the refinement or addition of mitigation measures. The PM is responsible for approving any such refinements or additions. An MMRP Reporting Form will be completed by the PM and/or an assignee. The completed form will be provided to the appropriate design, construction, or operational personnel.

In the foregoing regard, it is noted that in OCGP FEIR Addendum No.3 dated April 2007, several mitigation measures were modified with regard to their timing in order to more effectively implement them. Mitigation measures in this regard are identified with an asterisk (*).

6. The PM has the authority to stop the work of construction contractors if compliance with any aspects of the MMRP is not occurring after written notification has been issued. The PM also has authority to hold certificates of occupancies if compliance with a mitigation measure attached herein is not occurring. The PM also has authority to hold the issuance of a building permit until all mitigation measures are implemented. Should the applicant/contractor disagree with the findings and actions of the PM, an appeal to the Community Development Director can be submitted.

2.2 General Procedures

MMRP Program Definitions

The MMRP consists of key program elements. The elements are summarized below.

MMRP Files

Files are established to document and retain records of the MMO. The file organization is established by the PM according to mitigation measures and project phases.

R&I Forms

R&I Forms are designed to record the monitoring activity in a consistent manner with appropriate approvals. The R&I Forms are placed in the MMRP files.

Environmental Compliance Verification

At the completion of construction contracts that are part of the overall development of the project, a verification of environmental compliance is executed by the PM. The verification concludes the construction monitoring process for the contract.

Mitigation Monitoring and Reporting Program Procedures

The policies and procedures for the MMRP described herein are intended to provide focused, yet flexible guidelines for monitoring the implementation of the mitigation measures discussed in the final EIR. The Mitigation Monitoring and Reporting Checklist lists each mitigation measure, the method of verification for each mitigation measure, and the party responsible for monitoring efforts. The Mitigation Monitoring and Reporting

Checklist also provides the PM a verification of compliance for each mitigation measure during each applicable phase of the project. An R&I form is prepared for each potential significant impact and its corresponding mitigation measure. After each measure is verified for compliance, no further action is required for the specific phase. The PM shall initial and date the measure on Mitigation Monitoring and Reporting Checklist.

Disposition of Monitoring Forms

All actions and completed R&I Forms are kept in the MMRP file with the City of Irvine during the pre-design, design, construction, and operational phases of the project. Reports will be available from the city upon request at the following address:

City of Irvine (Lead Agency)
Community Development Department
One Civic Center Plaza
Irvine, California 92623-9575

MITIGATION MONITORING AND REPORTING PROGRAM

ORANGE COUNTY GREAT PARK

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
5.1 LAND USE (Base Plan and Overlay Plan)					
	No mitigation measures are required.				
5.2 TRAFFIC/CIRCULATION (Base Plan and Overlay Plan)					
TRAN1	<p>Prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs. The primary purpose of this mitigation measure is to reduce traffic, air quality and noise impacts. Should annexation into Spectrumotion not be approved, the landowner or subsequent project applicant shall develop and implement a similar transportation management plan containing the elements and meeting the criteria described below:</p> <p>Transportation Management Plan (TMP)</p> <p>The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for the Great Park Project. This document summarizes the key elements of the TMP.</p>	<p>Requires submittal of annexation plans by project applicant in accordance with the Irvine Spectrum TMA. Failure to obtain approval of such plans requires project applicant to develop and implement a TMP as described in TRAN1.</p>	<p>Prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property.</p>	<p>Director of Community Development or designee.</p>	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>1.0 Introduction</p> <p>The purpose of this document is to provide an outline for a comprehensive TMP for the Great Park. This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.</p> <p>It is the intent to annex Planning Area 51 and a portion of Planning Area 35 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.</p> <p>In the event that annexation of PAs 51 and 35 into Spectrumotion is not approved, a TMP similar to that provided by Spectrumotion will be implemented. This document sets forth the components of the TMP should it be necessary.</p> <p>2.0 Transportation Management Plan Framework</p> <p>The key elements of the Great Park TMP are set forth below:</p> <p>New Hire Orientation: Inform newly hired employees of commuting services available to them.</p>				

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	<p>Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services ((i.e., OCTA buses, Metrolink, Amtrak, etc.).</p> <p>Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.</p> <p>On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.</p> <p>Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.</p> <p>Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.</p> <p>Website: Maintain a website with all of their program information available.</p> <p>Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.</p> <p>Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.</p> <p>Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.</p>				

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	3.0 Transportation Management Plan Implementation As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Great Park. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.				
TRAN2	Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of this EIR.	Requires contractual agreement between the City of Irvine and project applicant to fund improvement listed in the EIR.	Prior to the issuance of the first building permit.	Director of Community Development or designee.	
TRAN3	Prior to issuance of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the project traffic study (Urban Crossroads, December 2002) to maintain satisfactory levels of service as defined by the City's General Plan, based on thresholds of significance, performance standards, and methodologies used in this EIR, Orange County Congestion Management Program, and established in the transportation system/infrastructure fee program described in Mitigation Measure Tran 2 above.	Requires contractual agreement between the City of Irvine and project applicant to fund improvement listed in the EIR.	Prior to issuance of any building permits for permanent improvements in the project area.	Director of Community Development or designee.	
TRAN4	Prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated traffic forecasts. The updated traffic study will evaluate the cumulative impact of the subject map and all previously approved or concurrently submitted maps. The methodology for the study area, applicable land use and	Requires the separate submission of updated traffic study developed in accordance with City of Irvine Traffic Study Guidelines.	Prior to the approval of each Master Tentative Map or equivalent document.	Director of Community Development or designee.	

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	<p>circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City approved traffic study scope of work. The landowner or subsequent project applicant shall construct, bond for, or enter into a funding agreement for necessary improvements identified in the updated traffic study and/or participate in the City fee program (Tran 2 above) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of this EIR.</p> <p>Traffic signals that are on-site or directly related to the Great Park development will be installed as warranted through the mitigation implementation plan process.</p>				
TRAN5	<p>In conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the following actions:</p> <ol style="list-style-type: none"> 1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-tollway ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in this EIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines. 2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency. 	Requires the separate submission of updated traffic study developed in accordance with City of Irvine Traffic Study Guidelines.	Prior to the approval of each Master Tentative Map or equivalent document.	Director of Community Development or designee.	

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	<p>3. The landowner or subsequent project applicant shall enter into an agreement with the City prior to recordation of the first final map for each Master Tentative Map or equivalent to establish the method and timing of payment of the identified percentage responsibility.</p> <p>The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or funding participation in a regional transportation improvement fee program, if adopted.</p>				
TRAN6	The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.	Requires the separate submission of updated traffic study developed in accordance with City of Irvine Traffic Study Guidelines. May require additional documentation and/or submission to other jurisdictions, depending on location of proposed improvement.	Prior to the approval of each Master Tentative Map or equivalent document.	Director of Community Development or designee.	
TRAN7	Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall	Requires the development and submission of a Project Study Report, a New Connection Request, and a	Prior to the approval of each Master Tentative Map or equivalent document.	Director of Community Development for submission to Caltrans and potentially effected TCA's.	

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	prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-compete clause or any similar agreement restricting a public agency's authority to construct improvement.	Detailed Traffic Revenue Study by the City of Irvine.			
TRAN8	Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of any building permits within the base property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdiction to amend the Orange County Master Plan of Arterial Highways. Marine Way, Trabuco Road from the SR-133 tollway to College Road, and Y Street should be included on the MPAH.	Requires cooperate study and subsequent amendment to Orange County Master Plan of Arterial Highways.	Following adoption of a land use plan and circulation plan for the project site and before the issuance of any building permits.	Director of Community Development, OCTA, and other affected jurisdictions.	
5.3 AIR QUALITY (Base Plan and Overlay Plan)					
AQ1	Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors; etc.; shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.	Requires written notification to potentially affected sensitive receptors (residents and landowners).	Prior to the start of demolition and construction within the project area.	Director of Community Development or designee.	
AQ2	Prior to the commencement of construction activities required to demolish and/or remove existing DON infrastructure, including runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future	Requires the development, submission, and approval of a construction emissions mitigation	Prior to the start of demolition and construction within the project area.	Director of Community Development or designee.	

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	<p>development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plans shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.</p> <p>X Evaluate the availability and use, if available, of low-emission (i.e., methanol- or natural gas-powered) construction equipment instead of diesel for each construction phase.</p> <p>X Water exposed soils at least twice daily and maintain equipment and vehicle engines in good condition and in proper tune.</p> <p>X Wash off trucks leaving the site.</p> <p>X Replace ground cover on construction sites when it is determined that the site will be undisturbed for lengthy periods.</p> <p>X Reduce speeds on unpaved roads to less than 15 miles per hour.</p> <p>X Halt all grading and excavation operations when wind speeds exceed 25 miles per hour.</p> <p>X Suspend all emission generating activities during smog alerts.</p> <p>X Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible.</p> <p>X Properly maintain diesel-powered on-site mobile equipment.</p> <p>X Sweep streets at the end of the day if substantial visible soil material is carried over to the adjacent streets.</p> <p>X Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible.</p> <p>X Use of low-VOC asphalt.</p> <p>X Cover all trucks hauling dirt, sand, soil or other loose</p>	plan by project applicant.			

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	<p>material to and from the site.</p> <p>X Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic.</p> <p>X Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible.</p> <p>X Reroute construction trucks away from congested streets, whenever feasible.</p> <p>X Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible.</p>				
AQ3	<p>Prior to the issuance of building permits for any future development, the applicant shall submit, and the Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.</p> <p>X Utilize built-in energy-efficient appliances to reduce energy consumption and emissions.</p> <p>X Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions.</p> <p>X Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible.</p> <p>X Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning.</p> <p>X Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible.</p> <p>X Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods.</p> <p>X Centralize space heating and cooling for multiple-family dwelling units and commercial space.</p>	Requires the development, submission, and approval of an operation-emissions mitigation plan by project applicant.	Prior to the issuance of building permits within the project area.	Director of Community Development or designee.	

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	X Orient buildings north/south for reducing energy-related combustion emissions. X Use solar energy, when feasible. X Use high rating insulation in walls and ceilings.				
AQ4*	At the time of residential and commercial lease and sales agreements, future sales information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find employment nearby.	Requires written notification to employees and residents within the project area.	On-going (at the time of residential and commercial lease and sales agreements).	Director of Community Development or designee.	
AQ5	Future employment generating non-residential development shall include measures to reduce vehicle trips including carpool incentives, easy access to public transit systems, trail linkages between uses, low-emissions vehicle fleets, and the provision of on-site facilities such as banking and food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.	Requires submission of potential measures to reduce vehicle trips, as identified in AQ5.	On-going (prior, during and upon completion of development of the project area).	Director of Community Development or designee.	
5.4 NOISE (Base Plan and Overlay Plan)					
	No mitigation measures are required.				
5.5 PUBLIC HEALTH AND SAFETY (Base Plan and Overlay Plan)					
HH1	a. Prior to the conveyance of the property and issuance of subsequent grading permits, where the presence of ACMs is identified, the DON or its transference shall ensure that all available information concerning ACMs has been provided to the City of Irvine, and the purchasers of the property, including: X The type, location and condition of ACMs X The results of any asbestos testing X Description of asbestos control measures taken, if any X The costs or time necessary to remove existing ACMs	Requires submission of Record of Decision (ROD) or similar applicable federal/state documentation to verify information provided to the City of Irvine by the DON.	Prior to the conveyance of the former MCAS El Toro property; prior to the occupation of existing structures on the former MCAS El Toro property.	Manager of Building and Safety; Director of Community Development.	

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	<p>X The results of any site-specific asbestos inventory updates</p> <p>b. For any structures known to contain ACMs that will be renovated and/or demolished prior to transfer, the DON shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.</p> <p>c. Prior to transfer of any structure constructed before October 1988, scheduled for renovation and/or demolition, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by the DON. This requirement can be waived if an architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building material, and to the best of their knowledge, no ACMs were used as a building material.</p> <p>d. Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.</p> <p>e. Any renovation and/or LBP abatement activities on residential units at former MCAS El Toro shall be conducted in accordance with all applicable federal, state and local regulatory requirements.</p>				
HH2	<p>a. Prior to transfer, the City of Irvine shall receive from the DON, with the concurrence of the appropriate regulatory agencies, a statement that the "Action Required" IRP Site 3 is to be conveyed for restricted use and that all institutional controls have been</p>	Requires submission of Record of Decision (ROD) or similar applicable	Prior to the conveyance of the former MCAS El Toro property; prior to the use of	Manager of Building and Safety; Director of Community Development; City	

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	<p>identified and implemented. The City of Irvine will adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.</p> <p>b. Prior to transfer, if the DON chooses to impose temporary restrictions on the use of Sites 16 and 24 pending adequate remediation of groundwater, the City of Irvine shall receive from the DON a statement of temporary restrictions on the use of the sites and the release of the sites for unrestricted use following implementation of adequate remediation of groundwater. The City of Irvine shall adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.</p>	federal/state documentation to verify information provided to the City of Irvine by the DON.	Locations of Concern on the former MCAS El Toro property.	Council.	
HH3	The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include	Requires submission of development plans	Prior to the approval of development	Manager of Building and Safety ; Orange	

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	evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for “Development Within and Exclusion from Very High Fire Severity Zones” and “Fuel Modification Plans and Maintenance.” Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the proposed project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.	by potential project applicants for review and approval.	plans.	County Fire Authority.	
HH4	Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.	Requires submission of development plans for existing structures for review and approval of required improvements.	Prior to the occupation of existing structures located on the former MCAS El Toro property.	Manager of Building and Safety; Orange County Fire Authority.	
HH5	Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director of Community Development of the City of Irvine in a timely	Requires the development, submission, and approval of a protocol plan by the potential project applicant.	On-going (prior to the issuance of a grading permit within the project area; in the event of the discovery of unknown hazardous materials).	Director of Community Development or designee; the DON.	

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	manner. Additionally, said protocol plan shall be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities.				
HH6	The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells located on the former MCAS El Toro in a geographic information systems database (GIS). The City will review all permit applications on the former air station for well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to wells will be limited to authorized personnel.	Requires the development and maintenance of a GIS database by the City of Irvine.	On-going (prior to the issuance of grading permits; during construction activities).	Department of Public Works.	
4.6 GEOLOGY AND SEISMICITY (Base Plan and Overlay Plan)					
GS1	Prior to issuance of a building permit, the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.	Requires potential project applicant to address seismic design provisions in geotechnical reports per adopted Building Codes.	Prior to the issuance of a building permit.	Director of Community Development.	
GS2	<p>Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.</p> <p>1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be conducted. The purpose of the subsurface evaluation is to:</p> <p>a. Further evaluate the subsurface conditions in the</p>	Requires potential project applicant to prepare geotechnical studies in support of specific development plans.	Prior to the issuance of a building permit.	Director of Community Development.	

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	<p>area of the proposed structures.</p> <p>b. Provide specific data on potential geologic and geotechnical hazards.</p> <p>c. Provide information pertaining to the engineering characteristics of earth materials in the project area.</p> <p>From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural sections, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:</p> <p>X Seismic Ground Shaking - Measures to prevent risk of loss, injury or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.</p> <p>X Erosion or Loss of Topsoil – Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances.</p> <p>X Where Expansive Soils Exist – Measures for the design of foundations, slabs, flatwork and other improvements subject to drainage from expansive soils.</p> <p>Compliance with this measure shall be verified by the Community Development Department.</p>				
GS3	Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of	Requires potential project applicant to	Prior to the issuance of a	Manager of Building and	

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	any existing structure if a building permit is not issued, a seismic evaluation of the structure including recommendations for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.	develop and submit a seismic evaluation in accordance with adopted Building Codes.	building permit for the occupation of any existing structure at the former MCAS El Toro.	Safety.	
GS4	Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.	Requires potential project applicant to develop and submit geotechnical and hydrology reports in accordance with adopted local/state/federal regulations.	Prior to the issuance of a grading permit.	Director of Community Development.	
5.7 Hydrology/Water Quality (Base Plan and Overlay Plan)					
H/WQ1	<p>Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City of Irvine adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area . . . and residential construction sites that result in the disturbance of five acres or more . . . shall be required to develop and implement BMPs . . . to control erosion and siltation and contaminated runoff from the construction sites." Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of one acre or more.</p> <p>The City's standard conditions of approval indicate that a</p>	<p>Potential project applicant must show compliance with City of Irvine Grading and Water Quality Ordinances via approval of a NPDES permit, SWPPP, and WQMP.</p> <p>Notices of Intent (NOIs) for coverage of potential projects under the General Construction Activity Storm Water Runoff Permit must be submitted to the</p>	Prior to the issuance of a grading permit.	Director of Community Development; Manager of Building and Safety; City Engineer; State/Regional Water Quality Control Boards.	

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	<p>Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.</p> <p>Additionally, prior to the issuance of a grading permit, project applicants must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.), and shall reference the location(s) of structural BMPs.</p> <p>Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the Director of Community Development for any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES Permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.</p> <p>The Mitigation Measures will be implemented in accordance</p>	State Water Resources Control Board.			

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	with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.				
H/WQ2	Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TDML) Implementation Plan adopted for this watershed.	Submission of a construction management plan required by the potential project applicant.	Prior to the issuance of a grading permit.	Director of Community Development; City Engineer; State/Regional Water Quality Control Boards.	
H/WQ3	Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrology studies and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.	Requires the submission of a hydrology study and hydraulic analysis by the potential project applicant.	Prior to the approval of the first tentative tract or parcel map in the project area.	Director of Community Development; City Engineer.	
H/WQ4	Prior to issuance of a building permit, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be	Requires the development, review, and approval of a Letter of Map Revision; physical improvement of property located in	Prior to the issuance of a building permit.	Director of Community Development; City Engineer.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.</p> <p>After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process.</p>	100-year floodplain by project applicant.			
5.8 AGRICULTURAL RESOURCES (Base Plan and Overlay Plan)					
AG1	<p>In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operations, City Of Irvine Standard Discretionary Case Condition B.4 and City Of Irvine Standard Subdivision Condition 3.4 regarding disclosure statements shall be amended to include the following for subdivisions proposed adjacent to existing agricultural operations:</p> <p>Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:</p> <p>X Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.</p>	Project applicant shall complete and receive approval for an occupancy disclosure form per the standards stated in Mitigation Measure AG1.	Prior to the issuance of a building permit.	Director of Community Development.	
AG2	Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.	May require development of a cooperative agreement.	On-going (prior to and during development of the project area).	Director of Community Development.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
AG3	Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operations and adjacent urban uses.	May require development of a cooperative agreement.	On-going (prior to and during development of the project area).	Director of Community Development.	
5.9 BIOLOGICAL RESOURCES (Base Plan and Overlay Plan)					
BIO1	Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. Prior to approval of a subdivision map for development within, or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owls, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).	Requires the development and submission of focused biological surveys for resources indicated in BIO1.	Prior to the approval of a subdivision map.	Director of Community Development; US Fish and Wildlife Service; California Department of Fish and Game.	
BIO2	Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan subarea that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, re-creation (i.e. within the proposed wildlife corridor), and/or revegetation as deemed acceptable by the appropriate jurisdictional agencies.	Requires the development and submission of wetland survey for potential wetland resources.	Prior to the approval of a subdivision map.	Director of Community Development; US Army Corps of Engineers; US Fish and Wildlife Service; California Department of Fish and Game.	
BIO3	The City shall continue to work with State and federal agencies during the implementation of the proposed project to implement the revegetation/restoration plan for the wildlife	May require development of a revegetation and/or	On-going (prior to and during development of	Director of Community Development; US	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	corridor. Measures such as sight and sound barriers, including artificial sound walls and natural diversions (e.g. hedges and tree lines) shall be incorporated into corridor design to ensure the viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the EIR.	restoration plan for the identified wildlife corridor.	the project area).	Fish and Wildlife Service; California Department of Fish and Game.	
BIO4	Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered "Significant Trees" under the City of Irvine's Urban Forestry Ordinance (UFO) (Section 5-7-401 et al) and the UFO shall apply to all trees included in this inventory.	Requires the development and submission of a tree inventory per the regulations outlined in the City of Irvine Urban Forestry Ordinance.	Prior to the issuance of a grading permit.	Director of Community Development; International Society of Arboriculture.	
5.10 PALEONTOLOGICAL RESOURCES (Base Plan and Overlay Plan)					
P1	Prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. (A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.	Submittal of resource recovery and disposition plans to the Community Development Department; qualified paleontologists' attendance at pre-grading conference(s) and field observation.	Prior to issuance of a grading permit and during site grading.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossils specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screen-washing operation on-site.</p> <p>Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.</p>				
5.11 CULTURAL RESOURCES (Base Plan and Overlay Plan)					
CULT1	<p>Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PAs 51 and 30. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.</p>	<p>Requires development and submission of an archaeological resources report for PAs 51 and 30 by project applicant.</p>	<p>Prior to the issuance of subdivision maps.</p>	<p>Director of Community Development or designee.</p>	
CULT2	<p>Monitoring of excavation and grading activities associated with future development in PAs 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure Cult1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of</p>	<p>Requires field inspection and monitoring by qualified archaeologist implementing recommendations</p>	<p>Field inspection and monitoring required during grading activities.</p>	<p>Director of Community Development or designee.</p>	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	artifacts, controlled removal of the materials, and an assessment of their importance under CEQA and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.	outlined in the report noted above.			
CULT3	Prior to the issuance of grading permits and/or building permits for any future development in PAs 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City of Irvine to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.	Requires the development and submission of an archaeological mitigation program by project applicant.	Prior to the issuance of grading permits and/or building permits in PAs 51 and 30.	Director of Community Development or designee.	
CULT4	<p>Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City of Irvine to address the accidental discovery or recognition of any human remains. The program shall include the following:</p> <p>X There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:</p> <p>The county coroner must be contacted to determine that no investigation of the cause of death is required, and</p>	Requires the development and submission of an archaeological mitigation program by project applicant.	Prior to the issuance of grading permits and/or building permits.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>If the coroner determines the remains to be Native American:</p> <p>X The coroner shall contact the Native American Heritage Commission within 24 hours.</p> <p>X The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.</p> <p>X The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or</p> <p>X Where the following conditions occur, the landowner or his authorized representative shall reburial the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.</p> <ul style="list-style-type: none"> • The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission. • The descendant identified fails to make a recommendation; or • The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner. <p>Compliance with this measure shall be verified by the Community Development Department.</p>				

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
5.12 AESTHETICS (Base Plan and Overlay Plan)					
A1*	Prior to issuance of building permits, lighting plans and signage plans for new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent residential areas occurs.	Requires review of site specific plans for light intrusion and spillover by City of Irvine.	Prior to the issuance of building permits, lighting plans, and/or signing plans.	Director of Community Development or designee.	
A2*	Prior to the issuance of building permits, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.	Discourages use of mirrored or reflective surfaces in proposed development; designs to be reviewed by the City of Irvine.	On-going (prior to the issuance of building permits; during master plan review).	Director of Community Development or designee.	
5.13 POPULATION AND HOUSING (Base Plan and Overlay Plan)					
	No mitigation measures are available.				
5.14 PUBLIC SERVICES AND FACILITIES (Base Plan and Overlay Plan)					
	Mitigation Measures identified in other sections of this EIR (Section 5.1 – 5.13) address the impacts associated with the construction and operation of new public services and facilities (including law enforcement, fire and emergency medical services, parks and recreation, and school services). Refer to the individual sections mentioned above for a discussion on specific mitigation monitoring and reporting programs.				
5.15 UTILITIES (Base Plan and Overlay Plan)					
	Mitigation Measures identified in other sections of this EIR (Section 5.1 – 5.13) address the impacts associated with the construction and operation of new utilities (including potable water, recycled water, and sewer). Refer to the individual sections mentioned above for a discussion on specific mitigation monitoring and reporting programs. Mitigation Measures pertaining to solid waste are described below.				
SW1	It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other deconstruction of the aged structures and property, including but not limited to buildings and runways, at El Toro MCAS, is contaminated with lead based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense	Requires the development and submission of a technical evaluation by the project applicant to	Prior to the issuance of grading permits.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the MCAS El Toro site by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.</p> <p>If it is determined by the technical evaluation that the material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as "waste-to-energy" (WTE) plants.</p>	determine the composition of solid waste materials generated during the development of the project area.			
SW2	For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant must submit a written plan to the City and implement such plan to ensure that 75 percent of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.	Requires the project applicant to submit written plans to the City of Irvine to ensure recycling maximum feasible levels of solid waste material is recycled.	Prior to the issuance of grading permits.	Director of Community Development or designee.	
SW3	For that solid waste which the technical study deems to be suitable for recycling, the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75% of the	Requires the project applicant to submit written plans to the City of Irvine to ensure recycling maximum feasible levels of solid waste	Prior to the issuance of grading permits.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180. ("Recycling" does not include transformation, as defined in Public Resources Code Section 40201.)	material is recycled.			
SW4	<p>To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by "weight ticket" receipts from state-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.</p> <p>To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.</p>	Requires the project applicant to submit quarterly solid waste tonnage reports to the City of Irvine in order to demonstrate solid waste diversion has occurred.	Prior to the issuance of grading permits.	Director of Community Development or designee.	
SW5	For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50 percent of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.	Requires the project applicant to submit a written plan to the City of Irvine to ensure recycling of the maximum feasible amount of green waste material (minimum of 50 percent) by qualified agent.	Prior to the issuance of grading permits.	Director of Community Development or designee.	

APPENDIX B

**ORANGE COUNTY GREAT PARK
TRIP GENERATION AND
PARKING DEMAND ANALYSIS,
JULY 18, 2007,
LSA ASSOCIATES, INC.**

ORANGE COUNTY GREAT PARK
TRIP GENERATION
AND
PARKING DEMAND ANALYSIS

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July 18, 2007

ORANGE COUNTY GREAT PARK

TRIP GENERATION AND PARKING ANALYSIS

INTRODUCTION

The Great Park is being created as a multi-destination facility that will include a wide variety of educational and recreational opportunities, including sports fields, museums, gardens, wildlife habitat and many other uses. The Great Park will be a total visitor experience with many attractions. As such, visitors will park once and attend multiple events or activities. A high frequency park circulator shuttle system will be available to take visitors from the parking areas to their destination, from one destination to another, or to just provide visitors with a relaxed tour of the park allowing them to get on and off the shuttle wherever their interests may take them. The shuttle system will also provide a link between transit services.

This document is a preliminary summary of trip and parking generation estimated from the current Great Park conceptual design and will be refined and updated as the design moves to a more detailed plan. This document includes summary trip and parking generation for both weekday and weekend days, as well as an estimation of parking demand by time of day. The tables and assumptions used therein are described in the following sections.

For the purposes of the trip and parking generation calculations, the Great Park was divided into three general areas or uses:

- **Sports Area:** includes the sports fields, action sports park, racquet courts, field house and the military museum.
- **Cultural Terrace Area:** includes the remaining museums, library, botanical gardens and conservatory, cultural terrace/lake area, and the time line.
- **Trabuco Entry/Other Park Uses:** includes the great lawn, Bosque, pocket parks, upper canyon, and agua chinon.

The calculations in this document make assumptions as to the operating hours of the various uses found in the Great Park. Those assumptions are shown in the Assumed Operating Hours table below. The "Core Operating Hours" columns indicate the anticipated operating hours or, for uses without traditional operating hours, the anticipated core operating time period in which most of the use's activity will occur in. The "Peak Period" columns indicate the time period in which the assumed peak demand at that use occurs for both the weekday and weekend.

Assumed Operating Hours

Activities	Weekday		Weekend	
	Core Operating Hours*	Peak Period**	Core Operating Hours*	Peak Period**
Field Sports/Baseball/Softball	3:00 pm to 7:00 pm	5:00 pm to 7:00 pm	9:00 am to 10:00 pm	9:00 am to 7:00 pm
Action Sports Park	3:00 pm to 8:00 pm	5:00 pm to 8:00 pm	9:00 am to 10:00 pm	9:00 am to 7:00 pm
Open Raquet Courts	11:00 am to 8:00 pm	6:00 pm to 8:00 pm	9:00 am to 10:00 pm	10:00 am to 5:00 pm
Field House	5:00 pm to 9:00 pm	6:00 pm to 8:00 pm	9:00 am to 8:00 pm	10:00 am to 5:00 pm
Balloon Ride	9:00 am to 6:00 pm	10:00 am to 4:00 pm	9:00 am to 6:00 pm	10:00 am to 4:00 pm
Museums	9:00 am to 6:00 pm	1:00 pm to 4:00 pm	9:00 am to 6:00 pm	10:00 am to 4:00 pm
Library	9:00 am to 6:00 pm	1:00 pm to 4:00 pm	9:00 am to 5:00 pm	10:00 am to 4:00 pm
Botanical Garden and Conservatory	9:00 am to 6:00 pm	1:00 pm to 4:00 pm	9:00 am to 6:00 pm	10:00 am to 4:00 pm
Cultural Terrace/Lake/Time Line	9:00 am to 8:00 pm	10:00 am to 4:00 pm	9:00 am to 8:00 pm	10:00 am to 4:00 pm
Great Lawn/Bosque	9:00 am to 8:00 pm	10:00 am to 4:00 pm	9:00 am to 8:00 pm	10:00 am to 4:00 pm
Upper Canyon/Agua Chinon	9:00 am to 8:00 pm	10:00 am to 4:00 pm	9:00 am to 8:00 pm	10:00 am to 4:00 pm
Pocket Parks	9:00 am to 8:00 pm	10:00 am to 4:00 pm	9:00 am to 8:00 pm	10:00 am to 4:00 pm

* While there is assumed to be some activity and parking demand outside of these hours, these are the general core operating hours assumed for the use.

** The assumed duration/time of the peak parking demand.

There are very few parks in operation that are of the magnitude proposed for the Great Park. The most comparable facility is Balboa Park in San Diego. Balboa Park encompasses almost 1,200 acres and includes the San Diego Zoo, 15 major museums, more than eight gardens, performing arts theatres, as well as traditional park picnic, sports, and recreational opportunities. Since Balboa Park is the most comparable facility to the Great Park, data from that park is used where appropriate, especially from a visitor survey performed as part of the *Balboa Park Land Use, Circulation and Parking Study* issued in February, 2004. Data from that survey is only used for respondents or visitors that did not visit the San Diego Zoo, since that use in Balboa Park is such a large attractor in and of itself and the Great Park does not include such a use. When data from Balboa Park is used in the calculations, it is identified and described below.

This analysis found that 2,639 parking spaces would be necessary to accommodate the park visitors on a weekday and 3,623 spaces would be required on a weekend. The conceptual Great Park design includes regular day-to-day parking for 5,505 vehicles. This supply of parking will be more than sufficient to accommodate the parking demand for the entire park at any given time on a typical weekday or weekend.

This analysis also found that the daily trip generation of the park would be 12,792 trips on a typical weekday and 18,387 trips on a typical weekend. Both of these are below the 19,083 trips calculated in the EIR.

Tables 1 and 2 include detailed note sections at the bottom of the tables that identify and describe the assumptions used in the calculations. The notes sections are divided into four sections, to correspond with different sets of columns used in the tables. Those note sections are:

- **Size Source Notes:** labeled "a" through "h", these notes identify the source of the land use size information.
- **Trip Generation Notes:** labeled "i" through "ll", these notes identify the source and/or assumptions used in calculating the daily trip generation rates for the land uses.
- **Minimum Parking Requirements Notes:** labeled "m" through "ix", these notes identify the appropriate use used to calculate the minimum parking requirements per Section 4-3-4 of the Irvine Zoning Ordinance. In cases where no corresponding use is available in the Zoning Ordinance, the note indicates the source of the parking generation rate.

- **Peak Parking Demand Analysis Notes:** labeled “A” through “K”, these notes identify the source and/or assumptions used in calculating the peak parking demand for the land uses.

TABLE 1: GREAT PARK WEEKDAY TRIP GENERATION AND PARKING ANALYSIS

Table 1 provides an estimate of typical weekday daily auto trip generation and parking demand for each of the uses within the Great Park. The uses are grouped by the general areas of the park, including the Sports area, Cultural Terrace area and Trabuco Entry/Other Park Uses area. The table provides information on trip generation, minimum parking requirements and expected peak parking demand. Detailed notes are included below the table that provide sources for the size, trip generation and parking generation values.

Activity/Use Information

The first set of columns in the table describe and provide a size for each use. The size is based on the preliminary design drawing plan. Several ancillary or passive uses (such as Concessions and Ancillary Buildings/Uses) are included in the tables as separate line items. Those uses are identified as such in the footnotes. Ancillary uses are those that support activities within the Great Park and do not generate trips, such as maintenance facilities, bike storage, restrooms, concessions, and ancillary retail uses. These uses are included in the overall traffic generation for the primary use for which they are associated with. Trips from the maintenance area south of Marine Way and other maintenance areas are accounted for in the Great Park trip generation primary uses.

Trip Generation

The next several columns provide daily auto trip generation data, including a trip generation rate, the number of activities or sites that are visited, an estimate for alternative mode usage, and the resulting daily trip generation for each use.

Daily Auto Trip Generation Rate/Trip Generation Source

The Daily Auto Trip Generation Rate column data is based primarily on Institute of Transportation Engineers (ITE) trip generation rates, where available. The notes section of the table provides more detailed information and/or specific uses that were used where the actual Great Park use was not available. Uses with notable variations from ITE rates are:

- **Sports Fields.** Upon discussions with and research on sports parks that specialize in field sports and tournament play, the ITE trip generation rate of 71.33 trips per day was considered to be low. With 35 vehicles per game estimated (15 players on two teams plus officials, coaches, etc) and two trips per vehicle (one arriving and one departing), the ITE rate would only allow for one game per day per field. For weekday events, it was determined that two games per day (in the late afternoon/early evening) would be likely, resulting in a trip generation rate of 140 trips per field per day.
- **Balloon Ride.** There is no ITE trip rate available for this unique attraction/ride. The trip generation rate is based on the *Orange County Great Park Balloon Ride Traffic and Parking Study* dated February 15, 2007. This study estimated 120 visitors per hour for the ride and an auto occupancy of 3 persons per vehicle, resulting in an average of 40 visitors per hour. If the ride

operates at 10 hours per day, the resulting number of trips would be 800 trips per day, assuming the worst case scenario of constant and maximum use throughout the day.

- **Museums.** There is no ITE trip rate available for museums, so the daily trip generation rate for this use was based on detailed calculations utilizing museum attendance and visitor survey data from Balboa Park. Those calculations are shown in Table 6 and described in detail in that section in this document.
- **Botanical Gardens.** There is no ITE trip rate available for botanical gardens, so the trip generation rate for this use was based on parking demand at similar facilities (Descanso Botanical Gardens in the Los Angeles area and the Santa Barbara Botanical Gardens) combined with an average visitor stay of 1.2 hours. The 1.2 hour visitor stay is based on the visitor survey found in *Balboa Park Land Use, Circulation and Parking Study*. More detailed data on the Botanical Garden calculations can be found in Table 7 and the accompanying section in this document.
- **Concessions and Ancillary Buildings/Uses.** These uses support other uses within the Great Park and are not primary generators of traffic. Since "Museums" is the primary source for which these uses support, the same trip generation rates as museums was used for these ancillary uses. The concessions area also serves the Sports area, and the trip generation rate for the concessions use is also consistent with the average trip generation rate per unit area for the Sports area as a whole.

Daily Auto Trip Generation

This column is the application of the daily trip generation rate to the size of the use to calculate the number of daily trips generated before alternative mode use and multiple destination visits are considered.

Number of Sites Visited

The number of sites visited column is used to account for the fact that visitors will likely park once for their entire visit to the Great Park while visiting multiple uses or activities. According to the Balboa Park visitor survey performed as part of the *Balboa Park Land Use, Circulation and Parking Study*, non-zoo visitors visited between 2.6 and 2.9 different sites or attractions during their visit to the park. A conservative estimate of 2.5 sites or attractions visited was made for the Great Park for the non-sports uses. It is assumed that sports visitors primarily come to one event (their particular game or sporting event).

Effective Auto Trip Generation

This column factors the number of daily trips generated by a use by the number of sites visited. This accounts for the fact that visitors will arrive at the park and depart only once, even though they may visit multiple sites while at the park.

Percent Alternative modes

The percent alternative mode column represents an estimate made for transit and other alternative mode use (such as walking or bicycling) for each land use. Based on the Balboa Park survey data, approximately 20% of visitors arrived by a mode other than an automobile, including transit, walking, bicycling, tour bus, being dropped off or other modes. Approximately 12% of visitors arrived by transit, walked, bicycled, or were dropped off. Given this data, the regional draw and close proximity to the Irvine Station and a direct connection with the Station through the Great Park's shuttle system, 10% was

assumed as a conservative estimate for alternative mode use for all non-sports uses. It is assumed that participants of the sports uses will all arrive by personal vehicle.

Net Auto Trips

The net auto trips column identifies the resulting number of daily auto trips that can be expected for each use. This value takes into account alternative mode use and multiple destination or activity visits per visit to the Great Park.

Minimum Parking Requirements per Section 4-3-4 of Irvine Zoning Ordinance

The minimum parking requirements set of columns present the rate closest to actual use per the City of Irvine minimum parking requirements for comparison. Minimum parking requirements for the various uses were used from the City of Irvine Zoning Ordinance, where available. In some cases, minimum parking requirements were not available from the City Zoning Ordinance. In those cases, a similar use found in the Zoning Ordinance is used, or an alternative source is used (as in the case of the museums). The source of the minimum parking requirement for each use is identified at the bottom of the table in the notes section.

There are some differences in the amount of parking required, some greater and some lesser, between the Irvine requirements and the peak demand calculated through this effort. This is because the type of trip and parking activity for the Great Park is unique and cannot be captured easily in a typical city parking code. As an example, the City of Irvine Zoning Ordinance minimum requirement of 15 parking spaces per sports field was deemed too low when considering 15 players per team, plus coaches, referees, etc. Therefore, 35 peak parking spaces per sports field was assumed.

Peak Parking Demand Analysis

The final set of columns shows the peak parking demand rate, source and resulting peak demand. The parking calculations in this and the remaining tables are based on peak parking and time of day parking distributions for each individual use. However, a visitor will only park once and visit multiple uses or activities in the park using the shuttle system. Even though the vehicle does not move, parking demand is calculated for each of the individual uses separately. The total parking demand for the Great Park will still be the sum of the demand of the individual uses at any given time; the parking demand is not dependent on the number of sites visited by each visitor.

Peak Parking Rate/Parking Generation Source

These columns show the peak parking rate for each use and the source of that information. Parking rates for the sports uses are primarily derived from work performed by Griffin Structures, Inc. on a program needs assessment and further refinement of that data. Griffin Structures, Inc. estimated a total of 2,100 spaces required for the Sports area (not including the Military Museum and Balloon Ride), and that approximate total is maintained.

However, some variations from the Griffin study are made for individual sports uses based on more appropriate data. For example, based on discussions with and research on sports parks that specialize in field sports and tournament play, it was determined that attendance for each game arrives in approximately 35 vehicles (15 players on two teams plus officials, coaches, etc). Parking calculations for the museum uses are based on data from Balboa Park and are shown in Table 6 and described in detail in that section in this document.

Peak Parking Demand

The Peak Parking Demand column is calculated by applying the peak parking rate to the size of the use regardless of the time of day that the peak occurs. This is calculated before accounting for any alternative mode use.

Percent Alternative Modes

The percent alternative mode column represents an estimate made for transit and other alternative mode use (such as walking or bicycling) for each land use. Based on the Balboa Park survey data, approximately 20% of visitors arrived by a mode other than an automobile, including transit, walking, bicycling, tour bus, being dropped off or other modes. Approximately 12% of visitors arrived by transit, walked, bicycled, or were dropped off. Given this data, the regional draw and close proximity to the Irvine Station and a direct connection with the Station through the Great Park's shuttle system, 10% was assumed as a conservative estimate for alternative mode use for all non-sports uses. It is assumed that participants of the sports uses will all arrive by personal vehicle.

Net Peak Parking

The net peak parking column identifies the peak parking demand for each individual use, taking into account expected alternative mode use.

Net Peak Parking for Area

This column shows the parking demand for each individual use at the time when each of the general areas of the park is at its peak. For each area of the park (Sports Area, Cultural Terrace Area, and Trabuco Entry/Other Park Uses), the time at which the peak occurs is shown at the bottom of each area. The total peak parking by area is the sum of the parking demand of each of the uses at the time when the peak for that entire area occurs. The peak time will differ between areas. The data in this column is derived from information in Table 3, which includes more detailed information for weekday peak parking by time of day.

Net Peak Parking for Great Park

This column shows the parking demand for individual uses and subtotals for each area when the parking peak for the entire park occurs. The time period listed in this column is when total parking demand for the entire park is at its highest.

Approximate Acres of Parking

This column estimates the land area of parking that would be required to meet the Net Peak Parking demand for each use. This assumes 350 square feet of land area for each parking space, or approximately 125 parking spaces per acre.

TABLE 2: GREAT PARK WEEKEND TRIP GENERATION AND PARKING ANALYSIS

Table 2 provides the same information as Table 1, but instead of showing it for the typical weekday, Table 2 shows the trip generation and parking demand for a typical weekend. For the most part, all of the trip generation and parking generation rates and assumptions are the same as for the weekday data shown

in Table 1. However, the time of day distribution is different and results in different peak parking requirements by area and for the park as a whole.

Trip Generation

Where ITE publishes a trip generation rate for Saturday or Sunday, the higher of those two rates was used in calculating the weekend number of trips. Sports fields and the Botanic Garden also used different trip rates for the weekend. It is expected that more sports field activity will take place on the weekend than the weekday, resulting in a higher number of trips. A daily trip generation rate of 210 vehicles per field per day was used to reflect this increased activity. The Botanic Garden trip generation also varies for the weekend, and those calculations are explained in more detail in Table 7 and the accompanying section of this document.

Minimum Parking Requirements per Section 4-3-4 of Irvine Zoning Ordinance

The values in these columns are the same as those found in the weekday data (Table 1).

Peak Parking Demand Analysis per

The parking generation rates for the various uses are the same for the weekend as for the weekday (Table 1). The parking demand by time of day distribution is different for the weekend, so the values and times in the Net Peak Parking by Area and Net Peak Parking for Great Park columns will differ between the weekday and weekend. Details of the weekend peak parking by time of day for each use can be found in Table 4.

TABLE 3: GREAT PARK WEEKDAY TRIP GENERATION AND PARKING ANALYSIS BY TIME OF DAY

Table 3 provides detailed time of day parking distribution for the typical weekday. This table provides more detailed data in support of the peak parking by time of day information found in Table 1. This table also includes a chart that graphically shows the estimated parking demand by time of day.

Parking Generation

The Use and Parking Generation areas of the table present summary information of the parking calculations. The data shown in these columns correlates to the parking generation information found in Table 1.

Peak Parking Rate/Peak Parking Demand/Percent Alternative Modes/Net Peak Parking

These columns are carried over from Table 1 and show the peak parking rate for each use as well as alternative mode use assumptions and net peak parking for each use.

Net Peak Parking for Area

This column shows the parking demand for each individual use at the time when each of the general areas of the park is at its peak. For each area of the park (Sports Area, Cultural Terrace Area, and Trabuco Entry/Other Park Uses), the time at which the peak for that area occurs is shown at the bottom of each area.

The total peak parking by area is the sum of the parking demand of each of the uses at the time when the peak for the whole area occurs. The peak time will differ between areas. This column is based on the time of day distribution found in the Weekday Parking Generation by Time of Day columns to the right. The time period(s) at which the peak parking demand occurs for each area is shown in bold. The Net Peak Parking for Area data is also shown in Table 1 for summary purposes.

Net Peak Parking for Great Park

This column shows the parking demand for individual uses and subtotals for each area when the parking peak for the entire park occurs. The time period listed in this column is when total parking demand for the entire park is at its highest. This column is based on the time of day distribution found in the Weekday Parking Generation by Time of Day columns to the right. The time period listed for each general area correlates to the peak parking demand experienced at the Park, and is highlighted in the Weekday Parking Generation by Time of Day columns to the right. The Net Peak Parking for Great Park data is also shown in Table 1 for summary purposes.

Approximate Acres of Parking

This column estimates the land area of parking that would be required to meet the Net Peak Parking demand for each use. This assumes 350 square feet of land area for each parking space, or approximately 125 parking spaces per acre.

Weekday Parking Generation by Time of Day

This area of the table includes columns for each hour of the day during which park activities are expected to take place. Each column represents an estimate of parking demand for each use for that particular hour of the day. The sports area assumes fairly low activity through much of the day which rises in the after school late afternoon hours into early evening hours. For other park uses, an increase of activity is expected throughout the morning leading to a peak in the early to mid afternoon. The highlighted column corresponds to the peak parking demand expected for the park as a whole and the bold columns correspond to the peak parking demand for individual areas.

Weekend Parking Demand Chart

The Weekend Parking Demand chart at the bottom of the page shows the parking demand expected for each general area for each hour of the day in graphic form. Dashed lines are shown to illustrate the available number of day-to-day parking spaces within the Great Park.

TABLE 4: GREAT PARK WEEKEND TRIP GENERATION AND PARKING ANALYSIS

Table 4 provides the same information as Table 3, but instead of showing it for the typical weekday, Table 4 shows the parking demand by time of day for a typical weekend day. This table provides more detailed data in support of the peak parking by time of day information found in Table 2. This table also includes a chart that graphically shows the estimated parking demand by time of day.

Parking Generation

The Use and Parking Generation areas of the table present summary information of the parking calculations. The data shown in these columns correlates to the parking generation information found in Table 2.

Peak Parking Rate/Peak Parking Demand/Percent Alternative Modes/Net Peak Parking

These columns are carried over from Table 2 and show the peak parking rate for each use as well as alternative mode use assumptions and net peak parking for each use.

Net Peak Parking for Area

This column shows the parking demand for each individual use at the time when each of the general areas of the park is at its peak. For each area of the park (Sports Area, Cultural Terrace Area, and Trabuco Entry/Other Park Uses), the time at which the peak occurs is shown at the bottom of each area. The total peak parking by area is the sum of the parking demand of each of the uses at the time when the peak for the whole area occurs. The peak time will differ between areas. This column is based on the time of day distribution found in the Weekend Parking Generation by Time of Day columns to the right. The time period listed for each general area correlates to the peak parking demand subtotal for that area found in the Weekend Parking Generation by Time of Day columns. The Net Peak Parking for Area data is also shown in Table 2 for summary purposes.

Net Peak Parking for Great Park

This column shows the parking demand for individual uses and subtotals for each area when the parking peak for the entire park occurs. The time period listed in this column is when total parking demand for the entire park is at its highest. This column is based on the time of day distribution found in the Weekend Parking Generation by Time of Day columns to the right. The time period listed for each general area correlates to the peak parking demand experienced at the Park. The Net Peak Parking for Great Park data is also shown in Table 2 for summary purposes.

Approximate Acres of Parking

This column estimates the land area of parking that would be required to meet the Net Peak Parking demand for each use. This assumes 350 square feet of land area for each parking space, or approximately 125 parking spaces per acre.

Weekend Parking Generation by Time of Day

This area of the table includes columns for each hour of the day during which park activities are expected to take place. Each column represents an estimate of parking demand for each use for that particular hour of the day. For all of the areas a fairly constant activity level is assumed throughout the day and then tailing off in the evening. The highlighted columns corresponds to the peak parking demand expected for the park as a whole.

Weekend Parking Demand Chart

The Weekend Parking Demand chart at the bottom of the page shows the parking demand expected for each general area for each hour of the day in graphic form. Dashed lines are shown to illustrate the

available number of day-to-day parking spaces within the Great Park, as well as the total number of spaces available.

TABLE 5: GREAT PARK EIR TRIP GENERATION

This table provides the trip generation data included in the Great Park Environmental Impact Report (EIR) for comparison purposes. This table identifies the allowable trip budget for the Great Park. The allowable daily trip budget for the Great Park is 19,083 trips. It is estimated that the Great Park will generate approximately 12,792 daily trips on a typical weekday and approximately 18,387 daily trips on a typical weekend day.

TABLE 6: MUSEUM TRIP AND PARKING CALCULATIONS

This table is provided as further information and more detailed calculations as to how the trip and parking generation rates for the museum uses were derived. The table is based on data collected from Balboa Park in San Diego. Detailed attendance and building size data was collected for four museums in Balboa Park in San Diego including the Aerospace Museum, Museum of Art, Natural History Museum, and the Reuben H. Fleet Science Center. The Total column combines the data for all four museums to arrive at either a total or weighted average, depending on the line of data.

Attendance/Building Size

Average daily attendance for the peak month of each museum is shown in the first line. Daily attendance figures were available for the San Diego Natural History Museum and based on several years worth of data for that museum, the peak day of visitor attendance was found to be 50% greater than the average daily attendance of the peak month. This factor was then applied to each of the four museums' peak month average daily attendance to arrive at a typical peak day attendance figure for each museum. This represents a reasonable worst case scenario for parking demand. The building size is also shown for each of the museums. The Aerospace Museum is a ring shaped building with the center atrium area open to the outside which contains additional aircraft displays. For the purposes of these calculations, the center outdoor area is included in the building size value to more accurately reflect the actual display space of the museum.

Trip Generation

Trip generation was calculated for the museums based on attendance data, data from the Balboa Park visitor survey, and general assumptions.

Visitor Trip Generation

To calculate the number of daily vehicle trips made by visitors, an average vehicle occupancy rate was applied to the attendance data. The 3.0 persons per vehicle value used for the Great Park is based on the Balboa Park visitor survey which found that non-zoo visitors had an average vehicle occupancy of between 2.92 and 3.06 persons per vehicle. By dividing the typical peak attendance value from above by the average vehicle occupancy, the number of vehicles that those visitors arrived in was estimated. Multiplying that number by two equates to the number of daily vehicle trips represented by the visitors. The Daily Trips per 1000 square feet (visitors) then calculates a trip generation rate for the visitors based on building size.

Employee Trip Generation

This section seeks to estimate the number of daily vehicle trips for employees of the museums. The number of employees is calculated by multiplying the building size in thousands of square feet from the top section by an average employment intensity of 2.0 employees per thousand square feet. This is a typical value on the lower end of the commercial/office employment intensity spectrum and is a conservative estimate for estimating the number of employees of a museum use. A vehicle occupancy rate of 1.2 persons per vehicle for all employees is assumed to account for carpooling. The number of employees is then divided by this occupancy rate to arrive at the number of vehicles represented by those employees. Daily trips per 1,000 square feet (employees) then shows a daily trip generation rate based on building size.

Total Trips per 1000 Square Feet

This is calculated by adding the visitor and employee trip generation rates together to arrive at a daily trip generation rate for the museums.

Parking Generation

Building on the trip generation calculations, peak parking demand was also estimated for the museums.

Visitors

The number of vehicles represented by museum visitors is carried over from the above visitor trip generation calculations based on typical peak attendance of the divided by the average visitor vehicle occupancy. The turnover factor is used to estimate the number of times, on average, that each parking space turns over in the course of a day. It is the result of the effective full attendance hours divided by the average time spent at each activity. The average time spent at each activity is based on the results of the Balboa Park visitor survey which found that, on average, the non-zoo visitor spent about 3.2 hours visiting 2.75 activities, or about 1.2 hours per activity. The effective full attendance hours represents the time, on average, that each parking space will be fully occupied per day. It is based on the expected time of day parking distribution and estimated operating hours of the museum. It is assumed that the museum parking is fully occupied for five hours and 50% occupied for four hours (as it would be if it were to ramp up to full capacity in two hours, be at full capacity for five hours and ramp down in two hours), it would have an effective full attendance hours value of 7.0. So, if on average, each parking space is fully occupied for 7.0 hours and each vehicle spends 1.2 hours in a space, then each space would turn over 5.8 times. The peak parking demand is estimated by dividing the estimated daily number of vehicles by the turnover factor, which can then be converted to a visitor peak parking rate by dividing by the building size.

Employees

The employee parking generation is calculated in a similar manner as the visitor parking generation calculations. The number of vehicles is carried over from the employee vehicle calculations from above based on employees per 1000 square feet of building size and the estimated vehicle occupancy. The parking space turnover factor is assumed to be one, as it is assumed that the employees will arrive in the morning, stay all day and then leave at the end of the day. Peak parking demand is calculated by dividing the number of vehicles by the turnover factor, which can then be converted to an employee peak parking rate by dividing by the building size.

TABLE 7: BOTANIC GARDEN TRIP AND PARKING RATE CALCULATIONS

This table is provided as further information and more detailed calculations as to how the trip and parking generation rates for the botanical garden use was derived. The parking generation calculations are based on the parking supply available at two comparable botanic gardens: Descanso Botanical Gardens in La Canada Flintridge, CA and Santa Barbara Botanical Gardens in Santa Barbara, CA. The trip generation rate calculations are based on the parking generation by time of day for the Great Park Botanical Gardens and are estimates prior to considering alternative mode use and number of sites visited.

Parking Generation Calculations

The parking generation for the Great Park Botanical Garden is based on the parking supply available at two comparable facilities: Descanso Botanical Gardens and Santa Barbara Botanical Gardens. The available parking supply at these two gardens was estimated based on the number of acres of available parking. A value of one space per 350 square feet (or approximately 125 spaces per acre) was assumed to convert from acres to spaces. The parking generation rates were then calculated based on the estimated number of spaces and the total size of the gardens. A weighted average peak parking generation rate was also calculated for the gardens. This weighted average rate of 4.0 spaces per acre was used to calculate the parking demand at the Great Park Botanical Garden.

Great Park Botanic Garden Estimated Peak Parking

The 4.0 spaces per acre value calculated above was applied to the 59.0 acre size of the Great Park Botanic Garden to arrive at 236 parking spaces necessary for the Great Park Botanic Garden. This value is before any adjustments to account for alternative mode use or visits to multiple sites or uses are made.

Great Park Botanic Garden Estimated Parking by Time of Day

This section utilizes the weekday and weekend time of day parking demand calculations found in Tables 3 and 4 to estimate the number of trips by time of day and the total daily trips that can be expected from the Great Park Botanic Garden. This section is based on parking generation before making adjustments for expected alternative mode use. Since the time of day distributions found in Tables 3 (weekday) and 4 (weekend) show the time of day distributions after adjusting for alternative mode use, those distributions are factored up for use in this table.

To estimate the hourly entering and exiting vehicles, an average length of stay of 1.2 hours was assumed. This average time is based on the results of the Balboa Park visitor survey which found that, on average, the non-zoo visitor spent about 3.2 hours visiting 2.75 activities, or about 1.2 hours per activity. The number of exiting vehicles was calculated using this average stay of 1.2 hours and the number of entering vehicles was calculated based on the estimated parking demand and the number of exiting vehicles.

The total trips for the weekday and weekend were calculated by summing the estimated entering and exiting trips throughout the day. A trip generation rate based on the anticipated size of the Great Park Botanic Gardens is calculated by dividing the total number of trips for both weekday and weekend by the size of the Great Park Botanic Garden.

Table 4
Great Park Weekend Trip Generation and Parking Analysis by Time of Day

Use	Size/Units	Peak Parking Demand	Percent Alternative Modes	Parking Generation	Net Peak Parking by Area	Net Peak Parking for Great Park	Approx Acres of Parking***
Sports Area							
Field Sports (Soccer)	12 each	35,000	40%	4,200	4,200	4,200	3.4
Field Sports (Baseball/Softball)	400	10,320	10%	1,032	1,032	1,032	1.0
Softball/Field Hockey (Spectators)	9 each	35,000	10%	3,500	3,500	3,500	2.5
Action Sports Park/Commercial Sports Area*	20 acres	14,300	28%	2,860	2,860	2,860	2.3
Open Request Courts (tennis and basketball)	14 each	2,000	0%	28	28	28	0.2
Baseball/Field Hockey	15 each	17,500	26%	2,625	2,625	2,625	2.1
Field Hockey (Spectators)	10 each	10,000	10%	1,000	1,000	1,000	0.8
Baseball/Field Hockey	60,000 sq ft GFA	3,500	10%	350	350	350	0.3
Harbor (Spectators)	10,544 sq ft GFA	3,000	32%	960	960	960	0.7
Concessions	13,066 sq ft GFA	80,000	10%	8,000	8,000	8,000	6.6
Ballfield Bldg	1,000 each			72	72	72	0.6
Sports Area Subtotal				1,229	1,229	1,229	14.7
Cultural Terrace Area							
Museum/Civic Building (not including Art Museum)	274.4 ksf GFA	3,000	82%	820	741	741	6.0
Library	39 ksf GFA	2,600	10%	260	260	260	0.7
Biological Program	13.9 ksf GFA	3,600	10%	360	360	360	0.4
Botanical Garden	59.0 acres	4,000	23%	920	920	920	1.7
Art Museum	13.5 ksf GFA	13,500	10%	1,350	1,350	1,350	0.7
Art Museum (Spectators)	10.8 ksf GFA	1,000	10%	100	100	100	0.1
Cultural Terrace Plaza	180.8 ksf GFA	1,000	18%	180	180	180	1.3
Event Lawn	11.5 acres	1,000	15%	150	150	150	0.1
Maintenance Facilities †	56.3 ksf GFA	1,000	50%	500	500	500	0.4
Cultural Terrace Area Subtotal				3,623	3,623	3,623	11.3
Tabasco Entry/Other Park Uses							
Office/Industrial/Residential/Entertainment	172.6 acres	1,000	17%	170	150	150	1.3
AgriPark Canyon/AgriPark Children	235.6 acres	1,000	23%	230	215	215	1.7
Pocket Parks	8.2 acres	1,000	11%	110	110	110	0.1
Other Uses Subtotal				383	383	383	3.1
All Park Uses				3,623	3,623	3,623	29.1

* The Action Sports Park includes a water park, commercial sports, plaza/pedestrian mall, and retail food service area.

*** Not Net Peak Parking Demand (100% = Alternative Modes)

† Maintenance facilities are ancillary and do not generate primary trips. Trip generation for the maintenance facilities are included at the primary uses which they are associated with.

May 24, 2007
July 18, 2007

Weekend Parking Generation by Time of Day															
7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM
0	210	420	420	420	420	420	420	420	420	420	420	420	420	315	210
0	0	60	120	120	120	120	120	120	120	120	120	120	120	120	60
0	143	260	260	260	260	260	260	260	260	260	260	260	260	215	143
0	7	14	28	28	28	28	28	28	28	28	28	28	28	21	14
0	60	132	263	263	263	263	263	263	263	263	263	263	263	192	0
0	25	50	100	100	100	100	100	100	100	75	50	50	0	0	0
0	41	122	162	162	162	162	162	162	162	122	81	81	41	0	0
0	7	21	28	28	28	28	28	28	28	21	14	14	7	0	0
0	13	20	35	35	35	35	35	35	35	34	31	28	27	18	13
0	18	54	72	72	72	72	72	72	72	54	36	18	0	0	0
0	688	1,053	1,029	1,029	1,029	1,029	1,029	1,029	1,029	1,029	1,029	1,029	1,029	858	61
Cultural Terrace Area															
0	105	556	741	741	741	741	741	741	556	371	371	185	0	0	0
0	23	68	91	91	91	91	91	91	68	46	46	23	0	0	0
0	11	34	45	45	45	45	45	45	34	23	23	11	0	0	0
0	53	150	212	212	212	212	212	212	150	106	106	53	0	0	0
0	5	10	19	10	10	10	10	10	10	8	5	4	2	0	0
0	20	41	61	61	61	61	61	61	53	53	32	12	0	0	0
0	41	124	165	165	165	165	165	165	124	83	83	41	0	0	0
0	3	7	13	13	13	13	13	13	7	3	3	0	0	0	0
13	27	53	53	53	53	53	53	53	40	27	27	0	0	0	0
13	368	1,052	1,391	1,391	1,391	1,411	1,411	1,411	1,078	740	629	261	17	0	0
Tabasco Entry/Other Park Uses															
0	40	79	158	158	158	158	158	158	158	119	119	79	40	0	0
0	54	108	215	215	215	215	215	215	215	161	161	108	54	0	0
0	2	5	10	10	10	10	10	10	10	8	8	5	3	0	0
0	96	192	383	383	383	383	383	383	383	288	288	192	97	0	0
13	112	2747	3,603	3,603	3,603	3,623	3,623	3,623	3,623	2,824	2,394	1,860	1,039	658	61

Weekend Parking Demand

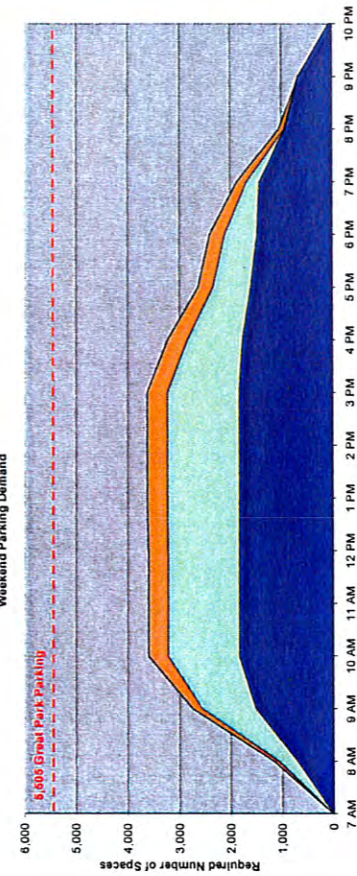


Table 5

Orange County Great Park EIR Trip Budget

Area Description	Acres	Square Feet	Daily Trip
			Generation
Open Space Sports Park	165	26,000	6,883
Open Space Exposition Center South	156	468,000	10,812
Open Space Park	367		1,318
Drainage Riparian Corridor	229		40
Drainage Wildlife Corridor	179		30
Total	1,096	494,000	19,083

Table 6

Museum Trip and Parking Calculations

	Balboa Park Museum				
	Aerospace Museum	Museum Of Art	Natural History Museum	Reuben H. Fleet Science Center	Total
Average Daily Attendance of Peak Month	653	3,012	1,070	1,508	6,244
Estimated Typical Peak Attendance (1.5 times average daily attendance of peak month)	980	4,518	1,606	2,263	9,366
Building Size (1000 sf)	67.7	90	150	93	400.7

Trip Generation					
Visitors					
Vehicle Occupancy	3.0	3.0	3.0	3.0	3.0
Vehicles	326.6	1,505.9	535.2	754.2	3,121.9
Daily Trips (visitors)	653.1	3,011.8	1,070.4	1,508.5	6,243.8
Daily Trips per 1000 sf (visitors)	9.6	33.5	7.1	16.2	15.6
Employees					
Employees per 1000 sf	2.0	2.0	2.0	2.0	2.0
Number of employees	135	180	300	186	801
Vehicle Occupancy	1.2	1.2	1.2	1.2	1.2
Vehicles	112.8	150.0	250.0	155.0	667.8
Daily Trips (employees)	225.7	300.0	500.0	310.0	1335.7
Daily Trips per 1000 sf (employees)	3.3	3.3	3.3	3.3	3.3
Total Trips per 1000 sf (visitors + employees)	13.0	36.8	10.5	19.6	18.9

Parking Generation					
Visitors					
Vehicles	326.6	1505.9	535.2	754.2	3121.9
Parking Space Turnover Factor per Site (1=no turnover)*	5.8	5.8	5.8	5.8	5.8
Average time spent at each activity (hours)**	1.2	1.2	1.2	1.2	1.2
Effective full attendance hours (estimated)***	7.0	7.0	7.0	7.0	7.0
Peak Parking Demand	56.0	258.2	91.7	129.3	535.2
Parking Utilization per 1000 sf (visitors)	0.8	2.9	0.6	1.4	1.3
Employees					
Vehicles	112.8	150.0	250.0	155.0	667.8
Parking Space Turnover Factor (1=no turnover)	1.0	1.0	1.0	1.0	1.0
Peak Parking Demand	112.8	150.0	250.0	155.0	667.8
Parking Utilization per 1000 sf (visitors)	1.7	1.7	1.7	1.7	1.7
Total Parking per 1000 sf (visitors + employees)	2.5	4.5	2.3	3.1	3.0

January 15, 2007

* Parking space turnover is calculated by dividing the Effective Full Attendance Hours by the average time spent at each activity. For example, if the museum is open for nine hours and the parking lot is fully occupied the whole time, the Effective Full Attendance Hours would be nine hours. Since the average time spent at each museum is approximately 1.2 hours, we could expect each parking space to turn over 7.5 times per day given those parameters. Using the more reasonable 7 hours for Effective Full Attendance Hours and the same 1.2 hours per activity visit, the turnover factor would be 5.8.

** The Average time spent at each activity is based on a visitor survey as part of the Balboa Park Land Use, Circulation and Parking Study (February, 2004).

*** Effective Full Attendance Hours is an estimate of the effective time that each parking space will be fully occupied per day. For example, if the museum is open for nine hours and the parking lot is fully occupied for 5 hours and 50% occupied for 4 hours, then the Effective Full Attendance Hours will be 7 hours. If the parking lot is fully occupied for all nine hours, the Effective Full Attendance Hours would be 9 hours. The 7 hours used here is estimated to reflect a fully occupied parking lot in the middle of the day, with ramps up and down to that capacity at the beginning and end of the day.

Table 7
Great Park Botanic Garden Trip and Parking Rate Calculations
9/10/04 (2/1, 2/07)

Parking Generation Calculations			
	Descanso Botanical Gardens	Santa Barbara Botanical Garden	
Total Garden Area (acres)	160	65	
Parking Area (acres)	6.6	0.71	
Estimated Parking Supply (spaces)**	821	88	
Parking Generation Rate (spaces/acre)**	5.1	1.4	
Weighted Average Parking Generation Rate (spaces/acre)	4.0		

* From Caltrans Report, pages 76 and 78
 ** Estimated based on 300 square feet per space or approximately 125 spaces per acre
 *** Number of spaces per acres of Total Garden Area

Great Park Botanic Garden Estimated Peak Parking	
Great Park Botanic Garden Area (acres)*	55.0
Estimated Peak Parking Generation**	236

* From 2004 Preliminary Master Plan
 ** Calculated as 4.0 parking spaces per acre * 59.0 acres

Great Park Botanic Garden Estimated Parking by Time of Day
(Before Transit and Number of Site Visit Adjustments)

Hour	Occupied Parking Spaces*	Weekday Estimated Number of Vehicles**		Total Trips
		Entering	Exiting	
8:00 am to 9:00 am	59	59	0	59
9:00 am to 10:00 am	118	106	47	153
10:00 am to 11:00 am	177	156	97	253
11:00 am to 12:00 pm	177	146	146	292
12:00 pm to 1:00 pm	177	108	148	296
1:00 pm to 2:00 pm	236	207	148	355
2:00 pm to 3:00 pm	236	195	195	390
3:00 pm to 4:00 pm	236	197	197	394
4:00 pm to 5:00 pm	177	138	137	315
5:00 pm to 6:00 pm	118	91	150	241
6:00 pm to 7:00 pm	59	41	100	141
7:00 pm to 8:00 pm	0	0	59	59
Total Trips		1,484	1,484	2,968
Peak Parking	236			

* Estimated Daily Trip Generation Rate (trips/acre)**

50.3

Occupied parking spaces by time of day is based on the Parking Generation by Time of Day distributions found in Tables 3 and 4.

** The hourly distribution of vehicles entering and exiting is based on an average time spent at the gardens of approximately 1.2 hours. This average time is based on a 1997 survey on part of the Botanic Park Land Use, Circulation, and Parking Study (February, 2004)

*** Calculated as Total Trips (2,968) or (3,480) divided by the Great Park Botanic Garden size of 59.0 acres

Occupied Parking Spaces*	Weekend Estimated Number of Vehicles**		Total Trips
	Entering	Exiting	
59	59	0	59
177	165	47	212
236	203	144	347
236	105	195	300
236	197	197	394
236	157	157	394
236	197	157	394
236	197	157	394
177	138	137	315
118	91	150	241
59	41	100	141
0	0	59	59
Total Trips	236		3,360

50.9

APPENDIX C

**TECHNICAL MEMORANDUM (AIR QUALITY) -
EVALUATION OF REGIONAL CONSTRUCTION IMPACTS
FROM THE ORANGE COUNTY GREAT PARK,
JULY 12, 2007,
PCR SERVICES CORPORATION**



Memorandum

TO: Robert Verlaan, Chambers Group
Glen Worthington, OCGP
FROM: Heidi Rous, CPP *Heidi Rous*

DATE: July 12, 2007

RE: EVALUATION OF REGIONAL CONSTRUCTION IMPACTS FROM THE ORANGE COUNTY GREAT PARK

FINDINGS OF THE FEIR

The Final Environmental Impact Report (FEIR) for the Orange County Great Park (OCGP) identified significant air quality impacts associated with construction of the project. The construction impact analysis assumed demolition, grading, and new construction would occur in two phases: the first phase would begin in 2007 and end in 2016 and the second phase would begin in 2017 and end in 2025. The emissions associated with demolition of existing structures, including 31.2 million cubic feet of concrete from removal of the runways, site grading, and development would generate construction air emissions, on a worst case day, that exceed the South Coast Air Quality Management District (SCAQMD) recommended regional significance thresholds. The OCGP FEIR described the construction air impacts after mitigation as significant and unavoidable. As shown in Table 1, regional oxides of nitrogen (NO_x), particulate matter 10 microns or less in diameter (PM₁₀), and volatile organic compounds (VOC, previously called reactive organic gases, or ROG) were estimated to exceed SCAQMD thresholds. However, carbon monoxide (CO) and oxides of sulfur (SO_x) emissions were reported below the SCAQMD recommended significance threshold, (please refer to OCGP FEIR pages 5.3-16 through 5.3-20). Grading was an anticipated part of the project and was discussed in the OCGP FEIR; however, a grading plan was not available at that time. Accordingly, general or "default" assumptions were used in the air quality analysis, based on the type and size of anticipated development.

CONSTRUCTION ASSESSMENT

Orange County Great Park

In support of Addendum No. 4, PCR conducted an analysis to determine whether the construction emissions inventory for the OCGP proposed grading equipment mix is consistent with the emissions inventory assumed in the certified FEIR and is within the envelope of the original air quality analysis. Assumptions were developed (by Fuscoe Engineering and others) and refined consistent with the requirements for the proposed grading of the Orange County Great Park (OCGP) site, excluding the portions known as Heritage Fields, the Agua Chino and the wildlife corridor:

- Earthmoving activities to start in 2008
- Earthmoving activities to total 13.23 million cubic yards

Memorandum

RE: EVALUATION OF REGIONAL CONSTRUCTION IMPACTS FROM
THE ORANGE COUNTY GREAT PARK



- Equipment Mix - 12 scrapers, 3 slope cats, 2 compactors, 1 motor grader, 2 rubber tire dozer, and 2 other pieces of equipment (e.g., water trucks)

The analysis was conducted using SCAQMD's recommended CEQA emissions inventory model URBEMIS. A new version of URBEMIS (URBEMIS 2007 Version 9.2) was released in June 2007 and was used in this analysis. The new version of URBEMIS is considered a major overhaul to URBEMIS 2002. It incorporates the current version of California Air Resources Board's OFFROAD model (OFFROAD 2007) construction equipment emission factors and reflects a better estimate of the population, activity, and emissions estimate of the varied types of off-road equipment. The emissions estimates from the proposed grading equipment mix are provided in Table 1.

As shown in Table 1, the OCGP equipment mix results in an overall decrease in equipment exhaust emissions and fugitive dust PM_{10} emissions, as compared to those levels estimated for the FEIR. No new significant impacts and no substantial increase in the severity of previously identified impacts would occur as a result of implementation of the OCGP equipment mix. It should be noted that Addendum #4 does not address construction activities, such as painting and paving, which resulted in the VOC emissions reported previously in the FEIR.

Table 1

COMPARISON OF DAILY CONSTRUCTION EMISSIONS FOR OCGP CONSTRUCTION ACTIVITIES^a

Emissions Inventory	Emission Totals, lbs/day				
	VOC	NO _x	CO	SO _x	PM ₁₀
Certified EIR	4,660 ^b	840	280	40	1,440
OCGP Site Grading	37	343	174	<1	663
SCAQMD Significance Threshold	75	100	550	150	150
Over (Under)	(38)	243	(376)	(149)	513
Significant for Certified FEIR?	Yes	Yes	No	No	Yes
Significant for OCGP Equipment Mix?	No	Yes	No	No	Yes

^a Compiled using the URBEMIS2007 emissions inventory model.

^b VOC emissions presented in the Certified EIR are for application of architectural coatings. VOC emissions for site grading would result in a slight decrease based on the other pollutant trends.

Source: PCR Services Corporation, 2007.

Memorandum

RE: EVALUATION OF REGIONAL CONSTRUCTION IMPACTS FROM
THE ORANGE COUNTY GREAT PARK



Concurrent Activities

The site grading and demolition will most likely occur in a phased approach, over the course of numerous years. PCR also conducted an analysis to determine whether the construction emissions inventory for a maximum plausible day (consisting of concurrent grading of the OCGP along with site grading activities for Heritage Fields, the Agua Chinon, and the wildlife corridor and runway demolition activities) is consistent with the emissions inventory presented in the certified FEIR and is within the envelope of the original air quality impact assessment.

Assumptions were developed and refined consistent with the requirements for the proposed demolition and grading activities. The equipment mix for runway demolition and crushing activities was provided by Mark Waxle of RMC on July 10, 2007. A total of 31.2 million cubic feet of concrete and asphalt would be generated from removal of the runways with an average daily amount of 20,000 cubic feet. The equipment mix would be comprised of:

- o 4 off-highway trucks, 1 excavator, 1 motor grader, 1 water truck, 1 rubber tired dozer, 2 rubber tired loaders, 2 portable concrete crushing plants, and 2 other pieces of equipment.

The equipment mix and grading assumptions for Heritage Fields (including the wildlife corridor and Agua Chinon) were based on information provided in Addendum No. 3 to the OCGP FEIR (SCH #2002101020). Heritage Fields would require a total of 7.1 million cubic yard (maximum daily 47,000 cubic yards) of earth moving activities. The equipment mix would be comprised of:

- o 10 scrapers, 4 compactors, 6 rubber tire dozers, 1 tractor /loader/backhoe, and 3 other pieces of equipment (e.g., water trucks).

The analysis was conducted using SCAQMD's recommended CEQA emissions inventory model URBEMIS 2007 Version 9.2. The emission inventory prepared for Addendum No. 3 used the previous version of URBEMIS (URBEMIS 2002) and was therefore updated using URBEMIS 2007. As discussed above, the new version of URBEMIS is considered a major overhaul to URBEMIS 2002. The details of these calculations are shown in the attachments to this technical memorandum. The emissions from the concurrent construction activities are provided in Table 2.

Memorandum

RE: EVALUATION OF REGIONAL CONSTRUCTION IMPACTS FROM
THE ORANGE COUNTY GREAT PARK



Table 2

COMPARISON OF DAILY CONSTRUCTION EMISSIONS FOR CONCURRENT OCGP CONSTRUCTION
ACTIVITIES^a

Emissions Inventory	Emission Totals, lbs/day				
	VOC	NO _x	CO	SO _x	PM ₁₀
Certified EIR	4,660 ^b	840	280	40	1,440
OCGP Site Grading	37	343	174	<1	663
Heritage Fields Site Grading	37	332	171	<1	663
Runway Demolition	17	165	66	<1	76
Total	91	839	411	<1	1,402
SCAQMD Significance Threshold	75	100	550	150	150
Over (Under)	16	739	(139)	(149)	1,252
Significant for Certified FEIR?	Yes	Yes	No	No	Yes
Significant for concurrent activities?	Yes	Yes	No	No	Yes

^a Compiled using the URBEMIS2007 emissions inventory model.

^b VOC emissions presented in the Certified EIR are for application of architectural coatings. VOC emissions for site grading would result in a slight decrease based on the other pollutant trends.

Source: PCR Services Corporation, 2007.

As shown in Table 2, concurrent construction activities results in a slight decrease in equipment exhaust emissions and fugitive dust PM₁₀ emissions, as compared to those levels estimated for the FEIR. While CO emissions show an increase, it is a function of updated emission factors in the current version of URBEMIS2007 and not a substantial change in the construction intensity. Regardless, CO emissions are less than the SCAQMD significance threshold and no new significant impacts and no substantial increase in the severity of previously identified impacts would occur as a result of concurrent construction activities. It should be noted that these emission estimates do not address construction activities, such as painting and paving, which resulted in the VOC emissions reported previously in the FEIR.

OCGP: Concurrent URBEMIS2007 Summary

Construction Activity	Assumptions	Outputs (lbs per day) 2008 only						
		VOC	NOx	CO	SO2	PM10 Exhaust	PM10 Dust	PM10 Total
	FEIR	4660	840	280	40			1440
	CEQA standards	75	100	550	150			150
	Project Thresholds	4660	840	550	150			1440
Heritage Fields Grading	7.1 mcy total grading and 47,000 cy per day, 30 acres disturbed per day, 10 scrapers, 6 rubber tired dozers, 1 tractor/loader/backhoe, 4 rollers, 3 other pieces of equipment	37	332	171	0	15	648	663
Runway Demolition	31.2M cubic feet to be demolished, daily 20,000 cubic feet, 2 mobile crushing plants, 1 excavator, 1 grader, 4 offhighway trucks, 1 rubber tired dozer, 2 rubber tired loaders, 1 water truck, and two other pieces of equipment	17	165	66	0	8	68	76
OCGP MP grading exclusive of HF, Agua Chino, and wildlife corridor	13.23 mcy total grading and 60,000 cy per day, 30 acres disturbed per day, 1 Grader, 2 Other Equipment, 2 Rollers, 5 Rubber Tired Dozers, and 12 Scrapers	37	343	174	0	15	648	663
Concurrent: Heritage, Demolition, and OCGP grading		91	839	411	0	38	1364	1402
	Exceeds Project Thresholds	No	No	No	No		No	No

OCGP: Concrete Crushing

No. of Sources	Sources ²	Maximum Thruput (tons/day)	Average Thruput (tons/day)	PM ₁₀ Emission Factors ¹ Uncontrolled (lbs/ton)	Maximum Emissions (lbs/day)	Average Emissions (lbs/day)
1	Primary Crushing	4000	1094	2.40E-03	10	3
1	Secondary Crushing	4000	547	2.40E-03	10	1
2	Screening	2000	547	8.70E-03	35	10
12	Transfer Points	500	547	1.10E-03	7	7
	TOTAL EMISSIONS				61	21

¹ The method is derived from the EPA's AP-42 Section 11.19.2, Crushed Stone Processing.

² Number of sources from a typical crushing facility. Personal Communication, Mark Waxle of RMC, July 10, 2007.

Urbemis 2007 Version 9.2.0

Detail Report for Summer Construction Mitigated Emissions (Pounds/Day)

File Name: V:\A\NOISE DIVISION\Active Projects\IOC Great Park\Heritage Hills urb9

Project Name: Orange County Great Park

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Mitigated)

Time Slice	6/2/2008-6/2/2008 Number Active Days:	1	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total
Mass Grading	06/01/2008-06/02/2008		36.54	331.93	171.04	0.01	648.10	14.66	662.78
			36.54	331.93	171.04	0.01	648.10	14.66	662.78

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 6/1/2008 - 6/2/2008 - Default Mass Site Grading/Excavation Description

For Soil Stabilizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

Phase Assumptions

Phase: Mass Grading 6/1/2008 - 6/2/2008 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 0

Maximum Daily Acreage Disturbed: 30

Fugitive Dust Level of Detail: Default

38.2 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment

3 Other Equipment (190 hp) operating at a 0.62 load factor for 8 hours per day

4 Rollers (95 hp) operating at a 0.58 load factor for 8 hours per day

6 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

10 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Urbemis 2007 Version 9.2.0

Detail Report for Summer Construction Unmitigated Emissions (Pounds/Day)

File Name: V:\AQ\NOISE DIVISION\Active Projects\OC Great Park\Demo.urb9

Project Name: Orange County Great Park

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

Time Slice 6/2/2008-6/2/2008 Number Active Days: 1	CO	NOx	SO ₂	PM10 Dust	PM10 Exhaust	PM10 Total
Demolition 06/01/2008-06/02/2008	66.00	164.53	0.01	8.43	6.66	15.10
	66.00	164.53	0.01	8.43	6.66	15.10

Phase Assumptions

Phase: Demolition 6/1/2008 - 6/2/2008 - Type Your Description Here

Building Volume Total (cubic feet): 0

Building Volume Daily (cubic feet): 20000

On Road Truck Travel (VMT): 92.59

Off-Road Equipment:

- 2 Crushing/Processing Equip (305 hp) operating at a 0.78 load factor for 8 hours per day
- 1 Excavators (166 hp) operating at a 0.57 load factor for 8 hours per day
- 1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
- 4 Off Highway Trucks (479 hp) operating at a 0.57 load factor for 8 hours per day
- 2 Other Equipment (190 hp) operating at a 0.62 load factor for 8 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.58 load factor for 8 hours per day
- 2 Rubber Tired Loaders (164 hp) operating at a 0.54 load factor for 8 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

ADDENDUM NO. 5

**ORANGE COUNTY
GREAT PARK AND
GREAT PARK
NEIGHBORHOODS
GENERAL PLAN
AMENDMENTS, ZONE
CHANGES, AND
DEVELOPMENT
AGREEMENT
AMENDMENT**

00468566-PGA

00468567-PZC

00470036-PGA

00470039-PZC

00470035-PDA

SCH #2002101020

Prepared by:

**CITY OF IRVINE
COMMUNITY
DEVELOPMENT
DEPARTMENT**

Contacts:
Diane Vu,
Senior Planner and
Michelle Drou  ,
Associate Planner



JULY 2008

ADDENDUM NO. 5

**ORANGE COUNTY
GREAT PARK AND
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COI-30

JULY 2008

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1. EIR Addendum Summary

1.1 PURPOSE AND SCOPE

This Initial Study/Addendum provides the basis for an addendum to the previously certified Final Environmental Impact Report (State Clearinghouse Number 2002101020) for the Orange County Great Park (OCGP) and serves as the environmental review of a proposal to initiate various General Plan and Zoning Amendments related to the OCGP, including:

- General Plan Amendment (00468566-PGA) and Zone Change (00468567-PZC) to amend appropriate figures in the General Plan to reflect the Bake Parkway/Marine Way intersection relocation and the Rockfield Boulevard reconfiguration in the southern portion of Planning Area 30.
- General Plan Amendment (00470036-PGA), Zone Change (00470039-PZC), and Amended Development Agreement (00470035-PDA) to provide for the following: 1) reduce the number of required golf course holes within the Orange County Great Park from 45 to 18; 2) removal of the requirement for 173 acres of Agricultural Preserve in the Lifelong Learning District; and 3) other minor changes to the General Plan and Zoning Code text, tables, and figures. The Development Agreement Amendment also addresses the following core issues: (1) vest Heritage Fields' rights to develop under the General Plan and Zoning Code, as amended in the manner described above; (2) revise the funding mechanism for the Great Park maintenance; (3) shift the CFD cost overruns from the City to Heritage Fields; (4) transfer 131 acres of land from Heritage Fields to the City of Irvine; (5) establish the location of the police facility; (6) confirm runway demolition and recycling protocols; and (7) reiterate the role of the Master Implementation Agreement in the establishment of the backbone infrastructure phasing. Please refer to Section 2.2.2, Project Components and Appendix A, Proposed General Plan and Zoning Code Text, Table, and Figure Changes, for a more detailed description of the proposed actions and changes.

The requested actions do not permit any new residences or other changes to approved intensities. This Addendum has been prepared pursuant to the provisions of the California Environmental Quality Act (CEQA), Public Resources Code Sections 21000 et seq., the State CEQA Guidelines, and the City of Irvine Local Guidelines for Implementing CEQA (Local CEQA Guidelines).

1.2 ENVIRONMENTAL PROCEDURES

Pursuant to CEQA, the State CEQA Guidelines, and the City of Irvine CEQA Guidelines, the City's review of the proposed Initial Study/Addendum focuses on the proposed General Plan Amendments and Zone Changes and the Development Agreement Amendment to determine if the project would cause a change in the conclusions of the Orange County Great Park Final Environmental Impact Report (OCGP FEIR), and any change in circumstances or new information of substantial importance that would substantially change the conclusions of the OCGP EIR. This Addendum only relates to the proposed changes to the project as described in Section 1.1.

Pursuant to Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines, when an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for the project unless the lead agency determines, on the basis of substantial evidence, that one or more of the following conditions are met:

- Substantial changes are proposed in the project that will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

1. EIR Addendum Summary

- Substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, suggests any of the following:
 - 1) The project would have one or more significant effects not discussed in the previous EIR or negative declaration.
 - 2) Significant effects previously examined would be substantially more severe than identified in the previous EIR.
 - 3) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives.
 - 4) Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.

Section 15164 of the State CEQA Guidelines states that an Addendum to an EIR shall be prepared “if some changes or additions are necessary, but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.” This Initial Study/Addendum reviews the changes proposed by the project and any changes to the existing conditions that have occurred since the OCGP FEIR was certified. It also reviews any new information of substantial importance that was not known and could not have been known with exercise of reasonable diligence at the time that the OCGP FEIR was certified. It further examines whether, as a result of any changes or any new information, a subsequent or supplemental EIR may be required. This examination includes an analysis of the provisions of Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines and their applicability to the proposed project. This Initial Study/Addendum relies on the attached Environmental Analysis, which addresses environmental checklist issues on a section-by-section basis.

The City of Irvine Environmental Checklist Form has been completed by the City and included in Section 3, *Environmental Checklist*. The Environmental Checklist Form is marked with the findings of the Community Development Director as to the environmental effects of the proposed project in comparison with the findings of the OCGP FEIR certified in 2003. The checklist has been prepared pursuant to Section 15168(c)(4) of CEQA, which states that “where the subsequent activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR.”

Using that approach, the City of Irvine, the Lead Agency, determined that an Addendum to the previously approved OCGP FEIR is the appropriate environmental clearance for the project application.

1.3 PREVIOUS ENVIRONMENTAL DOCUMENTATION

The OCGP FEIR was certified by the City of Irvine in May 2003. The project analyzed in the OCGP Program EIR consisted of the following actions: 1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; 2) Annexation of the unincorporated portion of Planning Area 35 (Irvine Ranch Water District Parcel); 3) General Plan Amendment and Zone Change for Planning Area 30; and 4) Approval of the form of a Development Agreement vesting approval of overlay uses and intensities in consideration for dedication of land for public purposes and for developing and funding certain infrastructure improvements and maintenance of the public uses by the purchaser/developer and subsequent landowners and funding for specific park, roadways, and other circulation facilities and infrastructure. Together, these actions establish the policy and legislative structure to guide the development of the former MCAS El Toro property.

The OCGP FEIR mitigation measures are provided in the adopted Mitigation Monitoring and Reporting Program included in Appendix C. The table includes:

- Mitigation number and a description of the action;
- Timing for implementation;
- Approving authority and reviewing agency(s), if any; and
- Method of compliance

Addendum No. 1, approved by City on May 18, 2006, addressed the potential for environmental issues associated with the implementation of the OCGP Redevelopment Project Area Plan.

Addendum No. 2 was approved by the City Council on October 24, 2006. It analyzed the potential for environmental issues associated with minor adjustments to the boundary between the public and private areas of the OCGP; revisions to Zoning Code text and figures related to Planning Areas 30 and 51; the creation of a mixed-use zoning category called the Lifelong Learning District (LLD) within Planning Area 51; and minor technical changes to the General Plan, as described in Section 2.3 of the Addendum No. 2.

Addendum No. 3, approved by the City Planning Commission on May 17, 2007, addressed the potential for environmental issues associated with a proposal to approve the Master Subdivision Map (Vesting Tentative Tract Map No. 17008), submitted pursuant to Section 7.1 of the "Original Development Agreement" (defined below), to identify the backbone infrastructure in the Overlay Plan project area, to define the areas for potential future subdivision and development and to delineate the limits of rough grading for the development on approximately 2,157 acres (Great Park Neighborhoods development) of the approximately 3,705 acres that Heritage Fields purchased from the United States Department of the Navy (DON).

Addendum No. 4 was approved by the City Planning Commission on September 27, 2007. It analyzed the Orange County Great Park Master Plan, which provides a conceptual design for the future buildout of the 1,145-acre multiuse OCGP development.

The OCGP FEIR, Addendum No. 1, Addendum No. 2, Addendum No. 3, Addendum No. 4, and all of the associated technical documents are on file at the City of Irvine, Community Development Department, at 13825 "B", Irvine, California 92618.

1.4 ENVIRONMENTAL SETTING

The Orange County Great Park (which consists of City of Irvine Planning Areas 30 and 51) is in the central portion of Orange County, approximately 45 miles southeast of Los Angeles. The project area is generally

1. EIR Addendum Summary

bounded by the Woodbury residential development to the west, future Portola Springs residential development to the north, Irvine Spectrum to the south, and the City of Lake Forest to the east. Other nearby local jurisdictions include the Cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo, and Tustin. Specifically, the proposed Lifelong Learning District consists of Planning Area Zones (PAZ) 1, 5, 6, 7, 8, 9, 11, 17a and 17b, which are in the northwest portion of Planning Area 51.

The Irvine Station, a major multimodal transit center linking Orange County Transportation Authority (OCTA) bus, Metrolink commuter rail, and Amtrak rail services, is adjacent to the Southern California Regional Rail Authority (SCRRA) Metrolink tracks, which bisect the project area and separate Planning Areas 30 and 51. The existing facilities within the project site include California State University, Fullerton; Marine Memorial Golf Course; equestrian facilities; and agricultural and nursery operations. The OCGP FEIR also describes interim activities that might occur on the site, including short-term use of the land or existing buildings on-site. Currently, there are offices occupied by the City of Irvine Community Development Department, Great Park Corporation (GPC), and Heritage Fields. Other tenants include Second Harvest Food Bank, Families Forward, Orange County Great Park Balloon Preview Park, and Tierra Verde Industries. A day-care facility is immediately adjacent to these office uses. Finally, a small portion of the existing runway has been removed within the southern portion of PA 51.

Ownership of Planning Areas 30 and 51 has changed since certification of the OCGP FEIR, including certain parcels that have been transferred to the Federal Aviation Administration, City of Irvine, County of Orange, and Heritage Fields by the DON or leased in furtherance of conveyance.

2.1 PROJECT LOCATION

The Orange County Great Park, encompassing Planning Areas 30 and 51, is northeast of the freeway junction at Interstate 5 (I-5) and Interstate 405 (I-405), within the City of Irvine. Figure 2-1 depicts the project location in a regional context and Figure 2-2 shows its local context.

Major roadways bordering the project are Sand Canyon Avenue to the northwest, Portola Parkway and Irvine Boulevard to the north, and Bake Parkway to the northeast. An aerial photograph of the project site and surrounding area is shown on Figure 2-3. The Irvine Station is adjacent to the SCRRA Metrolink tracks, which traverse the site and separate Planning Areas 30 and 51. Surrounding the site are residential and nonresidential uses under construction to the north and west, open space to the northeast, and nonresidential and mixed land uses to the east and southeast within the City of Lake Forest and City of Irvine.

2.2 PROJECT CHARACTERISTICS

2.2.1 Project Background

On May 27, 2003, the City Council certified a Final Environmental Impact Report and adopted a general plan amendment and zone change to implement the development of the Orange County Great Park. In order to develop at the maximum intensities allowed in the Overlay Plan shown in the General Plan and Zoning Code, the property owners entered into a development agreement, which required the dedication of land and the development or funding of infrastructure improvements in excess of the City's standard requirements, and the commitment to long-term maintenance of the public facilities.

In July 2005, Heritage Fields, LLC, (Heritage Fields) purchased all four bid parcels through a US Department of Navy/General Services Agency online auction process. Subsequent to the land purchase, the Great Park Corporation and Heritage Fields initiated their respective master design and development processes for the OCGP. To facilitate additional design options, both the Great Park Corporation and Heritage Fields requested and the City initiated an amendment to the General Plan and the Zoning Code to reconfigure the boundaries between the two properties. In addition, Heritage Fields has requested the creation of a new mixed-use zoning district called the 8.1/8.1A Lifelong Learning District. They also proposed minor clarifications to the zoning text within Planning Areas 30 and 51. These revisions to the Overlay Plan were analyzed in Addendum No. 2 dated September 2006, and were approved as the Revised Overlay Plan (Overlay Plan) by the City Council on October 24, 2006. These changes did not increase the building intensity already approved for the Site, and did not increase any significant environmental impacts previously identified in the 2003 OCGP FEIR. Addendum No. 2 was also approved on October 24, 2006, and is on file with the City Community Development Department for review.

On June 28, 2006, and pursuant to Section 7.1 of the Development Agreement, Heritage Fields El Toro, LLC, (Heritage Fields) filed an application for the Master Subdivision Map (Vesting Tentative Tract Map No. 17008) for the Overlay Plan. The Master Subdivision Map was approved by the City Planning Commission on May 17, 2007. The Master Subdivision Map subdivided approximately 3,585 gross acres of the Site into 44 numbered lots and 14 lettered lots, but did not authorize the construction of any trip-generating land uses or alter any land use or associated acreages to the approved Overlay Plan. As noted, the CEQA compliance was established via Addendum No. 3 approved on May 17, 2007. The City concluded that the Master Subdivision Map was consistent with the Overlay Plan land uses, as approved, and that no new areas were proposed for development. Addendum No. 3 is on file with the City Community Development Department for review.

2. Project Description

In 2007, the GPC requested approval of the Master Plan for the Great Park Development (Great Park Master Plan). The Great Park Master Plan was approved by the City Planning Commission on September 27, 2007. As noted, the CEQA compliance was established via Addendum No. 4 dated July 2007 and approved September 27, 2007. Addendum No. 4 is on file with the City Community Development Department for review.

The development analyzed in the OCGP FEIR and addenda includes both Public Park (Great Park development) and private development components (Great Park Neighborhoods development formerly known as Heritage Fields). The Great Park development, the public park component, is owned by the City and is being developed by the GPC. The Great Park Neighborhoods development, the private development component, is being developed by Heritage Fields.

During preliminary consideration of the conceptual design of Marine Way, California Department of Transportation (Caltrans) expressed concerns regarding the location of Marine Way and its relationship to the Bake Parkway freeway on-ramp. A revised alignment was first discussed in conjunction with the Master Subdivision Map for Great Park Neighborhoods and the Great Park. At that time it was recognized that the revised alignment required an amendment to the General Plan and that further study of the alignment was warranted. This Addendum is intended to provide that additional analysis and, if appropriate based on findings, allow the City to amend the City's General Plan, zoning code, and the Orange County Transportation Authority's Master Plan of Arterial Highways to effectuate that change.

On October 25, 2005, the City Council created the Orange County Great Park Development Agreement Committee, including Mayor Krom and Councilmember Agran, to review and consider proposals by Heritage Fields to amend various aspects of the existing development agreement. The committee, supported by staff, has been engaged in these discussions for the past several months. To maintain consistency with the proposed Development Agreement amendments, the City and Heritage Fields are also proposing to amend the General Plan and Zoning Code.

2.2.2 Project Components

This Addendum addresses the potential for environmental issues associated with the proposed General Plan, Zoning, and Development Agreement Amendments. The Proposed Project includes the following requested actions:

- General Plan Amendment (00468566-PGA) and Zone Change (00468567-PZC) to amend the appropriate figures in the General Plan to reflect the Bake Parkway/Marine Way intersection relocation and the Rockfield Boulevard reconfiguration in the southern portion of Planning Area 30.
- General Plan Amendment (00470036-PGA), Zone Change (00470039-PZC), and Amended Development Agreement (00470035-PDA) to provide for the following: 1) reduce the number of required golf course holes within the Orange County Great Park from 45 to 18; 2) removal of the requirement for 173 acres of Agricultural Preserve in the Lifelong Learning District; and 3) other minor changes to the General Plan and Zoning Code text, tables, and figures. The Development Agreement Amendment also addresses the following core issues: (1) vest Heritage Fields' rights to develop under the General Plan and Zoning Code, as amended in the manner described above; (2) revise the funding mechanism for the Great Park maintenance; (3) shift the CFD cost overruns from the City to Heritage Fields; (4) transfer 131 acres of land from Heritage Fields to the City of Irvine; (5) establish the location of the police facility; (6) confirm runway demolition and recycling protocols; and (7) reiterate the role of the Master Implementation Agreement in the establishment of the backbone infrastructure phasing. Please refer to Section 2.2.2, *Project Components and Appendix A*,

2. Project Description

Proposed General Plan and Zoning Code Text, Table, and Figure Changes, for a more detailed description of the proposed actions and changes.

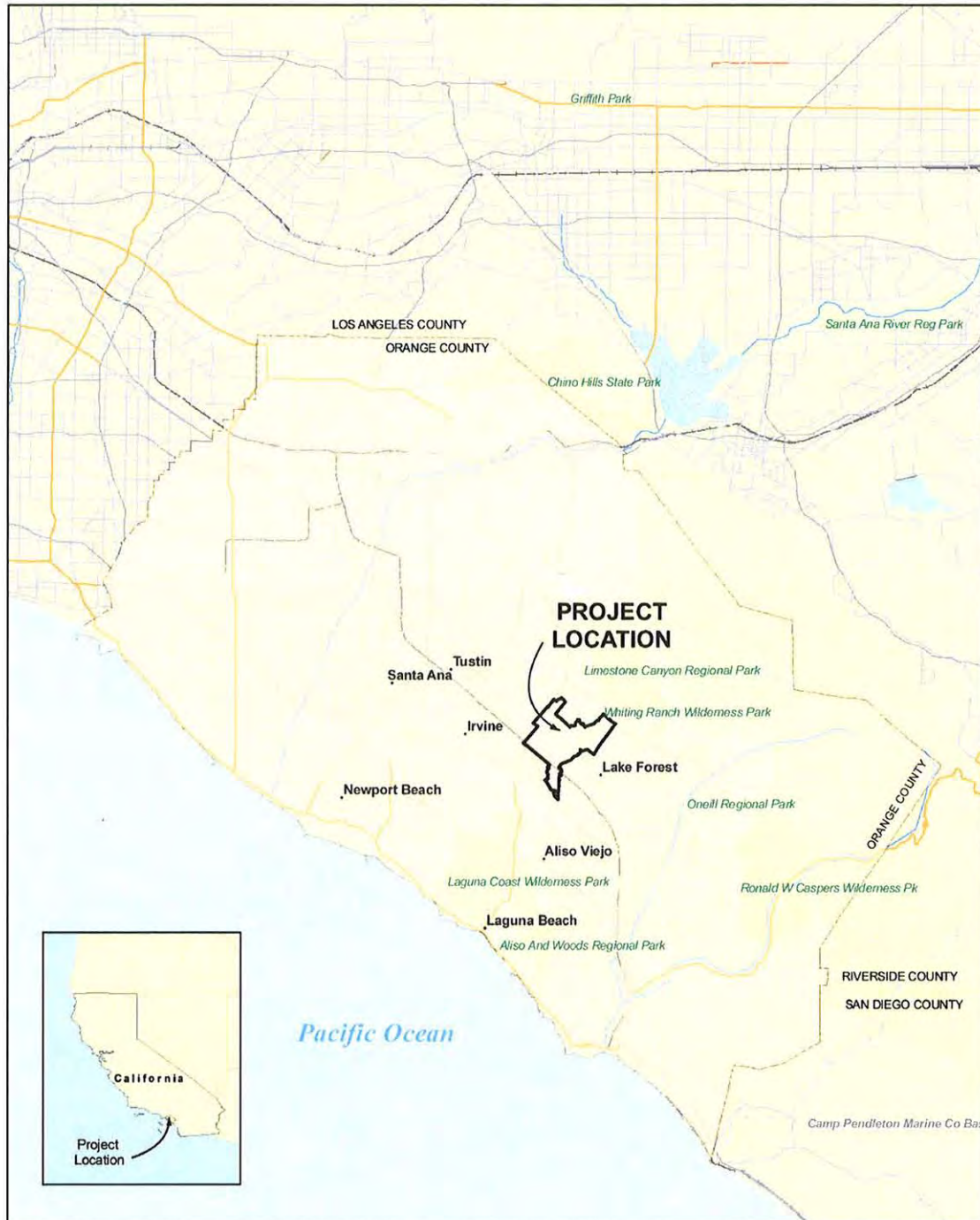
The requested actions do not permit any new residences or other changes to approved intensities. The specific components of the requested actions are discussed in more detail below.

2. Project Description

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2. Project Description

Regional Location



NOT TO SCALE

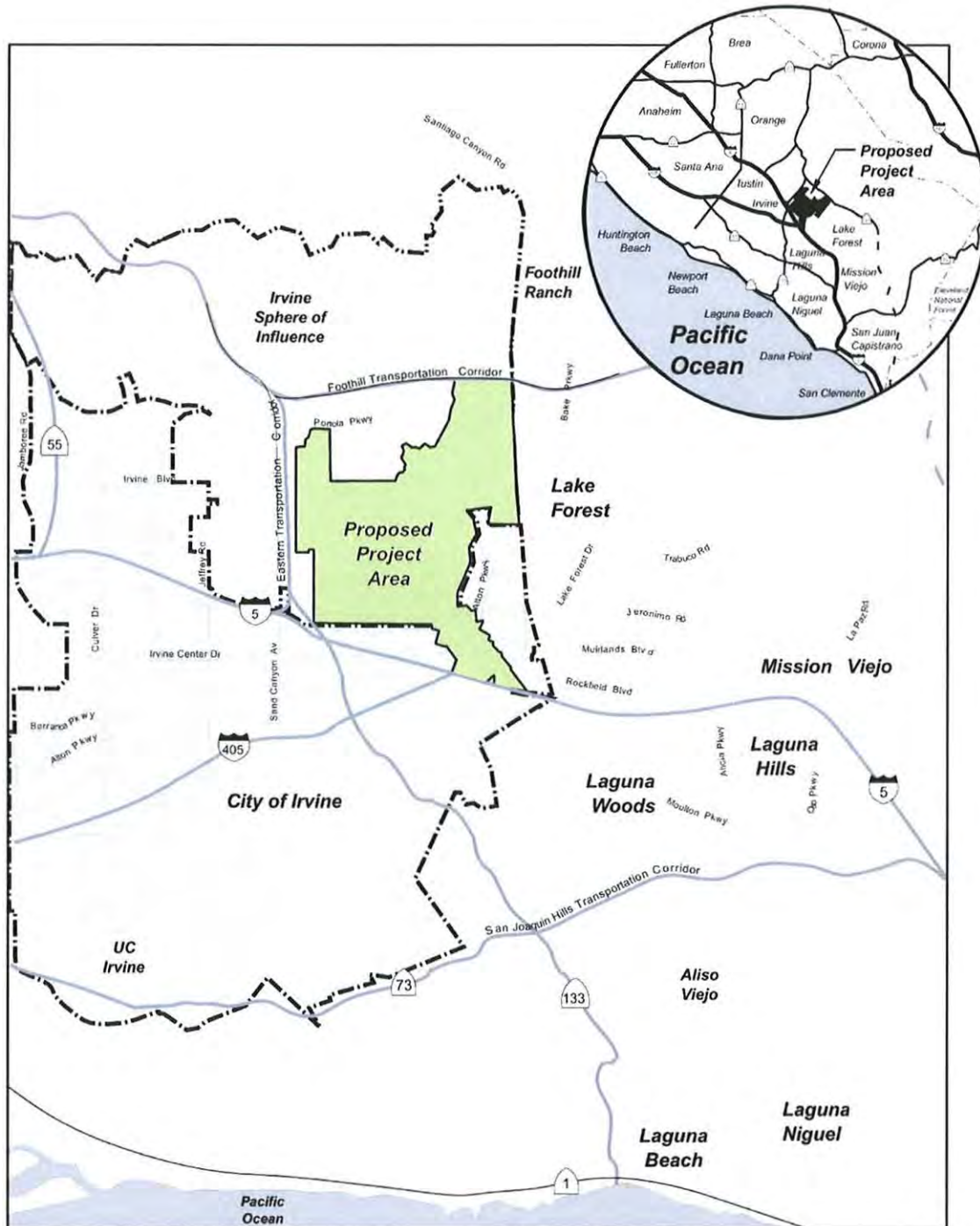


2. Project Description

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2. Project Description

Vicinity Map



0 2.25
Scale (Miles)



2. Project Description

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2. Project Description

Aerial Photograph



Orange County Great Park

0 3,300
Scale (Feet)



Source: EDAW

Addendum No. 5 Update for the Orange County Great Park EIR

City of Irvine • **Figure 2-3**

2. Project Description

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Bake Parkway/Marine Way Relocation

General Plan Amendment (00468566-PGA) and Zone Change (00468567-PZC) would amend the appropriate figures in the General Plan to reflect the Bake Parkway/Marine Way intersection relocation and the Rockfield Boulevard reconfiguration in the southern portion of Planning Area 30. The proposed General Plan Amendment would relocate Marine Way approximately 900 feet to the east of the I-5 NB exit ramp. Due to the relocation of Marine Way, the extension of Rockfield Boulevard to Marine Way would also be modified. The currently planned alignment of both roads is reflected in Figure 2-4, with the proposed revisions shown in Figure 2-5. The associated Zone Change would reflect the modifications to the proposed street alignments and would be reflected in a revision to the Planning Area 30 zoning map.

Project design features are associated with the relocation of the Bake Parkway/Marine Way intersection. These project design features are as follows:

Bake Parkway/I-5 Northbound Ramp

The General Plan-approved Bake Parkway/Marine Way intersection provides direct access from the Bake/I-5 NB Ramp intersection onto Marine Way. Under the proposed relocation, the Bake Parkway/Marine Way intersection is relocated north (east) of General Plan approved Bake Parkway/Marine Way intersection on Bake Parkway. The relocation of the Bake Parkway/Marine Way intersection includes project design features along Bake Parkway. Specifically, Bake Parkway is proposed to be widened north (east) of the existing I-5 bridge to provide four through lanes to Rockfield Boulevard while southbound (westbound) Bake Parkway from Rockfield Boulevard will be widened to provide four through lanes which reduces to three through lanes at the I-5 NB on-ramp. In addition, the proposed Bake Parkway/Marine Way relocation is also accompanied by improvements at the I-5 Northbound off-ramp. The I-5 Northbound off-ramp would be widened to provide one left-turn lane and three right-turn lanes. The project design features tied to the construction of the Bake Parkway/Marine Way intersection would provide acceptable levels of service at this intersection.

Sand Canyon/I-5 Northbound Ramp

The proposed relocation of the Bake Parkway/Marine Way intersection resulted in the need for restriping at the eastbound approach or the southbound approach of the Sand Canyon/I-5 Northbound Ramp intersection. As part of the project design features, the southbound approach at this intersection would be restriped to provide two left-turn lanes, four through lanes, and one right-turn lane. The restriping improvement provides Intersection capacity values lower than the Without Project condition.

The certified OCGP EIR analyzed the proposed Great Park circulation system and associated amendments to the City's Circulation Element at a programmatic level and listed Caltrans as a Responsible Agency. Project specific impacts will be addressed through the normal Caltrans process including a request for an Encroachment Permit, completion of a Project Study Report, and additional CEQA/NEPA review, if required.

General Plan, Zone Change, and Development Agreement Amendment

Reduction of Golf Course Holes

General Plan Amendment (00470036-PGA) would amend the Land Use Element Table A-5 in the General Plan to reduce the number of required golf course holes from 45 to 18. The 27 holes to be removed from future plans were to have been located in the area between the Wildlife Corridor and the Aqua Chinon, in the Park District of the Great Park Neighborhoods project. The reduction in the golf course holes will not permit any new residences or other changes to approved densities.

2. Project Description

Reduction in Agricultural Acreage

General Plan Amendment (00470036-PGA), Zone Change (00470039-PZC), and Development Agreement Amendment (00470035-PDA) would reduce the required agricultural acreage within the Lifelong Learning District by 173 acres. The reduction in the agricultural acreage will not permit any new residences or other changes to approved intensities.

Development Agreement

In addition to reducing the number of golf course holes and agricultural acreage as described above, the Development Agreement Amendment also addresses the following issues: (1) vest Heritage Fields' rights to develop under the General Plan and Zoning Code, as amended in the manner described above; (2) revise the funding mechanism for the Great Park maintenance; (3) shift the CFD cost overruns from the City to Heritage Fields; (4) transfer 131 acres of land from Heritage Fields to the City of Irvine; (5) establish the location of the police facility; (6) confirm runway demolition and recycling protocols; and (7) reiterate the role of the Master Implementation Agreement in the establishment of the backbone infrastructure phasing.

Additional Text and Figure Changes

General Plan Amendment 00470036-PGA and Zone Change 00470039-PZC also include other minor changes to texts and figures to clean up other technical issues with the Planning Areas 30 and 51. The specific text and figure changes associated with the proposed General Plan Amendments and Zone Changes are included Appendix A.

2.3 DISCRETIONARY APPROVALS

Implementation of the project includes the following discretionary actions for Planning Areas 30 and 51 to be undertaken by the City:

- CEQA related actions and approvals; and
- General Plan Amendment 00468566-PGA
- Zone Change 00468567-PZC
- General Plan Amendment 00470036-PGA
- Zone Change 00470039-PZC
- Development Agreement Amendment 0040035-PDA

The OCGP FEIR lists additional discretionary actions to be taken by the City and other public agencies at or as part of the completion of the project—the adopted Overlay Plan (OCGP FEIR pages 3-29 and 3-30). The actions listed therein which have not yet been undertaken also are necessary for implementation of the project. The actions and responsible public agencies include, but are not necessarily limited to, these approvals:

- Master plans and subdivisions for development (City)
- Community facilities districts or other assessment districts (City)
- Actions to improve interim use activities (City and DON)
- Transfer of parcels within Planning Area 51 (DON)

2. Project Description

- Clean Water Act section 404 permits (US Army Corps of Engineers)
- Endangered Species Act compliance (U.S. Fish and Wildlife Service)
- Clean Water Act section 401 and National Pollutant Discharge Elimination System (NPDES) permits (Regional Water Quality Control Board)
- California Fish and Game Code 1602 permits (California Department of Fish and Game)
- Revisions to the Orange County Master Plan of Arterial Highways (Orange County Transportation Authority)

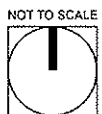
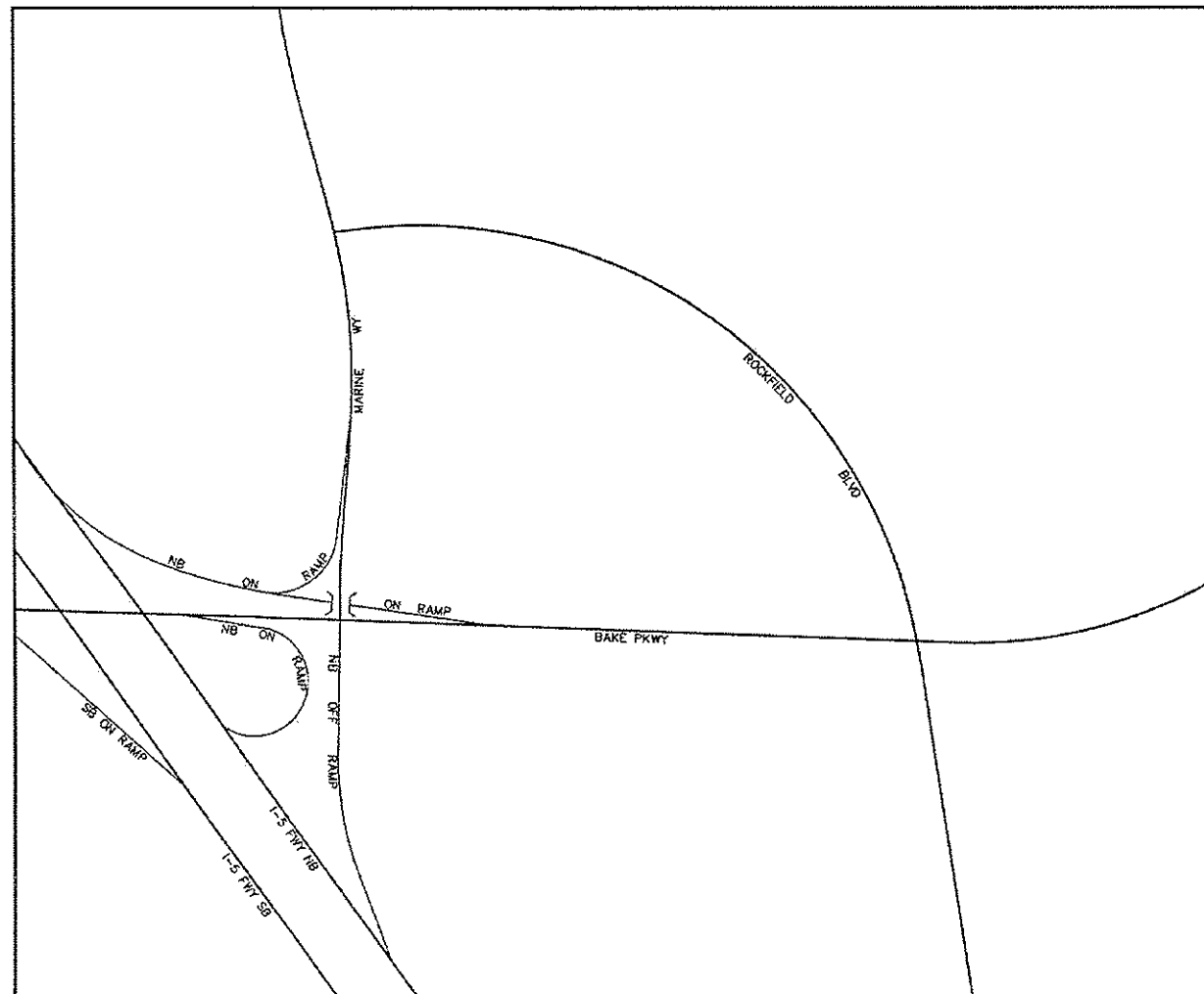
The City of Irvine Environmental Information Form and Environmental Checklist Form have been completed by the City and are included on the following pages. The Environmental Checklist Form is marked with the findings of the Community Development Department as to the environmental effects of the proposed changes to the project in comparison with the findings of the certified OCGP FEIR.

As explained above, this comparative analysis has been undertaken, pursuant to the provisions of the California Environmental Quality Act, to provide the City with the factual basis for determining whether any changes in the project, any changes in the circumstances, or any new information requires additional environmental review or preparation of a subsequent or supplemental EIR. The basis for each of the findings listed in the attached Environmental Checklist Form in Section 3 is explained in Section 4 of the Addendum.

2. Project Description

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Current Bake Parkway/Marine Way Conceptual Design



Source: Austin-Foust Associates, Inc.

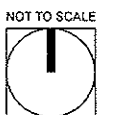
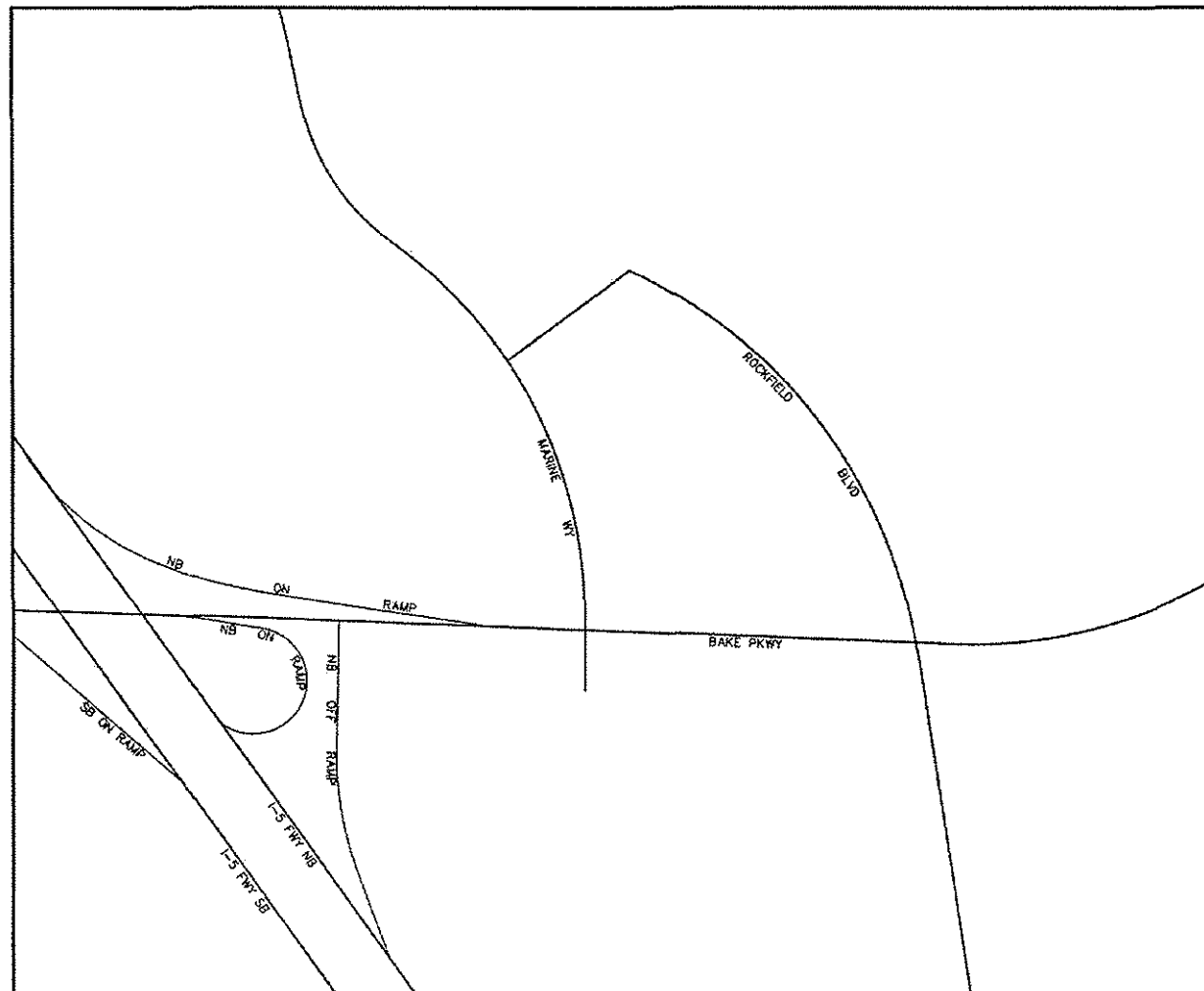
Addendum No. 5 Update for the Orange County Great Park EIR

City of Irvine • **Figure 2.4**

2. Project Description

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Proposed Bake Parkway/Marine Way Conceptual Revisions



Source: Austin-Foust Associates, Inc.

Addendum No. 5 Update for the Orange County Great Park EIR

City of Irvine • **Figure 2.5**

2. Project Description

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3. Environmental Checklist

3.1 CITY OF IRVINE INITIAL STUDY AND ENVIRONMENTAL EVALUATION

The City of Irvine Environmental Information Form and Environmental Checklist Form have been completed by the City and are included on the following pages. The Environmental Checklist Form is marked with the findings of the Community Development Department as to the environmental effects of the proposed changes to the project through the General Plan Amendments, Zone Changes, and Development Agreement Amendment in comparison with the findings of the certified OCGP FEIR and addenda.

As explained above, this comparative analysis has been undertaken, pursuant to the provisions of CEQA, to provide the City with the factual basis for determining whether any changes in the project, any changes in the circumstances under which the project is undertaken, or any new information requires additional environmental review or preparation of a subsequent or supplemental EIR. The basis for each of the findings listed in the attached Environmental Checklist Form is explained in Section 4 of the Addendum.

1. Project Title:

General Plan Amendment 00468566-PGA and Zone Change 00468567-PZC,
General Plan Amendment 00470036-PGA, Zone Change 00470039-PZC, and Development
Agreement Amendment 00470035-PDA

2. Lead Agency Name and Address:

City of Irvine Community Development Department
13825 "B" Street
Irvine, California 92618

3. Contact Person and Phone Number:

Diane Vu, Senior Planner (949) 724-7460 and Michelle Drou  , Associate Planner (949) 724-6314

4. Project Location:

The project area is north of Interstate 5 (Santa Ana Freeway), east of State Route 133 (Eastern Transportation Corridor), west of the City of Lake Forest, and south of State Route 241 (Foothill Transportation Corridor).

5. Project Sponsor's Name and Address:

City of Irvine Community Development
13825 "B" Street
Irvine, California 92618

6. General Plan Designation: Orange County Great Park (OCGP)

7. Zoning:

1.1 Exclusive Agriculture, 1.4 Preservation, 1.5 Recreation, 1.8 Golf Course Overlay, 2.2 Low Density Residential, 2.3 Medium Density Residential, 3.2 Transit Oriented Development, 4.3 Vehicle-Related Commercial, 5.4B General Industrial, 6.1 Institutional, and 8.1/8.1A Lifelong Learning District

3. Environmental Checklist

8. Description of Project

The purpose of this proposal is to initiate General Plan Amendment and Zone Change to revise appropriate General Plan Figures and Zoning Maps to reflect the relocated Bake Parkway/Marine Way intersection and the Rockfield Boulevard reconfiguration within the southern portion of Planning Area 30. This proposal also seeks to initiate a General Plan Amendment, Zone Change, and Development Agreement Amendment to reduce the number of required golf course holes within the Orange County Great Park from 45 to 18; remove the requirement for 173 acres of Agricultural Preserve in the Lifelong Learning District; and other minor changes to the General Plan and Zoning Code text, tables, and figures. The Development Agreement Amendment also proposes to vest Heritage Fields' rights to develop under General Plan and Zoning Code, as amended in the manner described above; revise the funding mechanism for the Great Park maintenance; shift the CFD cost overruns from the City to Heritage Fields; transfer 131 acres of land from Heritage Fields to the City of Irvine; establish the location of the police facility; confirm runway demolition and recycling protocols; and reiterate the role of the Master Implementation Agreement in the establishment of the backbone infrastructure phasing. Please refer to Section 2.2.2, *Project Components* and Appendix A, *Proposed General Plan and Zoning Code Text, Table, and Figure Changes*, for a more detailed description of the proposed actions and changes.

9. Surrounding Land Uses and Setting (Briefly describe the project's surroundings):

The proposed project area (which consists of City of Irvine Planning Areas 30 and 51) is in the central portion of Orange County, approximately 45 miles southeast of Los Angeles. The project area is generally bounded by the Irvine Spectrum to the south, City of Lake Forest to the east, the Woodbury residential community to the west, and the future Portola Springs residential development to the north.

The project area is north of I-5, east of SR-133, and south of SR-241. Major roadways bordering the project area include Barranca Parkway to the south, Sand Canyon Avenue to the west, Portola Parkway and Irvine Boulevard to the north, and Alton Parkway to the east.

10. Other Public Agencies Whose Approval Is Required (e.g., permits, financing approval, or participation agreement):

Orange County Transportation Authority (Master Plan of Arterial Highways)
Cal Trans

3. Environmental Checklist

3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology / Soils |
| <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use / Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation / Traffic |
| <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Mandatory Findings of Significance | |

3.3 DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

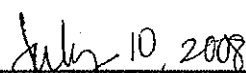
☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☒ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.


Diane Vu, Senior Planner


Date

3. Environmental Checklist

3.4 EVALUATION OF ENVIRONMENTAL IMPACTS

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) **Earlier Analysis Used.** Identify and state where they are available for review.
 - b) **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) **Mitigation Measures.** For effects that are “Less Than Significant With Mitigation Incorporated,” describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

3. Environmental Checklist

- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
- a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significant.

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
I. AESTHETICS: Would the project:						
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway or local scenic expressway, scenic highway, or eligible scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in the visible grading of over 5,000 cubic yards on any 20-acre portion of the project site; or visible cut and fill slope over 25 vertical feet?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in the creation of light spillover and glare effects that present a nuisance to residential land uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Result in the substantial alteration of the existing landform of the site or of a unique topographic feature on the site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
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II. AGRICULTURAL RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Mode (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:						
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:						
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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IV. BIOLOGICAL RESOURCES: Would the project:						
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
V. CULTURAL RESOURCES: Would the project:						
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the CEQA Guidelines?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the CEQA Guidelines?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VI. GEOLOGY AND SOILS: Would the project:						
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:						
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:						
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter-mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VIII. HYDROLOGY AND WATER QUALITY: Would the project:						
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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support existing land uses or planned uses for which permits have been granted)?						
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on-site or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of pollutant runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IX. LAND USE AND PLANNING: Would the project						
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
X. MINERAL RESOURCES: Would the project:						
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XI. NOISE: Would the project result in:						
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, heliport or helistop, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XII. POPULATION AND HOUSING: Would the project:						
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIII. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:						
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XIV. RECREATION: Would the project:						
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XV. TRANSPORTATION/TRAFFIC: Would the project:						
a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3. Environmental Checklist

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
c) Result in a change in air traffic patterns, including either an increase in traffic levels or change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus stops/routes, bicycle lanes, sidewalks, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XVI. UTILITIES AND SERVICE SYSTEMS: Would the project:						
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project (including large scale developments as defined by Public Resources Code Section 21151.9 and described in Question No. 20 of the Environmental Checklist) from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3. Environmental Checklist

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with Federal, State, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Result in a need for new systems or supplies, or substantial alterations related to electricity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Result in a need for new systems or supplies, or substantial alterations related to natural gas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Result in a need for new systems or supplies, or substantial alterations related to telephone service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
k) Result in a need for new systems or supplies, or substantial alterations related to television service/reception?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XVII. MANDATORY FINDINGS OF SIGNIFICANCE						
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4. Discussion of Checklist and Mitigation Measures

This section is intended to provide evidence to substantiate the conclusions set forth in the Environmental Checklist. The section will briefly summarize the OCGP FEIR conclusions and then discuss whether or not the proposed project is consistent with the findings contained in the OCGP FEIR.

4.1 AESTHETICS

4.1.1 Environmental Setting

The OCGP FEIR addressed in detail the potential visual impacts associated with the development of the former MCAS El Toro. The OCGP FEIR discussed the project's visual setting associated with its location adjacent to various arterial highways and state and federal highways. None of these roadways are designated County or State scenic highways; although Sand Canyon Avenue is designated as a highway with rural/natural character. The City's General Plan also designates I-5 as an urban character Scenic Highway.

Generally, views of the former military base are from the surrounding highways. From these highways, a variety of land uses, structures, and facilities of differing ages, sizes, and architectural styles may be viewed. Though agricultural areas are adjacent to and within the base, the predominant features are associated with the military use of the base, including runways, aprons, hangars, warehouses, barracks housing, recreational facilities, golf course, single-family housing, offices, and commercial structures.

The City of Lake Forest and the James A. Musick Branch Jail are to the southeast; Irvine Spectrum abuts the former base along the eastern and southern boundaries; and existing and developing residential developments are to the north and west. Further to the south are the residential areas of the Cities of Laguna Woods and Laguna Hills. These communities are at higher elevations and therefore have panoramic views of the project. Residences with views of the facility are not impacted by existing light sources on the site since the residences are at least two miles from the property.

4.1.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR discussed the potential aesthetic effects of the development of the site, including Planning Areas 51 and 30, under the adopted Overlay Plan and found that future development of these two planning areas would introduce new sources of light within the project area. These sources include street lighting along planned roadways and various forms of exterior lighting, including security lighting, parking lots, educational facilities, institutional and commercial developments, and lighting associated with athletic fields. The OCGP FEIR concluded that significant light impacts could have occurred if proposed light sources were directed into or located near existing or planned residential uses, which are sensitive to light intrusion during nighttime hours, but that, with the mitigation ultimately adopted by the City, these potential impacts would be less than significant. The OCGP FEIR and addenda further concluded that the proposed mitigation measures for the project would reduce potentially significant light impacts to less than significant levels.

With regard to other aesthetic-related impact significance threshold presented in the OCGP FEIR, no other significant or potentially significant aesthetic impacts were identified. These other thresholds primarily concern visual aesthetic impacts and include such evaluative factors as view-shed obstruction or impairment, landform alteration, and the degradation of valued or unique scenic resources or features.

4. Discussion of Checklist and Mitigation Measures

4.1.3 Impacts Associated with the General Plan Amendments, Zone Changes, and Development Agreement Amendment

Bake Parkway/Marine Way Relocation

There are no scenic routes, scenic resources, or unique geologic or topographic features within the project area. The proposed relocation of Bake Parkway/Marine Way shifts the intersection approximately 900 feet to the east of the I-5 NB exit ramp. Rockfield Boulevard is reconfigured as well. The roadways remain in the same general vicinity in Planning Area 30 as the original planned roadways as previously examined in the OCGP FEIR.

The project would not introduce new light sources or highly reflective building materials that would result in new sources of potential glare beyond those already considered by the OCGP FEIR, because it includes the same land uses and intensity, and comparable physical area for future development as the adopted Overlay Plan.

Reduction of Required Golf Course Holes

According to the OCGP FEIR, there are no scenic routes, scenic resources, or unique geologic or topographic features within the project site. Reducing the golf course requirement by 27 holes would not authorize new land uses or increase development intensities within the area. All previous land use intensities would remain the same. Therefore, the aggregate amount of residential development and developed areas remains the same. Therefore, the project would not introduce new light sources or highly reflective building materials that would result in new sources of potential glare beyond those already considered by the OCGP FEIR, because it includes the same land uses, intensity, and comparable physical area for future development as the adopted Overlay Plan.

The reduction of required golf course holes would not authorize new land uses or increase the intensity; therefore, there would be no new significant impacts degrading the visual character or quality of the site and its surroundings beyond those already considered by the OCGP FEIR.

Reduction in Agricultural Acreage

According to the OCGP FEIR, there are no scenic routes, scenic resources, or unique geologic or topographic features within the project site. Removing the requirement to include 173 acres of agricultural use within the Lifelong Learning District (LLD) would not authorize new land uses or increase development intensities. All previous land use intensities would remain the same. The project does not create a new source of substantial light or glare, or degrade the visual character of the project area and its surroundings. Therefore, there would be no new significant impacts degrading the visual character or quality of the site and its surroundings beyond those already considered by the OCGP FEIR.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major revision to the certified OCGP FEIR due to any new significant environmental impact or a substantial increase in the severity of impacts.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

4. Discussion of Checklist and Mitigation Measures

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR.

This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project would have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR.

This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that: 1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or 2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetics effects identified in and considered by the certified OCGP FEIR.

4.1.4 Mitigation from the OCGP FEIR and Applicability to the General Plan Amendments, Zone Changes, and Development Agreement Amendment

The OCGP FEIR identified mitigation measures A1 and A2, which, if fulfilled, would reduce the effects of development under the adopted Overlay Plan to a less than significant level. Measures A1 and A2 are applicable to future development under the project.

- A1 Prior to issuance of building permits, lighting plans and signage plans for new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent residential areas occurs.
- A2 Prior to the issuance of building permits, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.

4. Discussion of Checklist and Mitigation Measures

4.2 AGRICULTURAL RESOURCES

4.2.1 Environmental Setting

The OCGP FEIR described the Farmland Mapping and Monitoring Program of the California Department of Conservation Division of Land Resources Protection classifications of agricultural lands present within the project area as follows:

- **Prime Farmland:** Land which has the best combination of physical and chemical features able to sustain long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for production of irrigated supply needed to produce sustained high yields. Land must have been used for production of irrigated crops at some time during the previous two map updates.
- **Farmland of Statewide Importance:** Similar to Prime Farmland, except this land has minor shortcomings such as greater slopes or less ability to store soil moisture than Prime Farmland. This land has minor shortcomings, such as greater slopes or less ability to store soil moisture than Prime Farmland. Land must have been used for production of irrigated crops at some time during the previous two map updates.
- **Unique Farmland:** Lesser quality soils used for the production of the state's leading crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climate zones in California. This land is used for the production of specific high economic value crops such as oranges, olives, avocados, rice, grapes, or cut flowers. Land must have been cropped at some time during the two previous maps updates.
- **Farmland of Local Importance:** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

The OCGP FEIR identified approximately 659 acres of designated Prime Farmland, 70 acres of designated Unique Farmland, and 99 acres of designated Farmland of Statewide Importance. The Orange County Board of Supervisors has not designated any farmland as being of Local Importance.

City of Irvine Policies and Programs

The City of Irvine General Plan Objective L-10, as amended in 2002 and presented in the OCGP FEIR, includes the following policies to "encourage the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development":

Policy (a): Provide for farming opportunities in the community, where feasible and appropriate, through an Agricultural Legacy Program facilitating limited-scale agricultural operations and program on public lands. The program may include components such as edible landscape, metro-farming, heritage farming, model farming, education and community service farming and other farm or farm market program. Location for implementation of the Agricultural Legacy Program to be considered should, at a minimum, include:

- Designated open space spine network,
- Designated open space areas not subject to the Natural Community Conservation Plan (NCCP), and
- Other appropriate publicly owned lands.

4. Discussion of Checklist and Mitigation Measures

Policy (b): Consider creating a “working model” farm to act as a center for education and enjoyment of all age groups pursuant to the Agricultural Legacy Program in conjunction with the City’s planning efforts concerning the reuse of MCAS El Toro, or with the South Coast Research Extension owned by UC Regents.

Policy (c): Permit agricultural use of land which is unsuitable for building because it is within flood plains, or is subject to hazards to public health, safety, and welfare or similar constraints precluding development. Conversion from agricultural use may be allowed where the identified hazard conditions have been eliminated.

Policy (d): Permit agricultural uses, on an interim bases, on land designated for development, and consider agricultural uses as part of the City’s planning efforts for the re-use of MCAS El Toro.

Policy (e): Encourage and support federal and state legislation proposed for the purpose of preservation of agricultural lands which are compatible with the City’s goals and objectives.

Policy (f): Allow for conversion of interim and permanent agricultural uses to development to provide land for the construction of housing units consistent with the Land Use and Housing Elements, and the development of commercial and industrial buildings consistent with the provision of job opportunities as described in the Land Use Element, where such conversion does not conflict with other L-10 policies.

Policy (g): Pursue the open space policies contained in the Conservation and Open Space Element and address any open space or aesthetic impacts from the conversion of interim and permanent agricultural uses to development as part of the City’s existing policies for the preservation of open space and existing policies for mitigation of views and aesthetic impacts under the policies in the Conservation and Open Space Element.

4.2.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR and addenda determined the Overlay Plan would preserve in perpetuity 303 acres¹ of land for agricultural use, of which 251 acres are classified as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. The locations of the 303 acres of permanent agricultural land are listed below, and the Farmlands Map can be found in the OCGP FEIR as Figure 5.8-1:

- **PA 30:** 13 acres within Planning Area Zone (PAZ) 26; and
- **PA 51:** 90 acres within PAZ 4; 200 acres within PAZ 1.

The Overlay Plan also resulted in the permanent loss of 802 acres of designated farmland comprised of 651 acres of Prime Farmland, 63 acres of Unique Farmland, and 88 acres of Farmland of Statewide Importance. This impact was considered significant and unavoidable.

It was determined the Overlay Plan resulted in a significant impact associated with the conversion of agricultural land to nonagricultural use. The OCGP FEIR noted the context of agricultural production in Orange County—including development pressures that have contributed to the decrease in agricultural production in the County overtime—which suggested that conversion of agricultural land to urban uses would occur with or without the development of the project.

¹ Please note that there is a typographical error within the OCGP FEIR: Table 1-2 on page 1-8 and Table 3-4 on pages 3-12 and 3-13 identify the total agricultural land as 303 acres; however on page 5.8-10 the agricultural use acreage is noted as 307.

4. Discussion of Checklist and Mitigation Measures

4.2.3 Impacts Associated with the General Plan Amendments, Zone Changes, and Development Agreement Amendment

Bake Parkway/Marine Way Relocation

As discussed in the OCGP FEIR, Planning Area 30 was planned for development. The roadway relocation remains in Planning Area 30; therefore, the Bake Parkway/Marine Way Relocation would not create any new impacts to agricultural resources beyond those evaluated in the OCGP FEIR.

Reduction of Required Golf Course Holes

Reduction of the required golf course holes would not increase allowable intensities or areas planned for development and would not create any new impacts to agricultural resources beyond those evaluated in the OCGP FEIR.

Reduction in Agricultural Acreage

The proposed General Plan Amendment and Zone Change (GPA/ZC) would result in the removal of the requirement to include 173 acres of agricultural use within Planning Area 51 currently designated as Prime Farmland by the state through the Farmland Mapping and Monitoring Program. The entire 173 acres is designated as Planning Area Zone 1 (PAZ 1) in the adopted Great Park Overlay Plan. It should be noted that PAZ 1 is currently occupied by a nursery, which grows the nursery stock aboveground in pots. None of the soils in PAZ 1 are currently used for growing crops. However, the loss of agricultural land in Planning Area 51 is potentially significant because the land provides: 1) open space relief and use of productive soils; 2) historical, cultural, and heritage value; and 3) the economic value of the food products grown on the land to California's economy and consumers. Existing regulatory programs, however, address each of these three values of agricultural use.

On a local level, this conversion of agricultural land within the City to development uses was previously acknowledged and mitigated through various plans, policies, and programs adopted by the City. In particular, the City of Irvine General Plan Objective L-10 specifically addresses the conversion of agricultural lands where development under the General Plan is designated to occur and establishes the Irvine Agricultural Legacy Program to mitigate the loss of existing agricultural land throughout the City.

As a result of General Plan Objective L-10, described above, and in accordance with the mitigation measures contained in the Northern Sphere EIR, and the OCGP FEIR, several areas were considered relative to being potentially viable for agricultural operations. The 173-acre Exclusive Agriculture site was identified as a potential site (Site 5). However, since certification of the OCGP FEIR an additional 508 acres within Planning Area 1 has been designated as "Exclusive Agriculture" and added to the Agricultural Legacy Program. As a result, overall acreage enrolled within the Agricultural Legacy Program is greater than that assumed in the certified OCGP FEIR. Additionally, on August 2, 2007, the Planning Commission approved the Great Park's conceptual design, which includes a 56-acre Orchard. The design also includes citrus trees, nut, and avocado trees to recognize Orange County's agricultural past and programs for "working farm models" that will serve to educate the community. In addition to the 130 acres remaining as designated for permanent agriculture within Planning Areas 30 and 51, the education programs and additional 56 acres proposed by the Great Park help support and implement General Plan Objective L-10. As a result, no new impacts to agricultural resources beyond those assumed in the OCGP FEIR are anticipated.

The City's extensive program for the preservation of open space addresses open space relief. The program includes the Open Space Memorandum of Understanding, which was based upon a 1984 agreement with The Irvine Company. This program will result in dedication of approximately 2,800 acres of land as

4. Discussion of Checklist and Mitigation Measures

permanent open space, which will be part of the City's overall program for permanent preservation of more than 10,000 acres of natural open space within the City. In addition, the City's participation in the Orange County Central-Coastal Natural Communities Conservation Plan and Habitat Conservation Plan (NCCP/HCP) has provided open space and visual relief by preserving and restoring many acres of native vegetation and ecosystems using the growing capacity of native soils.

The cultural and historical value of the 173 acres of Prime Farmland that will be affected by conversion to urban uses has been addressed by the City's existing Agricultural Legacy Program, which was adopted and is administered under the City's General Plan Policy L-10. Currently, and in the foreseeable future, the supplies of fruits and vegetables grown in California are abundant, and prices of these products have not increased at the same rate as other commodities dependent on land, such as apartments, homes, or offices. The City Council found as part of its previous approval of the Orange County Great Park project in May 2003 that "there is substantial evidence before the City that the wholesale and retail market for agricultural products is a strong and dynamic market, which functions well in delivering agricultural products to consumers without shortages and with reasonable prices."

As a result, no new significant impacts to agricultural resources are anticipated due to the proposed General Plan Amendment since loss of agricultural land has been adequately mitigated through City of Irvine General Plan Objective L-10 and establishment of the Irvine Agricultural Legacy Program.

The OCGP Overlay Plan designates PAZ 1 as Lifelong Learning District (LLD), which allows for a mix of residential, commercial, and educational uses that would promote a synergistic live/learn/work/play environment. Therefore, deletion of 173-acres of Exclusive Agriculture would not conflict with the LLD designation. Additionally, there are no Williamson Act contracts within Planning Area 51.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that; 1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or 2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures

4. Discussion of Checklist and Mitigation Measures

or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant agricultural effects identified in and considered by the certified OCGP FEIR.

4.2.4 Mitigation from the OCGP FEIR and Applicability to the General Plan Amendments, Zone Changes, and Development Agreement Amendment

Mitigation measures AG1 through AG3 would be implemented in conjunction with master plan review and subsequent development permits. The project would neither change these mitigation measures nor their application to future development projects.

- AG1 In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operators, City of Irvine Standard Discretionary Case Condition B.4 and City of Irvine Subdivision Condition 3.4 regarding disclosure statements shall be amended to include the following for subdivisions proposed adjacent to existing agricultural operations:

Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:

- Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.

- AG2 Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.

- AG3 Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operation and adjacent urban uses.

4.3 AIR QUALITY

4.3.1 Environmental Setting

The OCGP FEIR described the existing air quality regarding the following regulated pollutants: ozone (O₃), carbon monoxide (CO), suspended particulate matter (PM₁₀), nitrogen oxides (NO_x), sulfur dioxide (SO₂), lead (Pb), volatile organic compounds (VOC), and reactive organic gases (ROG). The South Coast Air Basin (SCAB) is described as a non-attainment area for O₃, CO, and PM₁₀; annual maximum concentrations of O₃, CO, PM₁₀, and SO₂ exceeded both federal and state standards in some or all areas in the SCAB during the reporting period (2000). In contrast, standards for nitrogen dioxide (NO₂), SO₂, and Pb were not exceeded during the reporting period. The OCGP FEIR also noted the pending promulgation by the U.S. Environmental Protection Agency (EPA) and California Air Resources Board of standards for PM_{2.5} (particulate matter less than 2.5 microns in diameter). The standards are provided in Table 4-1 (Federal and State Standards for PM_{2.5}) below.

4. Discussion of Checklist and Mitigation Measures

Table 4-1
Federal and State Standards^a for PM_{2.5}

<i>Averaging Time</i>	<i>Federal Standards</i>	<i>California Standards^b</i>
Annual Arithmetic Mean	15 µg/m ³	12 µg/m ³
24-Hour	65 µg/m ³	No Separate Standard

Sources:

a www.epa.gov/pmdesignations/state/California.htm [June 5, 2006].

b 17 CFR §70200, Table of Standards.

The California Air Resources Board adopted the annual standard identified above but has postponed establishing a 24-hour standard for PM_{2.5}. EPA has identified several counties, including Orange County, as PM_{2.5} non-attainment areas. EPA is in the process of responding to comments on related regulations. At the local level, the South Coast Air Quality Management District (SCAQMD) is in the process of developing a methodology for calculating PM_{2.5} and PM_{2.5} significance thresholds for the purpose of analyzing local and regional air quality impacts in CEQA documents. A draft communication issued in May 2006 by the SCAQMD to its working group indicated that the methodology for calculating PM₁₀ could also be used to calculate PM_{2.5}.

4.3.2 Impacts Identified in the OCGP FEIR and Addenda

Operations Phase

Among the various sources of a project's operations-phase emissions, those attributable to mobile sources (i.e. vehicular traffic) comprise the largest proportion by far and is a function of both the number and trip length characteristics of vehicle trips directly and indirectly associated with the project under consideration. As discussed in preceding Section 4.3.1, OCGP FEIR estimates of the daily mobile source emission volumes attributable to OCGP project implementation, were based on traffic volumes and average trip lengths associated with build out of the overall OCGP project pursuant to adopted Overlay Plan development parameters. The development parameters for the OCGP project as a whole under the Overlay Plan were provided in OCGP FEIR Table 3-4 beginning at Page 3-12.

In the foregoing regard, Table 2-1, in Section 2.3.1 of Addendum No. 4, OCGP FEIR, identifies the General Plan land use designations, Zoning Districts, attendant Planning Area Zones and acreages, allowable land uses, and the types and quantities of development solely within the OCGP Master Plan portion of the overall OCGP project and is based exclusively on data provided in the aforementioned OCGP FEIR Table 3-4. It is noted that they have remained essentially unchanged since the OCGP Final Program EIR was certified in 2003. Furthermore, a review of the current OCGP Master Plan proposal indicates that all of the land use types and building intensities exhibited are within the scope of the development parameters identified in the subject table.

As a consequence, since future development the OCGP Master Plan portion of the overall OCGP project is consistent with the development parameters that served as the basis for determining the operations phase-related mobile source emissions provided in the OCGP FEIR, the results of the operations phase-related emissions provided in the OCGP FEIR adequately characterize the potential air quality effects of the project and further analysis is neither warranted nor required.

4. Discussion of Checklist and Mitigation Measures

Construction Phase

With regard to OCGP Master Plan construction, more precise and refined information regarding earth movement quantities, locations and anticipated demolition activities and timeframes than what was known and analyzed in the July 2003 OCGP FEIR has become available. As a consequence, PCR Services Corporation prepared a report in which they conducted an analysis to determine whether the projected emissions associated with the more recent, precise and refined information regarding OCGP Master Plan earthmoving activities would be consistent with the emissions inventory assumed in the certified OCGP FEIR and within the envelope of the original air quality impact analysis. The subject report is available for review in Appendix C of Addendum No. 4, OCGP FEIR. The following assumptions regarding OCGP Master Plan area grading (excluding the Agua Chinon and Wildlife Corridor) were provided by Duke Dunn with Gafcon Inc. and employed in the analysis:

- Earthmoving activities to total 13.23 million cubic yards
- Earthmoving activities to start in 2008
- Equipment Mix - 12 scrapers, 3 slope cats, 2 compactors, 1 motor grader, 2 rubber tire dozer, and 2 other pieces of equipment (e.g., water trucks)

The analysis was conducted using SCAQMD's recommended CEQA emissions inventory model URBEMIS. A new version of URBEMIS (URBEMIS 2007 Version 9.2) was released in June 2007 and was used in this analysis in accordance with SCAQMD's most recent recommendations for preparation of air quality analyses. The new version of URBEMIS is considered a major overhaul to URBEMIS 2002. It incorporates the current version of California Air Resources Board's OFFROAD model (OFFROAD 2007) construction equipment emission factors and reflects a better estimate of the population, activity, and emissions estimate of the varied types of off-road equipment. The emissions estimates from the proposed grading equipment mix are provided in Table 4-2 (*Comparison of Daily Construction Emissions for OCGP Construction Activities*).

Table 4-2
Comparison of Daily Construction Emissions for OCGP Construction Activities

<i>Emissions Inventory</i>	<i>Emission Totals, lbs./day [tons per day]</i>				
	<i>CO</i>	<i>NO_x</i>	<i>PM₁₀</i>	<i>VOC</i>	<i>SO_x</i>
Certified EIR	280	840	1440	4660 ^c	40
OCGP Site Grading ^a	174	343	663	37	<1
SCAQMD Significance Threshold ^b	550	100	150	75	150
Over (Under)	(376)	243	513	(38)	(149)
Significant for Certified FEIR?	No	Yes	Yes	Yes	No
Significant for OCGP Equipment Mix?	No	Yes	Yes	No	No

Source: PCR Services Corporation 2007.

^a Compiled using the URBEMIS 2007 emissions inventory model and EPA AP-42 emission factors for PM₁₀.

^b The FEIR misstated the CEQA Significant Thresholds on Tables 5.3-12 and 5.3-13 for VOC and NO_x as 0.03 tpd, which are the correct thresholds for those pollutants during the operational phase of a project. The significance determinations in the FEIR were correctly assessed.

^c VOC emissions presented in the Certified EIR are for application of architectural coatings. VOC emissions for site grading would result in a slight decrease based on the other pollutant trends.

4. Discussion of Checklist and Mitigation Measures

As shown in Table 4-2 above, the OCGP equipment mix results in an overall decrease in daily emissions associated with equipment exhaust and fugitive dust PM₁₀, as compared to those levels estimated for the FEIR. The equipment mix identified above could complete the grading associated with the Upper Canyon, Lake, and remaining components of the OCGP Master Plan within 10 months, which is well within the assumptions contained in the OCGP FEIR. No new significant impacts and no substantial increase in the severity of previously identified impacts would occur as a result of implementation of the OCGP equipment mix. This addendum does not address other construction activities, such as painting and paving, which resulted in the VOC emissions reported previously in the OCGP FEIR.

Concurrent Grading and Demolition Activities

The site grading and demolition will most likely occur in a phased approach, over the course of numerous years. PCR also conducted an analysis to determine whether the construction emissions inventory for a maximum plausible worst case day (consisting of concurrent grading of the OCGP Master Plan along with site grading activities for Heritage Fields, the Agua Chionon, and the wildlife corridor and runway demolition activities) is consistent with the emissions inventory presented in the certified FEIR and is within the envelope of the original air quality impact assessment.

Assumptions were developed and refined consistent with the requirements for the proposed demolition and grading activities. A total of 31.2 million cubic feet of concrete and asphalt would be generated from removal of the runways with an average daily amount of 20,000 cubic feet. The equipment mix would be comprised of: (Source: Duke Dunn with Gafcon Incorporated)

- 4 off-highway trucks, 1 excavator, 1 motor grader, 1 water truck, 1 rubber tired dozer, 2 rubber tired loaders, 2 portable concrete crushing plants, and 2 other pieces of equipment.

The equipment mix and grading assumptions for Heritage Fields (including the wildlife corridor and Agua Chionon) were based on information provided in Addendum No. 3 to the OCGP FEIR (SCH #2002101020). Heritage Fields would require a total of 7.1 million cubic yard (maximum daily 47,000 cubic yards) of earth moving activities. The equipment mix would be comprised of:

- 10 scrapers, 4 compactors, 6 rubber tire dozers, 1 tractor /loader/backhoe, and 3 other pieces of equipment (e.g., water trucks).

The equipment mix and grading assumptions for the OCGP Master Plan that could occur concurrent with demolition activities and grading of Heritage Fields are provided above. The analysis was conducted using SCAQMD's recommended CEQA emissions inventory model URBEMIS 2007 Version 9.2. The emission inventory prepared for Addendum No. 3 used the previous version of URBEMIS (URBEMIS 2002) and was therefore updated using URBEMIS 2007. As discussed above, the new version of URBEMIS is considered a major overhaul to URBEMIS 2002. The details of these calculations are shown in the attachments to this technical memorandum. The emissions from the concurrent construction activities are provided in Table 4-3 (*Comparison of Daily Construction Emissions for Concurrent OCGP Construction Activities*).

As shown, concurrent grading and demolition activities results in a slight decrease in equipment exhaust emissions and fugitive dust PM₁₀ emissions, as compared to those levels estimated for the FEIR. While CO emissions show an increase, it is a function of updated emission factors in the current version of URBEMIS2007 and not a substantial change in the construction intensity. Regardless, CO emissions are less than the SCAQMD significance threshold and no new significant impacts and no substantial increase in the severity of previously identified impacts would occur as a result of concurrent construction activities. It should be noted that these emission estimates do not address other construction activities, such as painting and paving, which resulted in the VOC emissions reported previously in the FEIR.

4. Discussion of Checklist and Mitigation Measures

Table 4-3
Comparison of Daily Construction Emissions for Concurrent OCGP Construction Activities

Emissions Inventory	Emission Totals, lbs./day [tons per day]				
	CO	NO _x	PM ₁₀	VOC	SO _x
Certified EIR	280	840	1440	4660 ^c	40
OCGP Site Grading ^a	174	343	663	37	<1
Heritage Fields Site Grading	171	332	663	37	<1
Runway Demolition	66	165	76	17	<1
Total	411	839	1402	91	<1
SCAQMD Significance Threshold ^b	550	100	150	75	150
Over (Under)	(139)	739	1252	16	(149)
Significant for Certified FEIR?	No	Yes	Yes	Yes	No
Significant for concurrent activities?	No	Yes	Yes	Yes	No

Source: PCR Services Corporation 2007.

^a Compiled using the URBEMIS 2007 emissions inventory model and EPA AP-42 emission factors for PM₁₀.

^b The FEIR misstated the CEQA Significant Thresholds on Tables 5.3-12 and 5.3-13 for VOC and NO_x as 0.03 tpd, which are the correct thresholds for those pollutants during the operational phase of a project. The significance determinations in the FEIR were correctly assessed.

^c VOC emissions presented in the Certified EIR are for application of architectural coatings. VOC emissions for site grading would result in a slight decrease based on the other pollutant trends.

4.3.3 Impacts Associated with the General Plan Amendments, Zone Changes, and Development Agreement Amendment

Regional Construction Impacts

Construction activities associated with the proposed project would have a short-term impact on air quality. While the proposed project would involve relocating the Bake Parkway/Marine Way intersection, construction emissions associated with the original roadway alignment were included in the OCGP FEIR. Other changes proposed in the General Plan Amendment, Zone Change, and Development Agreement Amendment relating to the Heritage Fields property do not allow any additional development intensity of the Overlay Plan in a manner that would result in an increase in construction emissions. In addition, the analytical assumptions concerning construction, development phasing, and operations of the adopted Overlay Plan remain appropriate for the project (OCGP FEIR Table 5.3-14). Consequently, the project would not increase the maximum daily air pollutant emissions generated during construction and demolition activities. The OCGP FEIR concluded that air pollutant emissions associated with construction and demolition activities of the Overlay Plan were considered a Significant Unavoidable Adverse Impact. As part of the certification of the OCGP FEIR, Findings of Fact and a Statement of Overriding Considerations were adopted for unmitigatable environmental effects, including air quality. Therefore, the construction air emissions associated with this component of the project are anticipated to be less than those addressed in the OCGP FEIR and would not result in any new significant impacts that were not previously anticipated.

Regional Operational Impacts

Relocation of the Bake Parkway/Marine Way intersection would not result in land use changes that would increase project-related stationary or mobile sources of air pollution generated by the project. Other changes

4. Discussion of Checklist and Mitigation Measures

proposed in the General Plan Amendment, Zone Change, and Development Agreement Amendment relating to the Heritage Fields property do not allow any additional development intensity of the Overlay Plan or increase project-generated trips. Consequently, the project would not increase the maximum daily air pollutant emissions generated during operational activities. The OCGP FEIR concluded that air pollutant emissions associated with operational activities of the Overlay Plan were considered a Significant Unavoidable Adverse Impact. As part of the certification of the OCGP FEIR for OCGP, Findings of Fact and a Statement of Overriding Considerations were adopted for unmitigatable environmental effects, including air quality. Therefore, the operational air emissions associated with this component of the project are anticipated to be less than those addressed in the OCGP FEIR and would not result in any new significant impacts that were not previously anticipated.

Consistency Determination with the Air Quality Management Plan

The OCGP FEIR included a consistency evaluation with the SCAQMD's Air Quality Management Plan (AQMP). The consistency evaluation concluded development of the adopted Overlay Plan would have a negligible impact on the overall air quality within the SoCAB. The project would not result in new activities or new land uses that would change the consistency evaluation in the OCGP FEIR.

Localized Construction Impacts

As stated previously, the project would not increase the maximum daily air pollutant emissions generated during construction activities. However, the OCGP FEIR identified significant localized air quality impacts associated with construction of the adopted Overlay Plan based on the extent and schedule of construction activities, primarily from particulate matter (PM_{10} and $PM_{2.5}$) emissions associated with fugitive dust. The OCGP FEIR concluded that air pollutant emissions associated with construction activities of the Overlay Plan were considered a Significant Unavoidable Adverse Impact. As part of the certification of the OCGP FEIR for OCGP, Findings of Fact and a Statement of Overriding Considerations were adopted for unmitigatable environmental effects, including air quality. Therefore, the construction air emissions associated with this component of the project are anticipated to be less than those addressed in the OCGP FEIR and would not result in any new significant impacts which were not previously anticipated.

Localized Operational Impacts

The OCGP FEIR did not identify significant localized air quality impacts associated with operation of the adopted Overlay Plan for either mobile sources or stationary sources. Because the project would not result in an increase in the number of units or permitted square footage of buildings on-site, the project would not increase the concentrations of stationary-source air pollutant emissions generated during operational activities.

However, relocation of the Bake Parkway/Marine Way intersection would redistribute traffic on the local roadway network with the Overlay Plan. Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hot spots are typically produced at intersection locations. Typically for an intersection to exhibit a significant CO concentration, it would operate at level of service (LOS) E or worse. As discussed in section 3.15, *Transportation/Traffic*, with improvements, the proposed project would not cause any intersection to operate at a LOS E or F. Furthermore, the source receptor area for which the project is located has not had an exceedance of the ambient air quality standards for CO for at least five years and due to the very low ambient concentrations of CO, project related trips would not be able to cause an exceedance of the CO standard. As such, the project would not expose sensitive receptors to substantial pollutant concentrations.

4. Discussion of Checklist and Mitigation Measures

Odors

The OCGP FEIR identified that development of the adopted Overlay Plan would not handle large amounts of solid waste, chemicals associated with heavy industry, or other uses that would generate objectionable odor and no significant impacts would occur. The project would not result in new activities or new land uses that would change the odor evaluation in the OCGP FEIR.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project would have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that; 1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or 2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant air quality effects identified in and considered by the certified OCGP FEIR.

4.3.4 Mitigation from the OCGP FEIR and Applicability to the General Plan Amendments, Zone Changes, and Development Agreement Amendment

The OCGP FEIR identified mitigation measures AQ1 through AQ5, which reduce the air quality effects of construction and operations of development under the adopted Plan. However, as noted above, the OCGP FEIR found that short-term and long-term air quality impacts would remain significant and unavoidable. The measures are applicable to future development under the project.

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| AQ1 | Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors; etc.; shall be employed as |
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4. Discussion of Checklist and Mitigation Measures

necessary. Compliance with this measure shall be verified by the Director of Community Development.

AQ2 Prior to the commencement of construction activities required to demolish and/or remove existing DON structures, including runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Evaluate the availability and use, if available, of low-emission (i.e., methanol- or natural gas-powered) construction equipment instead of diesel for each construction phase.
- Water exposed soils at least twice daily and maintain equipment and vehicle engines in good condition and in proper tune.
- Wash off trucks leaving the site.
- Replace ground cover on construction sites when it is determined that the site will be undisturbed for lengthy periods.
- Reduce speeds on unpaved roads to less than 15 miles per hour.
- Halt all grading and excavation operations when wind speeds exceed 25 miles per hour.
- Suspend all emission generating activities during smog alerts.
- Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible.
- Properly maintain diesel-powered on-site mobile equipment.
- Sweep streets at the end of the day if substantial visible soil material is carried over to the adjacent streets.
- Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible.
- Use of low-VOC asphalt.
- Cover all trucks hauling dirt, sand, soil or other loose material to and from the site.
- Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic.
- Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible.
- Reroute construction trucks away from congested streets, whenever feasible.
- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible.

4. Discussion of Checklist and Mitigation Measures

- AQ3 Prior to the issuance of building permits for any future development, the applicant shall submit, and Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.
- Utilize built-in energy-efficient appliances to reduce energy consumption and emissions.
 - Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions.
 - Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible.
 - Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning.
 - Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible.
 - Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods.
 - Centralize space heating and cooling for multiple-family dwelling units and commercial space.
 - Orient buildings north/south for reducing energy-related combustion emissions.
 - Use solar energy, when feasible.
 - Use high rating insulation in walls and ceilings.
- AQ4 At the time of residential and commercial lease and sales agreements, future sales information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find employment nearby.
- AQ5 At the time of residential and commercial lease and sales agreements, the applicant shall demonstrate to the satisfaction of the Director of Community Development that future employment generating nonresidential development shall include measures to reduce vehicle trips including: the promotion of carpool incentives and alternative work schedules, easy access to public transit systems, trail linkages between uses, low emissions vehicles fleets, and the provision of on-site facilities such as banking and food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.

4. Discussion of Checklist and Mitigation Measures

4.4 BIOLOGICAL RESOURCES

4.4.1 Environmental Setting

The OCGP FEIR described the biological resources within Planning Areas 30 and 51, including a 995-acre parcel of land in the easternmost portion of Planning Area 51 retained in federal ownership and designated as both "habitat reserve" and a part of the Orange County Central-Coastal Sub-region Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP). The areas outside the habitat reserve were described as: 1) providing minimal native or undisturbed habitat, and, 2) consisting of agricultural, ornamental, and domestic landscapes.

The OCGP FEIR identified nine vegetative communities within the project site, including Venturan-Diegan sage scrub, southern cactus scrub, chaparral, woodland, riparian scrub, grassland, open water, agriculture, and predominately disturbed or developed areas. Several sensitive plant species and a large number of mature trees also were identified as potentially occurring within the project site. The sensitive plant species potentially occurring in Planning Areas 30 and 51 include the southern tarplant, Palmer's grapplehook, many-stemmed dudleya, Coulter's Matilija poppy, Catalina mariposa lily, and intermediate mariposa lily. The OCGP FEIR also noted the Coulter's saltbush, Laguna Beach dudleya, San Fernando Valley spineflower, and the Lewis's evening-primrose as having a moderate potential for occurrence. Species with a low potential for occurrence include the Los Angeles sunflower, south coast saltscale, Santa Monica Mountains dudleya, heart-leaved pitcher sage, coast wooly-heads, slender-horned spineflower, Santa Barbara morning glory, tecate cypress, and salt spring checkerbloom.

The OCGP FEIR documented an observation made of one sensitive wildlife species, a burrowing owl. This individual, observed during the conductance of protocol focus studies for a nearby development proposal, was outside the habitat reserve at the southwest end of Planning Areas 30 and 51 along Serrano Creek. Forty other sensitive wildlife species or species of local concern were identified as having a potential to occur on the site.

The OCGP FEIR also describes the Wildlife Corridor Concept Plan that would be incorporated into the eastern portion of the project site (Refer to pp. 5.9-9 through 5.9-14 of the OCGP FEIR) and explains the guidelines pursuant to which the ultimate corridor will be designed and constructed. The subject guidelines are primarily concerned with the creation and re-vegetation of wildlife habitats that would flourish in the proposed areas and serve as protective cover for target wildlife species that will presumably utilize the proposed corridor. A preliminary design concept for the creation and/or re-vegetation of the proposed route has also been prepared which is consistent with the guidelines described below (Draft Irvine Wildlife Corridor Master Plan, November 2002). The draft recommends a series of actions to improve the environmental quality for wildlife:

- Creation (establishes historical ecosystems on lands that did not previously support that ecosystem or on severely altered sites)
- Revegetation
- Reduce the amount of noise pollution and urban influence.
- Remove and restore the unnecessary developed (paved) areas within the corridor right-of-way.
- Create a protective habitat along the entire length of the corridor.
- Apply minimum height/width requirements based on the specific wildlife species.

OCGP FEIR Mitigation Measure BIO3, which continues to apply to this addendum, ensures that the City of Irvine will continue to work with State and federal agencies to implement the revegetation/restoration plan necessary to create a viable wildlife corridor within the project area. The City has already engaged in this

4. Discussion of Checklist and Mitigation Measures

process as is demonstrated through the preparation of the Draft Irvine Wildlife Corridor Master Plan, which is independent of this project.

4.4.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR concluded that implementation of the overall project could result in the occurrence of the following potentially significant effects:

- The southern tarplant, a federal species of concern, might be adversely affected by project development.
- Although very limited in aerial extent and highly disturbed wetland, there exist isolated riparian habitat remnants that could be adversely impacted by project implementation.

The project site contains a large number of trees, many of which are mature, representing a wide range of species. Project implementation may result in damage and destruction of the trees. A significant impact related to conflicts with the City's Urban Forestry Ordinance could occur.

4.4.3 Impacts Associated with the General Plan Amendments, Zone Changes, and Development Agreement Amendment

Bake Parkway/Marine Way Relocation

Although Marine Way traverses the proposed Irvine Wildlife Corridor, the wildlife corridor will continue to be designed to avoid potential conflicts with the roadways (e.g., it will be below the grade of Marine Way and will incorporate conservation zones and setbacks), consistent with the alignment analyzed in the OCGP FEIR. The conclusions drawn in the OCGP FEIR adequately describe the environmental effects of the project relative to biological resources, as well as the severity of the impacts.

Reduction of Required Golf Course Holes

PAZ 18 is to the north of the proposed Irvine Wildlife Corridor. The OCGP FEIR analyzed the development of a 45-hole golf course, 250 residential units, and a 25,000 square foot club house in PAZ 18. The reduction of the golf course requirement by 27 holes would not permit any new residences or other changes to approved densities. Any development within PAZ 18 would continue to be subject special regulations designed to limit the urban influence on the proposed Irvine Wildlife Corridor, such as Encroachment Zone development regulations, 500 foot setbacks from the centerline of the core conservation zone, and sight and sound barriers along the urban edge, where applicable. Therefore, there would not be any new impacts to any biological resources beyond those evaluated in the OCGP FEIR.

Reduction in Agricultural Acreage

The agricultural fields serve as low to moderate quality raptor foraging habitat (depending of the type of crop planted). Due to the proximity of the project site to the large amount of additional raptor forging grounds, including agricultural fields, open space, and the 39,000 acre NCCP habitat reserve, impacts to raptor forging habitat are considered less than significant. No wildlife corridors currently exist within the project area. The currently proposed removal of the requirement to include 173 acres of agricultural use does not affect the development of the Irvine Wildlife Corridor. In addition, changes to the agricultural preserve do not permit any changes to the approved land use intensities; therefore, the conclusions drawn in the OCGP FEIR

4. Discussion of Checklist and Mitigation Measures

adequately describe the environmental effects of the project relative to biological resources, as well as the severity of the impacts.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project would have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that 1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or 2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant biological effects identified in and considered by the certified OCGP FEIR.

4.4.4 Mitigation from the OCGP FEIR and Applicability to the General Plan Amendments, Zone Changes, and Development Agreement Amendment

Mitigation measures BIO1 through BIO4 would be implemented in conjunction with master plan review and subsequent development permits. The project would neither change these mitigation measures nor their application to future development projects.

- BIO1 Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. Prior to approval of a subdivision map for development within or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).

4. Discussion of Checklist and Mitigation Measures

- BIO2 Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, recreation (i.e., within the proposed wildlife corridor), and/or re-vegetation as deemed acceptable by the appropriate jurisdictional agencies.
- BIO3 The City shall continue to work with State and federal agencies during the implementation of the proposed project to implement the revegetation/restoration plan for the wildlife corridor. Measures such as sight and sound barriers, including artificial sound walls and natural diversions (e.g., hedges and tree lines) shall be incorporated into corridor design to ensure the viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the OCGP FEIR.
- BIO4 Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered "Significant Trees" under the City of Irvine's Urban Forestry Ordinance (UFO) (Sections 5-7-401 et al.) and the UFO shall apply to all trees included in this inventory.

4.5 CULTURAL RESOURCES

4.5.1 Environmental Setting

Cultural Resources

The discussion of cultural resources includes archaeological and historical resources. The OCGP FEIR presents information pertaining to the regional setting of former MCAS El Toro from both a prehistoric and historic perspective. The OCGP FEIR reported the presence of ten prehistoric archaeological sites and eight isolated prehistoric artifacts that have been recorded in the northeastern habitat preserve portions of PA 51. These sites are generally on the ridges between Borrego Canyon Wash and the Agua Chino Wash.

The former MCAS El Toro was surveyed to determine whether any of the structures would be eligible for the National Register. Generally, a structure that has achieved significance in the past 50 years is not considered eligible for the National Register unless it is of exceptional importance. The evaluation was expanded to include eligibility under the Legacy Cold War Project (Public Law No. 101-511, Section 8120). Portions of PAs 30 and 51 (the former MCAS El Toro) were established during WWII, and no structure earlier than this period is at the former MCAS El Toro. Therefore, the historical significance of any structures at the former military base would be as part of the Cold War Legacy. Surveys conducted by the US Army Corps of Engineers and the Department of the Navy in conjunction with the base's closure concluded there were no structures eligible for designation as Cold War Legacy or for inclusion in the National Register of Historic Places.

4. Discussion of Checklist and Mitigation Measures

Paleontological Resources

The OCGP FEIR reported that a majority of Planning Areas 30 and 51 is on the Tustin Plain, a coastal alluvial plain. Alluvium from the Late Pleistocene to Holocene Epochs (approximately 2 million to 11,000 years ago) immediately underlies the majority of the project area, including the part occupying the coastal plain and washes in the eastern portion of PA 51. The Pleistocene Alluvium formation is widespread and believed to extend to depths of 1,000 feet in PA 30. A significant deposit of Pleistocene terrestrial vertebrates was recovered during excavation of a flood control basin four miles from PA 30; thus, it is possible that similar beds underlie PA 30 (OCGP FEIR 5.10-2).

The eastern portion of PA 51 is in the western foothills of the northern Santa Ana Mountains. The hills and ridges in the eastern part of PA 51 are composed of older, underlying marine and nonmarine rock units of early Oligocene to late Pleistocene (23 million to 2 million years ago). In order of decreasing geologic age, these latter rock units include the undifferentiated Sespe and Vaqueros Formations, Topanga and Monterey Formations, Oso Member of the Capistrano Formation, Niguel Formation, and Nonmarine Terrace Deposits. Nonmarine Terrace Deposits also underlie the terraces at the south corner of PA 51. The northwestern corner of PA 51 contains a small portion of the Santa Ana Mountains foothills, which were separated from the main formation by erosion. This small portion is composed of undifferentiated late Cretaceous (135 million years ago) Marine Williams Formation. The rock units underlying portions of PA 51 have previously yielded important fossil remains at recorded fossil sites on and near the site. There are three recorded fossil sites in PA 51. These sites occur in undifferentiated Sespe and Vaqueros Formations and in the Topanga Formation. Fossil types include marine invertebrates and vertebrates, continental vertebrates, land plants, and land mammals. The three recorded fossil sites lie within the proposed habitat preserve portion of PA 51 (OCGP FEIR p. 5.10-1 and Table 5.10-1).

4.5.2 Impacts Identified in the OCGP FEIR and Addenda

Cultural Resources

The OCGP FEIR determined that development according to the adopted Overlay Plan would not cause a substantial adverse change in the significance of any historical structure. The consequence of grading activities associated with future development, however, could potentially result in a substantial adverse change in the significance of an archaeological resource. The OCGP FEIR also stated that grading activities could uncover previously unknown human remains, including those interred outside formal cemeteries.

Although the entire project area was the subject of previous cultural resources investigations as part of the Base Realignment and Closure process, it was later determined that an updated survey and report was necessary to supplement the previous work. PCR Services performed an additional Phase I and II cultural resources investigation, the results of which can be found in the *Cultural Resources Update and Review, Heritage Fields/The Great Park, City of Irvine, Orange County, California* report² dated September 2006.

Paleontological Resources

The OCGP FEIR stated that earthmoving operations associated with grading and trenching have the greatest potential to impact buried paleontological resources in the moderately to highly sensitive areas in the coastal plain and washes, northeastern, northwestern, and southern portions of Planning Area 51. The OCGP FEIR considered the potential impact associated with earthmoving operations as a significant impact for which mitigation was necessary.

² *Cultural Resources Update and Review...* report is available for review at the City of Irvine.

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4.5.3 Impacts Associated with the General Plan Amendments, Zone Changes, and Development Agreement Amendment

Cultural Resources

The majority of previously documented archeological resources in the project area are in the portion of Planning Area 51 designated as Habitat Reserve. The potential to encounter unknown archeological resources and unknown human remains was considered significant in the OCGP FEIR. The changes proposed in the General Plan Amendment for the Bake Parkway/Marine Way intersection relocation, and those proposed in the General Plan Amendment, Zone Change, and Development Agreement Amendment relating to the Heritage Fields property do not allow any additional development intensity. Therefore, impacts to cultural resources remain the same. The mitigation measures related to cultural resources developed for the OCGP FEIR remain applicable to future development under the project.

Paleontological Resources

As described in the OCGP FEIR, earthmoving operations such as grading and trenching have the potential to significantly impact buried paleontological resources. The changes proposed in the General Plan Amendment for the Bake Parkway/Marine Way intersection relocation, and those proposed in the General Plan Amendment, Zone Change, and Development Agreement Amendment relating to the Heritage Fields property do not allow any additional development intensity. Therefore, the impacts to paleontological resources remain the same. The paleontological mitigation measure developed for the OCGP FEIR remains applicable to future development under the project.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project would have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that: 1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or 2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would

4. Discussion of Checklist and Mitigation Measures

substantially reduce one or more of the significant cultural or paleontological effects identified in and considered by the certified OCGP FEIR.

4.5.4 Mitigation from the OCGP FEIR and Applicability to the General Plan Amendments, Zone Changes, and Development Agreement Amendment

Cultural Resources

The OCGP FEIR identified mitigation measures CULT1 through CULT4 which, if fulfilled, would reduce the effects of development under the adopted Plan to a level less than significant. Measures CULT 1 through CULT 4 are applicable to future development under the project.

- CULT1 Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PAs 51 and 30. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.
- CULT2 Monitoring of excavation and grading activities associated with future development in PAs 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure CULT1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and an assessment of their importance under CEQA and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.
- CULT3 Prior to the issuance of grading permits and/or building permits for any future development in PAs 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City of Irvine to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.
- CULT4 Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City of Irvine to address the accidental discovery of recognition of any human remains. The program shall include the following:

There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

4. Discussion of Checklist and Mitigation Measures

- The county coroner must be contacted to determine that no investigation of the cause of death is required, and

If the coroner determines the remains to be Native American:

- The coroner shall contact the Native American Heritage Commission within 24 hours.
- The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
- The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for the means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
- Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
 - The Native American heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
 - The descendant identified fails to make a recommendation; or
 - The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage commission fails to provide measures acceptable to the landowner.

Compliance with this measure shall be verified by the Community Development Department.

Paleontological Resources

The OCGP FEIR identified mitigation measure P1, which, if fulfilled, would reduce the effects of development under the adopted Overlay Plan to a level less than significant. Measure P1 is applicable to future development under the project.

- P1 Prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. (A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.

When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossil specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological

4. Discussion of Checklist and Mitigation Measures

monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screening-washing operation on-site.

Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.

4.5.5 GEOLOGY AND SOILS

4.5.6 Environmental Setting

The OCGP FEIR describes the topography of the project site as nearly flat and gently sloping down to the west to southwest with elevations ranging from 450 feet above mean sea level (msl) to 200 feet above msl. Planning Area 30 is at the southeast margin of the Tustin plain with elevations ranging from about 260 to 300 feet above msl. Planning Area 51 includes some slopes of the Santa Ana foothills which each elevations of about 750 feet above msl. Alluvial soils of six major soil associations consisting predominantly of varying sands, silts, and clayey silty sands are present within PA 51. Soils underlying PA 30 contain clayey loam alluvial material, terrace deposits, and old and unconsolidated recent alluvium of the Myford and Sorrento series.

The OCGP FEIR identified the primary potential seismic hazard in the area as ground motion. Seismic Response Areas (SRA) designations are used by the City to assess the geologic and seismic risk associated with potential development. All of PA 30 and a majority of PA 51 are within SRA-2 (denser soils/deeper groundwater) and are considered suitable for development. The planned development area of PA 51 situated north of Irvine Boulevard is designated SRA-3 (alluvium/shallow bedrock) and also susceptible to ground motion.

No known active faults crossing or projecting into the project area were identified; however, the project site is within the seismically active southern California region and there are two active faults—Whittier-Elsinore Fault and Newport-Inglewood Fault—within 14 miles of the site.

4.5.7 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR disclosed the potential for future development of the project area to result in the exposure of people or structures to strong ground shaking in the event of a major earthquake along any one of the active faults in the region. The OCGP FEIR noted that new construction would be required to adhere to current seismic safety building codes which address seismic concerns. Existing buildings within current Planning Area 51 do not meet current seismic codes; therefore, the temporary or permanent reuse of the existing buildings and the associated exposure of people or structures to potential substantial adverse effects due to strong seismic-related ground shaking were considered significant impacts.

Because of the documented landslides in the northeastern Santa Ana foothills area of the Site, the OCGP FEIR analysis concluded that the project would result in a significant impact associated with landslides in the affected area of Planning Area 51 east of Irvine Boulevard, where future development of habitable structures could occur under the adopted Overlay Plan. The OCGP FEIR also concluded future development has the potential to result in soil erosion or the loss of topsoils and risk to life and property with the presence of expansive soils, and that these impacts are considered significant. The project includes the same land uses and development areas as the adopted Overlay Plan; therefore the conclusions drawn in the OCGP FEIR

4. Discussion of Checklist and Mitigation Measures

adequately describe the environmental effects of the project relative to soils, geologic hazards, and seismic safety, as well as the severity of the impacts.

4.5.8 Impacts Associated with the General Plan Amendments, Zone Changes, and Development Agreement Amendment

The project occurs within the same development envelope as the OCGP FEIR and does not provide additional development intensity. Impacts related to seismic hazards, landslides, expansive soils, and loss of topsoil or soil erosion are not intensified by the proposed project. As a result, the conclusions drawn in the OCGP FEIR adequately describe the environmental effects of the project relative to soils, geologic hazards, and seismic safety, as well as the severity of the impacts.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant geological effects identified in and considered by the certified OCGP FEIR.

4.5.9 Mitigation from the OCGP FEIR and Applicability to the General Plan Amendments, Zone Changes, and Development Agreement Amendment

The OCGP FEIR identified four mitigation measures to reduce the effects of the adopted Overlay Plan on soils, geologic hazards and seismic safety. All of the mitigation measures are applicable to implementation of the project and would be carried forward to future development of the project site. Implementation of measures GS1 through GS4 (listed below) would reduce Project impacts to a level less than significant.

4. Discussion of Checklist and Mitigation Measures

GS1 Prior to issuance of a building permit, the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.

GS2 Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.

1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be conducted. The purpose of the subsurface evaluation is to:
 - a. Further evaluate the subsurface conditions in the area of the proposed structures.
 - b. Provide specific data on potential geologic and geotechnical hazards.
 - c. Provide information pertaining to the engineering characteristics of earth materials in the project area.

From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural section, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:

- Seismic Ground Shaking – Measures to prevent risk of loss, injury or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.
- Erosion or Loss of Topsoil – Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances.
- Where Expansive Soils Exist – Measures for the design of foundation, slabs, flatwork and other improvements subject to drainage from expansive soils.

Compliance with this measure shall be verified by the Community Development Department.

GS3 Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of any existing structure if a building permit is not issued, a seismic evaluation of the structure including recommendations for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.

4. Discussion of Checklist and Mitigation Measures

- GS4 Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

4.6 HAZARDS AND HAZARDOUS MATERIALS

4.6.1 Environmental Setting

Hazardous Materials and Hazardous Wastes

The OCGP FEIR discussed an environmental baseline survey (EBS) that was conducted for the project area. Information was used from the Base Realignment and Closure Business Plan for Marine Corps Air Station (MCAS) El Toro dated May 2002; the EBS dated 1995; and an update to the EBS—April 2003 Draft Final EBS. The 2003 EBS identified “76 potential release locations, all of which require further evaluation for potential releases to the environment and subsequent remediation, if required” (Refer to OCGP FEIR p. 5.5-5).

Regarding the Installation Restoration Program (IRP), the OCGP FEIR summarizes the status of each IRP site based on the information available at the time the EIR was prepared. Ten (10) IRP sites were identified as requiring “No Further Action,” including sites 4, 6, 7, 9, 10, 13, 14, 15, 19, 20, 21, 22 and 25. The IRP sites identified as “Action Required” included sites 1, 2, 3, anomaly 3, 5, 8, 11, 12, 16, 17, 18 (plume), and 24 (Refer to OCGP FEIR pp. 5.5-6 through 5.5-9).

Of the 404 underground storage tanks (USTs) identified, 357 had been remediated and received findings of “no further action” at the time the OCGP FEIR was prepared. Of the 39 aboveground storage tanks (ASTs) on the property, 36 had been remediated and received findings of “no further action” (Refer to OCGP FEIR p. 5.5-10).

Evaluation and remediation of previously identified IRP sites within the project site continues with the resulting changes in the condition of the property largely anticipated in the OCGP FEIR. Subsequent to certification of the OCGP FEIR, the DON completed environmental related findings that support the suitability to transfer (FOST) real property made available through the Base Realignment and Closure process and to support of the lease of areas not yet suitable for transfer.³ (Refer to *Installation Restoration Program (IRP) Locations*, OCGP FEIR Addendum No. 4, Figure 4-2).

The areas suitable for lease encompass locations of concern identified in the 1995 and 2003 EBS, and in the OCGP FEIR, where future evaluation and/or actions are ongoing or required. These areas were identified as “carve-outs” in the DON documentation.⁴

Progress relative to conveyance of the carve-outs includes DON transfer of approximately eight acres of the project site to Heritage Fields and the Great Park Corporation on March 22, 2006. At the time of the initial land sale, these properties (carve-outs) were retained by the DON in order to complete environmental

³ U.S. Department of the Navy, 2004. *Final Finding of Suitability to Transfer, Parcel IV and Portions of Parcels I, II, and III, Former Marine Corps Air Station, El Toro, California, July 2004*; *Final Finding of Suitability to Lease for Carve-outs Within Parcels I, II, and III, Former Marine Corps Air Station, El Toro, California, July 2004*.

⁴ U.S. Department of the Navy, 2004a. *Final Finding of Suitability to Lease for Carve-outs within Parcels I, II, and III, Former Marine Corps Air Station, El Toro, California, July 2004*.

4. Discussion of Checklist and Mitigation Measures

cleanup, and have since been approved by the regulatory agencies for transfer (FOST #2). The following sites were included in this transfer:

- Carve-out parcel II-J consists of approximately 0.2 acre in the central portion of former MCAS El Toro. It contains one building—Building No. 860—and 1 location of concern.
- Carve-out parcel II-Q (portion) consists of approximately 5 acres in the eastern portion of the former MCAS El Toro. It is an abandoned jet fuel (JP-5) pipeline.
- Carve-out parcel II-S consists of approximately 1.3 acres in the southeastern portion of former MCAS El Toro. It contains 6 buildings (347, 377, 447, 448, 566, and 726) and 13 locations of concern.
- Carve-out parcel II-T consists of approximately 0.5 acre in the southeastern portion of former MCAS El Toro. It contains 1 building—Building No. 761—and 4 locations of concern. The facility was a former aircraft wash rack.
- Carve-out parcel III-C consists of approximately 1 acre in the western portion of the former MCAS El Toro. It contains 1 building—Building No. 240—and 7 locations of concern. This site was a former ordnance storage facility.

Emergency Plans

The OCGP FEIR described the former MCAS El Toro site (Planning Areas 30 and 51) as a potential emergency response staging area because of its capacity for processing and storing large quantities of cargo. The Orange County Emergency Plan, which incorporates the statewide standardized emergency management system (SEMS), guides multijurisdictional response to emergency conditions. No substantial change to the description of the setting regarding emergency plans has occurred that would alter the analysis and conclusions of the OCGP FEIR on emergency plans and response.

Wildland Fires

The OCGP FEIR identified high fire hazard areas within open space, undeveloped land northeast of and adjacent to Planning Area 51. The City has no construction records of existing buildings and structures on the property. No substantial change to the description of the setting relative to wildland fires has occurred that would alter the analysis and conclusions of the OCGP FEIR regarding wildland fires.

4.6.2 Impacts Identified in the OCGP FEIR and Addenda

Hazardous Materials and Wastes

The OCGP FEIR identified no significant impacts associated with the No Further Action IRP sites, which are listed in Table 4-4. Table 4-5 identifies each Action Required IRP site and its location relative to the adopted Overlay Plan. The OCGP FEIR disclosed the following environmental consequences of the adopted Overlay Plan as significant impacts:

- Construction activities involving demolition and possible substantial remodeling of existing structures in the project area as the project area develops could result in the disturbance of structures and soils containing asbestos-containing building materials (ACM) and lead-based paint.
- IRP site 24 is located in the 6.1 Institutional and 1.5 Recreation zoning districts. The site may be conveyed with temporary restrictions on use that are not appropriate for transportation facility use. This is considered a significant impact.
- Future uses of IRP site 3 may be potentially constrained by the implementation of institutional controls.

4. Discussion of Checklist and Mitigation Measures

- IRP site 16 (Crash Crew Pit No. 2) is located in the 1.5 Recreation zoning district. The site may be conveyed with temporary restrictions on use that are not appropriate for recreational land uses.

Table 4-4
No Further Action IRP Sites and Zoning

IRP Site	IRP Designation	Adopted Overlay Plan Zoning District
4	Ferrocene Spill Area	8.1 Lifelong Learning District
6	Drop Tank Drainage Area No. 1	2.2 Low-Density Residential with 1.8 Golf Course Overlay
9	Crash Crew Pit No. 1	1.5 Recreation
10	Petroleum Disposal Area	1.5 Recreation
13	Oil Change Area	1.5 Recreation
15	Suspended Fuel Tanks	1.5 Recreation
19	Air Craft Expeditionary Refueling	2.2 Low-Density Residential with 1.8 Golf Course Overlay
20	Hobby Shop	8.1 LLD
21	Materials Management Group	6.1 Institutional
22	Tactical Air Fuel Dispensing System	1.5 Recreation

Source: OCGP FEIR, Table 5.5-3, p. 5.5-21; SEMA Associates (June 7, 2006) (rev June 2008).

Table 4-5
Action Required IRP Sites and Zoning

IRP Site	IRP Designation	Adopted Overlay Plan Zoning District
1	EOD Range	1.4 Preservation
2	Magazine Road Landfill	1.4 Preservation
3	Original Landfill	8.1 Lifelong Learning District
5	Perimeter Road Landfill	1.5 Recreation
7	Drop Tank Drainage Area No. 2	1.5 Recreation
8	DRMO Storage Yard	6.1 Institutional/ 3.2 Transit Oriented Development
11	Transformer Storage Area	1.5 Recreation
12	Sludge Drying Beds	6.1 Institutional
14	Battery Acid Disposal Area	1.5 Recreation
16	Crash Crew Pit No. 2	1.5 Recreation
17	Communications Station Landfill	1.4 Preservation
24	VOC Source Area	6.1 Institutional/ 1.5 Recreation/ 3.2 Transit Oriented Development

Source: OCGP FEIR, Table 5.5-4, p. 5.5-22; SEMA Associates (June 7, 2006) (rev June 2008).

4. Discussion of Checklist and Mitigation Measures

Emergency Plans

The OCGP FEIR determined the Overlay Plan would not be expected to interfere with emergency response and evacuation plans on the basis that other sites within Orange County are already designated as emergency staging areas and portions of the OCGP would remain available to non-aviation emergency response equipment. Accordingly, the OCGP FEIR concluded that the adopted Overlay Plan would not result in a significant impact related to emergency response and evacuation plans.

Wildland Fires

The OCGP FEIR concluded that the Habitat Reserve, Wildlife Corridor, and Recreational areas in the northeastern portion of Planning Area 51 would be exposed to the highest level of fire risk from wildland fires under the adopted Overlay Plan, and that reuse of existing buildings require inspection for conformance to fire life safety code requirements. The OCGP FEIR identified the wildland fire impacts as potentially significant.

4.6.3 Impacts Associated with the General Plan Amendments, Zone Changes, and Development Agreement Amendment

Hazardous Materials and Wastes

The changes proposed in the General Plan Amendment for the Bake Parkway/Marine Way intersection relocation, and those proposed in the General Plan Amendment, Zone Change, and Development Agreement Amendment relating to the Heritage Fields property do not allow any additional development intensity. As a result, the proposed modifications would not alter the findings and conclusions previously certified and adopted in the OCGP FEIR and addenda. Therefore, the OCGP FEIR adequately describes the environmental effects of the project relative to hazardous materials and wastes for the project site. No new or modified mitigation measures are required.

Emergency Plans

The changes proposed in the General Plan Amendment for the Bake Parkway/Marine Way intersection relocation, and those proposed in the General Plan Amendment, Zone Change, and Development Agreement Amendment relating to the Heritage Fields property do not allow any additional development intensity or include new land uses and would not be expected to interfere with emergency response and evacuation plans. Other sites within Orange County are already designated emergency staging areas and portions of the OCGP would remain available to non-aviation emergency response equipment. Accordingly, the proposed modifications would not change the OCGP FEIR conclusions; the project would not result in a significant impact related to emergency response and evacuation plans.

Wildland Fires

As previously stated in the OCGP FEIR, the Habitat Reserve, Wildlife Corridor, and recreational areas in the northeastern portion of current Planning Area 51 would be exposed to the highest level of fire risk from wildland fires, and reuse of existing buildings would require inspection for conformance to fire life safety code requirements. The changes proposed in the General Plan Amendment for the Bake Parkway/Marine Way intersection relocation, and those proposed in the General Plan Amendment, Zone Change, and Development Agreement Amendment relating to the Heritage Fields property do not allow any additional development intensity and would not alter the findings and conclusions of the OCGP FEIR and addenda regarding wildland fires.

4. Discussion of Checklist and Mitigation Measures

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant hazardous effects identified in and considered by the certified OCGP FEIR.

4.6.4 Mitigation from the OCGP FEIR and Applicability to the General Plan Amendments, Zone Changes, and Development Agreement Amendment

The OCGP FEIR identified six mitigation measures to reduce the effects of the adopted Overlay Plan on public health and safety—specifically, environmental effects associated with hazardous materials and waste, emergency response, and wildland fires—to a level less than significant. All of the mitigation measures are applicable to implementation of the proposed project and would be carried forward to future development of the project site. Measures HH1 through HH6 are listed below:

- HH1 a. Prior to the conveyance of the property and issuance of subsequent grading permits, where the presence of ACMs is identified, the DON or its transferee shall ensure that all available information concerning ACMs has been provided to the City of Irvine, and the purchasers of the property, including:
- The type, location and condition of ACMs
 - The results of any asbestos testing
 - Description of asbestos control measures taken, if any
 - The costs or time necessary to remove existing ACMs
 - The results of any site-specific asbestos inventory updates

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- b. For any structures known to contain ACMs that will be renovated and/or demolished prior to transfer, the DON shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.
 - c. Prior to transfer of any structure constructed before October 1988, scheduled for renovation and/or demolition, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by the DON. This requirement can be waived if an architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building material, and to the best of their knowledge, no ACMs were used as a building material.
 - d. Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.
 - e. Any renovation and/or LBP abatement activities on residential units at former MCAS El Toro, shall be conducted in accordance with all applicable federal, state and local regulatory requirements.
- HH2
- a. Prior to transfer, the City shall receive from the DON, with the concurrence of the appropriate regulatory agencies, a statement that the "Action Required" IRP Site 3 is to be conveyed for restricted use and that all institutional controls have been identified and implemented. The City of Irvine will adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.
 - b. Prior to transfer, if the DON chooses to impose temporary restrictions on the use of Sites 16 and 24 pending adequate remediation of groundwater, the City of Irvine shall receive from the DON a statement of temporary restrictions on the use of the sites and the release of the sites for unrestricted use following implementation of adequate remediation of groundwater. The City of Irvine shall adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.
- HH3
- The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for "Development Within and Exclusion from

4. Discussion of Checklist and Mitigation Measures

Very High Fire Severity Zones” and “Fuel Modification Plans and Maintenance.” Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the proposed project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.

- HH4 Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.
- HH5 Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event that unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director of Community Development of the City of Irvine in a timely manner. Additionally, said Protocol Plan shall be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities.
- HH6 The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells on the former MCAS El Toro in a geographic information systems database (GIS). The City will review all permit applications on the former air station for monitoring well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to monitoring wells will be limited to authorized personnel.

4.7 HYDROLOGY AND WATER QUALITY

4.7.1 Environmental Setting

The OCGP FEIR describes the project site as within the San Diego Creek watershed, which includes the San Diego Creek, Peters Canyon Channel, and the tributaries to these water courses. The major drainage channels that traverse the site (PA 51) are the Marshburn Channel, Bee Canyon Channel, Agua Chinon Channel, and Borrego Canyon Channel. Serrano Creek and Upper San Diego Creek Channel traverse PA 30 in the southern tip of the project site, south of the existing SCRRA Metrolink railroad tracks.

San Diego Creek and Upper Newport Bay are listed as impaired water bodies under Section 303(d) of the Clean Water Act. Accordingly, Total Maximum Daily Load (TMDL) for pollutants that have impaired these water bodies has been established and was included in the OCGP FEIR (Refer to OCGP FEIR Table 5.7-2).

4. Discussion of Checklist and Mitigation Measures

The OCGP FEIR also notes the County of Orange and the City of Irvine hold a Nationwide Pollution Discharge Elimination System (NPDES) permit for the storm drain systems, and that the State has issued a NPDES general permit relating to construction activities on sites over five acres in the area. Lastly, the flood control improvements associated with the SR-133 toll road were noted in the OCGP FEIR as having reduced the 100-year flood zone north and west of the property.

4.7.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR identified several significant impacts on hydrology and water quality associated with future development under the adopted Overlay Plan before mitigation. First, grading and excavation activities required for future development could result in the exposure of bare soils to both wind- and water-related erosion and associated significant water quality impacts (specifically, a violation of water quality standards or waste discharge requirements). Compliance with City grading and water quality regulations—including the NPDES discharge permitting requirements and preparation of a Storm Water Pollution Prevention Plan (SWPPP) and a Water Quality Management Plan (WQMP)—are the primary means of controlling the potential impacts of grading and excavation activities. These City requirements, which are described in mitigation measures H/WQ1 and H/WQ2, will reduce the impact to a less-than-significant level.

According to the OCGP FEIR, the existing drainage patterns and stream courses will not be substantially altered by future development under the adopted Overlay Plan. In addition, the potential for inundation is reduced by improvements to upstream flood-control facilities. Without project-related flood-control facilities, the rate or amount of surface runoff due to new development would result in flooding on- and off-site, depending on the nature of the specific development. Although this impact was identified as significant, the effect of increased runoff will be reduced to a less-than-significant level through preparation and implementation of hydraulic studies and recommendations for the specific development and the construction of flood-control improvements commensurate with the specific development (Mitigation Measure H/WQ3).

The impact analysis for the Overlay Plan assumed development of the land use patterns created by the zoning designations for the Overlay Plan area and a backbone storm drain system. The storm drain system took into consideration and included improvements identified in the San Diego Creek Flood Control Master Plan (Refer to OCGP FEIR p. 5.7-16 and Figure 5.7-2). The drainage plan for the Overlay Plan area included improvements to the major drainages, including Marshburn Channel, Bee Canyon Channel, Agua Chinon Channel, and the Borrego Channel, Wildlife Corridor and Serrano Creek, and San Diego Creek, as described in the OCGP FEIR and addenda.

While relatively conceptually defined in the OCGP FEIR, the foregoing area-wide drainage and flood control facility system has since been undergoing increasingly more definitive design engineering refinement. The latest formal expression of these system enhancements is memorialized in the following documents: Master Plan of Drainage, Fuscoe Engineering February 23, 2007,⁵ Orange County Great Park – Hydrology/Hydraulic Report, Fuscoe Engineering June 12, 2007 (collectively, Fuscoe Reports); Planning Area 51 and Planning Area 30 Bee Canyon, Agua Chinon, Borrego, Serrano and Upper San Diego Creek Update, RBF Consulting February 27, 2008, and Planning Area 51 Marshburn Watershed Update, RBF Consulting March 14, 2008 (collectively, RBF Reports). These reports merely refine the drainage control system components described above, and are on file with the City, and available for inspection at the Irvine Community Development Department during normal business hours. The on-site channels will continue to drain the project site as under existing conditions. Additional backbone storm drain facilities will be designed to accommodate the changes in the land use surface runoff within the Great Park Neighborhoods development. The post-development hydrology was analyzed per the Orange County Hydrology Manual for a 100-year peak storm design event.

⁵ This report was submitted to the City of Irvine as a part of the Master Subdivision Map application.

4. Discussion of Checklist and Mitigation Measures

OCGP FEIR Mitigation Measure H/WQ3 states that prior to approval of the first tentative tract or parcel map in the project area, detailed hydrologic and hydraulic analysis shall be conducted. Studies and analyses shall be prepared in accordance with Orange County Flood Control District (OCFCD) methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. In compliance with the mitigation measure, the Fuscoe Reports, and RBF Reports were prepared. The primary focus of these reports was to evaluate the proposed drainage concept for the Great Park Neighborhoods development with respect to surface water hydrology. The studies identified surface water runoff as well as drainage and flood-control improvements for the proposed project. The reports also provide a brief discussion of the local hydrologic regime; an overview which ranges from the watershed delineation of the San Diego Creek Watershed to the physical drainage characteristics of Great Park Neighborhoods in Orange County.

4.7.3 Impacts Associated with the General Plan Amendments, Zone Changes, and Development Agreement Amendment

Bake Parkway/Marine Way Relocation

The proposed General Plan Amendment would realign Marine Way approximately 900 feet to the east of the I-5 NB exit ramp. Due to the alignment modification of Marine Way, the extension of Rockfield Boulevard to Marine Way would also be modified. The phasing of the flood control system improvements in Planning Area 30 will not be affected by this modification and will continue to be coordinated with the street phasing schedule so that the storm drains are installed prior to or in concert with road construction. The relocation does not alter land uses or intensify development; therefore no change in the development assumptions as they pertain to hydrology and water quality would be necessary. Accordingly, the impact analysis presented in OCGP FEIR Section 5.7 adequately describes the project effects on hydrology and water quality.

Reduction of Required Golf Course Holes

The reduction of the golf course requirement by 27 holes in PAZ 18 does not increase intensity or permit additional residences. Development within PAZ 18 will not expand the development boundary and will implement all mitigation measures identified in the OCGP FEIR and addenda. The mitigation measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and development occurs in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation of the Newport Bay watershed. As a result, the reduction of the golf course requirement by 27 holes in PAZ 18 will have no additional impact to the hydrology and water quality. Accordingly, the impact analysis presented in OCGP FEIR Section 5.7 adequately describes the project effects on hydrology and water quality.

Reduction in Agricultural Acreage

The removal of the requirement to include 173 acres of agricultural use in the Lifelong Learning District does not permit any new residences or other changes to approved intensities. All mitigation measures identified in the OCGP FEIR and addenda will be implemented. Therefore, no change in the development assumptions pertaining to hydrology and water quality would be necessary and the impact analysis presented in OCGP FEIR Section 5.7 adequately describes the project effects on hydrology and water quality.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not

4. Discussion of Checklist and Mitigation Measures

result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant hydrology effects identified in and considered by the certified OCGP FEIR.

4.7.4 Mitigation from the OCGP FEIR and Applicability to the General Plan Amendments, Zone Changes, and Development Agreement Amendment

The OCGP FEIR identified four mitigation measures to reduce the effects of the project on hydrology and water quality. All of the mitigation measures are applicable to implementation of the project and would be carried forward to future development of the project site. Implementation of measures H/WQ 1 through H/WQ 4 (listed below) would reduce project impacts to a less than significant level.

- H/WQ1 Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City of Irvine adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area...and residential construction sites that result in the disturbance of five acres or more...shall be required to develop and implement BMPs...to control erosion and siltation and contaminated runoff from the construction sites." Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of one acre or more.

The City's standard conditions of approval indicate that a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site

4. Discussion of Checklist and Mitigation Measures

in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.

Additionally, prior to the issuance of a grading permit, project applicants must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, lessee, etc.), and shall reference the location(s) of structural BMPs. Completed with the WQMP (Fusco, June 28, 2006, Revised September 15, 2006).

Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOI) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the Director of Community Development of any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

- H/WQ2 Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water quality Control Board Basin Plan, including Total Maximum Daily Load (TMDL) Implementation Plan adopted for this watershed.
- H/WQ3 Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrologic and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

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H/WQ4 Prior to issuance of a building permit, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.

After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process.

4.8 LAND USE

4.8.1 Environmental Setting

The OCGP FEIR described the existing and former land uses on Planning Areas 30 and 51, and other areas adjoining and surrounding these planning areas. Subsequent to the City's approval of the General Plan Amendment and Zone Change for the Overlay Plan, the DON initiated an auction process for the sale of the former MCAS El Toro property. To facilitate the transfer, the property was divided into and presented to prospective buyers as four distinct parcels. Interested parties were invited to bid on one or more of the parcels. In 2005, Heritage Fields successfully purchased all four parcels from the DON (3,671 acres), and entered into a Development Agreement with the City of Irvine on July 12, 2005. The Development Agreement sets forth the terms and conditions of subsequent development and implementation of the Great Park Plan, including dedication in fee of 1,096 acres of the property for development of the Great Park Plan.

The condition of Planning Area 30—generally, the cultivation of agricultural lands—is substantially the same as the OCGP FEIR baseline year. Consistent with a provision in the zoning code, there are interim uses that reuse existing buildings on-site. These uses include offices occupied by the City of Irvine Community Development Department, Great Park Corporation (GPC), and Heritage Fields. Other tenants include Second Harvest Food Bank, Families Forward, Orange County Great Park Balloon Preview Park, California State University, Fullerton. A day-care facility is immediately adjacent to these office uses. A few parcels such as Tierra Verde Industries have been leased and are operating on an interim basis.

4.8.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR identified no significant impact to established communities. There were no residents living within the Planning Areas 30 and 51 at the time the OCGP FEIR was prepared and there has been no change in this regard; there are no residents living within the project site. The OCGP FEIR analyzed certain amendments to the City's General Plan that were adopted on May 27, 2003, as part of the City's adoption of the Overlay Plan. The adopted Overlay Plan was determined to be consistent with each element of the General Plan, as summarized below.

Land Use Element: The goal of the Land Use Element is to “promote land use patterns that maintain safe residential neighborhoods, bolster economic prosperity, preserve open space, and enhance the overall quality of life in Irvine.” The “OCGP, Orange County Great Park” land use category was created to reflect the types, intensity, and density of uses and activities contemplated in the OCGP and was determined to be consistent with the goal of the Land Use Element.

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Circulation Element: The Circulation Element's goal is to "provide a balanced transportation system." Adoption of the Overlay Plan included the following modifications to the General Plan Circulation Element:

- Policy B-1(c) was changed to include the following provision:

"In conjunction with individual subdivision map level traffic studies for development proposed in the Overlay Plan area, a LOS [level of service] 'E' would be considered acceptable for application to intersections impacted in Planning Areas 13, 30, 31, 32, 34, 35, and 39."
- Figure B-1 (Master Plan of Arterial Highways) and Figure B-2 (Operational Characteristics) were amended to reflect the alignment of roadways within the OCGP, including:
 - Marine Way is aligned to join the Bake Parkway northbound exit ramp from Interstate 5 and terminate at Sand Canyon Avenue at Interstate 5.
 - Trabuco Road terminates at proposed Meadows Loop Road.
 - Rockfield Boulevard is realigned to terminate at Marine Way.
 - On-site circulation includes a new commuter highway/collector (Y Street [Ridge Valley]).
 - Research Parkway is renamed College Road and modified to extend from Irvine Boulevard to Marine Way.
- Figure B-3 (Public Transit) was amended to reflect the alignment of roadways within the OCGP.
- Figure B-4 (Trails Network) was amended to reflect the alignment of roadways within the OCGP.

Housing Element: The goal of the Housing Element is to "provide for safe and decent housing for all economic segments of the community." The adopted Overlay Plan would add up to 3,625 new dwelling units and carry forward all adopted policies and objectives of the Housing Element; specifically, the residential development component would explore opportunities for maintenance of the housing stock and help the City meet its Regional Housing Needs Assessment through year 2025.

Conservation and Open Space Element: The goal of this element is to "maintain and preserve the environmental systems as a major feature in the City." This goal would be achieved through the implementation of Objectives L-1 through L-12 and corresponding policies. Objective L-10 encourages "the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development." The adopted Overlay Plan includes 1,096 acres of Great Park recreational land, 290 acres of permanent agricultural land, and 974 acres of Habitat Preserve.

Cultural Resources: The goal of the Cultural Resources Element is to "ensure the proper disposition of historical, archaeological, and paleontological resources to minimize adverse impacts, and to develop an increased understanding and appreciation for the community's historic and prehistoric heritage, and that of the region." The OCGP FEIR identified the flatland area of the property as a low paleontological sensitivity zone and the hillside areas north of Irvine Boulevard as a high paleontological sensitivity zone. No objective of this element was amended by the adopted Overlay Plan and all of the objectives and implementing policies were to be implemented as part of the adopted Overlay Plan.

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Noise Element: The Noise Element's goal is to "contribute to a healthy and safe environment by minimizing noise impacts." The adopted Overlay Plan would not affect the mobile noise, stationary noise, and noise abatement objectives and implementing policies of the Noise Element.

Public Facilities and Services Element: The goal of this element is to "provide a full range of necessary public facilities and services that are convenient to users, economical, reinforce City and community identity, and reflect the participation of citizens." The facilities and services described in the Urban Service Plan for the adopted Overlay Plan were formulated through a public participatory process and found to implement the goal and adopted objectives and related policies of this element.

Integrated Waste Management Element: This element seeks to "encourage solid waste reduction and provide for the efficient recycling and disposal of refuse and solid waste material without deteriorating the environment." The OCGP FEIR disclosed that the Overlay Plan would not affect the adopted objectives and implementing policies regarding solid waste, waste, wastewater, and solid waste facility siting requirements; rather, it would provide the opportunity to better respond to the City's solid waste reduction requirements and other provisions of the element by broadening the range of design options.

Growth Management Element: The goal of the Growth Management Element is to "ensure that growth and development are integrally planned with, and phased concurrently with, the City of Irvine's ability to provide an adequate circulation system and public facilities." When the OCGP FEIR was certified, it was disclosed that though the project made changes to the *Master Plan of Arterial Highways*, the project would not change any of the objectives or implementing policies of the Growth Management Element.

Parks and Recreation Element: The goal of the Parks and Recreation Element is to "provide park and recreation opportunities at a level that maximizes available funds and enables residents of all ages to utilize their leisure time in a rewarding, relaxing, and creative manner." The OCGP FEIR reported that there would be no change to the objectives or implementing policies of this element.

Seismic Element: The goal of the Seismic Element is to "minimize the loss of life, disruption of goods and services, and the destruction of property associated with an earthquake." Five Seismic Response Area (SRA) designations are used to describe the magnitude and types of potential seismic hazards present within the City, and to provide policy guidance. The OCGP FEIR reported that the majority of the El Toro property was in category SRA-2 and that no objectives or implementing policies would be changed as a result of the project.

Safety Element: The goal of the Safety Element is to "minimize the danger to life and property from man-made and natural hazards, including fire hazards, flood hazards, non-seismic geologic hazards and air hazards." The OCGP FEIR disclosed the need for fuel modification to mitigate potential wildland fire hazards and drainage improvements to lessen flood hazards associated with implementation of the adopted Overlay Plan, and concluded no objectives or implementing policies would be changed as a result of the adopted Overlay Plan.

4.8.3 Impacts Associated with the General Plan Amendments, Zone Changes, and Development Agreement Amendment

The project is consistent with the land uses approved in the OCGP FEIR and addenda. The proposed modifications would not affect the goals, objectives, or policies, or the facilities and services described in any of the General Plan Elements. No changes or new impacts would occur. The following analysis discuss the proposed project in consideration of each General Plan element.

4. Discussion of Checklist and Mitigation Measures

Land Use Element: The Land Use Element designates Planning Areas 30 and 51 as “Orange County Great Park.” The proposed project is consistent with the General Plan designation, which allows both the City and Heritage Fields the opportunity to develop regionally significant conservation and open space, parks and recreation, educational facilities, and other public-oriented land uses, integrated with privately developed multi-use, residential, commercial, and industrial properties. The project will allow both entities to update the General Plan and Zoning Code to reflect current planning concepts for the sites. The changes proposed in the General Plan Amendment for the Bake Parkway/Marine Way intersection relocation, and those proposed in the General Plan Amendment, Zone Change, and Development Agreement Amendment relating to the Heritage Fields property do not allow any additional development intensity and would not change the previously approved acreages for the project area. The General Plan text, tables, and figures being amended are listed below and included in Appendix A:

1. Page A-7 OCGP Definition
2. Table A-1 General Plan Footnotes
3. Table A-2 General Plan Footnotes
4. City of Irvine Boundary Map
5. Land Use Element Map
6. Figure A-1 Vicinity Map
7. Figure A-2 Planning Areas
8. Figure A-3 Land Use Map
9. Figure A-4 Scenic Highways

Circulation Element: The goal of the Circulation Element – “to provide a balanced transportation system” – could be accomplished through various circulation alignments equal to or better than the internal roadway alignments shown on referenced maps. The project would not substantially alter the planned network of arterials and connections to roadways in the surrounding area; nor would they materially change riding and hiking trails and trail linkages; pedestrian and bicycle circulation; and transit, air transportation, and telecommunication opportunities. The General Plan Amendment includes modifications to maps and figures in the General Plan’s elements to reflect the proposed relocation of the planned intersection at Bake Parkway and Marine Way and the reconfigured Rockfield Boulevard that traverse the research and development designation on the Great Park Overlay Plan. Specifically, Figure B-1 (Master Plan of Arterial Highways) and Figure B-2 (Operational Characteristics) would be amended to reflect the relocation of Bake Parkway and Marine Way within the OCGP. The project also includes an additional amendment to Figure B-1 to change the designation of Trabuco Road between Sand Canyon and “O” Street from a Major Highway to a Primary Highway. This roadway segment is a planned Primary Highway in keeping with previous traffic studies. Figures B-1, B-2, B-3, and B-4 of the General Plan are modified to reflect the Bake Parkway/Marine Way intersection relocation. The General Plan figures being amended are listed below and included in Appendix A:

1. Figure B-1 Master Plan of Arterial Highways
2. Figure B-2 Operational Characteristics
3. Figure B-3 Public Transit
4. Figure B-4 Trails Network

Housing Element: The goal of the Housing Element is to “provide for safe and decent housing for all economic segments of the community.” Project components would not permit new residential units or increase allowable development intensity. The distribution of 3,625 residential dwelling units within the Great Park would carry forward the adopted policies and objectives of the Housing Element, specifically, help the City meet its Regional Housing Needs Assessment through 2025 and implement the provisions of the Development Agreement regarding the residential component of the adopted Overlay Plan.

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Cultural Resources: The project would not affect the adopted goals, objectives, and policies of this element. Subsequent development would be required to comply with its requirements and to implement mitigation measures found in the OCGP FEIR. With implementation of OCGP FEIR measures P1 and CULT1 through CULT4, the impacts of new development on paleontological and cultural resources would be less than significant. Furthermore, the proper disposition of such resources, if any are encountered prior to or during construction would be ensured; and through the information recovered, the community's understanding and appreciation for its historic and prehistoric heritage will have been enhanced. Figures E-1 and E-2 of the General Plan are modified to reflect the Bake Parkway/Marine Way intersection relocation. The General Plan figures being amended are listed below and included in Appendix A:

1. Figure E-1 Historical/Archeological Landmarks
2. Figure E-2 Paleontological Sensitivity Zones

Noise Element: The project would not affect the goal of this element—"to contribute to a healthy and safe environment by minimizing noise impacts"—or the mobile noise, stationary noise, and noise abatement objectives and implementing policies of the element. The General Plan figure being amended is listed below and included in Appendix A:

1. Figure F-1 Aircraft Noise

Public Facilities and Services Element: The project would not affect facilities and services described in the Urban Service Plan for the adopted Overlay Plan. As no substantive change in the Urban Service Plan is necessary, and that plan was a principle means of demonstrating consistency with the Public Facilities and Services Element, the project also is consistent with this element of the General Plan. Additionally, subsequent development would be required to implement the element's objectives and policies to ensure that a full range of necessary public facilities and services that are convenient to users are provided in conjunction with new development. Figure G-1 of the General Plan is modified to reflect the Bake Parkway/Marine Way intersection relocation. The General Plan figure being amended is listed below and included in Appendix A:

1. Figure G-1 Educational Facilities

Integrated Waste Management Element: Like the adopted zoning, the project would not affect the adopted objectives and implementing policies regarding solid waste, waste, wastewater, and solid waste facility siting requirements; rather, it would provide the opportunity to better respond to the City's solid waste reduction requirements and other provisions of the element by broadening the range of design options. This element seeks to "encourage solid waste reduction and provide for the efficient recycling and disposal of refuse and solid waste material without deteriorating the environment." Figure H-1 of the General Plan is modified to reflect the Bake Parkway/Marine Way intersection relocation. The General Plan figure being amended is listed below and included in Appendix A:

1. Figure H-1 Solid Waste Facilities

Growth Management Element: The goal of the Growth Management Element is to "ensure that growth and development are integrally planned with, and phased concurrently with, the City of Irvine's ability to provide an adequate circulation system and public facilities." When the OCGP FEIR was certified it disclosed that though the project made changes to the Master Plan of Arterial Highways, the project would not change any of the objectives or implementing policies of the Growth Management Element. The project likewise would not alter any of the objectives or implementing policies because it would remain consistent with the development phasing already a part of the overall development plan.

4. Discussion of Checklist and Mitigation Measures

Parks and Recreation Element: The goal of the Parks and Recreation Element is to “provide park and recreation opportunities at a level that maximizes available funds and enables residents of all ages to utilize their leisure time in a rewarding, relaxing, and creative manner.” The OCGP FEIR reported there would be no changes to the objectives or implementing policies of the Element. Figure K-1 of the General Plan is modified to reflect the Bake Parkway/Marine Way intersection relocation.. This modification will not result in any losses of park land or increases in development intensity for the project. Furthermore, through the Great Park Development Agreement, Heritage Fields has dedicated 1,096 acres: 367 acres for the park, 165 acres for the sports park, 229 acres for the drainage corridor, 179 acres for the wildlife corridor, and 156 acres for the exposition center south. The General Plan figure being amended is listed below and included in Appendix A:

1. Figure K-1 Recreational Facilities

Conservation and Open Space Element: The goal of this element is to “maintain and preserve the environmental systems as a major feature in the City.” This goal would continue to be achieved through the implementation of objectives L-1 through L-12 and corresponding policies. Objective L-10 encourages “the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development.” The zoning stipulations within Section 9-51-3 (Statistical Analysis) include a footnote with the following text:

With implementation of the proposed project, the Overlay Plan includes approximately 1,145 acres of Great Park passive recreational land, 130 acres of permanent agricultural land, and 974 acres of Habitat Preserve. Please refer to Section 4.0 herein for a detailed discussion of how the project specifically implements Objective L-10 Permanent Agriculture. Figures L-1, L-2, L-3, and L-4 of the General Plan are modified to reflect the Bake Parkway/Marine Way intersection relocation. The General Plan figures being amended are listed below and included in Appendix A:

1. Figure L-1 Landform Zones
2. Figure L-2 Conservation and Open Space
3. Figure L-3 Implementation Districts
4. Figure L-4 Biotic Resources

Seismic Element: The goal of the Seismic Element is to “minimize the loss of life, disruption of goods and services, and the destruction of property associated with an earthquake.” Five Seismic Response Area (SRA) designations are used to describe the magnitude and types of potential seismic hazards present within the City, and provide policy guidance. The OCGP FEIR reported that the majority of the El Toro property was in category SRA-2. All of Planning Area 30 and the portions of the Lifelong Learning District (LLD) and the Park District southwest of Irvine Boulevard are identified as SRA-2. The areas of the LLD and the Park District situated northeast of Irvine Boulevard are designated SRA-3; the SRA-4 classification has been applied to small areas along the northern edge of the LLD, and the Park District’s boundary within the Habitat Preserve area. The OCGP FEIR reported that no objectives or implementing policies would be changed as a result of the project. Likewise, this current proposal would not alter that finding/conclusion because all project development remains within the previously established boundaries. Figures D-2, D-3 of the General Plan are modified to reflect the Bake Parkway/Marine Way intersection relocation. The General Plan figures being amended are listed below and included in Appendix A:

1. Figure D-2 Inactive Fault Locations
2. Figure D-3 Seismic Response Areas

Safety Element: The goal of the Safety Element is to “minimize the danger to life and property from man made and natural hazards, including fire hazards, flood hazards, non-seismic geologic hazards, and air

4. Discussion of Checklist and Mitigation Measures

hazards.” The OCGP FEIR disclosed the need for fuel modification to mitigate potential wildland fire hazards and drainage improvements to lessen flood hazards associated with implementation of the project, and concluded no objectives or implementing policies would be changed as a result of the adopted Overlay Plan. The project does not contain elements that would alter the findings, conclusions and mitigation measures because all project development remains within the previously established project boundaries. Figures J-1, J-2, J-3, and J-4 of the General Plan are modified to reflect the Bake Parkway/Marine Way intersection relocation. The General Plan figures being amended are listed below and included in Appendix A:

1. Figure J-1 Public Safety Facilities
2. Figure J-2 Fire Hazard Areas
3. Figure J-3 Flood Hazard Areas
4. Figure J-4 Clear and Accident Potential Zones

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed projects would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. In that the OCGP FEIR did not identify any significant land use impacts there is no need for further alternatives to the project or the imposition of mitigation measure requirements.

4.8.4 Mitigation from the OCGP FEIR and Applicability to the General Plan Amendments, Zone Changes, and Development Agreement Amendment

The OCGP FEIR identified no significant land use impact; therefore no mitigation measures were proposed.

4. Discussion of Checklist and Mitigation Measures

4.9 NOISE

4.9.1 Environmental Setting

The OCGP FEIR described mobile noise sources from nearby freeways, roadways, rail facilities, and vehicle use at adjacent commercial businesses, light industrial facilities, and agricultural lands as the dominate noise source in the project area. Stationary sources of noise included temporary and intermittent noise from construction activities and agricultural operations, noise associated with the industrial/business parks to the east and the business park and entertainment uses to the south.

The OCGP FEIR presents the results of a noise survey conducted on December 10–12, 2002, in which noise measurements were conducted at nine locations. Ambient noise levels at the four surveyed representative residential locations ranged from 58 dBA to 65 dBA CNEL (Refer to OCGP FEIR p. 5.4-18, Figure 5.4-6, and Table 5.4-7). The audible noise sources included local traffic, distant traffic, birds, aircraft, and human voices, all of which were characterized as typical of suburban areas.

4.9.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR concluded that development of the Overlay Plan would not result in any significant noise effects. The noise assessment considered a worst-case condition of simultaneous demolition and construction activities with the combined sound level of 20 pieces of large mobile equipment operating at a distance of 5,000 feet; 5 concrete breakers operating at a distance of 6,000 feet; and 2 crusher plants operating at a distance of 10,000 feet from the nearest off-project area residential location. The distances represented the closest possible location of the construction equipment to the nearest off-project area residences during a heavy construction period. The nearest off-site residential uses (sensitive noise source) were located approximately 4,000 feet from the property boundary. Under this scenario, the analysis estimated sound levels of approximately 56 dBA at the nearest off-site residential location. (Refer to OCGP FEIR, p. 5.4-24 and Table 5.4-8.)

As buildout of the project site was assumed to occur over time (years 2007–2025), construction-related noise impacts on residential areas within the project site were also estimated. Using the same construction equipment assumptions and a distance of 600 feet from the nearest residential area, the combined effect of the equipment was estimated at a sound level of 70 dBA at the nearest on-site residential locations during a heavy construction period. While the City of Irvine Noise Ordinance does not specify a limit on construction noise levels, it stipulates the days and hours during which construction activities may occur and when construction would not be allowed unless a temporary waiver is requested and granted; specifically, construction is allowed Monday through Friday between 7:00 a.m. and 7:00 p.m., and on Saturdays between 9:00 a.m. and 6:00 p.m.; no construction is allowed outside those hours, on Sundays, or on federal holidays. (Refer to OCGP FEIR, p. 5.4-31.)

4.9.3 Impacts Associated with the General Plan Amendments, Zone Changes, and Development Agreement Amendment

The OCGP FEIR noise assessment considered a worst-case condition of simultaneous demolition and construction activities. The worst-case assumptions described for the adopted Overlay Plan remain reasonable assumptions for the project; no new information about future demolition and construction has become available that would increase the number of pieces of equipment to be operated simultaneously.

4. Discussion of Checklist and Mitigation Measures

Construction Noise

Construction activities associated with the proposed project would have a short-term impact on ambient noise levels in the project vicinity. While the proposed project would involve relocation of the Bake Parkway/Marine Way intersection, construction noise levels associated with the original roadway alignment were based on the maximum simultaneously operating pieces of construction equipment at the nearest sensitive receptor. Changing the location of the roadway within the development area of the Overlay Plan would not place the road closer to existing off-site residences, thereby increasing noise levels. Other changes proposed in the General Plan Amendment, Zone Change, and Development Agreement Amendment do not allow any additional development intensity of the Overlay Plan in a manner that would result in an increase in construction noise levels. In addition, the analytical assumptions concerning construction, development phasing, and operations of the adopted Overlay Plan remain appropriate for the project. Consequently, the project would not increase the noise levels generated during construction activities. Therefore, the construction noise levels associated with this component of the project are anticipated to be similar to those addressed in the OCGP FEIR and would not result in any new significant impacts which were not previously anticipated.

Construction Vibration

The OCGP FEIR identified that nuisance vibration from construction activities associated with the adopted Overlay Plan would result in noticeable vibration levels. However, because vibration from construction activities would be temporary, nuisance vibration would be less than significant. While the proposed project would involve relocation of the Bake Parkway/Marine Way intersection, changing the location of the roadway would not place generate significantly higher levels of vibration. Therefore, the construction vibration levels associated with this component of the project are anticipated to be similar to those addressed in the OCGP FEIR and would not result in any new significant impacts which were not previously anticipated.

Operation

Relocation of the Bake Parkway/Marine Way intersection would not result in land use changes that would increase project-related stationary or mobile source noise generated by the project. Other changes proposed in the General Plan Amendment, Zone Change, and Development Agreement Amendment do not allow any additional development intensity of the Overlay Plan or increase project-generated trips. Therefore, the stationary-source noise levels associated with this component of the project are anticipated to be similar to those addressed in the OCGP FEIR and would not result in any new significant impacts which were not previously anticipated.

Airport Noise

The former MCAS El Toro operations have ceased and no public airport, public use airport, or airport land use plan exists in the project vicinity.

Land Use Compatibility

The project includes land use types and intensity identical to the adopted Overlay Plan. Because the OCGP FEIR did not identify any significant impacts related to land use compatibility, the proposed project is also compatible with the Irvine General Plan and zoning code for noise and vibration compatibility.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project will not result

4. Discussion of Checklist and Mitigation Measures

in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant noise effects identified in and considered by the certified OCGP FEIR.

4.9.4 Mitigation from the OCGP FEIR and Applicability to the General Plan Amendments, Zone Changes, and Development Agreement Amendment

The OCGP FEIR identified no significant noise impacts; therefore no mitigation measures were proposed.

4.10 POPULATION AND HOUSING

4.10.1 Environmental Setting

The OCGP FEIR discussed the caretaker status of the base following its closure. At the time the OCGP FEIR was prepared there was a limited number of military and civilian staff working on the base. There are no residents living on the base. Consequently, there are 4,380 vacant group quarters units and 1,209 residential dwelling units. The OCGP FEIR examined demographics in the context of the existing and projected population of the Orange County region and the City of Irvine. Population and housing information was developed based on the 2000 United States Bureau of Census population, household, and employment census information. The areas surrounding the former base and the Orange County subregion are considered jobs-rich and housing-poor. The Southern California Association of Governments (SCAG) seeks to encourage housing growth over job growth in the Orange County subregion. The OCGP FEIR reported that the ratio of jobs to housing in the area has environmental implications related to transportation and air quality. Thus, a major focus of the regional planning efforts has been to improve the ratio of jobs to housing in all affected subregions in order to reduce to vehicular trips, costly infrastructure improvements, and resultant air emissions. Despite attempts, according to SCAG projections, the Orange County subregion's jobs/housing balance will worsen through the year 2025 as the number of jobs surpasses housing gains.

4. Discussion of Checklist and Mitigation Measures

4.10.2 Impacts Identified in the OCGP FEIR and Addenda

As noted above, the area surrounding the former MCAS El Toro and the Orange County subregion are considered jobs-rich and housing-poor. SCAG seeks to discourage job growth over housing growth in the Orange County subregion. The OCGP FEIR reported that regional projections are dynamic and, as a compilation of local land use projections, reflect changing community views on the location and the types of growth desired. Although implementation of the adopted Overlay Plan would not have exceeded the Orange County Preferred-2000 employment projections, its impact on employment was considered significant because the Orange County subregion is anticipated to become increasingly jobs-rich over the next 20 years and the Overlay Plan-related employment would exacerbate the subregional jobs/housing imbalance. The Overlay Plan is expected to result in the provision of 3,625 dwelling units. Based on the city's zoning categories planned for this site, the dwelling units could accommodate up to 9,000 people. This increase in population will not substantially exceed projections contained for the site in OCP-2000. No significant impacts to population and housing were identified (www.scag.ca.gov).

4.10.3 Impacts Associated with the General Plan Amendments, Zone Changes, and Development Agreement Amendment

The project would not substantially alter the population, housing, and employment information contained in the OCGP FEIR. The project would not introduce new levels of development that would improve the ratio of jobs to housing beyond that already considered by the OCGP FEIR. Both the proposed project and the adopted Overlay Plan would result in:

- an increase of up to 9,000 people (resident population);
- development of 3,625 residential dwelling units—1,100 low density, 860 medium density, 1,500 medium-high density, and 165 dwelling units allocated to homeless providers; and
- an approximate increase of 16,510 jobs.

The project's impacts would be the same as under the OCGP FEIR, less than significant for population and housing, and significant and unavoidable for employment.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OGCP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not

4. Discussion of Checklist and Mitigation Measures

have been known with the exercise or reasonable diligence at the time the OCGP FEIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant effects identified in and considered by the certified OCGP FEIR.

4.10.4 Mitigation from the OCGP FEIR and Applicability to the General Plan Amendments, Zone Changes, and Development Agreement Amendment

The OCGP FEIR identified a significant impact associated with the jobs/housing ratio. The OCGP FEIR also stated that no mitigation is available to rectify conflicts between the numerical objectives of regional planning documents including the jobs/housing ratio. This finding remains applicable to the proposed General Plan Amendments, Zone Changes, and Development Agreement Amendment.

4.11 PUBLIC SERVICES

4.11.1 Environmental Setting

Law Enforcement

At the time of the certification of the OCGP FEIR, law enforcement was provided by the Orange County Sheriff through a contract with the Department of the Navy (DON) in PA 51 and the Irvine Police Department provided law enforcement within PA 30. Subsequent to the annexation of the property, the City of Irvine Police Department has assumed law enforcement responsibility within both planning areas. The Irvine Police Department is headquartered at the Irvine Civic Center Complex and also has a satellite facility in the Irvine Spectrum Entertainment Complex. The OCGP FEIR stated that the current police facilities are adequate to handle the personnel and equipment that are employed and utilized by the department for PA 30. The OCGP FEIR also stated that the Irvine Police Department is researching the expansion of their facilities, although the specific details of constructing a substation were not known.

Fire and Emergency Medical Services

At the time of the certification of the OCGP FEIR, primary fire protection to PAs 30 and 51 was provided by Orange County Fire Authority (OCFA) under contract to the County of Orange on an interim basis. Subsequent to the annexation of the property, OCFA has continued to provide fire protection service to the project area. The OCGP FEIR stated that OCFA is planning two additional fire stations in the general vicinity. OCFA also has in place an agreement with the Irvine Company as part of the Northern Sphere Area that should provide adequate service to all areas surrounding the project.

Parks and Recreation

The site presently contains no parks, trails, bike lanes or other recreation facilities that are open to the public. However, many public facilities are located within five miles of the OCGP including neighborhood and community parks, recreational trails, and open space.

There are approximately 506 acres of neighborhood and community parks and recreational trails in the City of Irvine's public park system, including one aquatic complex containing three competition size pools. William R.

4. Discussion of Checklist and Mitigation Measures

Mason Regional Park, a County of Orange facility, and numerous private parks and recreation facilities are also available throughout Irvine that provide additional recreational opportunities for the City's residents.

The City of Irvine, through its Conservation and Open Space Element has established an open space program comprehensively aggregating open space, adjoining other regional open space, promoting conservation and passive recreational opportunities (e.g. Bommer Canyon, Shady Canyon and Limestone Canyon).

At the time of the certification of the OCGP FEIR, the DON, acting in a caretaker's role, offered public access to a variety of existing recreational facilities including the existing Marine Memorial Golf Course and equestrian stables. Currently, these facilities remain closed and are under demolition and preparation for future development.

School Services

Planning Areas 30 and 51 are within the school service boundaries of the Irvine Unified School District (IUSD) and the Saddleback Valley Unified School District (SVUSD). Prior to the closure of the base, an IUSD elementary school with a 600-student capacity was operated on the former base property.

4.11.2 Impacts Identified in the OCGP FEIR

Law Enforcement

The OCGP FEIR discussed the law enforcement needs of both Planning Areas 30 and 51, and stated that following annexation, the Irvine Police Department would provide law enforcement for the entire project area. The OCGP FEIR also analyzed the number of police officers, police supervisors and support staff, as well as the number of vehicles, equipment, and services. The OCGP FEIR stated that police protection for the park area would be funded through the use of a special park assessment. As stated in the OCGP FEIR, the general impacts associated with construction and operation of public facilities were analyzed in the OCGP FEIR as part of the planned land uses which also included the construction of a new Police substation.

Fire and Emergency Medical Services

Subsequent to annexation of the property, Planning Areas 30 and 51 continue to be served by OCFA. The OCGP FEIR stated that there was the likelihood that additional fire services infrastructure would be required to support the proposed project. OCFA had not provided the detailed calculations of the exact extent of new services. The OCGP FEIR stated that the final determination of fire station needs and locations would be made at a future date when more information is known about risk, layout, and types of occupancy. The specific environmental impact of constructing the new fire facilities to serve the project could not be determined at the General Plan level of analysis as specific site plans and locations had not been prepared. However, the general impacts associated with the construction and operation of public facilities were addressed within the OCGP FEIR.

Parks and Recreation

As discussed in detail in OCGP FEIR, the parkland acreage under the project will greatly exceed the existing City of Irvine's standards, and will provide a regional open space amenity for the benefit of Orange County. The OCGP FEIR calculated a total of 45.1 acres of parkland required for the proposed development. A portion of that acreage will be in neighborhood parks, primarily for pools and tot lots within close proximity of homes.

4. Discussion of Checklist and Mitigation Measures

The community park requirement for the future Great Park Neighborhoods development has been addressed through the Development Agreement between the City and Heritage Fields (Recorded on July 12, 2005) and reflected in the amended Development Agreement. Conveyance of the OCGP to the City satisfied any requirement imposed on the developer for the dedication or development of community parks as required by the City's General Plan and Municipal Ordinance. The neighborhood park requirements for the future Great Park Neighborhoods development will be met within the Great Park Neighborhoods development, outside the OCGP. Details of specific park locations, ownership, sizes, and improvements will be presented to the Community Services Commission as a part of the Park Plan for the new residential developments. This is consistent with the findings of the OCGP FEIR.

The OCGP FEIR also discussed the Implementation Agreement regarding the Natural Community Conservation Plan (NCCP) for the Central/Coastal Orange County Sub-region of the Coastal Sage Scrub NCCP (July 1996), and that the Habitat Reserve will be established on approximately 974 acres in the northeastern portion of current Planning Area 51. It is noted that that acreage was not sold by the Navy, but rather transferred to the Federal Aviation Administration (FAA). The FAA has an agreement with the Department of the Interior (DOI) for the maintenance of extant gnatcatcher habitat. There are two designated drainage corridors and one wildlife corridor on the Site. The wildlife corridor is located on the southern portion of the project area. The adopted Overlay Plan also includes opportunities for museums, theaters, gardens and other cultural facilities, as well as a sports park, a golf course, and network of recreational riding and hiking trails throughout the project site.

School Services

The OCGP FEIR discussed in detail the proposed project, the related student generation, and the required school facilities. Based on an initial analysis, the IUSD estimated the need for one 13-acre K-8 site as well as funding for expansion and modernization of existing middle and high school facilities by project buildout.

4.11.3 Impacts Associated with the General Plan Amendments, Zone Changes, and Development Agreement Amendment

Law Enforcement

The project does not change the intensity or type of land uses and therefore, the demand on law enforcement is within the envelope of analysis presented in the OCGP FEIR.

Fire and Emergency Medical Services

Since the project does not change the intensity or type of land uses, the demand on fire protection is within the envelope of analysis presented in the previously certified OCGP FEIR.

Parks and Recreation

The project does not propose changes to the land use intensities and types and maintains all of these facilities and amenities as project features. Therefore, the project remains within the envelope analyzed in the previously certified OCGP FEIR.

School Services

Since the project does not propose change to the number and type of residential units or to any of the other land uses, the proposed project remains within the envelope analyzed in the previously certified OCGP FEIR.

4. Discussion of Checklist and Mitigation Measures

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant effects identified in and considered by the certified OCGP FEIR.

4.11.4 Mitigation from the OCGP FEIR and Applicability to the General Plan Amendments, Zone Changes, and Development Agreement Amendment

The OCGP FEIR determined the mitigation measures identified in other sections of the OCGP FEIR (Sections 5.1–5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of facilities for police, fire protection, park and recreation, and education to serve new growth expected in the northern portion of the City.

4.12 RECREATION

Issues related to Recreation are discussed above under Section 4.11, *Public Services*.

4.13 TRANSPORTATION/TRAFFIC

4.13.1 Environmental Setting

The OCGP FEIR describes the traffic and circulation conditions of a study area that encompassed 145 existing intersection analysis sites (2007) and an additional 11 future sites (Post 2025) in the City of Irvine, and portions of 7 adjacent jurisdictions including the Cities of Lake Forest, Mission Viejo, Laguna Hills, Laguna Woods, Aliso Viejo, Laguna Beach, and unincorporated areas of Orange County.

4. Discussion of Checklist and Mitigation Measures

The OCGP FEIR used the City of Irvine Traffic Performance Criteria, which establishes level of service (LOS) “A” to “D” as the peak-hour minimum acceptable service level. In its adoption of the Overlay Plan, the City General Plan Policy B-1 (C), which identified LOS E as acceptable for application to intersections in Planning Areas 13, 31, 32, 34, 35 and 39, was changed to include the effects of future development in Planning Areas 30 and 51 on the intersections in those Planning Areas. The City’s performance criteria also includes a standard of 0.02—roadway volume to capacity (V/C) ratio or the intersection capacity utilization (ICU)—to identify significant project impacts and associated need for improvements at both roadways and intersections.

At the time the OCGP FEIR was prepared the following 10 study area intersections experienced deficient peak hour traffic operations:

- Culver Drive and Walnut Avenue
- Culver Drive and University Drive
- Jeffrey Road and Alton Parkway
- Jeffrey Road and I-405 Northbound Ramps
- Bake Parkway and Irvine Boulevard
- Bake Parkway and Jeronimo Road
- El Toro Road and Aliso Creek Road
- Los Alisos Boulevard and Los Alisos Boulevard
- Muirlands Boulevard and Los Alisos Boulevard
- Trabuco Road and Alicia Parkway

4.13.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR concluded that the adopted Overlay Plan would cause an increase in traffic which would be substantial in relation to the existing traffic load and capacity of the street system—that is, a substantial increase in either the number of vehicle trips, the V/C on roadways, or congestion at intersections—in the year 2007, year 2025, and post-2025 scenarios (OCGP FEIR page 5.2-66):

Year 2007

- I-5 Freeway at Alton Parkway—southbound off-ramp (A.M.)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (A.M.)

Year 2025

- University Drive from the I-405 Freeway to Michelson Drive (A.M.)
- I-5 Freeway from Sand Canyon Avenue to Jeffrey Road—northbound (P.M.)
- I-5 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-405 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-5 Freeway at Jeffrey Road—southbound on-ramp (A.M.)
- I-5 Freeway at Sand Canyon Avenue—northbound on-ramp (P.M.)
- I-5 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-5 Freeway at Alton Parkway—southbound off-ramp (A.M.)
- I-5 Freeway at Bake Parkway—southbound off-ramp (A.M.)
- I-405 Freeway at Sand Canyon Avenue—northbound direct on-ramp (P.M.)
- I-405 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)

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- I-405 Freeway at Irvine Center Drive—southbound off-ramp (A.M.)
- SR-241 Tollway at Lake Forest Drive—southbound off-ramp (A.M.)
- SR-133 Freeway at Barranca Parkway—northbound direct on-ramp (P.M.)

Post-2025

- I-5 Freeway from Sand Canyon Avenue to Jeffrey Road—northbound (P.M.)
- I-5 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-405 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-5 Freeway at Jeffrey Road—southbound on-ramp (A.M.)
- I-5 Freeway at Jeffrey Road—northbound off-ramp (P.M.)
- I-5 Freeway at Sand Canyon Avenue—northbound on-ramp (P.M.)
- I-5 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-5 Freeway at Alton Parkway—southbound off-ramp (A.M.)
- I-5 Freeway at Bake Parkway—southbound off-ramp (A.M.)
- I-5 Freeway at El Toro Road—southbound off-ramp (P.M.)
- I-405 Freeway at Sand Canyon Avenue—northbound direct on-ramp (A.M./P.M.)
- I-405 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (A.M.)

Intersections

For the list of impacted intersections by analysis year, please refer to the following OCGP FEIR tables:

- Table 5.2-12 for year 2007
- Table 5.2-13 for year 2025
- Table 5.2-15 for post 2025

4.13.3 Impacts Analyzed in the OCGP FEIR and Addenda

The OCGP FEIR established trip thresholds (also known as “trip caps”) for each of the planning areas within the Great Park area. The trip cap is based on socioeconomic data average daily trip generation for the approved Orange County Great Park plan (the Overlay Plan area), which the Great Park Neighborhoods development is a part. The traffic impacts of the 2006 GPA/ZC project were analyzed in Addendum No. 2 by distributing project-related traffic over existing and future traffic conditions. The three future conditions (year 2010, year 2025 and post-2025) are based on the existing circulation system plus fully funded intersection improvements that were planned to be in place in each future time frame and the land use and development growth that is projected in each future time frame. In each case, project impacts were identified by comparing traffic conditions with and without the 2006 GPA/ZC project.

The circulation system performance criteria applied in the analysis were the criteria approved in the 2003 North Irvine Transportation Model (NITM) Program Nexus Study. The performance criteria were also consistent with the criteria adopted by the jurisdictions that are within the project study area. The criteria include components for arterial roadways, intersections, freeway/tollway ramps, and freeway/tollway mainline segments.

The results of the year 2010, year 2025 and post-2025 analysis indicated that the proposed 2006 GPA/ZC project was not forecast to significantly impact any roadway segment based on the second level of analysis

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(the City's peak hour link capacity analysis methodology), intersection, freeway/tollway ramp, or any freeway/tollway mainline segment.

Subsequently, as addressed in Addendum No. 3, a Traffic Study (refer to Appendix C of Addendum No. 3) for the Master Subdivision Map was prepared by Austin-Foust Associates, Inc. (dated April 11, 2007) to address the transportation impacts for the "project," i.e. backbone infrastructure with no new land use development in an interim year timeframe consistent with the TTM scope of work of the North Irvine Transportation Mitigation (NITM) Program Ordinance.

The Traffic Study analyzed the impacts of the Master Subdivision Map (MSM) application based on Year 2010 traffic conditions in the traffic analysis study area.

That proposed project was presented in Figure 4-2 to Addendum No. 3, and included Marine Way from Sand Canyon Avenue to Bake Parkway, Trabuco Road from the SR-133 to "O" Street, and the extension of Rockfield Boulevard to Marine Way as four-lane primary arterials, Ridge Valley (formerly "Y" Street) from Portola Parkway to Irvine Boulevard and "O" Street (formerly College Road) as four-lane secondary arterials, Trabuco Road east of "O" Street, "A" Street, "B" Street, "C" Street and "D" Street as two-lane local road ways. The mid-block lanes were shown in Figure 4-3 to Addendum No. 3. It should be noted that the proposed project included the construction of two lanes on "O" Street between Trabuco Road and Marine Way. The remaining two lanes will be built by the owner of the adjacent property (west side of "O" Street) when that property is developed.

An Internal Circulation Analysis (refer to Appendix D to Addendum No. 3) for the Master Subdivision Map in the Overlay Plan area was prepared by Austin-Foust Associates, Inc. to analyze the access and internal circulation for the Great Park Neighborhoods project. Project access was illustrated in Figure 4-4 in Addendum No. 3, which showed the proposed access locations for the Lifelong Learning District, the Park District, and the Transit Oriented Development (TOD) District. The project traffic loaded directly onto the surrounding arterial system at several locations. These include access to Irvine Boulevard via Ridge Valley; "O" Street (formerly College Road), "A" Street and "B" Street to Sand Canyon Avenue via Trabuco Road and Marine Way (and indirectly via Irvine Boulevard); and to Alton Parkway, Barranca Parkway, and Bake Parkway via Marine Way. Project access to the SR-133 is provided directly via a planned interchange at Trabuco Road and indirectly via "O" Street to the Irvine Boulevard interchange.

The intersections shown in Figure 4-5 in Addendum No. 3 were analyzed using intersection capacity utilization (ICU) values to determine level of service (LOS). The results of this analysis showed that all intersections operate at an acceptable level of service under Post-2025 buildout conditions. The intersections were then analyzed for signalization needs. Traffic signal warrants based on peak hour volumes (as adopted by the Federal Highway Administration and Caltrans) were used to determine the need for signalization. The results of this analysis were illustrated in the Figure 4-4 in Addendum No. 3. Based on the application of the warrants, it was determined that traffic signals should be installed at all of the analyzed intersections except for the intersections of "C" Street and "D" Street at Marine Way.

Recommended on-site traffic-control measures included one-way stop signs, signals, and roundabouts. Left-turn pocket lengths for project access intersections with exclusive left-turn lanes were estimated using the County of Orange Environmental Management Agency (EMA) Highway Design Manual. The estimated left-turn storage length requirements for the analyzed intersections were based on peak hour volumes.

Right-turn lanes will be provided for select project access locations on site where additional intersection capacity is needed. The length of the right-turn lane is a function of the adjacent through-traffic queue and LOS at the intersection. A minimum length of 250 feet plus a 120-foot transition will be provided at these

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locations. Right-turn deceleration lanes are provided along the periphery of the project site and along major roadways within the project site where higher speeds prevail (i.e., Irvine Boulevard, Trabuco Road, and on Marine Way with the exception of locations within the TOD District). The right-turn deceleration lane will be a minimum of 150 feet with a 120-foot transition, in order to provide a safe transition from the through lane to the right-turn lane.

4.13.4 Impacts Associated with the General Plan Amendments, Zone Changes, and Development Agreement Amendment

Bake Parkway/Marine Way Relocation

A traffic study analyzing the potential impacts of the Bake Parkway/Marine Way relocation was prepared by the City of Irvine and Parsons Brinkerhoff in June 2008 and is included in its entirety as Appendix B. The following summarizes the analysis and conclusions contained in the traffic study.

Roadway Segment Improvements

Individual arterial segments that operate at a deficient level of service are candidates for a special analysis to determine whether additional improvements are required. Peak-hour segment analysis was conducted for segments that were forecasted to operate at a deficient level of service in Year 2012, Year 2030, and Post-2030. The results of the analyses revealed that additional lanes are needed on Bake Parkway between I-5 NB Ramps and Rockfield Boulevard in Year 2012. The need for the additional lanes in Year 2012 was due to the completion of the Marine Way segment between Sand Canyon Avenue and Bake Parkway and also due to the relocation of the Bake Parkway/Marine Way intersection in Year 2012. Since the completion of Marine Way was not anticipated in the Without Project scenario until year 2030, the determination of the impacts for Year 2012 was deferred to Year 2030. In Year 2030, analysis showed that the segment of Bake Parkway between I-5 NB Ramps and Rockfield Boulevard did not result in deficient level of service. Therefore, there are no project related impacts in Year 2030. No arterial improvements are needed Post 2030. In conclusion, there are no project-related roadway segment improvements.

Intersection Improvements

Intersection analysis was conducted for all intersections in the NITM study area for Year 2012, Year 2030 and Post 2030. For intersections that are forecasted to operate at a deficient level of service, NITM fully funded improvements were applied where applicable. In Year 2012, three intersections (Sand Canyon Avenue at I-5 northbound ramps; Marine Way/Bake Parkway at Rockfield Boulevard and Bake Parkway at the I-5 northbound ramps) were found to be in need of additional improvements. The need for additional improvements at these three intersections is due to the completion of Marine Way (Sand Canyon Avenue to Bake Parkway) and the relocation of the Bake Parkway at Marine Way intersection in Year 2012. The No Project scenario in Year 2012 does not assume the completion of the entire Marine Way segment. Since the assumptions between the No Project and With Project are different in Year 2012, the additional improvements associated with these three intersections are deferred until Year 2030 to determine if improvements are needed. In Year 2030, when both Without and With Project assume the completion of the entire Marine Way from Sand Canyon Avenue to Bake Parkway, the intersections of Sand Canyon Avenue at the I-5 northbound ramps and Marine Way/Bake Parkway at Rockfield Boulevard did not have project related impacts. However, the intersection of Bake Parkway at the I-5 northbound ramps was found to be in need of additional improvements. In Post 2030, the intersections of Sand Canyon Avenue at the I-5 northbound ramps and Marine Way/Bake Parkway at the I-5 northbound ramps were found to be in need of additional improvements. The relocation of the Bake Parkway at Marine Way intersection includes the following project design features that will provide improvements at the intersections identified above.

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Project Design Features

Bake Parkway/I-5 Northbound Ramp

The General Plan approved Bake Parkway at Marine Way intersection provides direct access from the Bake Parkway at the I-5 northbound ramps intersection onto Marine Way. The proposed Bake Parkway at Marine Way intersection is relocated north (east) of the General Plan approved Bake Parkway at Marine Way intersection on Bake Parkway. The relocation of the Bake Parkway at Marine Way intersection includes project design features along Bake Parkway. Specifically, Bake Parkway is proposed to be widened north (east) of the existing I-5 bridge to provide four through lanes to Rockfield Boulevard while southbound (westbound) Bake Parkway from Rockfield Boulevard will be widened to provide four through lanes which reduces to three through lanes at the I-5 NB on-ramp. In addition, the proposed Bake Parkway at Marine Way relocation is also accompanied by improvements at the I-5 northbound off-ramp. The I-5 northbound off-ramp at Bake Parkway will be widened to provide one left-turn lane and three right-turn lanes. The project design features at this location needed for Year 2030 and Post-2030 operations, tied to the construction of the Bake Parkway and Marine Way intersection will provide acceptable levels of service at this intersection.

Sand Canyon/I-5 Northbound Ramp

The proposed relocation of the Bake Parkway/Marine Way intersection resulted in the need for restriping at the eastbound approach or the southbound approach of the Sand Canyon/I-5 Northbound Ramp intersection. As part of the project design features, the southbound approach at this intersection will be restriped to provide two left-turn lanes, four through lanes, and one right-turn lane. The restriping improvement provides ICU values lower than the Without Project condition.

The certified OCGP EIR analyzed the proposed Great Park circulation system and associated amendments to the City's Circulation Element at a programmatic level and listed Caltrans as a Responsible Agency. Project specific impacts will be addressed through the normal Caltrans process including a request for an Encroachment Permit, completion of a Project Study Report, and additional CEQA/NEPA review, if required.

Conclusion

The project would not produce or substantially worsen significant impacts identified in the OCGP FEIR. Consistent with the conclusions in the OCGP FEIR, traffic and circulation impacts associated with the project would be less than significant, as the future development would implement all applicable laws and regulations to reduce impacts on traffic and circulation.

The OCGP FEIR also disclosed the traffic analysis assumption that the cumulative impact of the adopted Overlay Plan traffic along with other regional growth at the identified ramp and freeway locations would be mitigated through a combination of regional programs that are the responsibility of other agencies, and if said programs are not implemented, the cumulative freeway/toll way ramp impacts would remain significant and unavoidable (OCGP FEIR page 7-19). The project would not alter this conclusion.

Removal of Golf Course Holes

Removal of the Golf Course Holes does not increase allowable intensities or uses within the Orange County Great Park and would not create any new traffic impacts beyond those evaluated in the OCGP FEIR.

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Reduction in Agricultural Acreage

Removal of the requirement to include 173 acres of agricultural use within the Lifelong Learning District will not generate any additional traffic since the proposed Amendments do not increase allowable intensities beyond that analyzed in the certified OCGP FEIR. Therefore, no new traffic impacts beyond those analyzed in the certified OCGP FEIR are anticipated.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP OCGP FEIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant effects identified in and considered by the certified OCGP FEIR.

4.13.5 Mitigation from the OCGP FEIR and Applicability to the General Plan Amendments, Zone Changes, and Development Agreement Amendment

The OCGP FEIR identified mitigation measures TRAN1 through TRAN8 which, if fulfilled prior to specified development approvals, would eliminate or substantially reduce the traffic and circulation effects of development under the adopted Plan. The measures are applicable to future development under the project.

- TRAN1 Prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions, and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs. The primary

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purpose of this mitigation measure is to reduce traffic, air quality and noise impacts. Should annexation into Spectrumotion not be approved, the landowner or subsequent project applicant shall develop and implement a similar transportation management plan containing the elements and meeting the criteria described below:

Transportation Management Plan (TMP)

The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for the Great Park Project. This document summarizes the key elements of the TMP.

1.0 Introduction

The purpose of this document is to provide an outline for a comprehensive TMP for the Great Park. This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.

It is the intent to annex Planning Area 51 and a portion of Planning 35 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in TMA. Membership dues provide the funding for the Association and its program, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.

In the event that annexation of PAs 51 and 35 into Spectrumotion is not approved, a TMP similar to that provided by Spectrumotion will be implemented. This document sets forth the components of the TMP should it be necessary.

2.0 Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

New Hire Orientation: Inform newly hired employees of commuting services available to them.

Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services (i.e., OCTA buses, Metrolink, Amtrak, etc.).

Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.

On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.

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Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.

Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.

Website: Maintain a website with all of their program information available.

Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.

Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.

Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.

3.0 Transportation Management Plan Implementation

As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Great Park. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.

- TRAN2 Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of the OCGP FEIR.
- TRAN3 Prior to issuance of any building permits for permanent improvements within Planning Areas 30 and 51, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the NITM Ordinance.
- TRAN4 Prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated traffic forecasts. The updated traffic study will evaluate the cumulative impact of the subject map and all previously approved or concurrently submitted maps. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City approved traffic study scope of work. The landowner or subsequent project applicant shall construct, bond for, or enter into a funding agreement for necessary improvements identified in the updated traffic study and/or participate in the City fee program (Tran 2 above) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of the OCGP FEIR.

4. Discussion of Checklist and Mitigation Measures

Traffic signals that are on-site or directly related to the Great Park development will be installed as warranted through the mitigation implementation plan process.

- TRAN5 In conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/toll way ramp locations in conjunctions with fulfilling its regional role, that landowner or subsequent project applicant and the City will take the following actions:
1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-toll way ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in the OCGP FEIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines.
 2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency.
 3. The landowner or subsequent project applicant shall enter into an agreement with the City prior to recordation of the first final map for each Master Tentative map or equivalent to establish the method and timing of payment of the identified percentage responsibility.
 4. The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or funding participation in a regional transportation improvement fee program, if adopted.
- TRAN6 The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 in the OCGP FEIR show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.
- TRAN7 Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a new Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-complete clause or any similar agreement restricting a public agency's authority to construct improvement.

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- TRAN8 Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of any building permits within the base property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdictions to amend the Orange County Master Plan of Arterial Highways (MPAH). Marine Way, Trabuco Road from the SR-133 toll way to College Road, and Y Street should be included on the MPAH.

4.14 UTILITIES AND SERVICE SYSTEMS

4.14.1 Environmental Setting

Potable Water

The OCGP FEIR described the potable water system for the project. The IRWD is the jurisdictional agency responsible for plan approval and water service to the project area. Planning Areas 30 and 51 are within Zone 3 North and Zone 4 of the IRWD water system. The existing on-site distribution system includes a network of distribution system pipelines, six reservoirs, and two pump stations.

Recycled Water

As stated in the OCGP FEIR, IRWD is the jurisdictional agency responsible for plan approval and water service for the project area. Recycled water is currently supplied to Planning Areas 30 and 51 via a 12-inch IRWD Zone B pipeline and connecting to an 8-inch former military base pipeline in the southwest corner of the property.

Sewer

As stated in the OCGP FEIR, IRWD is the jurisdictional agency responsible for plan approval and sewer service for the project area. Planning Areas 30 and 51 are served by a two-branched system with flow, mainly by gravity, from the northeast to the southwest. The system includes a series of pipes ranging from 6 to 15 inches in diameter.

Solid Waste

The OCGP FEIR discussed in detail the environmental setting for solid waste for the project. Solid waste at the project site is collected by Waste Management, Inc., and is disposed of at the Frank R. Bowerman Landfill owned by the County of Orange Integrated Waste Management Department (IWMD).

The IWMD's Countywide Integrated Waste Management Plan (CIWMP) was approved in 1996 pursuant to California Integrated Waste Management Board requirement. The CIWMP shows that there is sufficient solid waste disposal capacity in the County for the next 30 years.

Energy and Communications

Southern California Edison (SCE) serves the project via two primary substations. The Southern California Gas Company serves Planning Areas 30 and 51. AT&T is the communications provider for these Planning Areas. Detailed information regarding the environmental setting of dry utilities was included in the OCGP FEIR.

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4.14.2 Impacts Identified in the OCGP FEIR and Addenda

Potable Water

The OCGP FEIR projected the potable water demand to be less than 1.75 million gallons per day (MGD) calculated for the land uses proposed within the project. Since the Proposed Entitlements do not include any additional intensity or change in the mix of land uses, the demand projection is consistent with the OCGP FEIR and addenda. As stated in the OCGP FEIR, selected portions of the existing potable water facilities are assumed to remain in place and operational through project buildout. The OCGP FEIR stated that the existing system will be expanded and integrated into the IRWD system and thus provide a backbone service to all users on the project site. The OCGP FEIR assumed a potable water system that would follow the routing of existing and proposed roadways. The approved Master Subdivision Map includes the alignment for water lines throughout Great Park Neighborhoods, which was an additional project design detail and not a change in the project.

Recycled Water

The OCGP FEIR stated that on January 27, 2003, the IRWD Board of Directors approved the assessment of water supply for the project. According to the findings of the assessment, the IRWD has determined that a sufficient non-potable water supply is available to serve the project. Since the proposed entitlements do not increase the intensity or change the mix of land uses, the total non-potable water supplies will meet the project demand.

The OCGP FEIR stated that the implementation of the project would require the expansion of the recycled water transmission lines to serve the project. It was assumed that selected on-site facilities would remain in place and operational through buildout. The OCGP FEIR stated that the existing system will be expanded and integrated into the IRWD system and provide a backbone service to all users in the project site. The OCGP FEIR assumed a non-potable system that would follow the routing of existing and proposed roadways within the project. The approved Master Subdivision Map included the alignment for the recycled water lines throughout Great Park Neighborhoods, which was an additional project design detail and is not a change in the project.

Sewer

The OCGP FEIR stated that the IRWD will continue to provide sewer service to the project. The IRWD has indicated that it would have sufficient capacity to meet the future demand; however, additional wastewater treatment capacity may need to be purchased by project proponents as specific development projects come forward. The OCGP FEIR stated that projected buildout demand for sewer services based on the land uses in the project were 0.89 MGD and that the project would require an increase of sewer transmission capacity to serve the project. The proposed sewer system would preserve selected, existing on-site facilities in place and operational through buildout and would expand the system through extension of existing sewer lines. The OCGP FEIR stated that additional IRWD maintenance and equipment could be required to operate and maintain the proposed system.

The adopted Master Subdivision Map ensured that any projected use of the existing sewer system would be in conformance with all applicable regional and state requirements and the mitigation requirements of the OCGP FEIR and addenda. It included the alignment for the sewer lines throughout the project, which was an additional project design detail and did not change the project description.

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Solid Waste

As stated in OCGP FEIR, demolition of existing runways, buildings, and structures within PA 51 will generate debris materials that will have to be disposed of at local landfills. Green waste will be also generated as a result of ongoing park and landscaping maintenance. In addition to the City requirement for recycling of construction and demolition material to reduce waste, solid waste reduction will also be achieved through compliance with AB 939, which requires that a minimum of 50 percent of the solid waste generated in cities in California be diverted from landfills. Further, SB 1374 requires that all cities implement measures that require diversion of 75 percent of all construction and demolition waste from landfills. While the OCGP FEIR identified a potential impact related to solid waste, it concluded that, with the recommended, City-adopted mitigation measures, the impact would be less than significant.

Energy and Communications

The Overlay Plan has proposed to install the new systems generally along a routing that coincides with the existing and proposed roadway within the project. A portion of the routing, (specifically the portion along the "loop road") is not included in the project and will require an adjustment to the routing system for the expansion of the dry utilities system. However, the expansion of the system will generally coincide with the existing and proposed roadways consistent with the OCGP FEIR. The OCGP FEIR further stated that the specific impacts of constructing new energy and communication transmission facilities could not be determined at the program level analysis, as site-specific plans for the installation of the energy and communication transmission backbone system have not been prepared. The general significant impacts associated with the construction and operation of public facilities, including the project's construction and operation of the transmission system, were addressed in the OCGP FEIR.

4.14.3 Impacts Associated with the General Plan Amendments, Zone Changes, and Development Agreement Amendment

Potable Water

The changes proposed in the General Plan Amendment for the Bake Parkway/Marine Way intersection relocation, and those proposed in the General Plan Amendment, Zone Change, and Development Agreement Amendment relating to the Heritage Fields property do not allow any additional development intensity. Therefore, the demand projection for potable water is consistent with the OCGP FEIR and addenda. No additional mitigation measures or change in any mitigation measure is required.

Recycled Water

The OCGP FEIR stated that on January 27, 2003, the IRWD Board of Directors approved the assessment of water supply for the project. The changes proposed in the General Plan Amendment for the Bake Parkway/Marine Way intersection relocation, and those proposed in the General Plan Amendment, Zone Change, and Development Agreement Amendment relating to the Heritage Fields property do not allow any additional development intensity, and the total nonpotable water supplies would meet the project demand, as analyzed in the OCGP FEIR.

Sewer

The changes proposed in the General Plan Amendment for the Bake Parkway/Marine Way intersection relocation, and those proposed in the General Plan Amendment, Zone Change, and Development Agreement Amendment relating to the Heritage Fields property do not allow any additional development intensity. Therefore, demand projections and proposed system expansion would remain the same. The OCGP FEIR

4. Discussion of Checklist and Mitigation Measures

further stated that the specific environmental impact of constructing new sewer facilities to serve the project cannot be determined at the program level analysis, as site-specific plans for the installation of the sewer backbone system had not been prepared. However, the general significant impacts associated with the construction and operation of public facilities, including the project's construction and operation of the sewer system, has been addressed in the OCGP FEIR.

Solid Waste

As stated in OCGP FEIR, demolition of existing runways, buildings, and structures within Planning Area 51 would generate debris materials that would have to be disposed of at local landfills. Green waste would also be generated as a result of ongoing park and landscaping maintenance. The project would not change the land uses or intensity; therefore, no change in impact to solid waste is anticipated. No additional mitigation measures or changes in any mitigation measure are required.

Energy and Communications

The changes proposed in the General Plan Amendment for the Bake Parkway/Marine Way intersection relocation, and those proposed in the General Plan Amendment, Zone Change, and Development Agreement Amendment relating to the Heritage Fields property do not allow any additional development intensity and would have no impact on the fuel and energy consumption projected for the project, which the OCGP FEIR previously analyzed in detail. The analysis and conclusions in the OCGP FEIR do not change since the intensity and types of land uses in the revised plan have not changed from those previously analyzed in the OCGP FEIR.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR.

This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR.

This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures

4. Discussion of Checklist and Mitigation Measures

that would substantially reduce one or more of the significant effects identified in and considered by the certified OCGP FEIR.

4.14.4 Mitigation from the OCGP FEIR and Applicability to the General Plan Amendments, Zone Changes, and Development Agreement Amendment

The OCGP FEIR determined the mitigation measures identified in other sections of the OCGP FEIR (5.1-5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of facilities for the following types of utilities to serve new growth expected in the project area:

- potable water
- recycled water
- wastewater
- energy and communication transmission facilities

Mitigation Measures SW1 through SW5 apply to future demolition and new construction, and would be carried forward through permit approvals for subsequent development projects. The proposed project would neither change these mitigation measures nor their application to future development projects.

SW1 It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other deconstruction of the aged structures and property, including but not limited to buildings and runways, at MCAS El Toro is contaminated with lead-based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the MCAS El Toro site by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.

If it is determined by the technical evaluation that material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as “waste-to-energy” (WTE) plants.

SW2 For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant must submit a written plan to the City and implement such plan to ensure that 75% of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.

SW3 For that solid waste which the technical study deems to be suitable for recycling, the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project,

4. Discussion of Checklist and Mitigation Measures

land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75% of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180 ("Recycling" does not include transformation, as defined in Public Resources Code Section 40201).

- SW4 To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by "weight ticket" receipts from state-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.

To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.

- SW 5 For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50% of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.

4.15 DETERMINATION

Based on the information and analysis in this Initial Study/Addendum, and pursuant to Section 15162 of the State CEQA Guidelines, the City has determined that:

1. There are no substantial changes to the project that will require major revisions to the OCGP FEIR due to new, significant environmental effects or a substantial increase in the severity of impacts identified in the OCGP FEIR;
2. Substantial changes have not occurred in the circumstances under which the project is being undertaken that will require major revisions of the OCGP FEIR to disclose new, significant environmental effects or a substantial increase in the severity of the impacts identified in the OCGP FEIR; and
3. There is no new information of substantial importance not known at the time the OCGP FEIR was certified that shows any of the following:
 - a) The project will have any new significant effects not discussed in the OCGP FEIR;
 - b) There are impacts that were determined to be significant in the OCGP FEIR that will be substantially increased;
 - c) There are additional mitigation measures or alternatives to the project that would substantially reduce one or more of the significant effects identified in the OCGP FEIR; or
 - d) There are additional mitigation measures or alternatives that were rejected by the project proponent that are considerably different from those analyzed in the OCGP FEIR that would substantially reduce any significant impact identified in that EIR.

5. Organizations and Persons Consulted

5.1 PREPARERS

CITY OF IRVINE (LEAD AGENCY)

Community Development Department

Doug Williford, AICP	Director of Community Development
Barry Curtis, AICP	Principal Planner
Diane Vu	Senior Planner
Genene Lehotsky	Senior Planner
Michelle Drouse	Associate Planner

City Attorney

Phil Kohn	City Attorney
Jeffrey Melching	Assistant City Attorney

Heritage Fields El Toro, LLC

Lynn Jochim	Division President
Jennifer Bohen	Manager of Engineering, Planning/Design

5. Organizations and Persons Consulted

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Appendix A

*Proposed General Plan and Zoning Code Text, Table, and
Figure Changes*

Appendices

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GENERAL PLAN AMENDMENTS

provides for offices, industry, and support commercial, mixed with high-density housing, and a variety of activities. Typical uses are professional/medical offices, industrial manufacturing, research and development, support service retail, restaurants, multifamily housing and hotel/motels.

Multi-use

Definition: The integration of a variety of land uses and intensities.

Multi-use. This land use category includes uses which are high intensity and urban in character. Typical uses include medium to high density residential, commercial, institutional, and offices.

Orange County Great Park

Definition: The development of regionally significant conservation and open space, parks and recreation, educational facilities, and other public-oriented land uses, integrated with privately developed multi-use, residential, commercial, and industrial properties, at the former MCAS El Toro site.

The Orange County Great Park land use category ensures the development of a Great Park and other cultural and institutional uses at the former MCAS El Toro site. The site will serve as a countywide asset consistent with the intent of the citizens of Orange County, who adopted Measure W, the “Orange County Central Park and Nature Preserve Initiative,” in March 2002. This land use category includes habitat preservation, conservation and open space, parks and recreation, education, institutional, and other public-oriented land uses as well as opportunities for the private development of agriculture, research and development, commercial, transit-oriented, and residential development. The property owners

entered into a development agreement with the City on July 12, 2005; therefore allowing development to occur at maximum intensities referred to as the “Overlay Plan”. These intensities are identified in Table A-1.

Military

Definition: Land under the jurisdiction of the United States.

The Military land use category currently shown on the Land Use Element map shall be retained within the General Plan until such time as the City’s planning efforts establish new and compatible land uses for MCAS Tustin.

Conservation and Open Space

Definition: Land or water that is essentially unimproved for the purposes of management and natural resources, production of preservation or enhancement of resources, outdoor recreation, or public health and safety.

TABLE A-1
MAXIMUM INTENSITY STANDARDS BY PLANNING AREA
GENERAL PLAN FOOTNOTES

1. For planning areas not yet annexed, the County of Orange maintains land use authority and controls related regulatory activities. Dwelling units and square footage totals may not reflect the Orange County General Plan.
2. This designation allows a variety of land uses, including the high-density residential category.
3. Refer to Objective A-4, Policy (a) for additional institutional category requirements. Within each planning area, actual intensity is regulated by the appropriate agencies involved. The development intensity for institutional uses is in addition to the development intensity allowed in the adopted land use category.
4. This designation provides for a variety of land uses and is based upon 63,476 AM (peak hour), 76,173 PM (peak hour) and 812,673 ADT as the maximum intensity regulating factor (refer to the IBC database), with the exception of Planning Area 4.
5. This designation provides for a variety of land uses, which are regulated by the Irvine Center Development Agreement for PA 33. The development intensity is derived from the Irvine Center Development Agreement adopted August, 1993. The development intensity for PA 33 was determined by converting the allowable points (6,300) to gross leaseable square feet and then multiplying by 1.15 to achieve a gross floor area. As such, the Irvine Center Development Agreement is estimated to allow approximately 8,388,980 square feet of gross floor area. An additional 1,514,000 square feet of gross floor area is permitted subject to the Zoning Ordinance. The actual development intensity within PA 33 may exceed these estimates subject to the traffic provisions contained in the Development Agreement. Within Planning Area 4, this designation provides for a variety of land uses as provided by the Lower Peters Canyon Development Agreement.
6. The permitted range of dwelling units (low-high) may be less than that allowed by the available acreage. The residential intensity ranges are based on estimated gross figures and may be adjusted through technical refinements to reflect more accurate information at subsequent planning levels.
7. Within Planning Area 12, the multi-use designation allows medium high or high density residential use.
8. On September 26, 1988, the "Memorandum of Understanding Implementing Initiative Resolution 88-1" was approved, establishing a 10,600 dwelling unit cap for Planning Areas 17, 18, 22, 26 and 27. In addition, the Memorandum permits up to 800 dwelling units in lieu of commercial in Planning Area 26, for an overall cap of up to 11,400 dwelling units.
9. Reserved.

10. The University of California controls land use authority and related regulatory activities. Dwelling unit totals are based on the University's Long-Range Development Plan.
11. Total residential Dwelling Units within Planning Area 4 shall not exceed 8,000.
12. Residential uses within Sector 11 of Planning Area 4 shall not exceed 2,830 ADT unless additional environmental documentation ensures traffic mitigation.
13. Natural Communities Conservation Program [NCCP] Facilitation Agreement [Approved 7-24-96]. These units can be located anywhere in the City upon mutual agreement of The Irvine Company and the City.
14. Derived from Planning Area 22 Zone Change [16868-ZC].
15. In Planning Area 15, a total of 50,526 square feet of Institutional Uses are located on a site designated as High Density Residential. This square footage is not included in the Planning Area 15 total intensity caps.
16. The Multi-Use category intensity will be used for Transit Oriented Development in Planning Areas 30 and 51 and Lifelong Learning District in Planning Area 51. The units and square footage will be divided between Planning Areas 30 and 51 through the implementation of a Master Plan for Transit Oriented Development.
17. The 1,254,5000 square feet in Institutional/Public Facilities in Planning Area 51 includes 122,500 square feet for Orange County Transit Authority facilities; 300,000 square feet for County of Orange facilities; 263,000 square feet for warehousing for homeless providers (Buildings 319, 322, and 360); 25,000 square feet for a golf course clubhouse (including a golf course with at least 18 holes); 468,000 square feet of institutional uses; 26,000 square feet of sports park; and 50,000 square feet for a mausoleum and mortuary.
18. In order to develop at the maximum intensities as established under the Overlay Plan for Planning Areas 30 and 51, the property owner has entered into a development agreement, (recorded on July 12, 2005), which will require the dedication of land and the development or funding of infrastructure improvements in excess of the City's standard requirements, and the commitment to long-term maintenance of public facilities.
19. To the extent that residential units are built in PA 33, within the 4.7C Urban Commercial District, a corresponding reduction in the allowable non-residential intensity shall occur in terms of equivalent traffic generated. The actual amount of reduction in non-residential intensity will be based upon a conversion rate of 648 square feet of non-residential intensity per dwelling unit (as established in the traffic analysis "City of Irvine Spectrum 1 Traffic Analysis" July 2003). Revisions to the non-residential and residential intensity figures for

PA 33 (consistent with this note) are authorized without the need for a subsequent general plan amendment.

20. The total residential dwelling units within Planning Areas 10, 11, 12, 14, 15, 19, 20, 21, 24, and 38 shall not exceed the figures reflected in the Maximum Dwelling Units column for each planning area.
21. The maximum residential density in the 5.0 IBC Mixed Use district in Planning Area 36 is 0-52 dwelling units per gross acre except that the maximum allowable density may be increased to 0-56 dwelling units per gross acre if the development provides 20 percent of the units in the development as on-site affordable housing in accordance with the following criteria:
 - ◆ Five percent of the units for Income II (30-50 percent of median area income); and
 - ◆ Five percent of the units for Income III (50-80 percent of median area income); and
 - ◆ Ten percent of the units for Income IV (80-120) percent of median area income).
22. The maximum Dwelling Units in Planning Area 36, the Irvine Business Complex, are specifically assigned to the following projects/properties:

Project / Address	Approved Intensity
<i>Existing</i>	
Charter Apartments	403 units
The Metropolitan	261 units
Villa Sienna	1,442 units
Toscana	563 units
Irvine Inn	192 units
<i>Approved</i>	
Central Park	1,380 units
Park Place (potential remaining approval)	1,416 units
Marquee at Park Place	232 units
MetLife Apartments	481 units
Essex Apartments	132 units
R. D. Olson/Legacy Partners	290 units
The Lofts @ Von Karman	115 units
Campus Center Apartments	341 units
The Plaza - Irvine (Phases I & II)	202 units
Watermarke Apartments	535 units

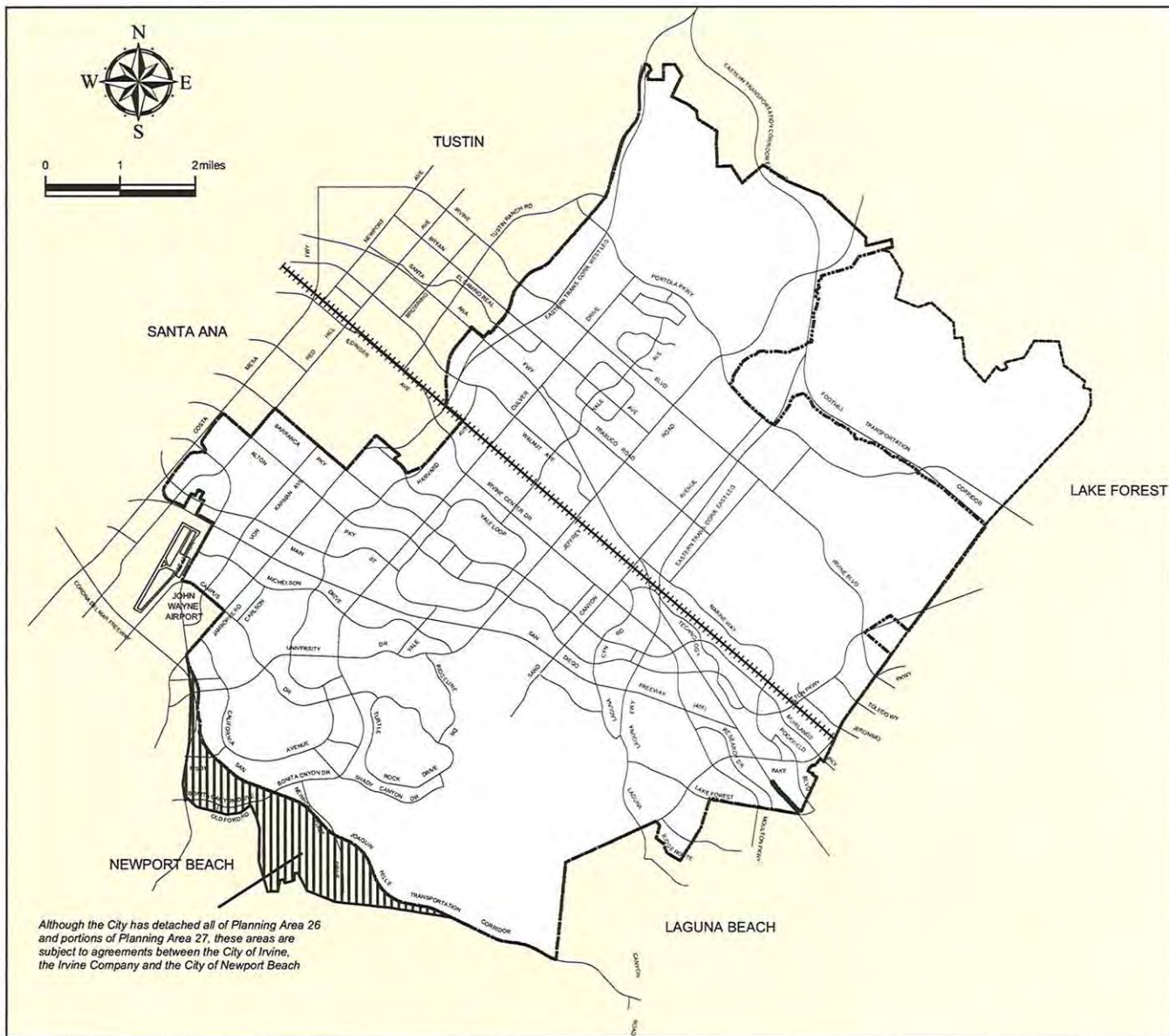
23. Development Agreement 00310468-PDA vested certain entitlements for the Park Place development (collectively, the "Vested Park Place Entitlements"). The Vested Park Place Entitlements include the right to allocate the maximum permitted intensity of development within Park Place among the various permitted and conditionally permitted uses utilizing the development points system set forth in Section V.E.-736.5 of the 1989 Zoning Code (the "1989 Point System"). The maximum intensity limits for Planning Area 36 allow for up to 3,090 dwelling units within Park Place subject to an overall intensity limit 8,567,880 total

points under the 1989 Point System which have been allocated to Park Place under the Vested Park Place Entitlements. To the extent that the 3,090 maximum unit entitlement is not developed at Park Place, non-residential uses may be developed at Park Place by utilizing unused points under the 1989 Point System. Total construction within Park Place shall not exceed any of the following intensity limits: 3,090 residential dwelling units and 8,567,880 points under the 1989 Point System.

24. To the extent residential units are built in PA 33 within the 4.7C Urban Commercial District, a corresponding reduction in the allowable non-residential intensity shall occur in terms of equivalent traffic generated. The actual amount of reduction in non-residential intensity will be based on a conversion rate of 648 square feet

TABLE A-2
MAXIMUM INTENSITY STANDARDS:
LAND USE ACREAGE BY PLANNING AREA
GENERAL PLAN FOOTNOTES

1. Community Parks and some open space spines located within Recreation land use category in Planning Areas 4,5,10, and 38 are conceptual. Unless specified in the Conservation and Open Space Element or the park code, the size of the open space spines or Community Parks will be determined concurrent with subsequent development applications.
2. Planning Area 3 includes a 730 acre Landfill overlay on the Recreational land use designation.
3. Planning Area 22 includes a 620 acre Golf Course overlay on the Residential land use designation.
4. Planning Area 27 includes a 58 acre Landfill overlay on the Recreational land use designation.
5. Planning Area 29 includes a 33 acre Landfill overlay on the Recreational land use designation.
6. Institutional acreage within Planning Area 4 represents a goal, not a requirement. Per the Lower Peters Canyon Development Agreement, institutional uses for Planning Area 4 include: public & private schools; churches; libraries; post offices; police stations; fire facilities; day care centers; utilities; public facilities; hospitals; government offices; educational facilities; non-profit housing, and institutional residential.
7. The Planning Area 30 and 51 total acreage figures include all General Plan Land Use categories as well as railroad and roadway rights-of-way. The railroad and roadway rights-of-way acreage has not been divided into individual General Plan Land Use categories. Therefore, the total acreage in Planning Areas 30 and 51, although correct, is greater than the sum of the individual General Plan Land Use categories in each planning area.
8. In order to develop at the maximum intensities under the Overlay Plan for Planning Areas 30 and 51, the property owner has entered into a development agreement (recorded on July 12, 2005), which requires the dedication of land and the development or funding of infrastructure improvements in excess of the City's standard requirements, and the long-term maintenance of public facilities.
9. A maximum of 7,800 students will be allowed for the institutional/educational use within the Lifelong Learning District.



City of Irvine General Plan

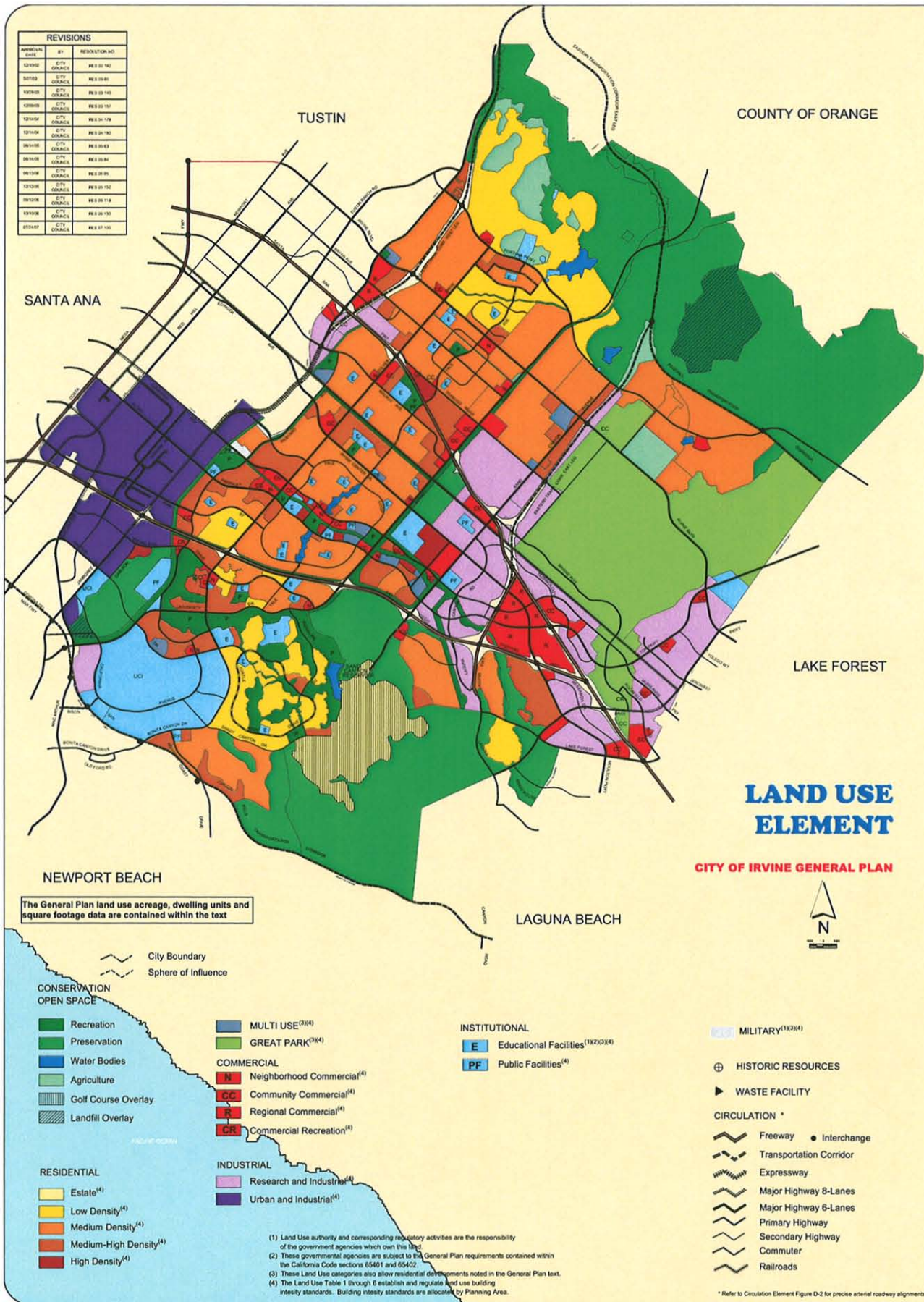


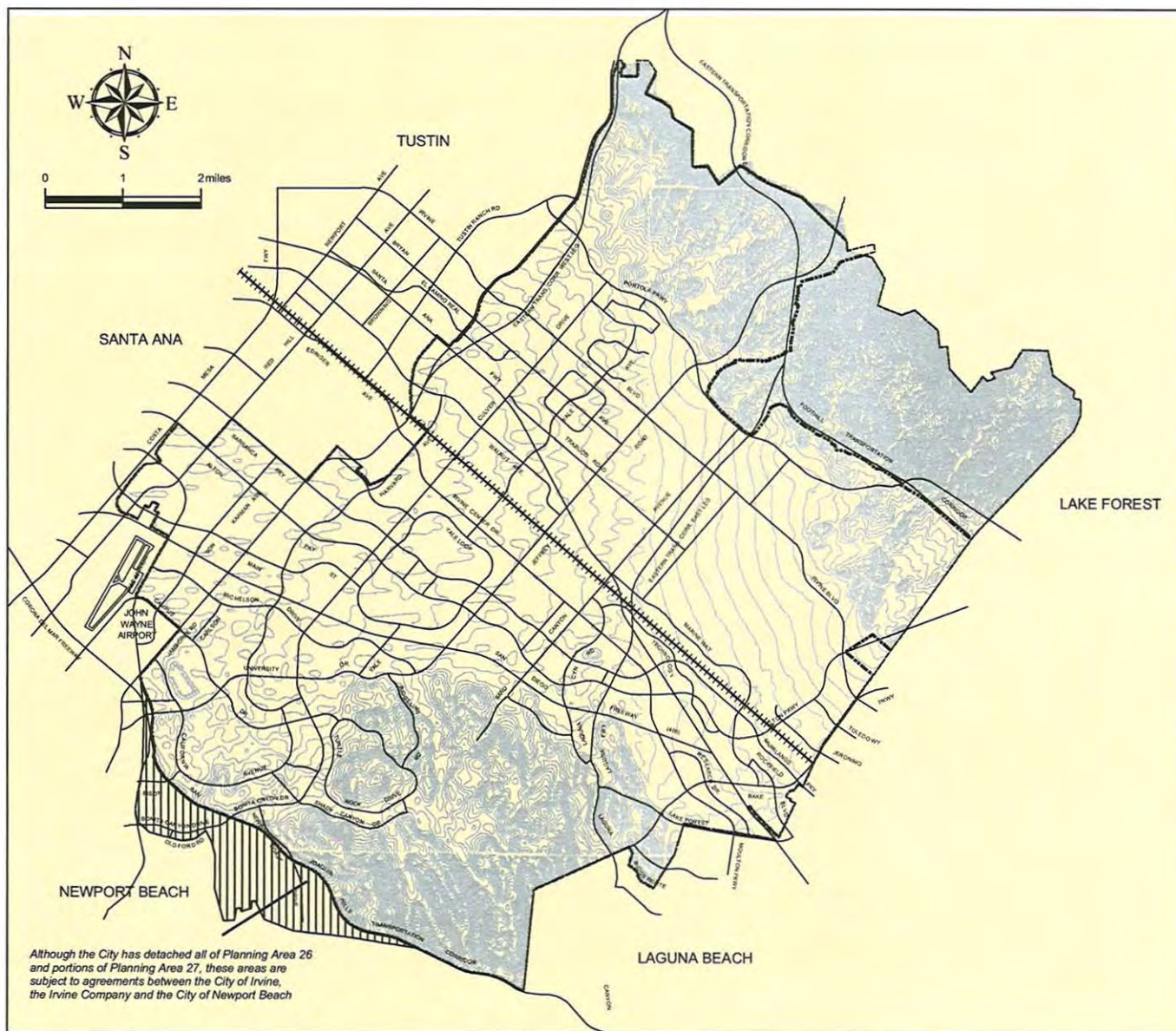
CITY OF IRVINE

LEGEND

- City Sphere of Influence
- City Boundary

REVISIONS		
APPROVAL DATE	BY	REVISION NO.
12/19/92	CITY COUNCIL	REV 01-162
10/17/93	CITY COUNCIL	REV 01-163
10/18/93	CITY COUNCIL	REV 01-164
12/15/93	CITY COUNCIL	REV 01-165
12/15/93	CITY COUNCIL	REV 01-166
12/15/93	CITY COUNCIL	REV 01-167
12/15/93	CITY COUNCIL	REV 01-168
12/15/93	CITY COUNCIL	REV 01-169
12/15/93	CITY COUNCIL	REV 01-170
12/15/93	CITY COUNCIL	REV 01-171
12/15/93	CITY COUNCIL	REV 01-172
12/15/93	CITY COUNCIL	REV 01-173
12/15/93	CITY COUNCIL	REV 01-174
12/15/93	CITY COUNCIL	REV 01-175
12/15/93	CITY COUNCIL	REV 01-176
12/15/93	CITY COUNCIL	REV 01-177
12/15/93	CITY COUNCIL	REV 01-178
12/15/93	CITY COUNCIL	REV 01-179
12/15/93	CITY COUNCIL	REV 01-180





City of Irvine General Plan

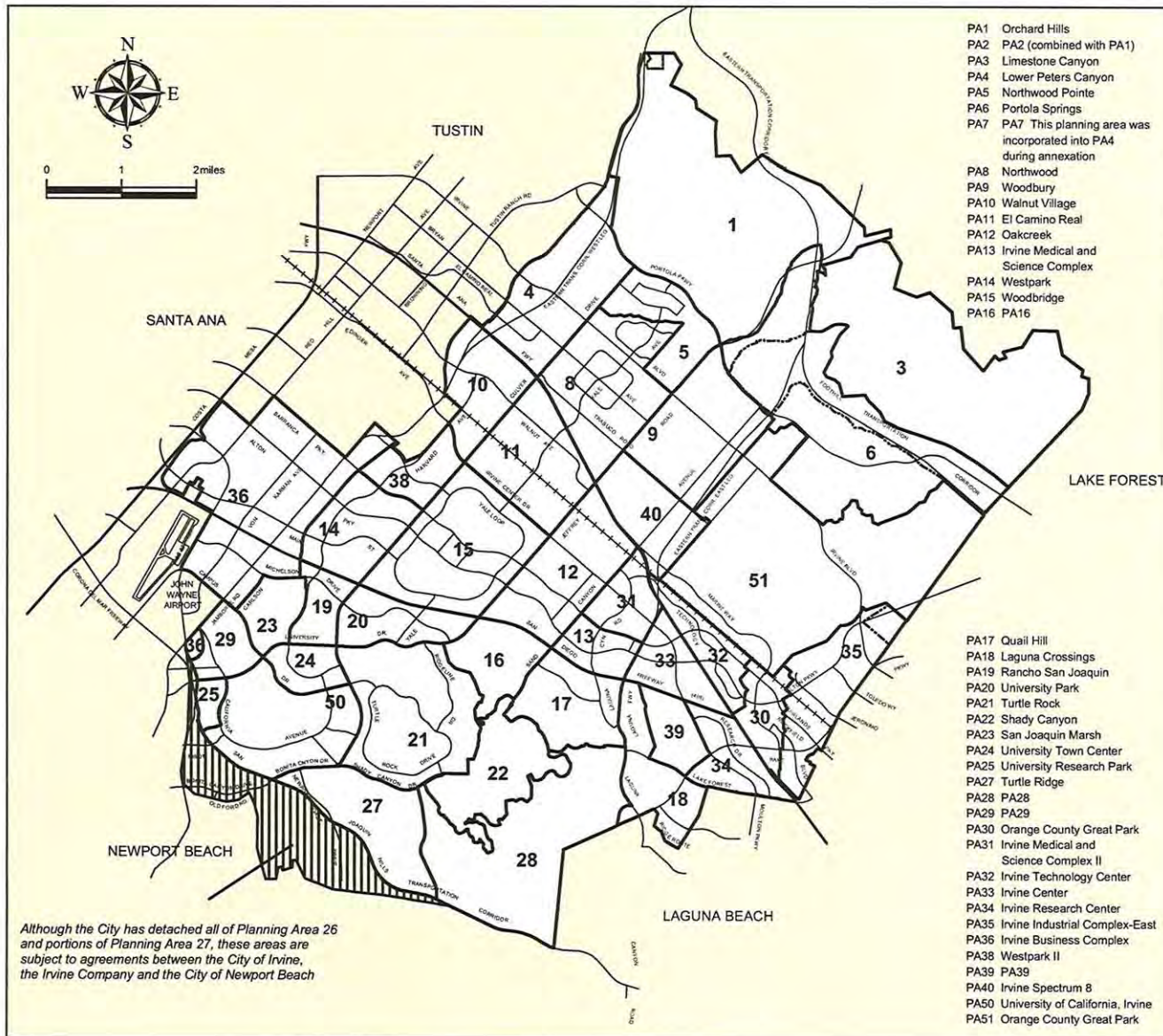


Figure A-1

VICINITY MAP

LEGEND

- City Sphere of Influence
- . - . - City Boundary
- _____ Topographical Contour Line (interval is 25 feet)



City of Irvine General Plan



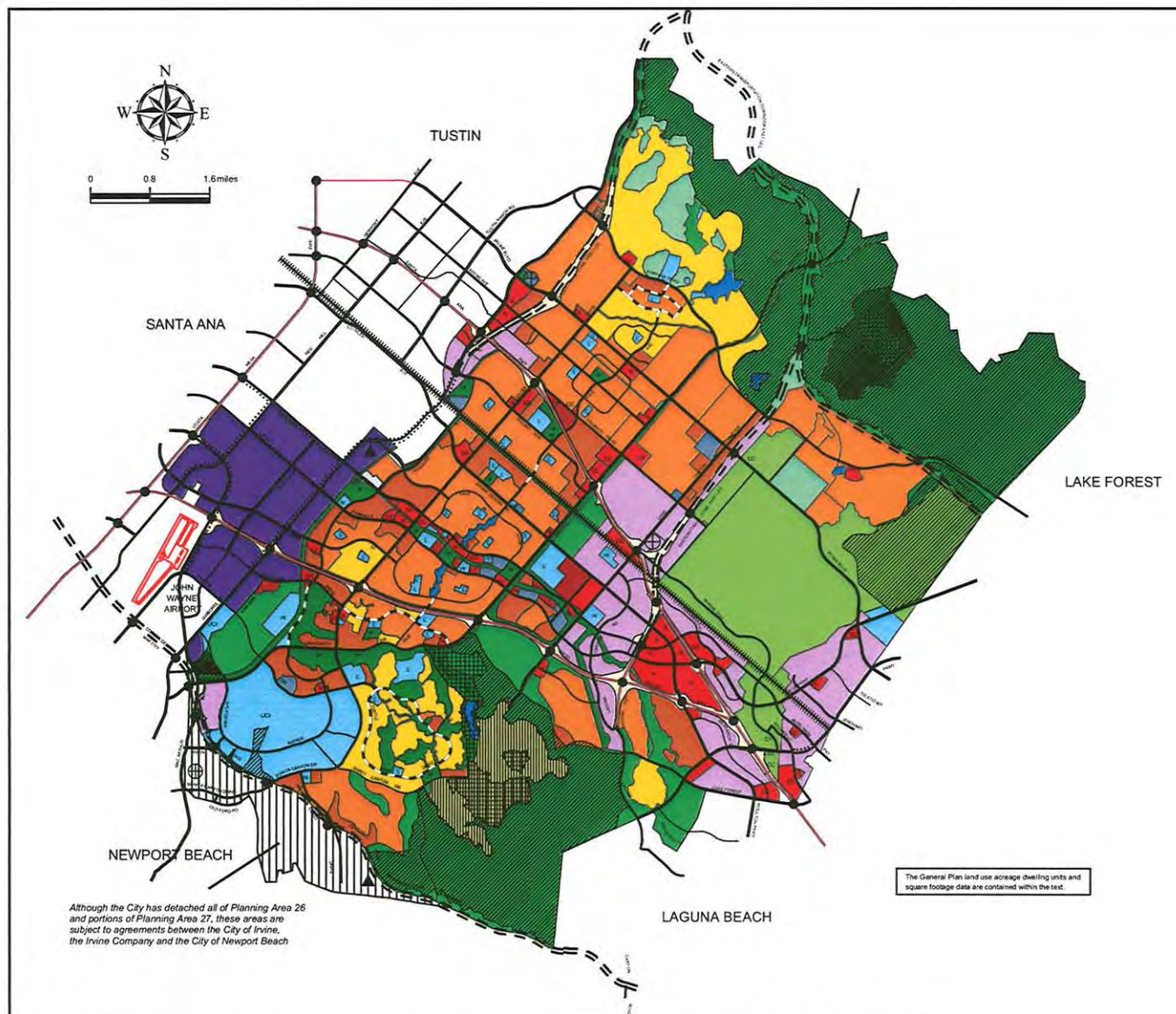
Figure A-2

PLANNING AREAS

LEGEND

- City Boundary
- Planning Area Boundary

NOTE: Unshaded area is City & Sphere of Influence



City of Irvine General Plan



Figure A-3

LAND USE

LEGEND

CONSERVATION OPEN SPACE



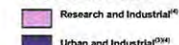
COMMERCIAL



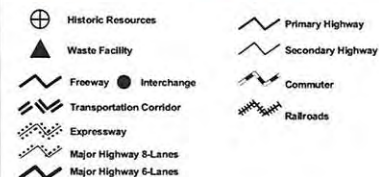
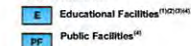
RESIDENTIAL



BUSINESS/INDUSTRIAL

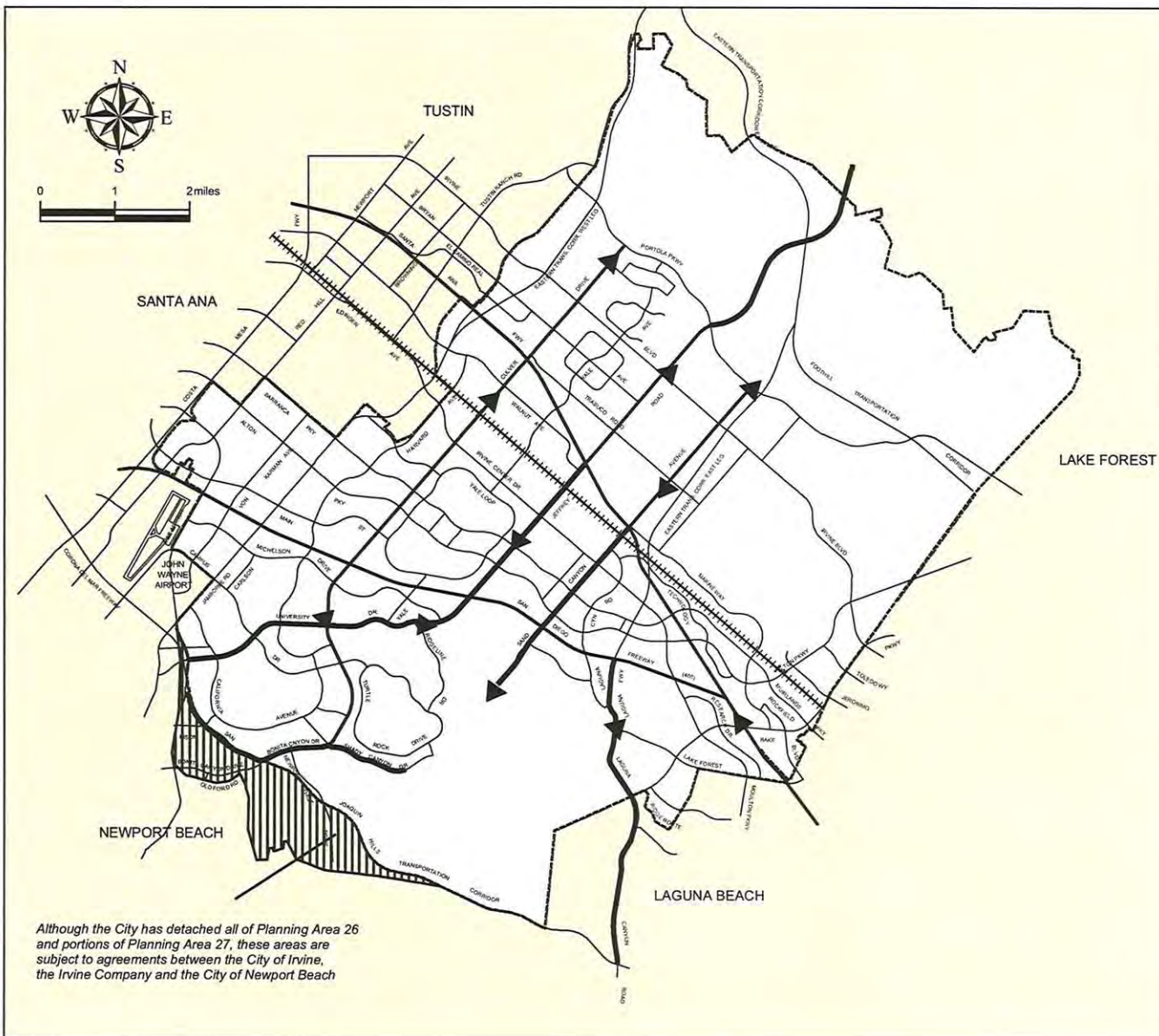


INSTITUTIONAL



NOTES TO LAND USES

- (1) Land Use authority and corresponding regulatory activities are the responsibilities of the government agencies which own this land.
- (2) These governmental agencies are subject to the General Plan requirements contained within the California Government Code sections 65401 and 65402.
- (3) These Land Use categories also allow residential developments noted in the General Plan text.
- (4) The Land Use Element Table A-1 establishes and regulates land use building intensity standards. Building intensity standards are allocated by Planning Area.






City of Irvine General Plan

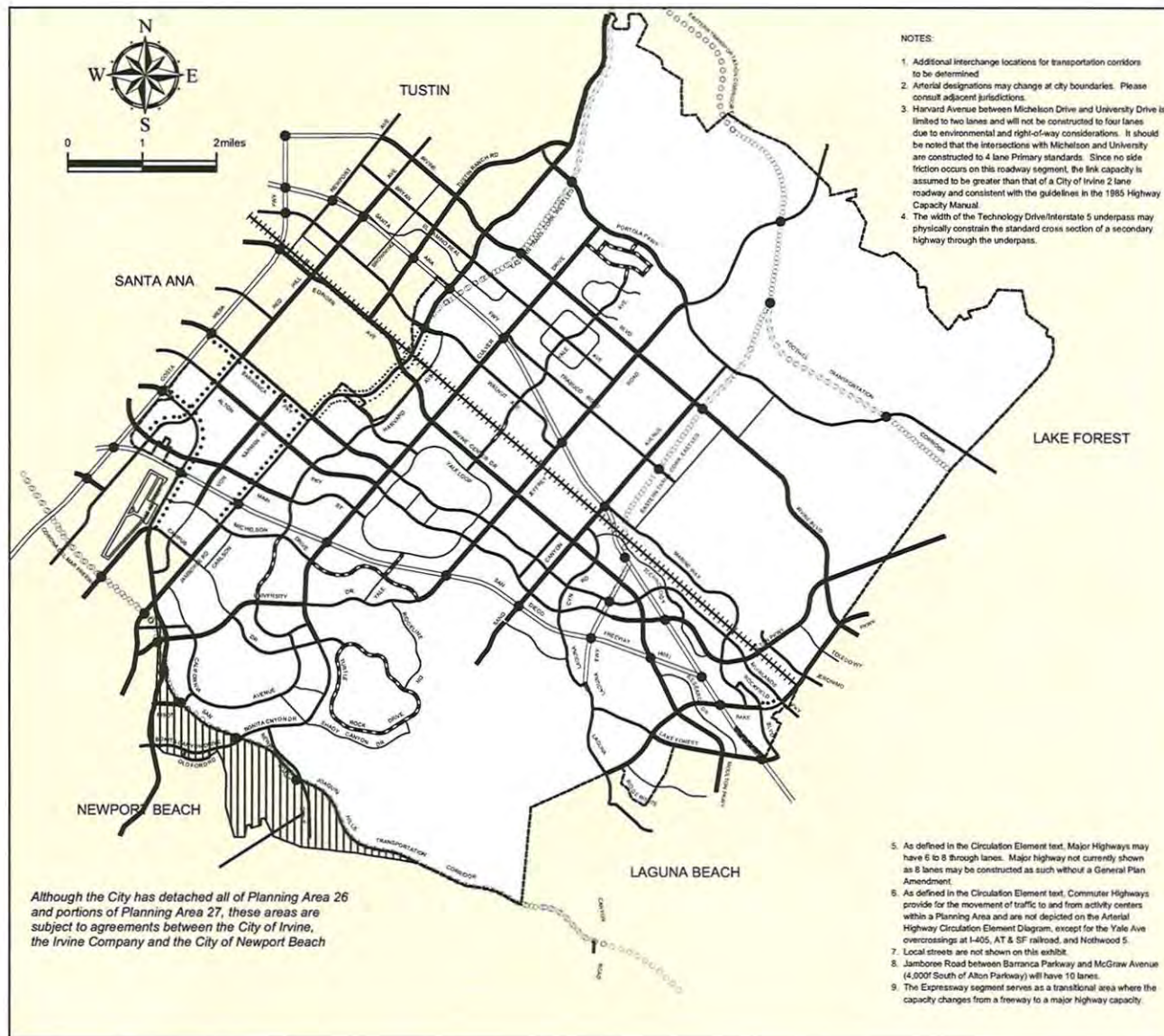


Figure A-4

SCENIC HIGHWAYS

LEGEND

-  Urban Character
-  Rural or Natural Character
-  Major View



City of Irvine General Plan



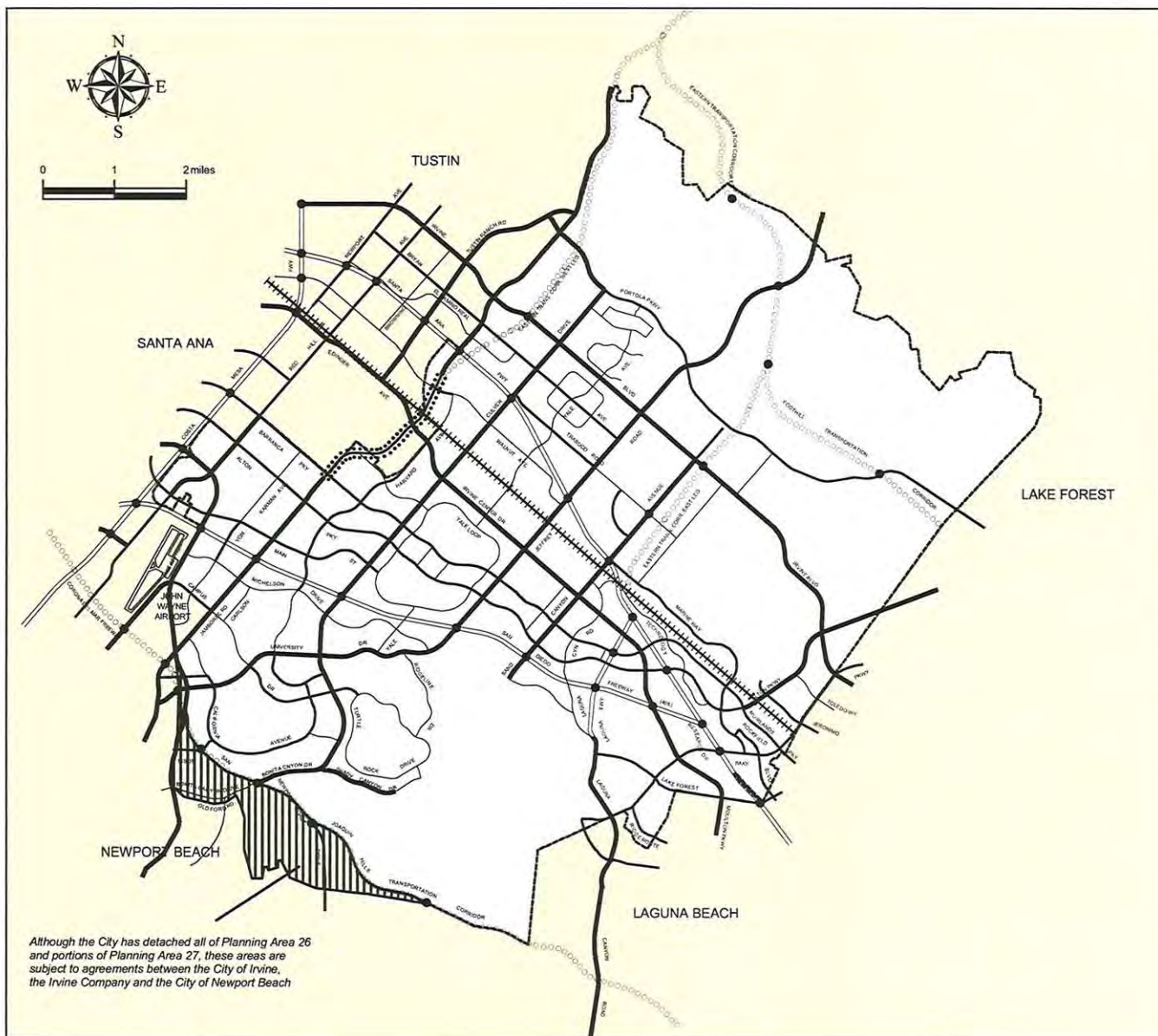
Figure B-1

MASTER PLAN OF ARTERIAL HIGHWAYS

LEGEND

- City Sphere of Influence
- Interchange
- ===== Freeway
- Transportation Corridor
- Expressway
- Major Highway 8-Lanes
- Major Highway 6-Lanes
- Primary Highway
- Secondary Highway
- Commuter Highway

NOTE: Not all commuter highways are shown on the map



City of Irvine General Plan



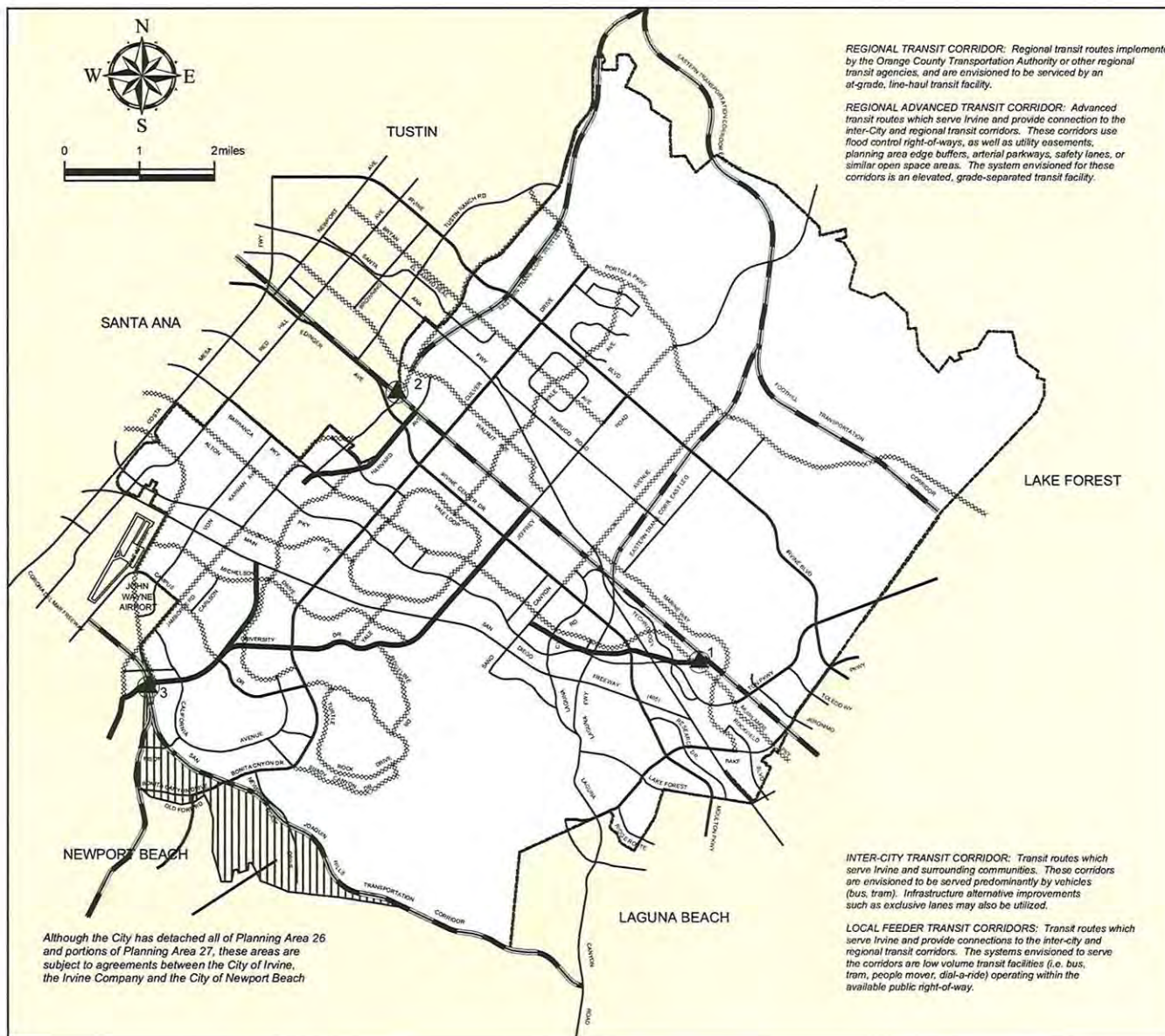
Figure B-2

OPERATIONAL CHARACTERISTICS

LEGEND

- City Sphere of Influence
- Interchange
- Freeway
- Transportation Corridor
- Expressway
- Thruway
- Parkway
- Collector

NOTE: Not All Community Collectors are shown on this map



City of Irvine General Plan



Figure B-3

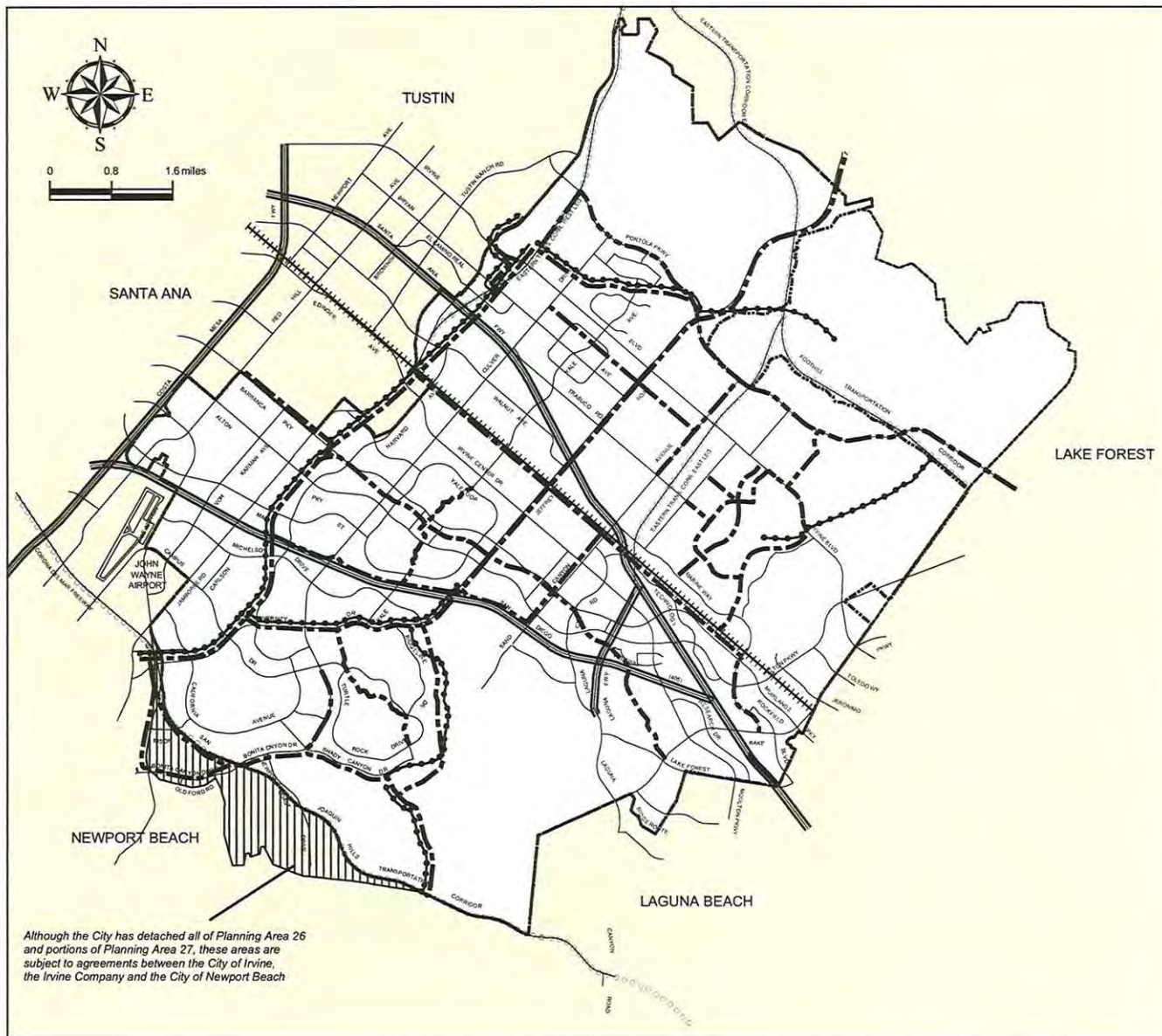
PUBLIC TRANSIT

LEGEND

- City Sphere of Influence
- Transit Stop *
- Regional Transit Corridor
- Regional Advanced Transit Corridor
- Inter-City Transit Corridor
- Local Feeder Transit Corridor
- Arterials

* A Transit Stop is defined as an intermodal transfer facility that typically serves a guideway or railway system and other motorized and non-motorized modes of transportation.
The facilities shown are:

1. Irvine Transportation Center
2. Commuter rail platform in Tustin
3. Future stop serving UCI, Irvine and Newport Beach







City of Irvine General Plan



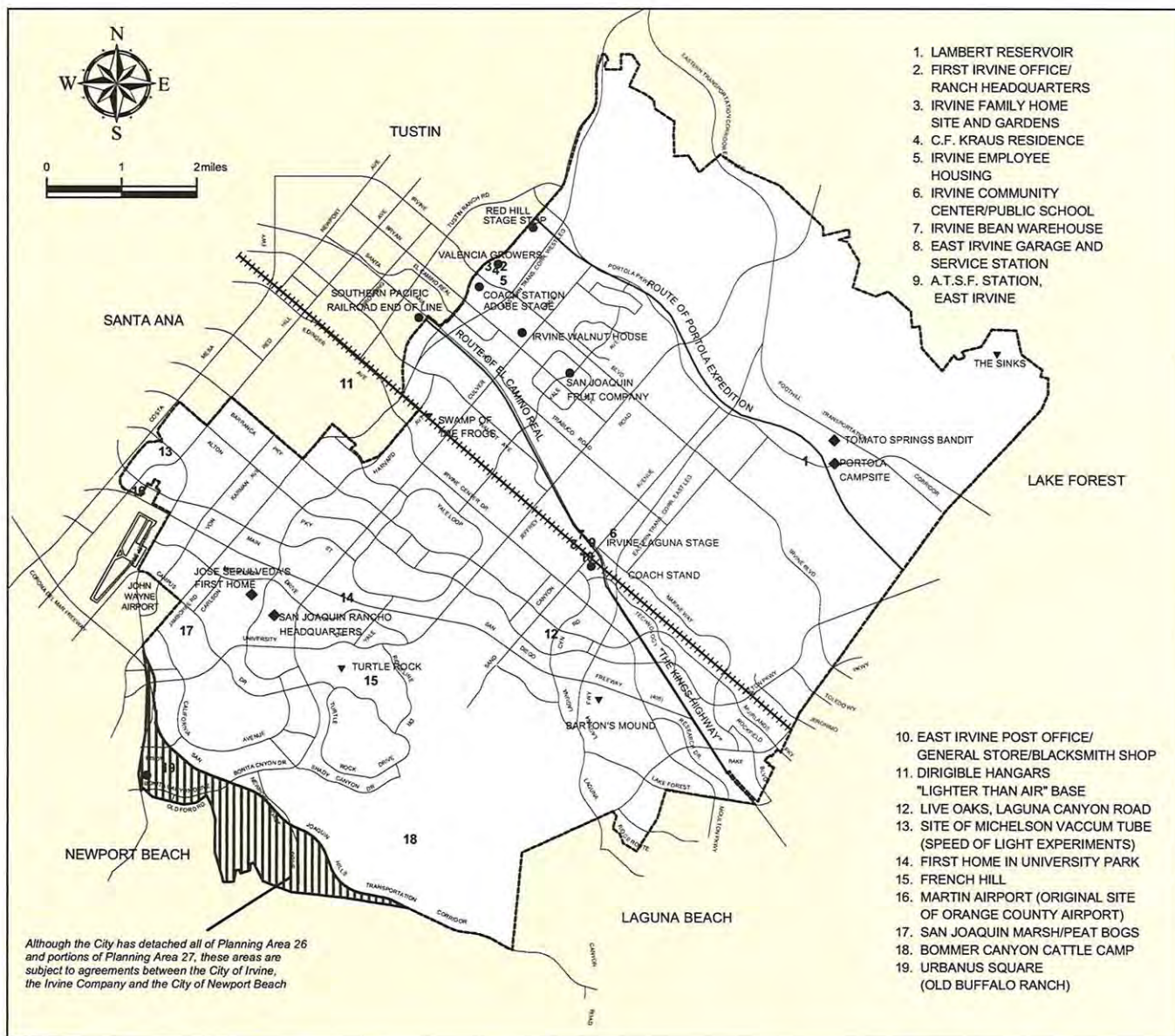
Figure B-4

TRAILS NETWORK

LEGEND

-  City Sphere of Influence
-  Class I (Off-Street) Trails
-  Class II (On-Street) Trails
are on all street shown on this exhibit except for Barranca between Jamboree and Redhill, along Mac Arthur between Jamboree Road, northwest to city limits, and along the west side of Jamboree Road between Michelson Drive and the San Diego (I-405) Freeway.
-  Riding and Hiking Trails

NOTE: The Trail Network Diagram is illustrative only and not indicative of precise alignments

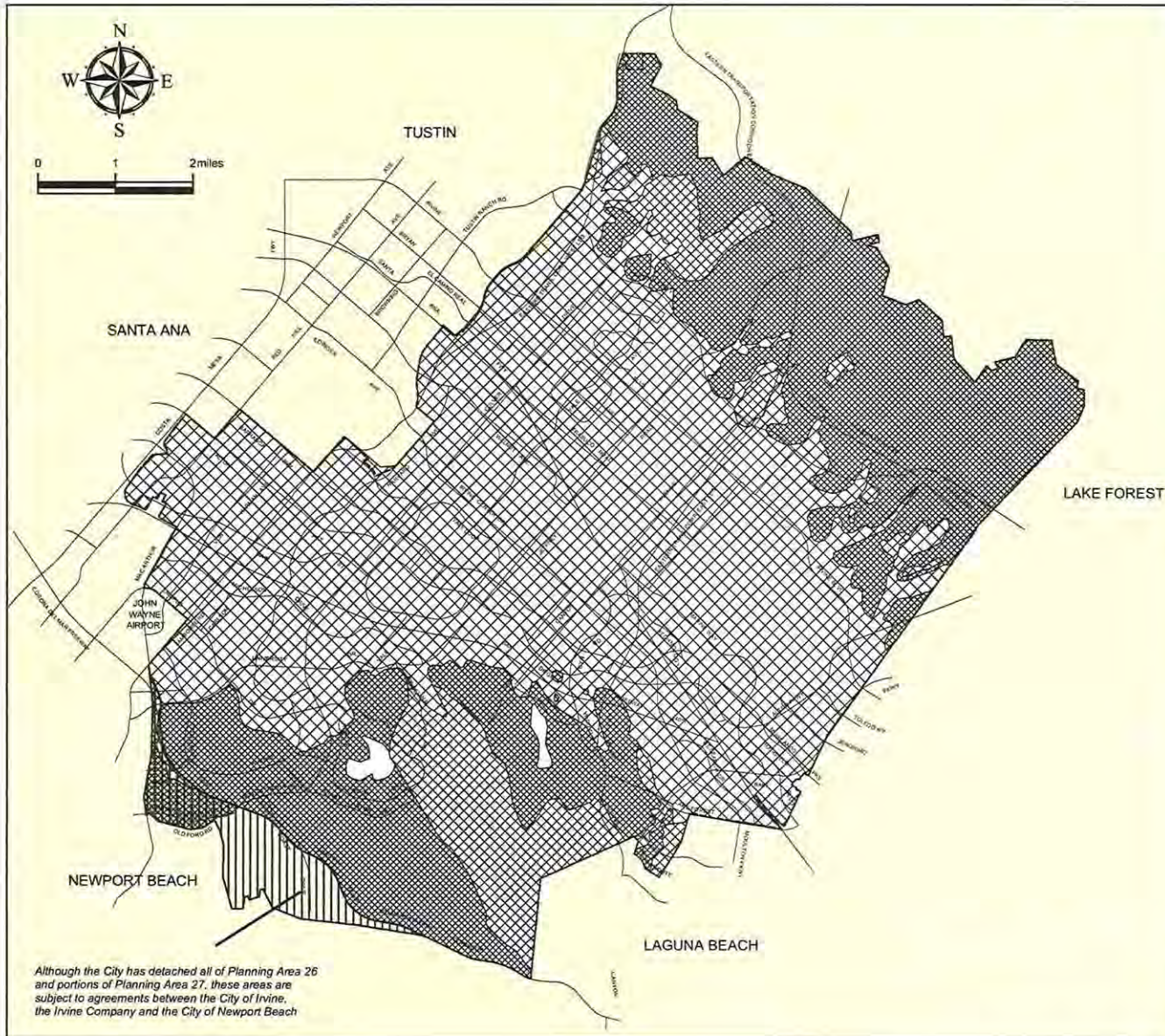


City of Irvine General Plan



Figure E-1

HISTORICAL/ ARCHAEOLOGICAL LANDMARKS



**City of Irvine
General Plan**

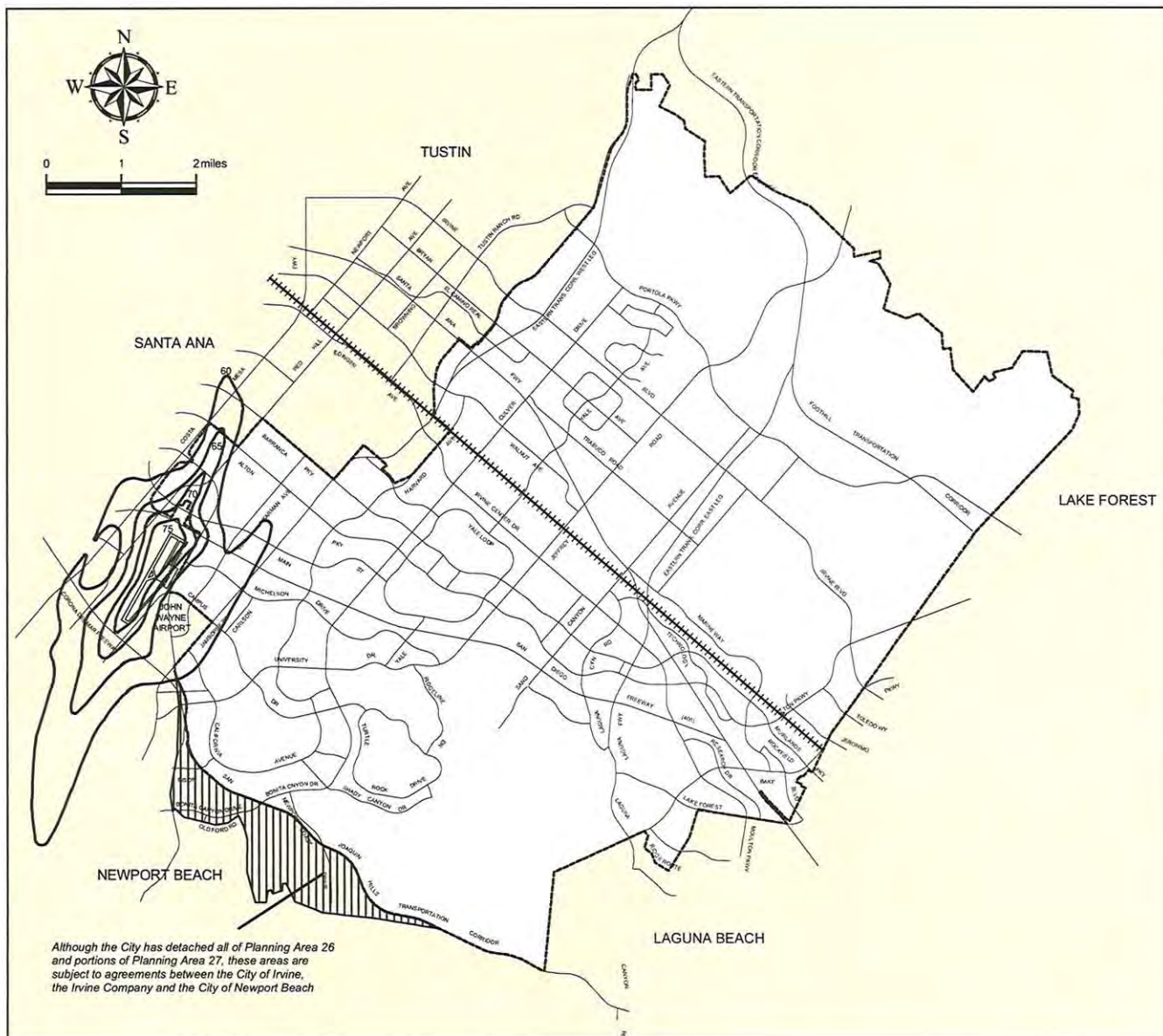


Figure E-2

**PALEONTOLOGICAL
SENSITIVITY
ZONES**

LEGEND

- GP_ARTERIAL_LINE
- None
 - Low
 - Moderate
 - High



City of Irvine General Plan



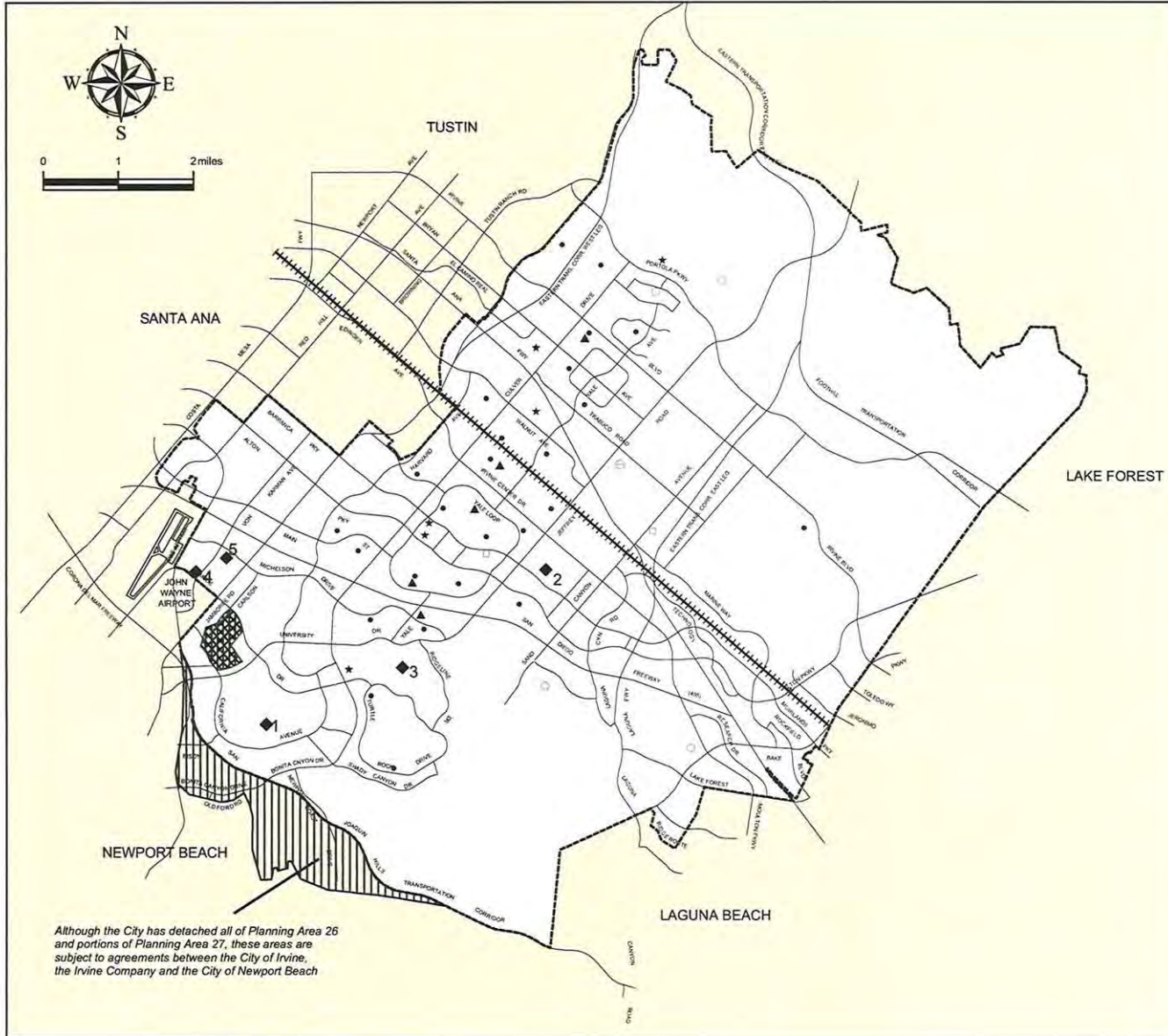
Figure F-1

AIRCRAFT NOISE

LEGEND

- City Sphere of Influence
- Aircraft Noise Contours expressed as CNEL (Community Noise Equivalent Level)

* This exhibit depicts the former noise contours for the now closed MCAS Tustin for historical purposes; and, the existing noise contours for John Wayne airport



City of Irvine General Plan



Figure G-1

EDUCATIONAL FACILITIES

LEGEND

----- City Sphere
of Influence

Irvine & Tustin Unified School Districts *

EXISTING

- Elem. School
- ▲ Middle School
- ★ High School
- IUSD Facility

PROPOSED

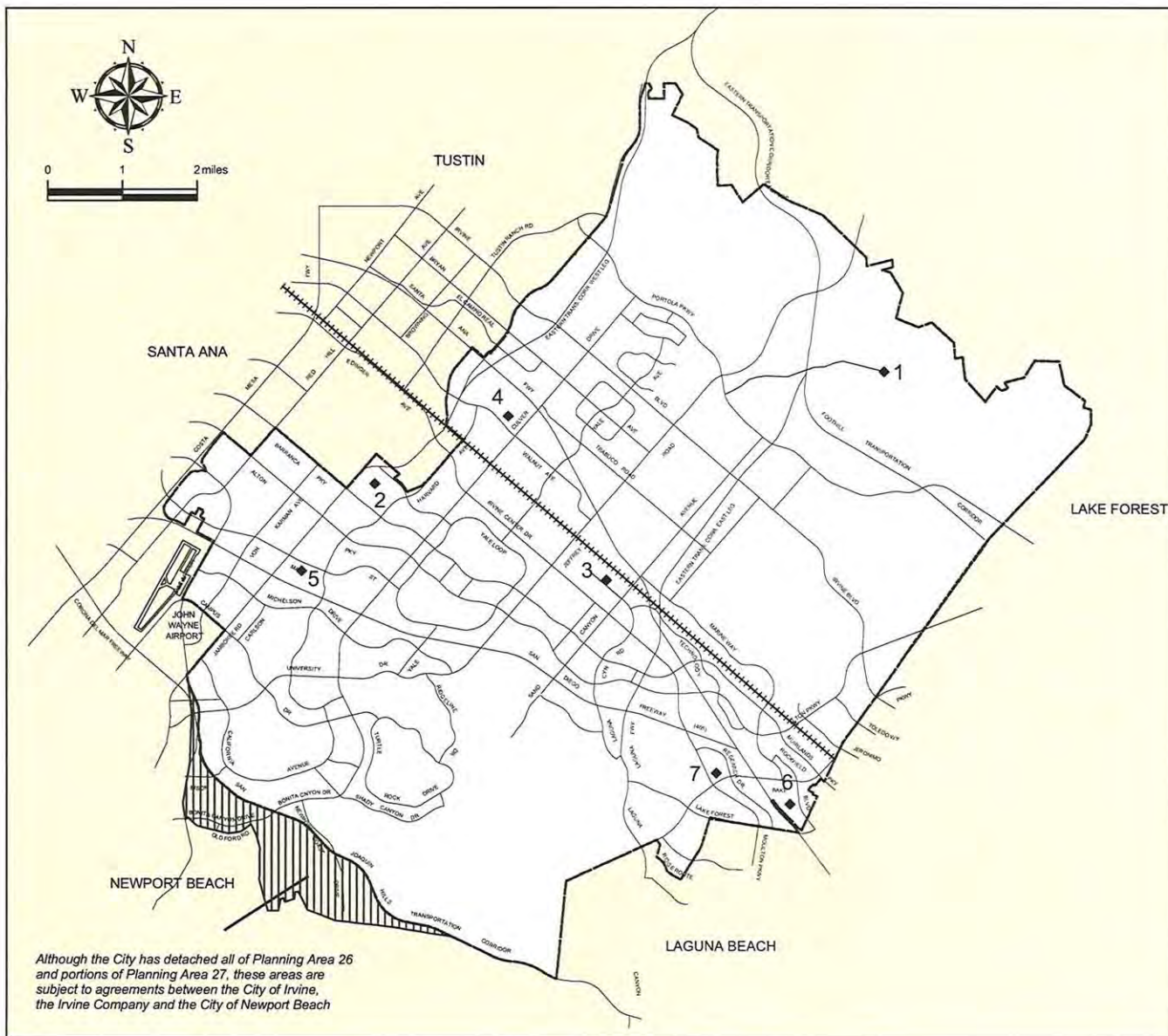
- ⊕ High School
- ⊖ Middle School
- Elem. School

College and University Campuses

- ◆ 1 University of California, Irvine
- ◆ 2 Irvine Valley College
- ◆ 3 Concordia University
- ◆ 4 University of Southern California Extension
- ◆ 5 Webster University

▨ UCI Natural Reserve

* NOTE: Portions of the City of Irvine are within the Tustin, Santa Ana, and Saddleback Valley School districts.



City of Irvine General Plan



Figure H-1

SOLID WASTE FACILITIES

LEGEND

----- City Sphere
of Influence

SOLID WASTE FACILITIES

1/ Frank R. Bowerman Landfill ("Bee Canyon")
Commercial Landfill

2/ Sunset Environmental Industries
Public Disposal site for bulky items and
recyclables buy back

3/ Irvine Regional Collection Center
Household hazardous waste disposal

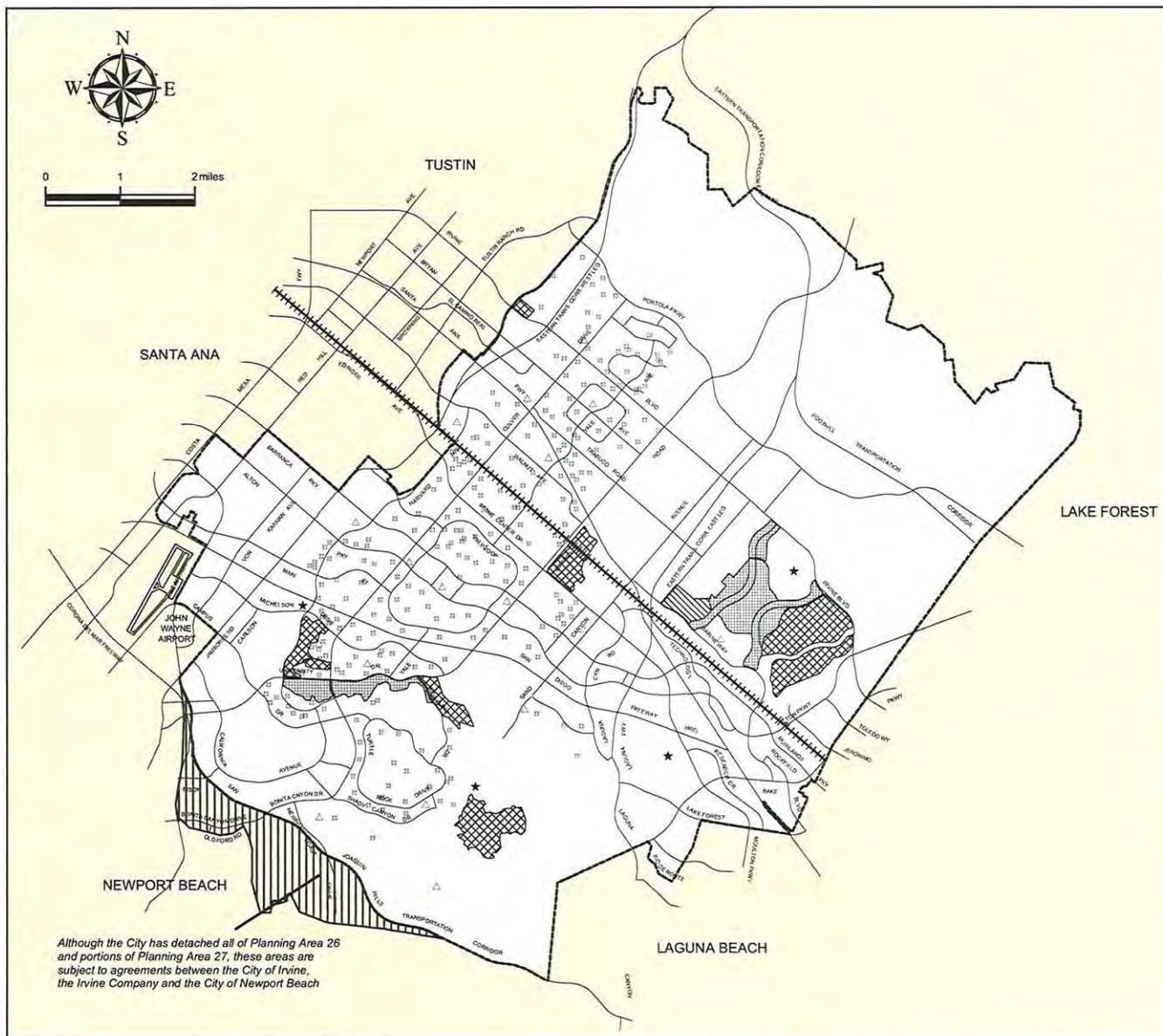
CERTIFIED USED OIL RECYCLING CENTERS
(certified by the CA Integrated Waste Management Board)

4/ Irvine City Auto Parts

5/ Jiffy Lube - Main St.

6/ Firestone Store

7/ Jiffy Lube - Spectrum



City of Irvine General Plan



Figure K-1

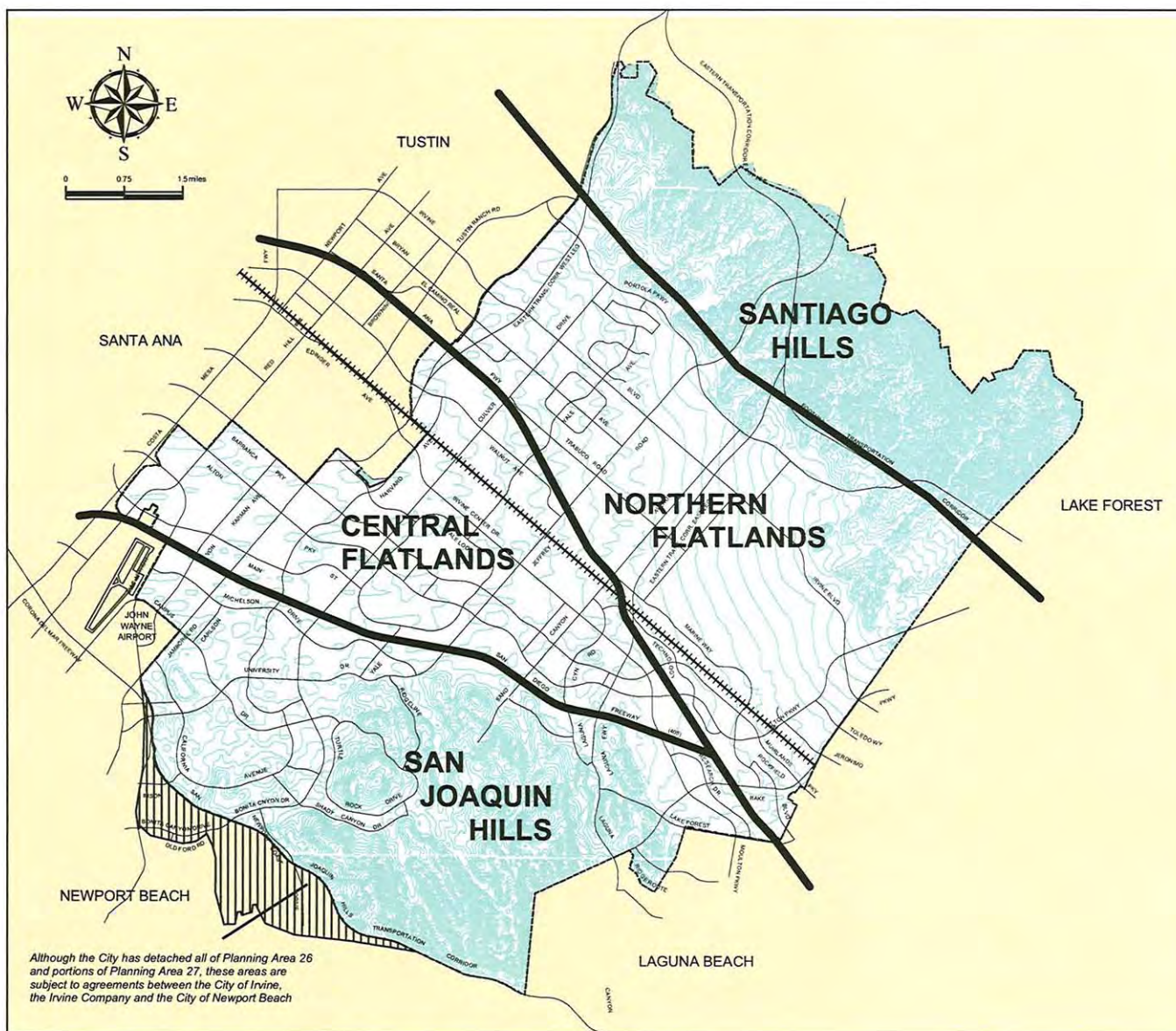
RECREATIONAL FACILITIES

LEGEND

- City Sphere of Influence
- Park *
- △ Community Park
- ★ Major Private Commercial Recreation Facilities
- Regional ** Park
- Public Golf Course
- Sports Park

* Includes neighborhood parks and private homeowners association recreation areas. Some private parks shown on the diagram may not meet the current minimum acreage requirement.

** Regional Park to be operated by the City, State, or City designated representative.



City of Irvine General Plan

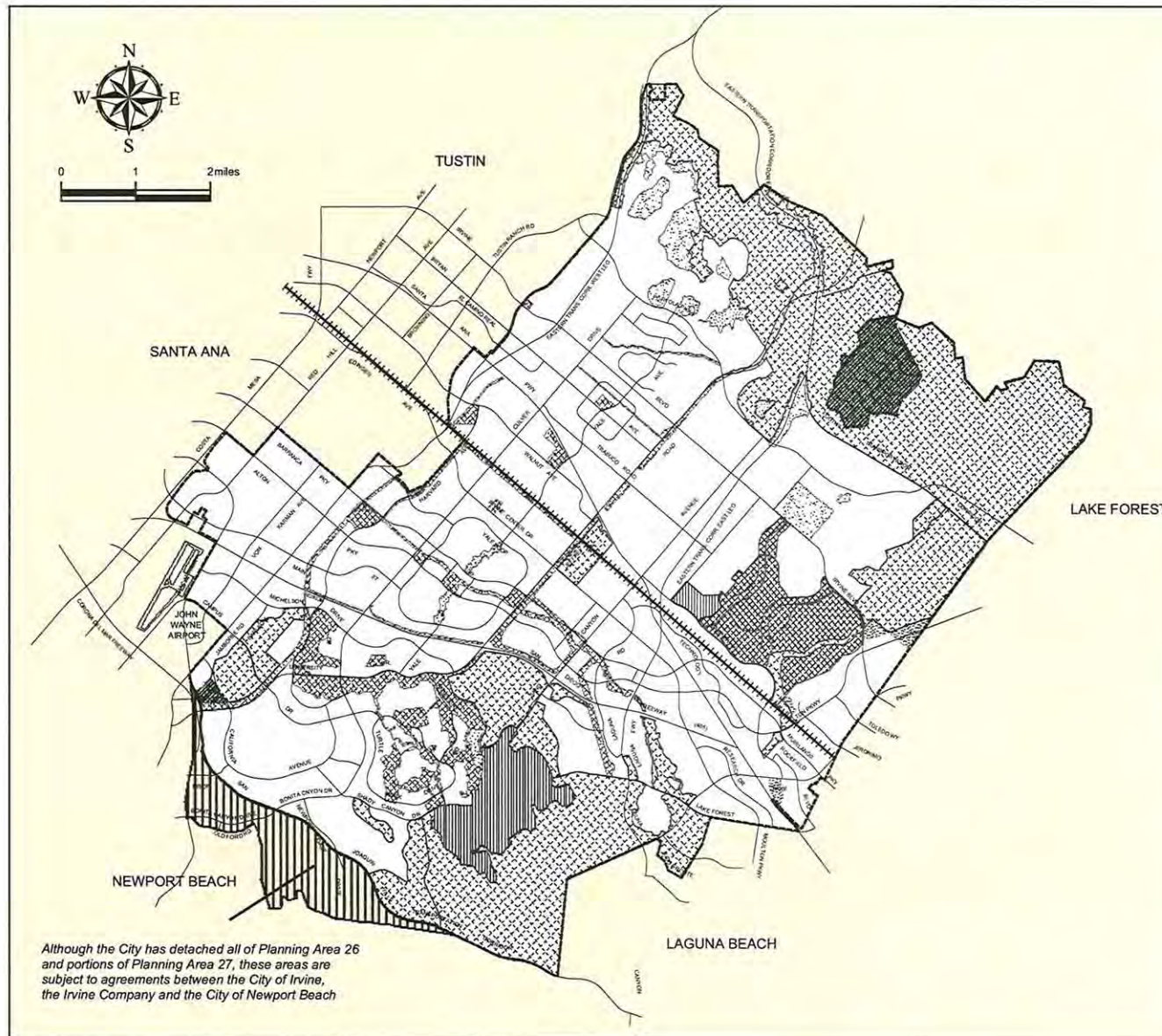


Figure L-1

LANDFORM ZONES

LEGEND

- City Sphere of Influence
- City Boundary
- Topographical Contour Line (interval is 25 feet)



City of Irvine General Plan



Figure L-2

CONSERVATION AND OPEN SPACE

LEGEND

- City Sphere of Influence
- Preservation
- Recreation
- Water Bodies
- Agriculture
- Golf Course Overlay
- Landfill Overlay

City of Irvine General Plan

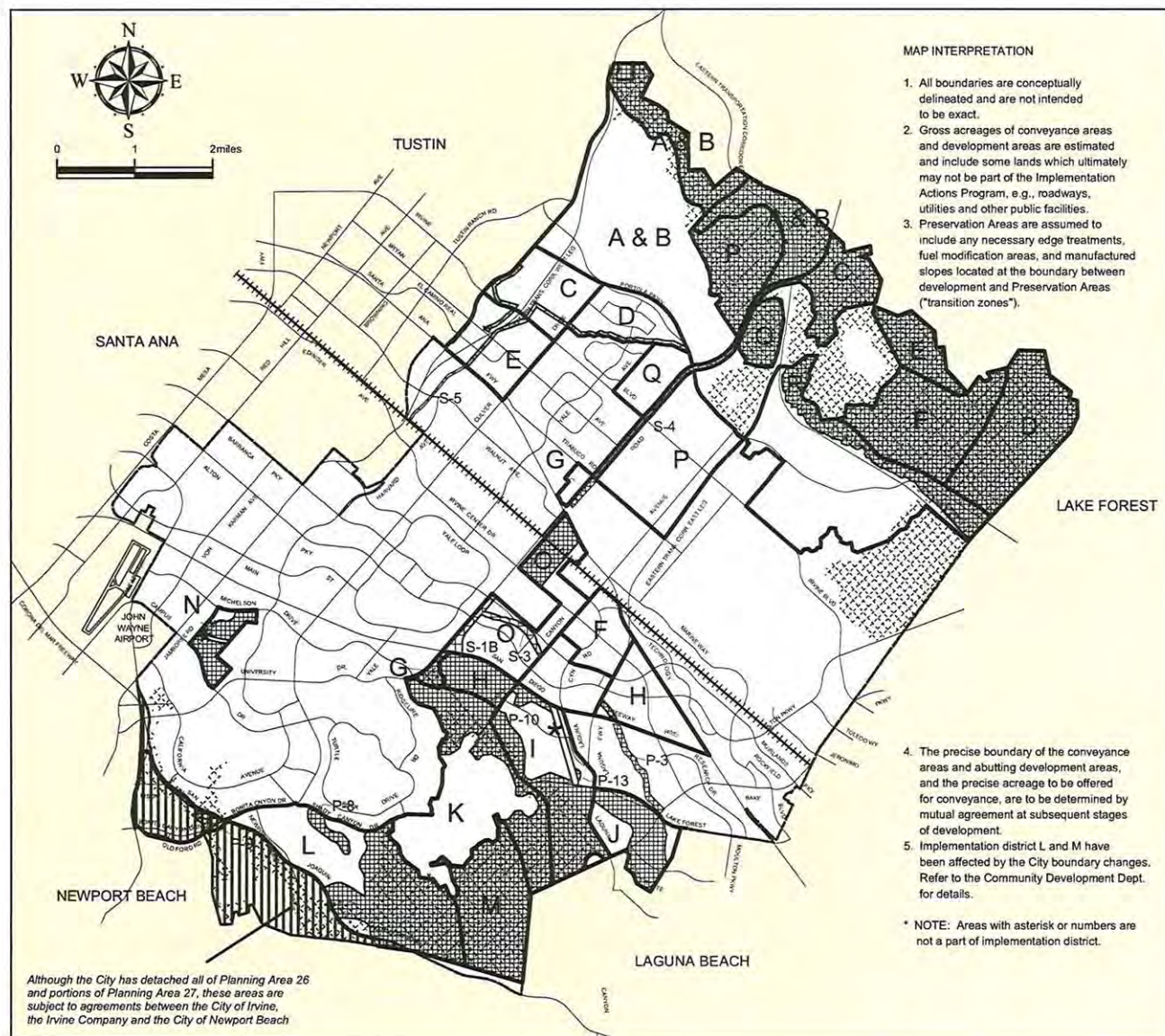


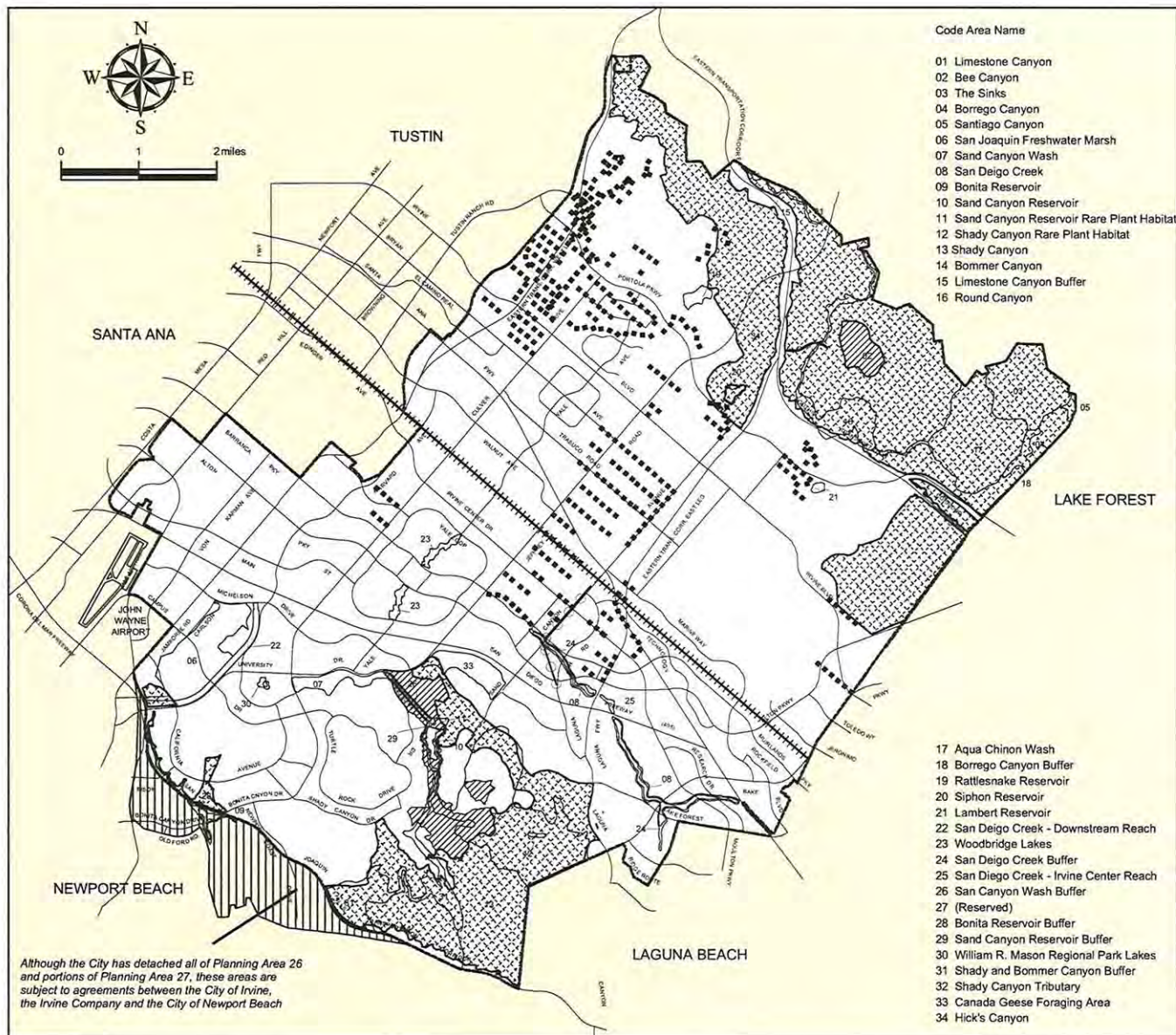
Figure L-3

IMPLEMENTATION DISTRICTS

LEGEND

- City Sphere of Influence
- Preservation Area
- Spine
- Development Area
- NCCP habitat identified for future public ownership by the Facilitation Agreement (see Appendix) between the City and the land owner.





City of Irvine General Plan



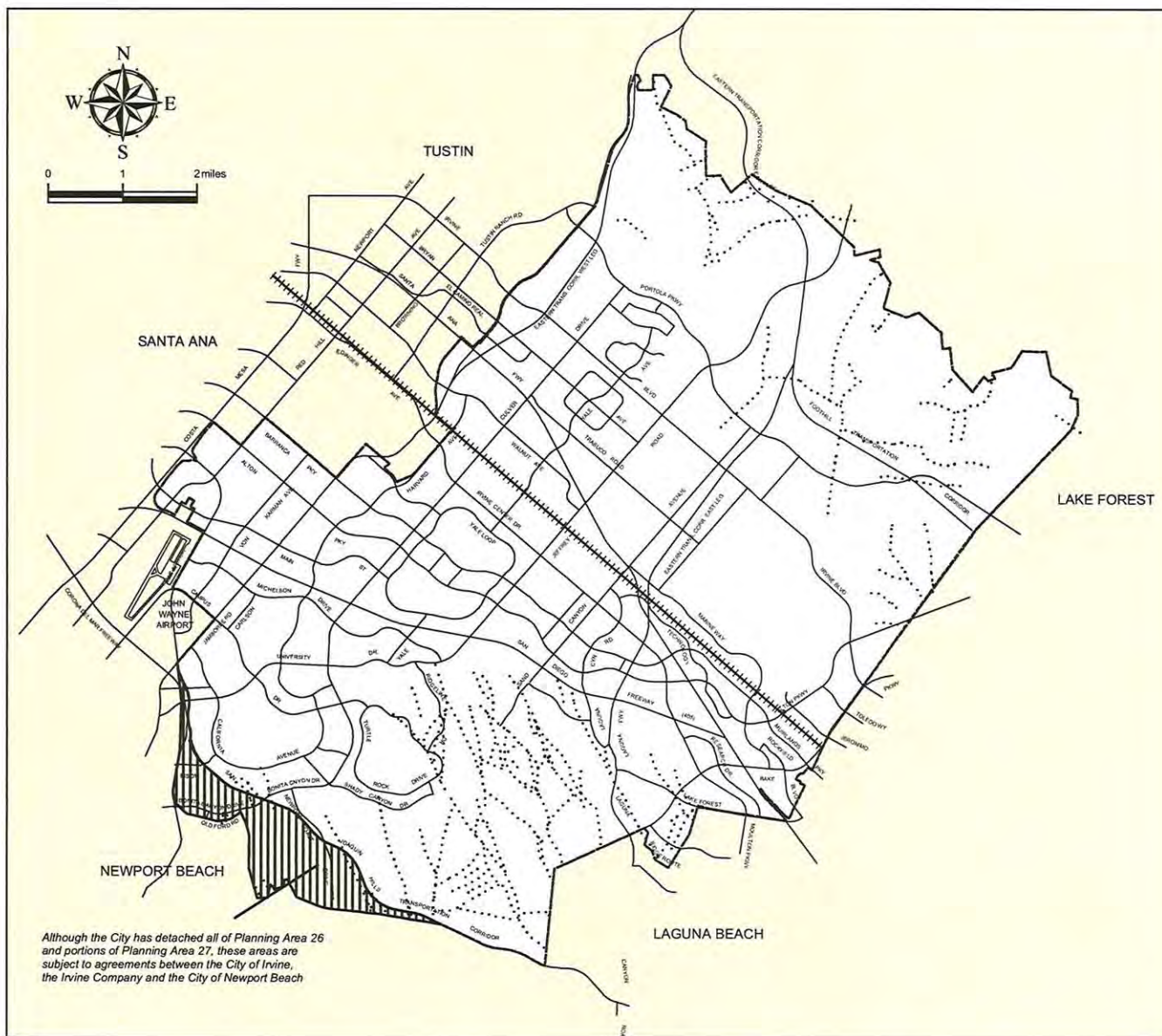
Figure L-4

BIOTIC RESOURCES

LEGEND

- City Sphere of Influence
- Eucalyptus Windrows
- Sand Canyon Oak Trees
- ▨ NCCP Habitat Reserve
- ▨ NCCP Special Linkage

Note: Eucalyptus Windrows located within Lower Peters Canyon Planning Area 4 are subject to the Eucalyptus Windrow Maintenance and Protection Plan for Lower Peters Canyon (September 1996)



City of Irvine General Plan



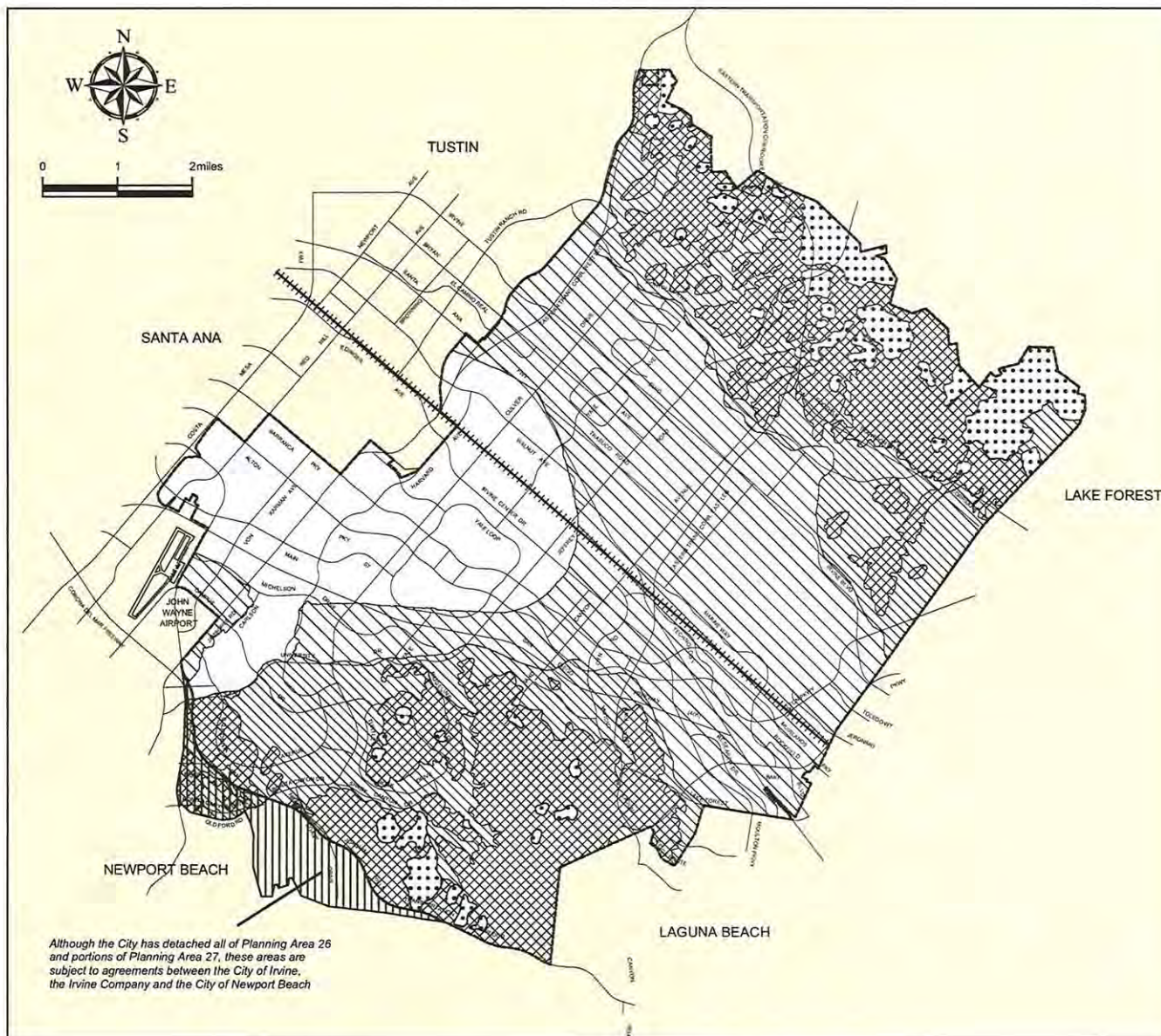
Figure D-2

INACTIVE FAULT LOCATIONS

LEGEND

----- City Sphere
of Influence

..... Fault Line



City of Irvine General Plan

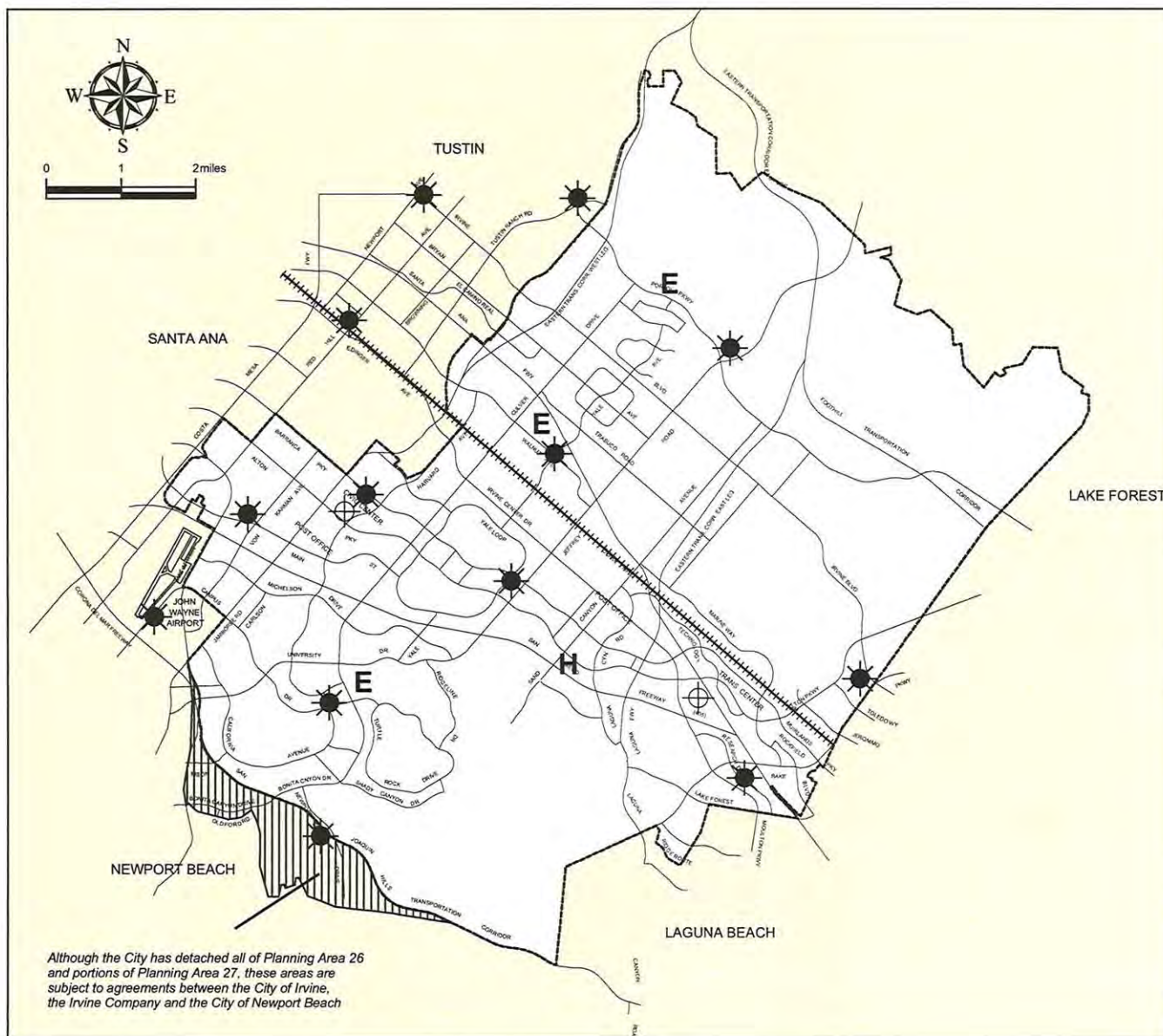


Figure D-3

SEISMIC RESPONSE AREAS

LEGEND

-  SRA-1, Soft Soils/
High Ground Water
-  SRA-2, Denser Soils/
Deeper Ground Water
-  SRA-3, Alluvium/
Shallow Bedrock
-  SRA-4, Highlands Over
20 Percent Slope
-  SRA-5, Less Stable
Geologic Formations



City of Irvine General Plan



Figure J-1

PUBLIC SAFETY FACILITIES

LEGEND

----- City Sphere
of Influence

★ Fire Station *

⊕ Police Station **

H Irvine Medical Center Hospital

E Potential Emergency Shelter
Location (High Schools)

NOTES:

Elementary Schools may also be designated as Emergency Shelters.

* Some fire station locations are outside the City boundary. These are shown for planning purposes because they may respond to calls within Irvine.

** In addition to the police station shown on the diagram, the Public Safety Department may establish temporary satellite facilities as required to respond to community needs.



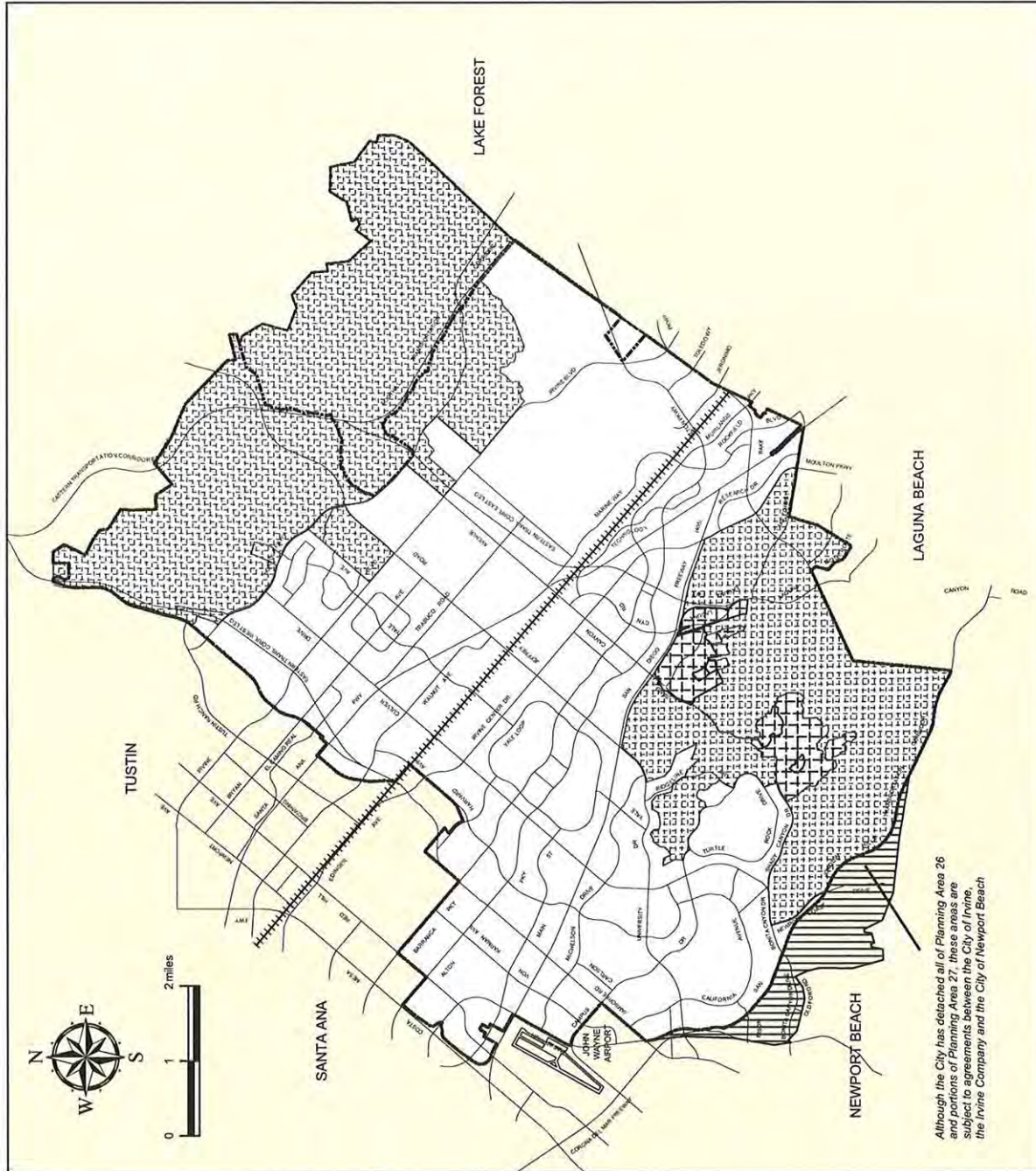
City of Irvine General Plan

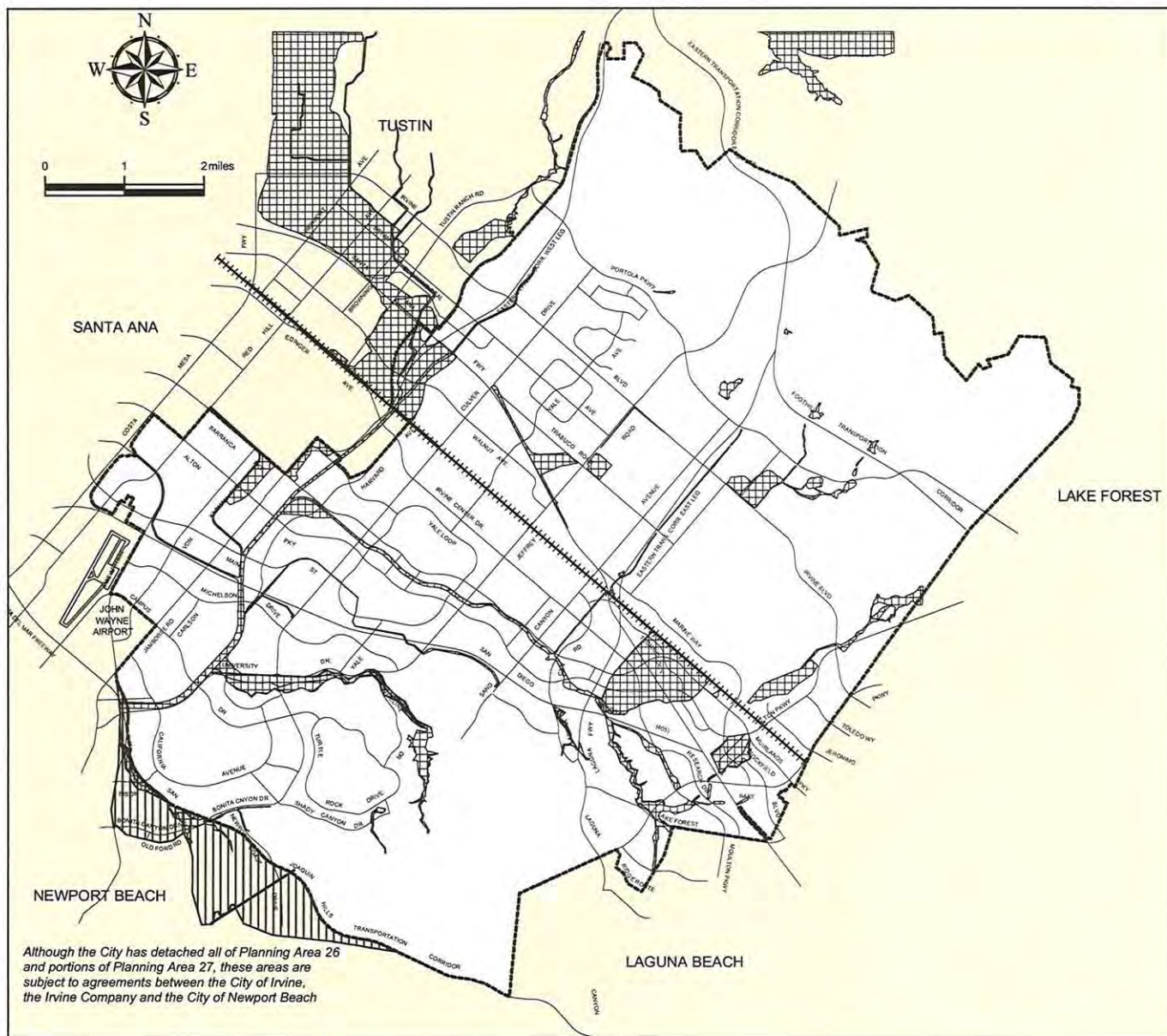
Figure J-2

FIRE HAZARD AREAS

LEGEND

- City Sphere of Influence
- City Boundary
- High Fire Severity Rating & Open Space with Fire Potential
- Conditional Exclusion Developed Areas






City of Irvine General Plan



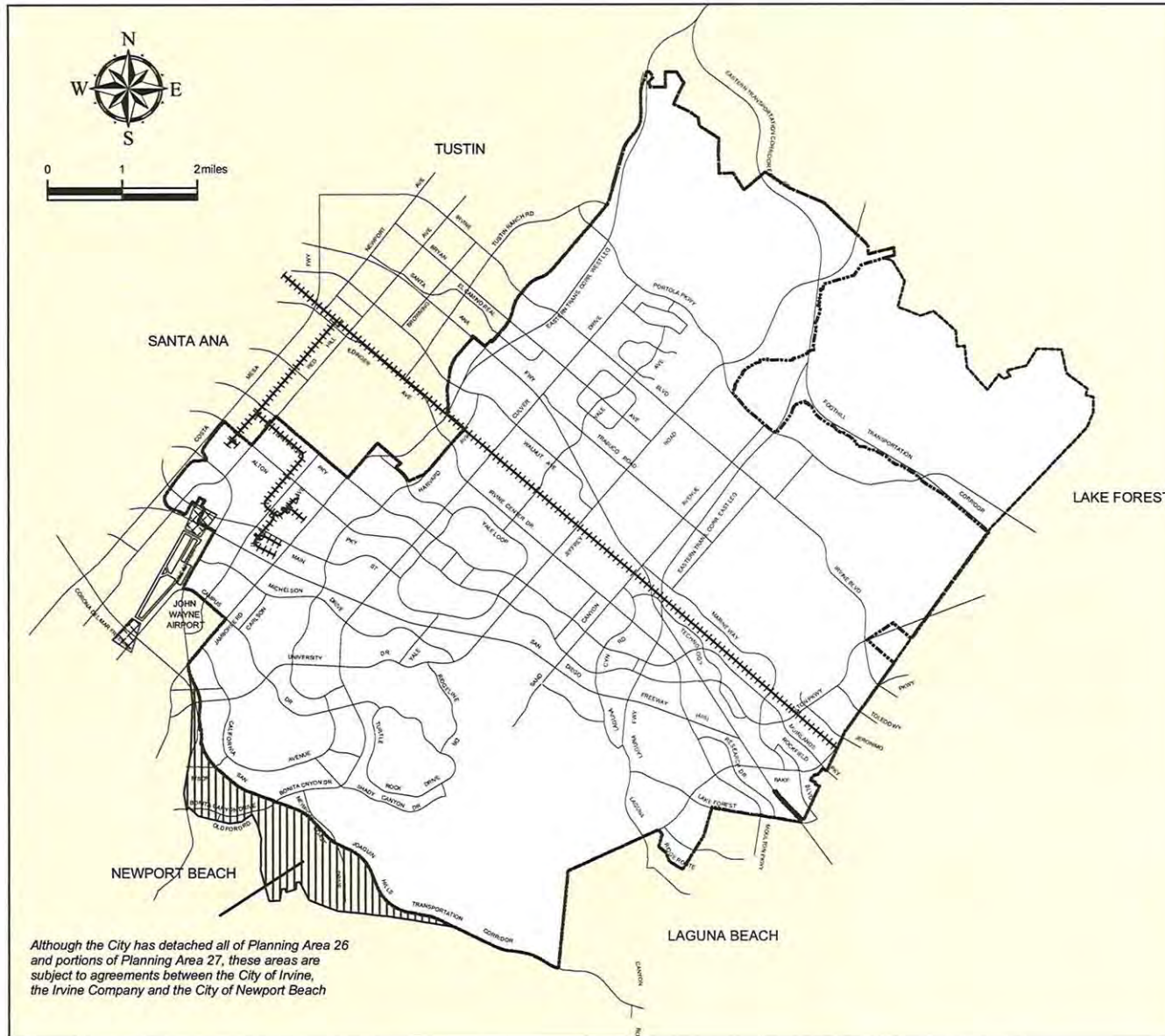
Figure J-3

FLOOD HAZARD AREAS

LEGEND

- City Sphere of Influence
-  Flood Hazard Areas
(theoretical 100-year flood area as designated by Federal Emergency Management Agency FEMA)

NOTE: Planning Area 51 has not been mapped by FEMA




City of Irvine General Plan



Figure J-4

CLEAR AND ACCIDENT POTENTIAL ZONES

LEGEND

- City Sphere of Influence
-  John Wayne Airport Clear Zones

ZONE CHANGES

Sec. 3-37-39. 8.1 Lifelong Learning District.

A. *Intent.* A unique urban setting that is intended as a zoning designation in which a wide variety of uses are allowed on the same site consistent with the Great Park land use category as defined in the General Plan. The lifelong learning district allows for a mix of residential, commercial, and educational uses that promotes and supports a synergistic live/learn/work/play environment. Specific uses that serve to enhance the cultural, educational, and recreational environment are especially encouraged in this area.

(8.1) Orange County Great Park (Planning Area 51)

(8.1A) Orange County Great Park (Planning Area 51)

B. *Intensity standard.*

1. 10.0 to 50.0 dwelling units per net acre.
2. Total maximum development intensity shall not exceed the building intensities described in Section 9-51-6(C) and shall not cause the total maximum Average Daily Trips (ADT) in PA 51 to exceed 117,047 ADT, based on the socio-economic-based trip generation average daily trips (ADT) rates used to analyze the Orange County Great Park traffic impacts.

C. *Permitted uses.*

1. Accessory use (including clubhouses and recreational amenities for the residential community).
2. Agriculture (interim use).
3. Caretaker's quarters.
4. Commercial recreation (under 1,500 square feet).
5. Department store.
6. Financial institution (except drive-thru).
7. Home care.
8. Home occupation permit.
9. Information center.
10. Manufactured structure (up to two years).
11. Model home complex.
12. Office, administrative, business professional.
13. Office, design professional.
14. Office, headquarters.
15. Office, medical.
16. Outdoor vendor.
17. Park.
18. Public park facility (only in public parks).
19. Pushcart.
20. Residential, second unit.
21. Research and development.
22. Restaurant.
23. Restaurant, fast food (except drive-thru).
24. Retail and/or service business, general (except drive-thru).
25. Reverse vending machine.
26. School, public.
27. Stable, private (only within agriculture area).
28. Supermarket.

29. Wireless communication. (May require a wireless communication facility permit, a minor conditional use, a major conditional use, or may be prohibited, depending on the type of installation and the location of the installation site, pursuant to the review procedures matrix in Section 2-37.5-3).

D. *Conditional uses.*

1. Ambulance service.
2. Arcade, game.
3. Bar, tavern, cocktail lounge.
4. Boarding house.
5. Car wash.
6. Cemetery/mausoleum/crematory (only in 8.1A).
7. Child care center.
8. Church.
9. Commercial recreation (over 1,500 square feet).
10. Community facility.
11. Composting facility. (In conjunction with demolition, removal and recovery of existing buildings, structures and landscaping associated with the former military use of the property).
12. Concrete recycling facility. (In conjunction with demolition, removal and recovery of existing buildings, structures and landscaping associated with the former military use of the property).
13. Conference/convention facility.
14. Congregate care facility.
15. Convalescent home.
16. Convenience or liquor store.
17. Drive-thru.
18. Financial institutions (drive-thru).
19. Equipment rental.
20. Fraternal and service club.
21. Funeral home/mortuary.
22. Gas station/fuel dispenser.
23. Government facility.
24. Health club.
25. Heliport.
26. Hospital.
27. Hotel, extended stay.
28. Hotel/motel.
29. Industry, service.
30. Manufactured structure (over two (2) years).
31. Massage establishment and related business.
32. Materials recovery facility. (In conjunction with demolition, removal and recovery of existing buildings, structures and landscaping associated with the former military use of the property).
33. Outdoor sales.
34. Outdoor storage.
35. Recreational vehicle storage, private.
36. Residential care facility.
37. Residential, attached.
38. Residential, single family detached.
39. Residential shelter.

40. Restaurant, "type 47" ABC license.
41. Restaurant, fast food (drive-thru).
42. Retail business, home improvement related.
43. School, commercial.
44. School, private.
45. Senior housing.
46. Small collection facility.
47. Sober living facilities.
48. Stable, public (only within agriculture area).
49. Utility building and facility.
50. Vehicle leasing and rental.
51. Vehicle repair.
52. Veterinary service, domestic.
53. Warehouse and sales outlet.

E. Introduction of unique land uses that are not specified in the permitted and conditionally permitted uses but fit within the intent of the GP-LLD (Section 3-37-38) shall be encouraged subject to an initial determination by the Director of Community Development and subsequently, subject to a conditional use permit for consideration by the Planning Commission.

F.	<i>Minimum site size</i>	0.25 acre (all uses except single-family detached).
		2,400 square feet (single-family detached only)
G.	<i>Maximum site coverage</i>	50% single-use developments
		65% mixed-use developments
H.	<i>Maximum building height</i>	70 feet
I.	<i>Minimum site landscaping</i>	15%
J.	<i>Building setbacks from:</i>	
	Major highways:	45 feet
	Primary highways:	45 feet
	Secondary highways:	
	In nonresidential areas	35 feet (Alternate setbacks may be approved through a master plan).
	In residential areas	25 feet
	Commuter highways and local	

streets:

Adjacent to nonresidential areas	15 feet
Adjacent to residential areas	To be determined at time of master plan review
Great Park edge	To be determined at time of master plan review
Interior boundary adjacent to residential or nonresidential uses:	
Side	To be determined at time of master plan or conditional use permit review
Rear	To be determined at time of master plan or conditional use permit review
Building to building	10 feet

(Ord. No. 06-18, § 4, 10-24-06)

Sec. 9-30-3. Statistical analysis.

Planning Area: 30 Base Zone

Orange County Great Park Land Use Category	Zoning	Zoning Number	Acres in Area	Maximum Square Feet
Agriculture	Exclusive Agriculture	1.1	148	
Wildlife Corridor	Preservation	1.4	61	
Sports Park	Recreation	1.5	77	
Auto	Vehicle-Related Commercial	4.3	34	50,000
Transportation	Institutional	6.1	38	53,500
Major Roadways			40	
	Total		398	103,500

Planning Area: 30 Overlay Zone

Orange County Great Park Land Use Category	Zoning	Zoning Number	Acres in Area	Maximum Square Feet
Agriculture*	Exclusive Agriculture	1.1	13	
Wildlife Corridor	Preservation	1.4	61	
Transit Oriented Development	Transit Oriented Development	3.2	129	53,500 Also see Special Development Requirements**
Auto	Vehicle-Related Commercial	4.3	34	102,000
Research and Development	General Industrial	5.4B	121	1,600,000
Major Roadways			40	
	Total		398	1,755,500*

* Not shown is the portion of the Transit Oriented Development intensity that will be allocated through the master plan process (See Section 9-30-6(B))

Notes on Maximum Intensities: In order to develop the overlay zone uses and intensities for Planning Area 30, the property-owners has entered into a development agreement, which requires the dedication of land and the development or funding of infrastructure improvements in excess of the City's standard requirements and the commitment to long term maintenance of public facilities (Section 9-30-2).

(Code 1976, § V.E-830.3; Ord. No. 96-18, § 4, 12-10-96; Ord. No. 00-03, § 4, 2-22-00; Ord. No. 03-18, § 4, 6-10-03; Ord. No. 06-18, § 4, 10-24-06)

Sec. 9-30-6. Special development requirements.

A. *Affordable Housing.* See Chapter 2-3 Affordable Housing Implementation Procedures.

B. *Transit Oriented Development.* The 3.2 Transit Oriented Development district within the overlay zone extends between Planning Areas 30 and 51. The intensity of development will be divided between the two planning areas through the implementation of a Master Plan for 3.2 Transit-Oriented Development, as defined in E below. The maximum intensity of development of the 3.2 Transit-Oriented Development district within the Orange County Great Park shall not exceed 1,500 residential dwelling units, 75,000 square feet of office, and 75,000 square feet of retail development. A remote airport terminal and maintenance facility with a maximum intensity of 53,500 square feet will also be developed within the 3.2 Transit Oriented Development district in Planning Area 30.

The following planning standards shall apply throughout the 3.2 Transit Oriented Development district:

1. The majority of the allowable residential units shall be located within one-quarter mile of the Irvine Transportation Center. Clustering of residential units shall be encouraged to provide for neighborhood parks as well as public and private open space areas within the project.
2. Total Average Daily Trips (ADT) shall not exceed the trip budget established for the development within the Orange County Great Park (C below). The developer shall provide additional traffic analysis for the review and approval of the Director of Community Development to support the consideration of trip reduction design standards and integration with mass transit systems.
3. Vertical and horizontal integration of commercial office and retail land uses into the residential development shall be required.
4. Pedestrian connections within and between the Transit Oriented Development district, the Irvine Transportation Center and the public areas of the Great Park shall be provided. An emphasis on pedestrian, way-finding signage and graphics, and the integration of the approved commercial retail and office uses shall facilitate pedestrian access in lieu of automobile access to the site amenities.
5. Neighborhood parks requirements shall be provided in accordance with City of Irvine standards. Community park requirements shall be met through participation in the cost of the Great Park through the Development Agreement.
6. Prior to approval of the master plan for development of the Transit Oriented Development site (F below), the Planning Commission shall make a specific finding that the master plan meets the intent of the Transit Oriented Development planning standards.

C. *Trip Budget.* Based on the socioeconomic-based trip generation average daily trip (ADT) rates used to analyze the Orange County Great Park traffic impacts, the total trips for the entire Orange County Great Park project area are not to exceed 90,963 ADT for the base zone or 148,910 ADT for the overlay zone.

Total trips for this Planning Area may not exceed 7,942 ADT for the base zone or 31,863 ADT for the overlay zone except as follows. Dwelling units and square footage allocated to the 3.2 Transit Oriented Development zoning district in the overlay zone will be divided between Planning Areas 30 and 51 through the

implementation of a master plan for Transit Oriented Development. A total of 3,183 ADT (ten percent of the vehicle trips allocated to Planning Area 30 in the overlay zone) may be transferred between Planning Area 51 and Planning Area 30 in conjunction with the approval of the master plan. Any transfer of vehicle trips between planning areas will be subject to review in accordance with the approval of the master plan. Any transfer of vehicle trips between planning areas will be subject to review in accordance with the requirements of the City's Traffic Study Guidelines.

D. *Development Tracking and Monitoring Report.* The development in Planning Area 30 is subject to specific limits as follows:

- Maximum square footage – see Section 9-30-3 Statistical Analysis Overlay Zone
- Maximum residential units – see Section 9-30-3 Statistical Analysis Overlay Zone
- Maximum daily vehicle trips - 31,863 ADT

Building permits which would cause one or more of these maximums to be exceeded shall not be issued.

Building permits and discretionary applications: Prior to the approval of any discretionary application and prior to the issuance of each building permit for new development, the applicant shall submit to the Community Development Department a table documenting the cumulative total of approved development within Planning Area 30, in a manner meeting the approval of the Community Development Director.

A project traffic study (Urban Crossroads Inc. dated December 2002) was prepared for development of the entire Orange County Great Park project area. A subsequent traffic study (Austin Foust & Associates dated September 2006) was prepared for the inclusion of the Lifelong Learning District. Based upon this study a post-2025 vehicle trip limit has been established for Planning Area 30. The study establishes a trip cap of 7,942 ADT for the base zone or 31,863 ADT for the overlay zone. Refer to Table A-1 of the September 2006 traffic study for the established land use trip rates for development monitoring purposes. Land use trip generation rates for undefined land uses will be determined by the Director of Public Works.

For the purpose of this section, "Applicant" shall mean the developer who will actually develop the land. In conjunction with issuance of any building permit, the applicant shall submit a Planning Area Development Monitoring Report for review and approval of the Director of Community Development. The Planning Area Development Monitoring Report shall include the allocation of trips to the proposed discretionary case or building permit to ensure that the aggregate projected traffic does not exceed the vehicle trip limits established for PA 30. The Planning Area Development Monitoring Report shall include, but not limited to, the accounting of trips (average daily) used in each discretionary case application or building permit application. Approval by the Director of Community Development shall be based upon the determination that the allocations shown do not exceed the maximum trips established for Planning Area 30; and that the allocation is generally consistent with the General Plan, zoning and other applicable regulatory documents. The Planning Area Development Monitoring Report may be updated by the Applicant and is subject to review and approval by the Director of Community Development. The purpose of the Great Park Planning Area 30 Development Monitoring Report is to monitor the growth and update the project's components.

E. *Additional Traffic Analysis.* With the submittal of future discretionary applications for specific development proposals, the Director of Public Works (DPW) may determine that additional traffic studies are required if the DPW determines that the proposed project is not in substantial conformance with the most recent traffic study for the project area. Notwithstanding the North Irvine Transportation Mitigation requirement that only an Interim Year analysis is required for Map level traffic studies, the applicant shall conduct an Interim, Long Term, and Buildout analysis for the required traffic study.

F. *Review Process.* Prior to the commencement of any private development in the 1.5 Recreation, 3.2 Transit Oriented Development, 4.3 Vehicle-Related Commercial, 5.4B General Industrial, or 6.1 Institutional zoning district within the Planning Area 30, the Planning Commission shall review and approve a master plan, containing the following information:

1. Location, acreage, types of land use and estimated square footages or number of dwelling units for each area within the zoning district.
2. A community design program, which characterizes the design features of the development, including signage design, fencing design, landscape themes, architectural theme, and other community design features. The location for a future City entry statement shall be reserved in the 4.3 Vehicle-Related Commercial zoning district near the Bake Parkway/I-405 interchange.
3. Landscape treatments, consistent with the Orange County Great Park Streetscape Plan, including:
 - a. Planning Area edge and entry widths and general character
 - b. Special landscaping themes, if any.
 - c. Palette of plant materials, walls, and hardscape for areas in and adjacent to the public rights-of-way.
 - d. Ownership of landscape areas.
4. Wildlife corridor edge condition treatments, consistent with the Irvine Wildlife Corridor Plan, including:
 - a. Light and noise mitigation programs and techniques.
 - b. Palette of compatible plant materials.
 - c. Walls, fences, and /or barrier mechanisms to protect the wildlife corridor from unwanted intrusions.
5. Existing and planned uses on adjoining properties and transition from surrounding areas to the mixed use Transit Oriented Development.
6. Access to the project site and on-site pedestrian and vehicular patterns. The use of pedestrian bridges to cross Alton, Barranca, and/or Marine Way is especially encouraged.
7. Other information as required by Chapter 2-17 or the Director of Community Development.

The master plan application shall be accompanied by maps, text, or other documentation to satisfy the above requirements. The form and content of such submittals shall be made to the satisfaction of the Director of Community Development.

G. *Changes in boundaries and/or intensities:*

1. Boundaries and acreages in the Orange County Great Park plan are approximate and shall be established by master plan approval (F above).

2. The trip budget for the Planning Area may be increased by ten percent, subject to the transfer provisions of C above.

H. *Trails Plan.* In conjunction with the submittal of the master tract map the applicant shall submit a conceptual master landscape and trails plan or a detailed exhibit depicting potential trail connections on site to the City's existing or planned regional trail network.

In addition, in conjunction with subsequent tract maps, master plans or building permit submittals, whichever comes first, the applicant shall provide a specific and detailed trails plan depicting the exact location, alignment and connectivity of on-site trails to the City's existing or planned regional trail network.

I. *Child Care.* The need for child care facilities shall be recognized in the development of Heritage Fields. Prior to the approval of the first residential tentative tract map that causes the total combined approved residential dwelling units, excluding senior housing units, to reach 1,400 in Planning Areas 30 and 51, the developer shall submit a child care needs study to the Director of Community Services for approval. Based on the presumption that generally need for private child care facilities will be triggered at 3,500 dwelling units (units with children), the purpose of the study will be to identify any unmet need for child care as a result of residential development within Planning Areas 30 and 51. Upon approval of the Study by the Director of Community Services which demonstrates that an unmet need exists, the developer shall identify ways to provide unmet private child care needs. Any private sector child care center(s) shall:

1. Accommodate the determined number of slots, which shall be based on the actual number of residential units to be built and on a determination of child care need within the project.
2. Be located at a site that is compatible with adjacent uses. Development of a child care center in conjunction with proposed elementary schools and public neighborhood parks, residential development and/or neighborhood commercial center shall be encouraged.
3. Be located at a site that has been evaluated with regard to factors that might be detrimental to public health, safety, or welfare, including but not limited to proximity to high-traffic volume roadways, hazardous material, and major generators of traffic.
4. Be a minimum site size for the child care center, which is 1.3 acres and accommodates a minimum of 150 children, per the Table G-2 of the City's General Plan, although larger sites are encouraged to accommodate larger number of children.

(Code 1976, § V.E-830.6; Ord. No. 96-18, § 4, 12-10-96; Ord. No. 00-03, § 4, 2-22-00; Ord. No. 03-18, § 4, 6-10-03; Ord. No. 06-18, § 4, 10-24-06)

Editor's note: Ord. No. 03-18, § 4, adopted June 10, 2003, amended the Code by repealing former § 9-30-06, and renumbering § 9-30-7 as § 9-30-6. Former § 9-30-6 pertained to the Sports and Entertainment Sector, South, and derived from Ord. No. 00-03, adopted February 22, 2000.

Sec. 9-51-3. Statistical analysis.

Planning Area: 51 Base Zone

Orange County Great Park Land Use Category	Zoning	Zoning Number	Acres	Maximum Square Feet	Maximum Dwelling Units
Agriculture	Exclusive Agriculture	1.1	290		
Habitat Preserve	Preservation	1.4	974		
Wildlife Corridor	Preservation	1.4	118		
Open Space/Park	Recreation	1.5	602	468,000	
Sports Park	Recreation	1.5	195	26,000	
Exposition Center	Recreation	1.5	322	963,500	165**
Golf Course	Recreation	1.5	576	25,000	
Drainage Corridor	Recreation	1.5	229		
Cemetery	Recreation	1.5	270		
Research and Development	Medical and Science	5.5	50	300,000	
Education	Institutional	6.1	308	1,285,000	60
Institutional	Institutional	6.1	135	685,500*	
Transportation	Institutional	6.1	81		
Major Roadways and Rail			145		
	Total		4,295	3,753,000	225

* Includes 122,500 square feet for OCTA facilities, 300,000 square feet for County facilities, and 263,000 square feet for "McKinney Act" warehousing.

**These units may be transferred to another 1.5 Recreation district through the master plan process. See Section 9-51-6(D)

Planning Area: 51 Overlay Zone

Orange County Great Park Land Use Category	Zoning	Zoning Number	Acres in Area	Maximum Square Feet	Maximum Dwelling Units
Agriculture	Exclusive Agriculture	1.1	117*		
Habitat Preserve	Preservation	1.4	974		
Wildlife Corridor	Preservation	1.4	118		
Open Space/Park	Recreation	1.5	367		
Sports Park	Recreation	1.5	165	26,000	
Golf Course	Recreation	1.5	211		
Drainage Corridor	Recreation	1.5	229		
Exposition Center	Recreation	1.5	156	468,000	
Low Density Residential	Low Density Residential	2.2	270		470
Golf Course with Residential Overlay	Low Density Residential with Golf Course Overlay	2.2/1.8	365	25,000	630
Transit Oriented Development	Transit Oriented Development	3.2	81	See Special Development Requirements**	Special Development Requirements**
Lifelong Learning	Lifelong Learning	8.1 8.1A***	962****	See Special Development Requirements	Special Development Requirements
Institutional	Institutional	6.1	135	685,500*****	
Major Roadways			145		
	Total		4,295	4,640,100**	2,125**

* This acreage includes 27 acres of the Marshburn Basin which shall remain in its current location. The total Agriculture acreage for PAs 30 and 51 combined is 130 acres.

** Not shown is the portion of the Transit Oriented Development intensity that will be allocated through the master plan process. See Section 9-51-6(B). Included in the total are residential and non-residential intensities in the 8.1 LLD.

*** A total of 73 acres of cemetery use shall be a conditionally permitted use in 8.1A LLD Zoning District.

**** This acreage does not include 27 acres of the Marshburn Basin which is included in the 1.1 Exclusive Agriculture zoning district.

*****Includes 122,500 square feet for OCTA facilities, 300,000 square feet for County facilities, and 263,000 square feet of "McKinney Act" warehousing.

Notes on Maximum Intensities: In order to develop the overlay zone uses and intensities for Planning Area 51, the property owner has entered into a development agreement, which requires the dedication of land and the development of funding of infrastructure improvements in excess of the City's standard requirements, and the commitment to long-term maintenance of public facilities (Section 9-51-2).

(Code 1976, § V.E-851.3; Ord. No. 92-3, 4-14-92; Ord. No. 95-4, 5-9-95; Ord. No. 95-22, § 3, 11-28-95; Ord. No. 96-18, § 4, 12-10-96; Ord. No. 00-02, § 4, 2-8-00; Ord. No. 00-03, § 4, 2-22-00; Ord. No. 03-18, § 4, 6-10-03; Ord. No. 06-18, § 4, 10-24-06)

Sec. 9-51-6. Special development requirements.

A. *Affordable housing.* See Chapter 2-3 Affordable Housing Implementation Procedures.

B. *Transit oriented development.* The 3.2 Transit Oriented Development district within the overlay zone extends between Planning Areas 30 and 51. The intensity of development will be divided between the two planning areas through the implementation of a Master Plan for 3.2 Transit-Oriented Development, as defined in G below. The maximum intensity of development of the 3.2 Transit-Oriented Development district within the Orange County Great Park shall not exceed 1,500 residential dwelling units, 75,000 square feet of office, and 75,000 square feet of retail development.

The following planning standards shall apply throughout the 3.2 Transit Oriented Development district:

1. The majority of the allowable residential units shall be located within one-quarter mile of the Irvine Transportation Center. Clustering of residential units shall be encouraged to provide for neighborhood parks as well as public and private open space areas within the project.
2. Total Average Daily Trips (ADT) shall not exceed the trip budget established for the development within the Orange County Great Park (D below). The developer shall provide additional traffic analysis for the review and approval of the Director of Redevelopment to support the consideration of trip reduction design standards and integration with mass transit systems.
3. Vertical and horizontal integration of commercial office and retail land uses into the residential development shall be required.
4. Pedestrian connections within and between the Transit Oriented Development district, the Irvine Transportation Center and the public areas of the Great Park shall be provided. An emphasis on pedestrian, way-finding signage and graphics, and the integration of the approved commercial retail and office uses shall facilitate pedestrian access in lieu of automobile access to the site amenities.
5. Neighborhood parks requirements shall be provided in accordance with the City of Irvine standards. Community park requirements shall be met through participation in the cost of the Great Park through the Development Agreement.

6. Prior to approval of the master plan for development of the Transit Oriented Development site (G below), the Planning Commission shall make a specific finding that the master plan meets the intent of the Transit Oriented Development planning standards.

C. *Lifelong Learning District.* A unique urban setting that is intended as a zoning designation in which a wide variety of uses are allowed on the same site consistent with the Great Park Land use category as defined in the General Plan. The lifelong learning district allows for a mix of residential, commercial, and educational uses that promotes and supports a synergistic live/learn/work/play environment. Specific uses that serve to enhance the cultural, educational, and recreational environment are especially encouraged in this area.

8.1 Great Park Lifelong Learning District Development Intensity.

The maximum intensity of development of the 8.1 Lifelong Learning District within the Orange County Great Park shall not exceed 1,025 residential dwelling units, 1,452,600 Institutional (education), 708,000 square feet of Commercial Recreation, 1,000,000 square feet of Medical and Science, 225,000 square feet of Community Commercial and 50,000 square feet of cemetery-related building development.

Development intensity shall be recorded in a LLD Development Intensity Database and monitored administratively by the Director of Community Development following the master plan approval by the Planning Commission (G below).

The following planning standards shall apply throughout the 8.1 Lifelong Learning District:

1. The allowable residential units shall be mixed with other uses providing choices in location, type and size based on compatibility with surrounding uses. Clustering of residential units shall be encouraged to provide for greater opportunities to develop neighborhood parks as well as public and private open spaces within the development.
2. The residential development shall have an emphasis on alternative housing types to include at least homes targeted to active adult families, assisted living and congregate housing for seniors, student rental and for-sale housing, faculty and staff housing, extended stay business transient lodging, and housing focusing on young professionals, empty nesters and alternative family types.
3. Total Average Daily Trips (ADT) shall not exceed the trip budget established for the development within the Orange County Great Park (D below). The developer shall provide additional traffic analysis for the review and approval of the Director of Community Development to support the consideration of trip reduction design standards and integration with mass transit systems.
4. Neighborhood parks requirements shall be provided in accordance with City of Irvine Park Code. Community park requirements shall be met through participation in the cost of the Great Park through the Development Agreement (recorded on July 12, 2005).
5. The inclusion of alternative educational, vocational, R&D, business and office facilities in the form of high technology research and vocational centers, business incubators, community outreach partnership centers, conference and group presentation facilities within a "campus commons" framework shall be encouraged.

6. The introduction of unique land uses that are not specified in the permitted and conditionally permitted uses but fit within the intent of the LLD (Section 3-37-39) shall be encouraged subject to an initial determination by the Director of Community Development and subsequently, subject to a conditional use permit approved by the Planning Commission.
 7. Prior to approval of the master plan for development of the Lifelong Learning District site (F below), the Planning Commission shall make a specific finding that the master plan meets the intent of the Lifelong Learning District planning standards.
- D. *Trip budget.* Based on the socioeconomic-based trip generation average daily trip (ADT) rates used to analyze the Orange County Great Park traffic impacts, the total trips for the entire Orange County Great Park project area are not to exceed 90,963 ADT for the base zone or 148,910 ADT for the overlay zone.

Total trips for this Planning Area may not exceed 83,021 ADT for the base zone or 117,047 ADT for the overlay zone except as follows. Dwelling units and square footage allocated to the 3.2 Transit Oriented Development zoning district in the overlay zone will be divided between Planning Areas 30 and 51 through the implementation of a master plan for Transit Oriented Development. A total of 3,183 ADT (ten percent of the vehicle trips allocated to Planning Area 30 in the overlay zone) may be transferred between Planning Area 51 and Planning Area 30 in conjunction with the approval of the master plan. Any transfer of vehicle trips between planning areas will be subject to review in accordance with the approval of the master plan. Any transfer of vehicle trips between planning areas will be subject to review in accordance with the requirements of the City's Traffic Study Guidelines.

- E. *Development tracking and monitoring report.* The development in Planning Area 51 is subject to specific limits as follows:
- Maximum square footage - see Section 9-51-3 Statistical Analysis Overlay Zone
 - Maximum residential units - See Section 9-51-3 Statistical Analysis Overlay Zone
 - Maximum daily vehicle trips - 117,047 ADT

Building permits which would cause one or more of these maximums to be exceeded shall not be issued.

Building permits and discretionary application: Prior to the approval of any discretionary application and prior to the issuance of each building permit for new development, the applicant shall submit to the Community Development Department a table documenting the cumulative total of approved development within Planning Area 51, in a manner meeting the approval of the Director of Community Development.

A project traffic study (Urban Crossroads Inc. dated December 2002) was prepared for development of the entire Orange County Great Park project area. A subsequent traffic study (Austin Foust & Associates dated September 2006) was prepared for the inclusion of the Lifelong Learning District. Based upon these studies, a post-2025 vehicle trip limit has been established for Planning Area 51 (the project area). The AFA study establishes a trip cap of 83,021 ADT for the base zone or 117,047 for the overlay zone. Refer to Table A-1 of the September 2006 traffic study for the established land use trip rates for development monitoring purposes. Land use trip

generation rates for undefined land uses will be determined by the Director of Public Works.

For the purpose of this section, "Applicant" shall mean the developer who will actually develop the land. In conjunction with issuance of any building permit, the applicant shall submit a Planning Area Development Monitoring Report for review and approval of the Director of Community Development. The Planning Area Development Monitoring Report shall include the allocation of trips to the proposed discretionary case or building permit to ensure that the aggregate projected traffic does not exceed the vehicle trip limits established for PA 51. The Planning Area Development Monitoring Report shall include, but not limited to, the accounting of trips (average daily) used in each discretionary case application or building permit application. Approval by the Director of Community Development shall be based upon the determination that the allocations shown do not exceed the maximum trips established for Planning Area 51; and that the allocation is generally consistent with the General Plan, zoning and other applicable regulatory documents. The Planning Area Development Monitoring Report may be updated by the Applicant and is subject to review and approval by the Director of Community Development. The purpose of the Great Park Planning Area 51 Development Monitoring Report is to monitor the growth and update the project's components.

- F. *Additional traffic analysis.* With the submittal of future discretionary applications for specific development proposals, the Director of Public Works (DPW) may determine that additional traffic studies are required if the DPW determines that the proposed project is not in substantial conformance with the most recent traffic study for the project area. Notwithstanding the North Irvine Transportation Mitigation requirement that only an Interim Year analysis is required for Map level traffic studies, the applicant shall conduct an Interim, Long Term, and Buildout analysis for the required traffic study.
- G. *Review process.* Prior to the commencement of any private development in the 1.5 Recreation, 2.2 Low Density Residential, 3.2 Transit Oriented Development, 8.1 and 8.1A Lifelong Learning District or 6.1 Institutional zoning districts within the Planning Area 51, the Planning Commission shall review and approve a master plan, containing the following information:
 - 1. Location, acreage, types of land use and estimated square footages or number of dwelling units for each area within the zoning district.
 - 2. A community design program, which characterizes the design features of the development, including signage design, fencing design, landscape themes, architectural theme, and other community design features.
 - 3. Landscape treatments, consistent with the Orange County Great Park Streetscape Plan, including:
 - a. Planning Area edge and entry widths and general character
 - b. Special landscaping themes, if any.
 - c. Palette of plant materials, walls, and hardscape for areas in and adjacent to the public rights-of-way.
 - d. Ownership of landscape areas.
 - 4. Wildlife corridor edge condition treatments, consistent with the Irvine Wildlife Corridor Plan, including:
 - a. Light and noise mitigation programs and techniques.
 - b. Palette of compatible plant materials.

- c. Walls, fences, and/or barrier mechanisms to protect the wildlife corridor from unwanted intrusions.
 - 5. Existing and planned uses on adjoining properties and transition from surrounding areas to the mixed use Transit Oriented Development and Lifelong Learning District.
 - 6. Access to the project site and on-site pedestrian, bicycle and vehicular patterns.
 - 7. Other information as required by Chapter 2-17 or the Director of Community Development. The application for said master plan shall be accompanied by maps, text, or other documentation to satisfy the above requirements. The form and content of such submittals shall be made to the satisfaction of the Director of Community Development.
- H. *Changes in boundaries and/or intensities.*
- 1. Boundaries and acreages in the Orange County Great Park plan are approximate and shall be established by master plan approval (G above).
 - 2. The Statistical Analysis (Section 9-51-3) shall be administratively adjusted to reflect the allocation of Transit Oriented Development intensity and any transfer of residential density in the overlay zone following Planning Commission approval of a master plan (B and G above).
 - 3. The trip budget for the Planning Area may be increased by ten percent, subject to the transfer provisions of D above.
- I. *Reuse of existing facilities.* The former MCAS El Toro site has a number of facilities suitable for civilian reuse, including barracks, recreational facilities, golf course, warehouses, hangars, and commercial facilities. The zoning accommodates a number of these existing facilities, encouraging adaptive reuse wherever possible. Some existing facilities can possibly be adapted for civilian use on a long-term, permanent basis; others can serve interim uses during development of the site.

Following is a summary of the existing on the base and their potential for reuse. Prior to the issuance of occupancy permits for any existing structure, a fire life-safety evaluation of the structure, including recommendations for improvements required for compliance with current Building Codes adopted by the City for the use of existing structures, and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.

- 1. *Residential.* Individual single-family and multi-family residential units appropriate for temporary reuse are generally located north of Irvine Boulevard. Permanent reuse may require substantial renovation.
- 2. *Barracks.* Twenty-five barracks in varying degrees of condition are located on the former MCAS El Toro. Most of the structures need substantial renovation or are condemned due to earthquake damage. Some barracks structures could be appropriate for reuse as student dormitory housing related to the education campus.
- 3. *Recreational facilities.* The recreational facilities on the base appropriate for reuse include two swimming pools, indoor racquetball courts, indoor handball courts, a gymnasium, a bowling alley, a golf course with club house, riding stables, and various playing fields.
- 4. *Equestrian center.* The equestrian center south of Irvine Boulevard could be appropriate for civilian reuse and linked to other open space areas with the Orange County Great Park. Should equestrian uses be pursued, the developer

will be required to provide trail connections to regional riding/hiking trails, consistent with the Orange County Great Park Streetscape Plan.

5. *Hangars.* Aviation hangars located in the southern portion of Planning Area 51 could be appropriate for reuse as warehousing, manufacturing, or motion picture production studios. Close proximity to the permanent open space areas may also facilitate reuse of the hangars as museum, sports, cultural facilities, or other uses consistent with the zoning of the site.

- J. *Recycling operations.* Existing runways are located on a substantial portion of the site planned for open space and related uses. Runways, aprons, and associated taxiways exist on the site reflecting its prior usage as a Marine Corps air station. In order to use the site for urban purposes, the runways must be removed. Concrete and asphalt from the runways will be crushed and then used as aggregate base or recycled for other roadway uses.

The runways will be removed in a sequential manner. The removal of most, if not all, of the runway paving is anticipated. Some portion of runway may be preserved for use as playing surfaces and parking areas or for historic purposes. Demolition of the runways may occur either in a single effort or may occur in conjunction with the phasing program to be developed as part of the park development plan. Stockpiled material will be placed in designated areas and distributed as required to provide aggregate for development projects. Once the material has been used, the land will become available for development. Concrete recycling facilities and stockpiling of demolished or recycled material are considered an appropriate interim land use, subject to the approval of a conditional use permit.

- K. *Senior housing.* The 800 residential units developed within the Lifelong Learning district in the overlay plan shall be age restricted housing with the minimum age of the principal occupant of any dwelling unit required to be 55 years of age or older.
- L. *Trails plan.* In conjunction with the submittal of the master tract map the applicant shall submit a conceptual master landscape and trails plan or a detailed exhibit depicting potential trail connections on site to the City's existing or planned regional trail network.

In addition, in conjunction with subsequent tract maps, master plans or building permit submittals, whichever comes first, the applicant shall provide a specific and detailed trails plan depicting the exact location, alignment and connectivity of on-site trails to the City's existing or planned regional trail network.

- M. *Child care.* The need for child care facilities shall be recognized in the development of Heritage Fields. Prior to the approval of the first residential tentative tract map that causes the total combined approved residential dwelling units, excluding senior housing units, to reach 1,400 in Planning Areas 30 and 51, the developer shall submit a child care needs study to the Director of Community Services for approval. Based on the presumption that generally need for private child care facilities will be triggered at 3,500 dwelling units (units with children), the purpose of the study will be to identify any unmet need for child care as a result of residential development within Planning Areas 30 and 51. Upon approval of the Study by the Director of Community Services which demonstrates that an unmet need exists, the developer shall identify

ways to provide unmet private child care needs. Any private sector child care center(s) shall:

1. Accommodate the determined number of slots, which shall be based on the actual number of residential units to be built and on a determination of child care need within the project.
2. Be located at a site that is compatible with adjacent uses. Development of a child care center in conjunction with proposed elementary schools and public neighborhood parks, residential development and/or neighborhood commercial center shall be encouraged.
3. Be located at a site that has been evaluated with regard to factors that might be detrimental to public health, safety, or welfare, including but not limited to proximity to high-traffic volume roadways, hazardous material, and major generators of traffic.
4. Be a minimum site size for the child care center, which is 1.3 acres and accommodates a minimum of 150 children, per the Table G-2 of the City's General Plan, although larger sites are encouraged to accommodate larger number of children.

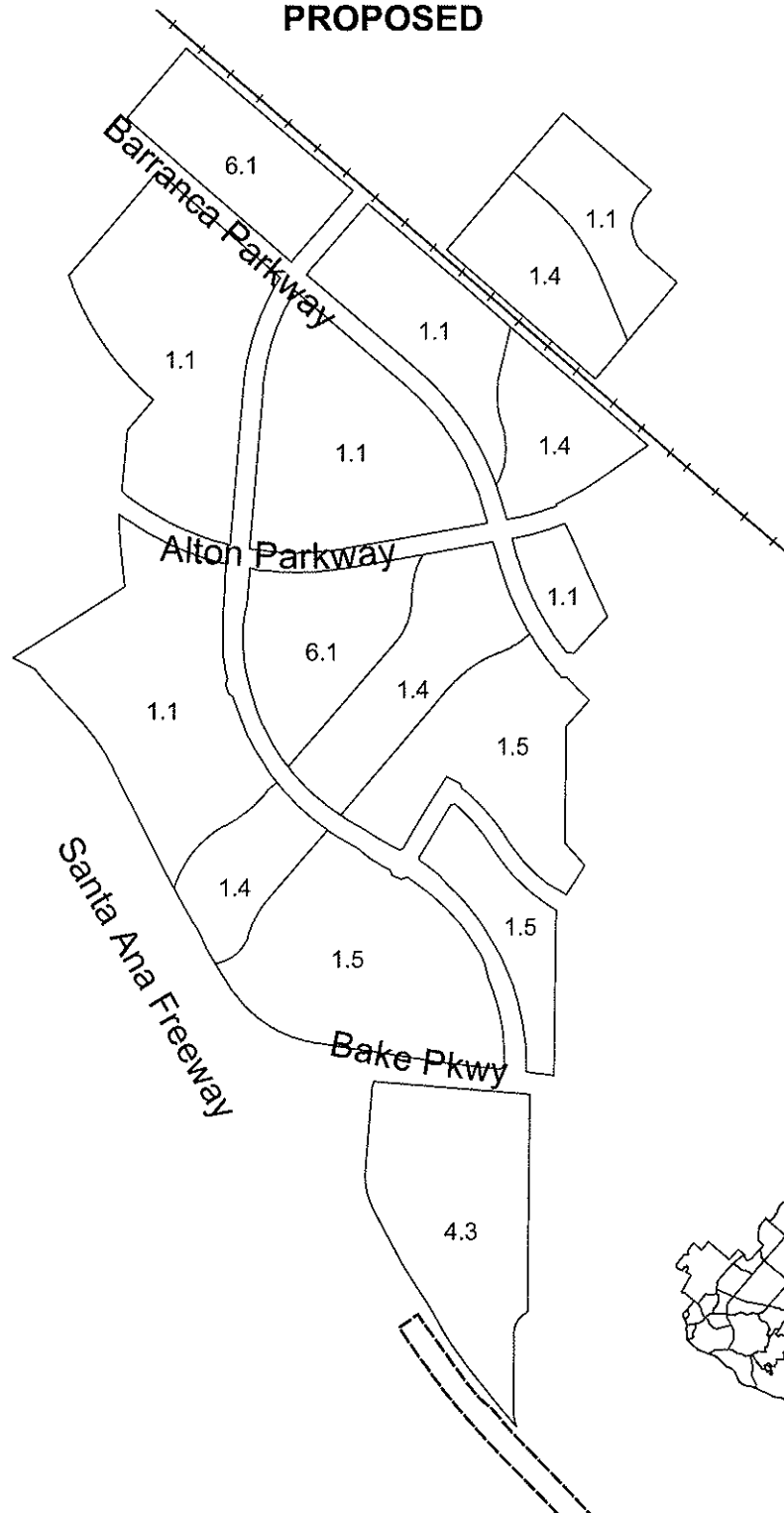
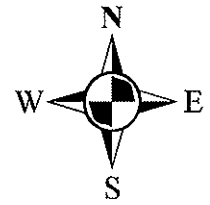
(Ord. No. 00-03, § 4, 2-22-00; Ord. No. 03-18, § 4, 6-10-03; Ord. No. 06-18, § 4, 10-24-06)

Editor's note: Ord. No. 03-18, § 4, adopted June 10, 2003, amended the Code by repealing former § 9-51-6 and renumbering § 9-51-7 as § 9-51-6. Former § 9-51-6 pertained to planning area sectors, and derived from Ord. No. 00-03, adopted February 22, 2000.



ZONING ORDINANCE MAP

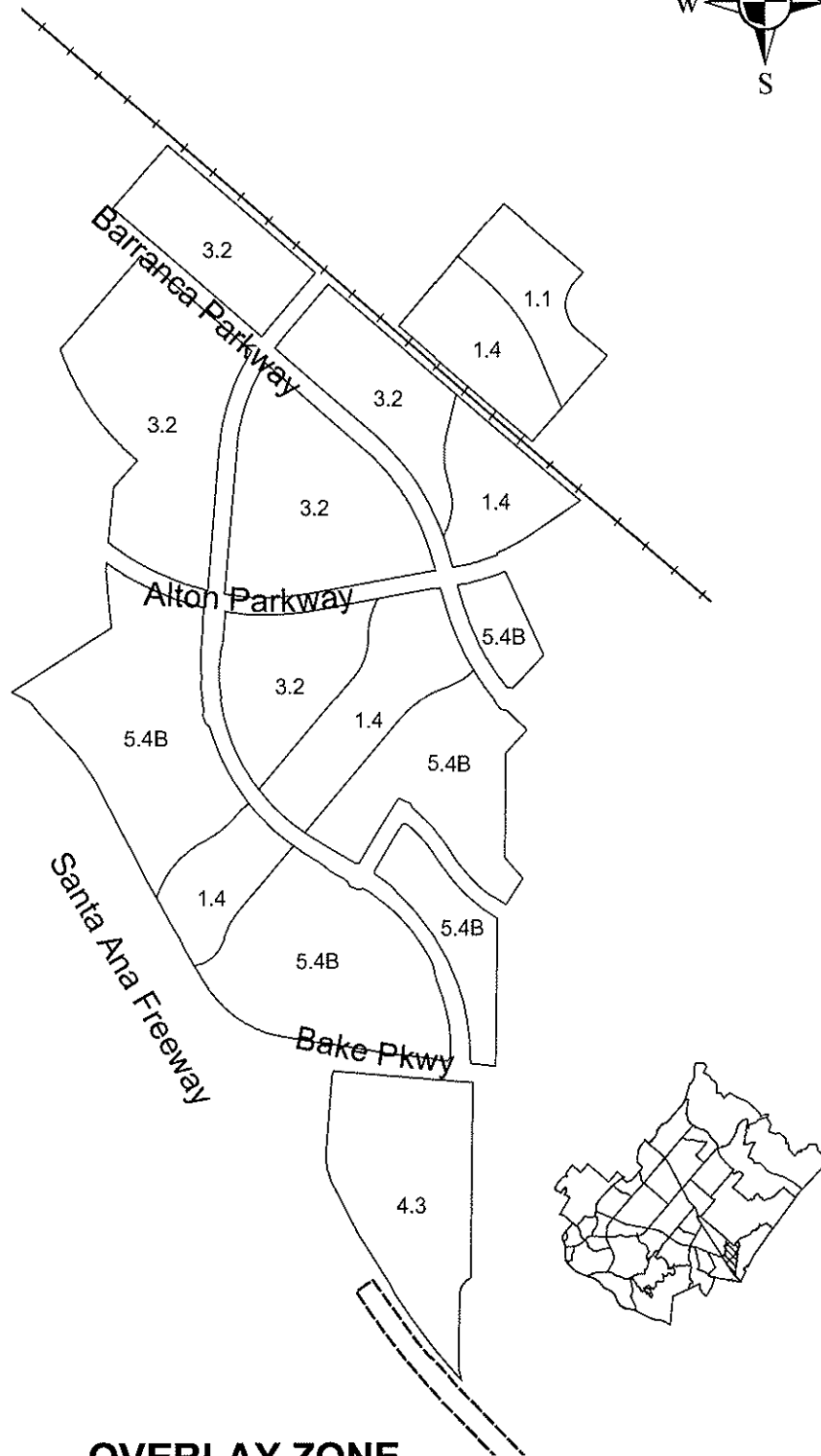
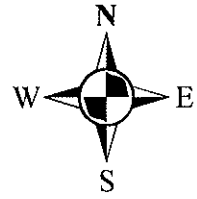
PLANNING AREA 30
PROPOSED



BASE ZONE



ZONING ORDINANCE MAP
**PLANNING AREA 30
PROPOSED**



OVERLAY ZONE

Appendix B

Bake Parkway – Marine Way Circulation System

*Amendment Traffic Study, prepared by Parsons Brinkerhoff
and the City of Irvine, dated June 2008*

Appendices

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Traffic Study under Separate Cover

Appendix C

OCGP Mitigation Monitoring and Reporting Program

Appendices

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**ORANGE COUNTY GREAT PARK
FINAL EIR (FEIR)
CITY OF IRVINE
MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST**

1.0 INTRODUCTION

Section 21081.6 to the State of California Public Resources Code requires a lead or responsible agency that approves or carries out a project where an environmental impact report (EIR) has identified significant environmental effects to adopt a “reporting or monitoring program for adopted or required changes to mitigate or avoid significant environmental effects.” The City of Irvine is the lead agency for the Great Park Plan EIR, and therefore is responsible for implementation of the mitigation monitoring program. An EIR has been prepared for this project which addresses potential environmental impacts and, where appropriate, recommends measures to mitigate these impacts. As such, a mitigation reporting or monitoring program is required to ensure that adopted mitigation measures are implemented.

The project is located in the center of Orange County and includes land within the City or Irvine as well as unincorporated area. The project area encompasses approximately 4,701 acres, or 7.5 square miles. The total area proposed for annexation is 4,287 acres.

The project area is bounded by the City of Lake Forest to the south and southeast, the City of Irvine to the west and southwest, and the County of Orange to the north. The former MCAS El Toro is generally located north of the Santa Ana (I-5) Freeway, east of the Eastern Transportation Corridor (SR-133), and south of the Foothill Transportation Corridor (SR-241). Major roadways bordering the project area include Barranca Parkway to the south, Sand Canyon Avenue to the west, Portola Parkway and Irvine Boulevard to the north, and Alton Parkway to the east. The James A. Musick Jail Facility is located on a 105-acre site northwest of existing Bake Parkway and east of the future extension of Alton Parkway. The northern boundary of the Musick Jail abuts the former MCAS El Toro. Existing buildings of the Irvine Spectrum abut the Musick Jail site to the west/southwest. An eight-acre parcel west of the Musick Jail contains the IRWD East Irvine Pumping Station, Zone III 5-million gallon potable water reservoir, and a 7-million gallon potable water reservoir.

The project consists of the following actions: 1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; 2) Annexation of the unincorporated portion of Planning Area 35 (the Irvine Ranch Water District Parcel); 3) General Plan Amendment and Zone Change for Planning Area 30 with is presently in the City of Irvine; and, 4) Approval in the form of a Development Agreement vesting approval of higher intensity overlay uses in consideration of dedication of land for public purposes and for funding certain infrastructure improvements and maintenance of the public uses by the

purchaser/developer and subsequent landowners and funds for specified park, roadways, and other circulation facilities and infrastructure. The proposed project also includes the dedication of approximately 21 acres to be used for the Jeffrey Pine Open Space Spine (JOSS). The JOSS acreage will serve as a connector to the regional open space system and will provide recreational opportunities in the Northern Sphere.

2.0 PROGRAM MANAGEMENT

The mitigation monitoring and reporting program (MMRP) for the Great Park Plan will be in place through all phases of project approval. Enforcement of the MMRP will be the responsibility of a Project Manager (PM) at the City of Irvine.

2.1 Roles and Responsibilities: Project Manager

The role is assigned by the Community Development Director. The PM assigned to the proposed project will supervise the MMRP during design, construction, and operation of the project and is responsible for the overall management of the MMRP. The PM is thoroughly familiar with the project and qualified to determine if an adopted measure is being properly implemented. The PM oversees the MMRP and reviews the Reporting and Implementation (R&I) Forms to ensure they are filled out correctly and proper action is being taken on each measure. The PM and/or an assignee will also be responsible for the filling and updating of the R&I Forms during all phases of the project. The PM will determine the need for a measure to be modified and ensure the use of a mitigation specialist if technical expertise beyond the PM's is required. If it is found that an adopted mitigation measure is not being properly implemented, the PM will require corrective actions to ensure adequate implementation. The responsibilities of the PM include the following:

1. An MMRP Reporting Form will be prepared for each potential significant impact and its corresponding mitigation, as identified in the list of significant impacts and mitigation measures attached hereto.
2. Appropriate specialists will be retained, as needed, to monitor specific mitigation activities and provide appropriate written approvals to the PM.
3. The PM and/or an assignee will approve, by signature and date, the completion of each action item that was identified on the MMRP Reporting Form.
4. All MMRP Reporting Forms for an impact issue requiring no further monitoring will be signed off as completed by the PM and/or an assignee at the bottom of the MMRP Reporting Form.

5. Unanticipated circumstances may arise requiring the refinement or addition of mitigation measures. The PM is responsible for approving any such refinements or additions. An MMRP Reporting Form will be completed by the PM and/or an assignee. The completed form will be provided to the appropriate design, construction, or operational personnel.
6. The PM has the authority to stop the work of construction contractors if compliance with any aspects of the MMRP is not occurring after written notification has been issued. The PM also has authority to hold certificates of occupancies if compliance with a mitigation measure attached herein is not occurring. The PM also has authority to hold the issuance of a building permit until all mitigation measures are implemented. Should the applicant/contractor disagree with the findings and actions of the PM, an appeal to the Community Development Director can be submitted.

2.2 General Procedures

MMRP Program Definitions

The MMRP consists of key program elements. The elements are summarized below.

MMRP Files

Files are established to document and retain records of the MMO. The file organization is established by the PM according to mitigation measures and project phases.

R&I Forms

R&I Forms are designed to record the monitoring activity in a consistent manner with appropriate approvals. The R&I Forms are placed in the MMRP files.

Environmental Compliance Verification

At the completion of construction contracts that are part of the overall development of the project, a verification of environmental compliance is executed by the PM. The verification concludes the construction monitoring process for the contract.

Mitigation Monitoring and Reporting Program Procedures

The policies and procedures for the MMRP described herein are intended to provide focused, yet flexible guidelines for monitoring the implementation of the mitigation measures discussed in the final EIR. The Mitigation Monitoring and Reporting Checklist lists each mitigation measure, the method of verification for each mitigation measure, and the party responsible for monitoring efforts. The Mitigation Monitoring and Reporting Checklist also provides the PM a verification of compliance for each mitigation measure during each applicable phase of the project. An R&I form is prepared for each potential significant impact and its corresponding mitigation measure. After each measure is

verified for compliance, no further action is required for the specific phase. The PM shall initial and date the measure on Mitigation Monitoring and Reporting Checklist.

Disposition of Monitoring Forms

All actions and completed R&I Forms are kept in the MMRP file with the City of Irvine during the pre-design, design, construction, and operational phases of the project. Reports will be available from the city upon request at the following address:

City of Irvine (Lead Agency)
Community Development Department
One Civic Center Plaza
Irvine, California 92623-9575

MITIGATION MONITORING AND REPORTING PROGRAM

ORANGE COUNTY GREAT PARK

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
5.1 LAND USE (Base Plan and Overlay Plan)					
	No mitigation measures are required.				
5.2 TRAFFIC/CIRCULATION (Base Plan and Overlay Plan)					
TRAN1	<p>Prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property, the landowner or subsequent project applicant shall apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs. The primary purpose of this mitigation measure is to reduce traffic, air quality and noise impacts. Should annexation into Spectrumotion not be approved, the landowner or subsequent project applicant shall develop and implement a similar transportation management plan containing the elements and meeting the criteria described below:</p> <p>Transportation Management Plan (TMP)</p> <p>The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for the Great Park Project. This document summarizes the key elements of the TMP.</p>	<p>Requires submittal of annexation plans by project applicant in accordance with the Irvine Spectrum TMA. Failure to obtain approval of such plans requires project applicant to develop and implement a TMP as described in TRAN1.</p>	<p>Prior to the approval of any final map (other than a financing and conveyance map) within the Great Park project, and prior to issuances of any building permits for permanent improvements within the Great Park property.</p>	<p>Director of Community Development or designee.</p>	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>1.0 Introduction</p> <p>The purpose of this document is to provide an outline for a comprehensive TMP for the Great Park. This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.</p> <p>It is the intent to annex Planning Area 51 and a portion of Planning Area 35 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.</p> <p>In the event that annexation of PAs 51 and 35 into Spectrumotion is not approved, a TMP similar to that provided by Spectrumotion will be implemented. This document sets forth the components of the TMP should it be necessary.</p> <p>2.0 Transportation Management Plan Framework</p> <p>The key elements of the Great Park TMP are set forth below:</p> <p>New Hire Orientation: Inform newly hired employees of commuting services available to them.</p>				

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services ((i.e., OCTA buses, Metrolink, Amtrak, etc.).</p> <p>Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.</p> <p>On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.</p> <p>Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.</p> <p>Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.</p> <p>Website: Maintain a website with all of their program information available.</p> <p>Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.</p> <p>Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.</p> <p>Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.</p>				

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	3.0 Transportation Management Plan Implementation As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Great Park. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.				
TRAN2	Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of the OCGP FEIR.	Requires contractual agreement between the City of Irvine and project applicant to fund improvement listed in the EIR.	Prior to the issuance of the first building permit.	Director of Community Development or designee.	
TRAN3	Prior to issuance of any building permits for permanent improvements within Planning Areas 30 and 51, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the NITM Ordinance.	Requires contractual agreement between the City of Irvine and project applicant to fund improvement listed in the EIR.	Prior to issuance of any building permits for permanent improvements in the project area.	Director of Community Development or designee.	
TRAN4	Prior to approval of each Master Tentative Map or equivalent, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Master Tentative Map. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated traffic forecasts. The updated traffic study will evaluate the cumulative impact of the subject map and all previously approved or concurrently submitted maps. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City approved traffic study scope of work. The landowner or subsequent project applicant shall construct, bond for, or enter into a funding agreement for necessary	Requires the separate submission of updated traffic study developed in accordance with City of Irvine Traffic Study Guidelines.	Prior to the approval of each Master Tentative Map or equivalent document.	Director of Community Development or designee.	

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	<p>improvements identified in the updated traffic study and/or participate in the City fee program (Tran 2 above) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of the OCGP FEIR.</p> <p>Traffic signals that are on-site or directly related to the Great Park development will be installed as warranted through the mitigation implementation plan process.</p>				
TRAN5	<p>In conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the following actions:</p> <ol style="list-style-type: none"> 1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-tollway ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in the OCGP FEIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines. 2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency. 3. The landowner or subsequent project applicant shall enter into an agreement with the City prior to recordation of the first final map for each Master Tentative Map or equivalent to establish the method 	Requires the separate submission of updated traffic study developed in accordance with City of Irvine Traffic Study Guidelines.	Prior to the approval of each Master Tentative Map or equivalent document.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	and timing of payment of the identified percentage responsibility. 4. The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or funding participation in a regional transportation improvement fee program, if adopted.				
TRAN6	The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 in the OCGP FEIR show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.	Requires the separate submission of updated traffic study developed in accordance with City of Irvine Traffic Study Guidelines. May require additional documentation and/or submission to other jurisdictions, depending on location of proposed improvement.	Prior to the approval of each Master Tentative Map or equivalent document.	Director of Community Development or designee.	
TRAN7	Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact	Requires the development and submission of a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study by the City of Irvine.	Prior to the approval of each Master Tentative Map or equivalent document.	Director of Community Development for submission to Caltrans and potentially effected TCA's.	

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	studies for any mitigation measure (improvement) that may be impacted by the non-compete clause or any similar agreement restricting a public agency's authority to construct improvement.				
TRAN8	Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of any building permits within the base property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdictions to amend the Orange County Master Plan of Arterial Highways (MPAH). Marine Way, Trabuco Road from the SR-133 tollway to College Road, and Y Street should be included on the MPAH.	Requires cooperate study and subsequent amendment to Orange County Master Plan of Arterial Highways.	Following adoption of a land use plan and circulation plan for the project site and before the issuance of any building permits.	Director of Community Development, OCTA, and other affected jurisdictions.	
5.3 AIR QUALITY (Base Plan and Overlay Plan)					
AQ1	Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors; etc.; shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.	Requires written notification to potentially affected sensitive receptors (residents and landowners).	Prior to the start of demolition and construction within the project area.	Director of Community Development or designee.	
AQ2	Prior to the commencement of construction activities required to demolish and/or remove existing DON structures, including runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain	Requires the development, submission, and approval of a construction emissions mitigation plan by project applicant.	Prior to the start of demolition and construction within the project area.	Director of Community Development or designee.	

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	<p>measures are determined infeasible, an explanation thereof shall be provided.</p> <p>X Evaluate the availability and use, if available, of low-emission (i.e., methanol- or natural gas-powered) construction equipment instead of diesel for each construction phase.</p> <p>X Water exposed soils at least twice daily and maintain equipment and vehicle engines in good condition and in proper tune.</p> <p>X Wash off trucks leaving the site.</p> <p>X Replace ground cover on construction sites when it is determined that the site will be undisturbed for lengthy periods.</p> <p>X Reduce speeds on unpaved roads to less than 15 miles per hour.</p> <p>X Halt all grading and excavation operations when wind speeds exceed 25 miles per hour.</p> <p>X Suspend all emission generating activities during smog alerts.</p> <p>X Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible.</p> <p>X Properly maintain diesel-powered on-site mobile equipment.</p> <p>X Sweep streets at the end of the day if substantial visible soil material is carried over to the adjacent streets.</p> <p>X Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible.</p> <p>X Use of low-VOC asphalt.</p> <p>X Cover all trucks hauling dirt, sand, soil or other loose material to and from the site.</p> <p>X Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic.</p> <p>X Schedule construction activities that affect traffic flow on</p>				

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	adjoining streets to off-peak hours to the extent possible. X Reroute construction trucks away from congested streets, whenever feasible. X Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible.				
AQ3	<p>Prior to the issuance of building permits for any future development, the applicant shall submit, and the Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.</p> <p>X Utilize built-in energy-efficient appliances to reduce energy consumption and emissions.</p> <p>X Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions.</p> <p>X Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible.</p> <p>X Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning.</p> <p>X Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible.</p> <p>X Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods.</p> <p>X Centralize space heating and cooling for multiple-family dwelling units and commercial space.</p> <p>X Orient buildings north/south for reducing energy-related combustion emissions.</p> <p>X Use solar energy, when feasible.</p> <p>X Use high rating insulation in walls and ceilings.</p>	Requires the development, submission, and approval of an operation-emissions mitigation plan by project applicant.	Prior to the issuance of building permits within the project area.	Director of Community Development or designee.	
AQ4	At the time of residential and commercial lease and sales	Requires written	On-going (at the	Director of	

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	agreements, future sales information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find employment nearby.	notification to employees and residents within the project area.	time of residential and commercial lease and sales agreements).	Community Development or designee.	
AQ5	At the time of residential and commercial lease and sales agreements, the applicant shall demonstrate to the satisfaction of the Director of Community Development that future employment generating non-residential development shall include measures to reduce vehicle trips including carpool incentives, easy access to public transit systems, trail linkages between uses, low-emissions vehicle fleets, and the provision of on-site facilities such as banking and food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.	Requires submission of potential measures to reduce vehicle trips, as identified in AQ5.	On-going (prior, during and upon completion of development of the project area).	Director of Community Development or designee.	
5.4 NOISE (Base Plan and Overlay Plan)					
	No mitigation measures are required.				
5.5 PUBLIC HEALTH AND SAFETY (Base Plan and Overlay Plan)					
HH1	<p>a. Prior to the conveyance of the property and issuance of subsequent grading permits, where the presence of ACMs is identified, the DON or its transference shall ensure that all available information concerning ACMs has been provided to the City of Irvine, and the purchasers of the property, including:</p> <p>X The type, location and condition of ACMs</p> <p>X The results of any asbestos testing</p> <p>X Description of asbestos control measures taken, if any</p> <p>X The costs or time necessary to remove existing ACMs</p> <p>X The results of any site-specific asbestos inventory updates</p>	Requires submission of Record of Decision (ROD) or similar applicable federal/state documentation to verify information provided to the City of Irvine by the DON.	Prior to the conveyance of the former MCAS El Toro property; prior to the occupation of existing structures on the former MCAS El Toro property.	Manager of Building and Safety; Director of Community Development.	

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	<p>b. For any structures known to contain ACMs that will be renovated and/or demolished prior to transfer, the DON shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.</p> <p>c. Prior to transfer of any structure constructed before October 1988, scheduled for renovation and/or demolition, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by the DON. This requirement can be waived if an architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building material, and to the best of their knowledge, no ACMs were used as a building material.</p> <p>d. Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.</p> <p>e. Any renovation and/or LBP abatement activities on residential units at former MCAS El Toro shall be conducted in accordance with all applicable federal, state and local regulatory requirements.</p>				
HH2	a. Prior to transfer, the City of Irvine shall receive from the DON, with the concurrence of the appropriate regulatory agencies, a statement that the "Action Required" IRP Site 3 is to be conveyed for restricted use and that all institutional controls have been identified and implemented. The City of Irvine will adopt appropriate rules, policies, and regulations	Requires submission of Record of Decision (ROD) or similar applicable federal/state documentation to	Prior to the conveyance of the former MCAS El Toro property; prior to the use of Locations of Concern on the	Manager of Building and Safety; Director of Community Development; City Council.	

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	<p>necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.</p> <p>b. Prior to transfer, if the DON chooses to impose temporary restrictions on the use of Sites 16 and 24 pending adequate remediation of groundwater, the City of Irvine shall receive from the DON a statement of temporary restrictions on the use of the sites and the release of the sites for restricted use following implementation of adequate remediation of groundwater. The City of Irvine shall adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.</p>	verify information provided to the City of Irvine by the DON.	former MCAS El Toro property.		
HH3	The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification	Requires submission of development plans by potential project applicants for review	Prior to the approval of development plans.	Manager of Building and Safety ; Orange County Fire Authority.	

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	zones. Projects potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for "Development Within and Exclusion from Very High Fire Severity Zones" and "Fuel Modification Plans and Maintenance." Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the proposed project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.	and approval.			
HH4	Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.	Requires submission of development plans for existing structures for review and approval of required improvements.	Prior to the occupation of existing structures located on the former MCAS El Toro property.	Manager of Building and Safety; Orange County Fire Authority.	
HH5	Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director of Community Development of the City of Irvine in a timely manner. Additionally, said protocol plan shall be revised should the discovery of previously unknown hazardous	Requires the development, submission, and approval of a protocol plan by the potential project applicant.	On-going (prior to the issuance of a grading permit within the project area; in the event of the discovery of unknown hazardous materials).	Director of Community Development or designee; the DON.	

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	materials be made during any of the above mentioned development activities.				
HH6	The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells located on the former MCAS El Toro in a geographic information systems database (GIS). The City will review all permit applications on the former air station for monitoring well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to monitoring wells will be limited to authorized personnel.	Requires the development and maintenance of a GIS database by the City of Irvine.	On-going (prior to the issuance of grading permits; during construction activities).	Department of Public Works.	
4.6 GEOLOGY AND SEISMICITY (Base Plan and Overlay Plan)					
GS1	Prior to issuance of a building permit, the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.	Requires potential project applicant to address seismic design provisions in geotechnical reports per adopted Building Codes.	Prior to the issuance of a building permit.	Director of Community Development.	
GS2	<p>Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.</p> <p>1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be conducted. The purpose of the subsurface evaluation is to:</p> <ol style="list-style-type: none"> Further evaluate the subsurface conditions in the area of the proposed structures. Provide specific data on potential geologic and 	Requires potential project applicant to prepare geotechnical studies in support of specific development plans.	Prior to the issuance of a building permit.	Director of Community Development.	

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	<p>geotechnical hazards.</p> <p>c. Provide information pertaining to the engineering characteristics of earth materials in the project area.</p> <p>From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural sections, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:</p> <p>X Seismic Ground Shaking - Measures to prevent risk of loss, injury or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.</p> <p>X Erosion or Loss of Topsoil – Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances.</p> <p>X Where Expansive Soils Exist – Measures for the design of foundations, slabs, flatwork and other improvements subject to drainage from expansive soils.</p> <p>Compliance with this measure shall be verified by the Community Development Department.</p>				
GS3	Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of any existing structure if a building permit is not issued, a seismic evaluation of the structure including recommendations	Requires potential project applicant to develop and submit a seismic evaluation	Prior to the issuance of a building permit for the occupation of	Manager of Building and Safety.	

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	for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.	in accordance with adopted Building Codes.	any existing structure at the former MCAS El Toro.		
GS4	Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.	Requires potential project applicant to develop and submit geotechnical and hydrology reports in accordance with adopted local/state/federal regulations.	Prior to the issuance of a grading permit.	Director of Community Development.	
5.7 Hydrology/Water Quality (Base Plan and Overlay Plan)					
H/WQ1	<p>Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City of Irvine adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area . . . and residential construction sites that result in the disturbance of five acres or more . . . shall be required to develop and implement BMPs . . . to control erosion and siltation and contaminated runoff from the construction sites." Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of one acre or more.</p> <p>The City's standard conditions of approval indicate that a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any</p>	<p>Potential project applicant must show compliance with City of Irvine Grading and Water Quality Ordinances via approval of a NPDES permit, SWPPP, and WQMP.</p> <p>Notices of Intent (NOIs) for coverage of potential projects under the General Construction Activity Storm Water Runoff Permit must be submitted to the State Water Resources Control</p>	Prior to the issuance of a grading permit.	Director of Community Development; Manager of Building and Safety; City Engineer; State/Regional Water Quality Control Boards.	

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	<p>project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.</p> <p>Additionally, prior to the issuance of a grading permit, project applicants must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.), and shall reference the location(s) of structural BMPs. (Completed with the WQMP (Fusco, June 28, 2006, Revised September 15, 2006).</p> <p>Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the Director of Community Development for any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES Permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.</p> <p>The Mitigation Measures will be implemented in accordance</p>	Board.			

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	with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.				
H/WQ2	Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TDML) Implementation Plan adopted for this watershed.	Submission of a construction management plan required by the potential project applicant.	Prior to the issuance of a grading permit.	Director of Community Development; City Engineer; State/Regional Water Quality Control Boards.	
H/WQ3	Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrology studies and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.	Requires the submission of a hydrology study and hydraulic analysis by the potential project applicant.	Prior to the approval of the first tentative tract or parcel map in the project area.	Director of Community Development; City Engineer.	
H/WQ4	Prior to issuance of a building permit, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be	Requires the development, review, and approval of a Letter of Map Revision; physical improvement of property located in	Prior to the issuance of a building permit.	Director of Community Development; City Engineer.	

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	<p>filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.</p> <p>After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process.</p>	100-year floodplain by project applicant.			
5.8 AGRICULTURAL RESOURCES (Base Plan and Overlay Plan)					
AG1	<p>In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operations, City Of Irvine Standard Discretionary Case Condition B.4 and City Of Irvine Standard Subdivision Condition 3.4 regarding disclosure statements shall be amended to include the following for subdivisions proposed adjacent to existing agricultural operations:</p> <p>Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:</p> <p>X Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.</p>	Project applicant shall complete and receive approval for an occupancy disclosure form per the standards stated in Mitigation Measure AG1.	Prior to the issuance of a building permit.	Director of Community Development.	
AG2	Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.	May require development of a cooperative agreement.	On-going (prior to and during development of the project area).	Director of Community Development.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
AG3	Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operations and adjacent urban uses.	May require development of a cooperative agreement.	On-going (prior to and during development of the project area).	Director of Community Development.	
5.9 BIOLOGICAL RESOURCES (Base Plan and Overlay Plan)					
BIO1	Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. Prior to approval of a subdivision map for development within, or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owls, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).	Requires the development and submission of focused biological surveys for resources indicated in BIO1.	Prior to the approval of a subdivision map.	Director of Community Development; US Fish and Wildlife Service; California Department of Fish and Game.	
BIO2	Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, re-creation (i.e. within the proposed wildlife corridor), and/or revegetation as deemed acceptable by the appropriate jurisdictional agencies.	Requires the development and submission of wetland survey for potential wetland resources.	Prior to the approval of a subdivision map.	Director of Community Development; US Army Corps of Engineers; US Fish and Wildlife Service; California Department of Fish and Game.	
BIO3	The City shall continue to work with State and federal agencies during the implementation of the proposed project to implement the revegetation/restoration plan for the wildlife	May require development of a revegetation and/or	On-going (prior to and during development of	Director of Community Development; US	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	corridor. Measures such as sight and sound barriers, including artificial sound walls and natural diversions (e.g. hedges and tree lines) shall be incorporated into corridor design to ensure the viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the OCGP FEIR.	restoration plan for the identified wildlife corridor.	the project area).	Fish and Wildlife Service; California Department of Fish and Game.	
BIO4	Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered "Significant Trees" under the City of Irvine's Urban Forestry Ordinance (UFO) (Section 5-7-401 et al) and the UFO shall apply to all trees included in this inventory.	Requires the development and submission of a tree inventory per the regulations outlined in the City of Irvine Urban Forestry Ordinance.	Prior to the issuance of a grading permit.	Director of Community Development; International Society of Arboriculture.	
5.10 PALEONTOLOGICAL RESOURCES (Base Plan and Overlay Plan)					
P1	Prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. (A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.	Submittal of resource recovery and disposition plans to the Community Development Department; qualified paleontologists' attendance at pre-grading conference(s) and field observation.	Prior to issuance of a grading permit and during site grading.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossils specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screen-washing operation on-site.</p> <p>Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.</p>				
5.11 CULTURAL RESOURCES (Base Plan and Overlay Plan)					
CULT1	<p>Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PAs 51 and 30. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.</p>	Requires development and submission of an archaeological resources report for PAs 51 and 30 by project applicant.	Prior to the issuance of subdivision maps.	Director of Community Development or designee.	September 2006 DL
CULT2	<p>Monitoring of excavation and grading activities associated with future development in PAs 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure Cult1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of</p>	Requires field inspection and monitoring by qualified archaeologist implementing recommendations	Field inspection and monitoring required during grading activities.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	artifacts, controlled removal of the materials, and an assessment of their importance under CEQA and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.	outlined in the report noted above.			
CULT3	Prior to the issuance of grading permits and/or building permits for any future development in PAs 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City of Irvine to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.	Requires the development and submission of an archaeological mitigation program by project applicant.	Prior to the issuance of grading permits and/or building permits in PAs 51 and 30.	Director of Community Development or designee.	
CULT4	<p>Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City of Irvine to address the accidental discovery or recognition of any human remains. The program shall include the following:</p> <p>X There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:</p> <p>The county coroner must be contacted to determine that no investigation of the cause of death is required, and</p>	Requires the development and submission of an archaeological mitigation program by project applicant.	Prior to the issuance of grading permits and/or building permits.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>If the coroner determines the remains to be Native American:</p> <p>X The coroner shall contact the Native American Heritage Commission within 24 hours.</p> <p>X The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.</p> <p>X The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or</p> <p>X Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.</p> <ul style="list-style-type: none"> • The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission. • The descendant identified fails to make a recommendation; or • The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner. <p>Compliance with this measure shall be verified by the Community Development Department.</p>				

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
5.12 AESTHETICS (Base Plan and Overlay Plan)					
A1	Prior to issuance of building permits, lighting plans and signage plans for new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent residential areas occurs.	Requires review of site specific plans for light intrusion and spillover by City of Irvine.	Prior to the issuance of building permits, lighting plans, and/or signing plans.	Director of Community Development or designee.	
A2	Prior to the issuance of building permits, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.	Discourages use of mirrored or reflective surfaces in proposed development; designs to be reviewed by the City of Irvine.	On-going (prior to the issuance of building permits; during master plan review).	Director of Community Development or designee.	
5.13 POPULATION AND HOUSING (Base Plan and Overlay Plan)					
	No mitigation measures are available.				
5.14 PUBLIC SERVICES AND FACILITIES (Base Plan and Overlay Plan)					
	Mitigation Measures identified in other sections of the OCGP FEIR (Section 5.1 – 5.13) address the impacts associated with the construction and operation of new public services and facilities (including law enforcement, fire and emergency medical services, parks and recreation, and school services). Refer to the individual sections mentioned above for a discussion on specific mitigation monitoring and reporting programs.				
5.15 UTILITIES (Base Plan and Overlay Plan)					
	Mitigation Measures identified in other sections of the OCGP FEIR (Section 5.1 – 5.13) address the impacts associated with the construction and operation of new utilities (including potable water, recycled water, and sewer). Refer to the individual sections mentioned above for a discussion on specific mitigation monitoring and reporting programs. Mitigation Measures pertaining to solid waste are described below.				
SW1	It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other deconstruction of the aged structures and property, including but not limited to buildings and runways, at MCAS El Toro, is contaminated with lead based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense	Requires the development and submission of a technical evaluation by the project applicant to	Prior to the issuance of grading permits.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the MCAS El Toro site by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.</p> <p>If it is determined by the technical evaluation that the material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as "waste-to-energy" (WTE) plants.</p>	determine the composition of solid waste materials generated during the development of the project area.			
SW2	For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant must submit a written plan to the City and implement such plan to ensure that 75 percent of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.	Requires the project applicant to submit written plans to the City of Irvine to ensure recycling maximum feasible levels of solid waste material is recycled.	Prior to the issuance of grading permits.	Director of Community Development or designee.	
SW3	For that solid waste which the technical study deems to be suitable for recycling, the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75% of the	Requires the project applicant to submit written plans to the City of Irvine to ensure recycling maximum feasible levels of solid waste	Prior to the issuance of grading permits.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180. ("Recycling" does not include transformation, as defined in Public Resources Code Section 40201.)	material is recycled.			
SW4	<p>To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by "weight ticket" receipts from state-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.</p> <p>To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.</p>	Requires the project applicant to submit quarterly solid waste tonnage reports to the City of Irvine in order to demonstrate solid waste diversion has occurred.	Prior to the issuance of grading permits.	Director of Community Development or designee.	
SW5	For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50 percent of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.	Requires the project applicant to submit a written plan to the City of Irvine to ensure recycling of the maximum feasible amount of green waste material (minimum of 50 percent) by qualified agent.	Prior to the issuance of grading permits.	Director of Community Development or designee.	

ADDENDUM NO. 6

**ORANGE COUNTY
GREAT PARK AND
HERITAGE FIELDS
AMENDED VTTM NO.
17008, VTTM NO.
17283, AND OTHER
ASSOCIATED
ACTIONS**

**00474083-PTT
00467853-PTT
00467322-PMP
00470483-PMP
00475427-PMP**

SCH #2002101020

Prepared by:

**CITY OF IRVINE
COMMUNITY
DEVELOPMENT
DEPARTMENT**

*Contacts:
David R. Law,
Senior Planner and
Michelle Drou  ,
Associate Planner*



OCTOBER 2008

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COI-28

OCTOBER 2008

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- C. Traffic Impact Analysis for Vesting Tentative Tract Map 17283 (Portion of the Lifelong Learning District) dated October 2008

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1. EIR Addendum Summary

1.1 PURPOSE AND SCOPE

This Initial Study/Addendum provides the basis for an addendum to the previously certified Final Environmental Impact Report (State Clearinghouse Number 2002101020) for the Orange County Great Park (OCGP) and serves as the environmental review of:

- Amended Vesting Tentative Tract Map (VTTM) No. 17008 (00474083-PTT)
- Vesting Tentative Tract Map No. 17283 (00467853-PTT)
- Modification to OCGP Streetscape Design Guidelines (00475427-PMP)
- Master Landscape and Trails Plan (MLTP) (00467322-PMP)
- Master Plan for Non-Residential Development within the Lifelong Learning District (00470483-PMP)

The requested entitlements do not permit any new development or other changes to approved intensities. This Addendum has been prepared pursuant to the provisions of the California Environmental Quality Act (CEQA), Public Resources Code Sections 21000 et seq., the State CEQA Guidelines, and the City of Irvine Local Guidelines for Implementing CEQA (Local CEQA Guidelines).

1.2 ENVIRONMENTAL PROCEDURES

Pursuant to CEQA, the State CEQA Guidelines, and the Local CEQA Guidelines, the City's review of the proposed Initial Study/Addendum focuses on the proposed VTTMs and related applications to determine if the project would cause a change in the conclusions of the Orange County Great Park Final Environmental Impact Report (OCGP FEIR), and any change in circumstances or new information that would substantially change the conclusions of the OCGP FEIR.

Pursuant to Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines, when an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for the project unless the lead agency determines, on the basis of substantial evidence, that one or more of the following conditions are met:

- (1) *Substantial changes are proposed in the project that will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;*
- (2) *Substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or*

1. EIR Addendum Summary

- (3) *New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, suggests any of the following:*
- a) *The project would have one or more significant effects not discussed in the previous EIR or negative declaration.*
 - b) *Significant effects previously examined would be substantially more severe than identified in the previous EIR.*
 - c) *Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives.*
 - d) *Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.*

Section 15164 of the State CEQA Guidelines states that an Addendum to an EIR shall be prepared “if some changes or additions are necessary, but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR has occurred.” This Initial Study/Addendum reviews the changes proposed by the project and any changes to the existing conditions that have occurred since the OCGP FEIR was certified. It also reviews any new information of substantial importance that was not known and could not have been known with exercise of reasonable diligence at the time that the OCGP FEIR was certified. It further examines whether, as a result of any changes or any new information, a subsequent or supplemental EIR may be required. This examination includes an analysis of the provisions of Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines and their applicability to the proposed project. This Initial Study/Addendum relies on the attached Environmental Analysis, which addresses environmental checklist issues on a section-by-section basis.

The City of Irvine Environmental Checklist Form has been completed by the City and included in Section 3, *Environmental Checklist*. The Environmental Checklist Form is marked with the findings of the Community Development Director as to the environmental effects of the proposed project in comparison with the findings of the OCGP FEIR. The checklist has been prepared pursuant to Section 15168(c)(4) of CEQA, which states that “where the subsequent activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR.”

Using that approach, the City of Irvine, the Lead Agency, determined that an Addendum to the previously approved OCGP FEIR is the appropriate environmental clearance for the project application.

1.3 PREVIOUS ENVIRONMENTAL DOCUMENTATION

The OCGP FEIR was certified by the City of Irvine in May 2003. The project analyzed in the OCGP Program EIR consisted of the following actions: 1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; 2) Annexation of the unincorporated portion of Planning Area 35 (Irvine Ranch Water District Parcel); 3) General Plan Amendment and Zone Change for Planning Area 30; and 4) Approval of the form of a Development Agreement vesting approval of overlay uses and intensities in consideration for dedication of land for public purposes and for developing and funding certain infrastructure improvements and maintenance of the public uses by the

1. EIR Addendum Summary

purchaser/developer and subsequent landowners and funding for specific park, roadways, and other circulation facilities and infrastructure. Together, these actions establish the policy and legislative structure to guide the development of the former MCAS El Toro property.

The OCGP FEIR mitigation measures are provided in the adopted Mitigation Monitoring and Reporting Program included in Appendix A. The table includes:

- Mitigation number and a description of the action;
- Timing for implementation;
- Approving authority and reviewing agency(s), if any; and
- Method of compliance

Addendum No. 1, approved by the City on May 18, 2006, addressed the potential for environmental issues associated with the implementation of the OCGP Redevelopment Project Area Plan.

Addendum No. 2 was approved by the City Council on October 24, 2006. It analyzed the potential for environmental issues associated with minor adjustments to the boundary between the public and private areas of the OCGP; revisions to Zoning Code text and figures related to Planning Areas 30 and 51; the creation of a mixed-use zoning category called the Lifelong Learning District (LLD) within Planning Area 51; and minor technical changes to the General Plan, as described in Section 2.3 of the Addendum No. 2.

Addendum No. 3, approved by the City Planning Commission on May 17, 2007, addressed the potential for environmental issues associated with a proposal to approve the Master Subdivision Map (Vesting Tentative Tract Map No. 17008), submitted pursuant to Section 7.1 of the “Original Development Agreement”, to identify the backbone infrastructure in the Overlay Plan project area, to define the areas for potential future subdivision and development and to delineate the limits of rough grading for the development on approximately 2,157 acres (Heritage Fields development) of the approximately 3,705 acres that the predecessor to Heritage Fields El Toro, LLC (Heritage Fields) purchased from the United States Department of the Navy (DON).

Addendum No. 4 was approved by the City Planning Commission on August 2, 2007. It analyzed the Orange County Great Park Master Plan, which provides a conceptual design for the future buildout of the 1,145-acre park with passive and active features with key activity areas identified as Upper Canyon, Bowling Green, Great Lawn, Bosque, Trabuco Entry, Berm Garden, Memorial Site, Aircraft Museum, Timeline, Sports Park, Cultural Terrace, Lake, Botanical Garden, Promenade, Linear Ramble, Agua Chinon, Wildlife Corridor, Orchard Parking, and Maintenance Facility.

Addendum No. 5 was approved by City Council on July 22, 2008. It analyzed changes to appropriate figures in the General Plan to reflect the Bake Parkway/Marine Way intersection relocation and the Rockfield Boulevard reconfiguration in the southern portion of Planning Area 30; and amendments to the existing Development Agreement to clarify the backbone infrastructure components, phasing and fiscal responsibility; update the document to be consistent with current planning concepts for both the Great Park and Heritage Fields; and provide internal consistency between documents, policies, and ordinances.

The OCGP FEIR, as augmented by Addendum No. 1, Addendum No. 2, Addendum No. 3, Addendum No. 4, Addendum No. 5 (collectively, Addenda) and all of the associated technical documents, reports and analyses are on file and can be reviewed at the City of Irvine, Community Development Department, at 13825 “B”, Irvine, California 92618.

1. EIR Addendum Summary

1.4 ENVIRONMENTAL SETTING

The Orange County Great Park (which consists of City of Irvine Planning Areas 30 and 51) is located in the central portion of Orange County, approximately 45 miles southeast of Los Angeles. The project area is generally bounded by the Woodbury residential development to the west, future Portola Springs residential development to the north (under construction), Irvine Spectrum to the south, and the City of Lake Forest to the east. Other nearby local jurisdictions include the Cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo, and Tustin.

The Irvine Station, a major multimodal transit center linking Orange County Transportation Authority (OCTA) bus, Metrolink commuter rail, and Amtrak rail services, is adjacent to the Southern California Regional Rail Authority (SCRRA) Metrolink tracks, which bisect the project area and separate Planning Areas 30 and 51. The existing facilities and uses within the project site include California State University, Fullerton; Marine Memorial Golf Course; equestrian facilities; recreational vehicle storage; and agricultural and nursery operations. The OCGP FEIR also describes interim activities that might occur on the site, including short-term use of the land or existing buildings on-site. Currently, there are offices occupied by the City of Irvine Community Development Department, Great Park Corporation (GPC), and Heritage Fields. Other tenants include Second Harvest Food Bank, Families Forward, Legacy, Orange County Great Park Balloon Preview Park, and Tierra Verde Industries. A day-care facility is immediately adjacent to these office uses. Finally, a small portion of the existing runway has been removed within the southern portion of PA 51.

Ownership of Planning Areas 30 and 51 has changed since certification of the OCGP FEIR, including certain parcels that have been transferred to the Federal Aviation Administration, City of Irvine, County of Orange, and Heritage Fields by the DON or leased in furtherance of conveyance.

2. Project Description

2.1 PROJECT LOCATION

The Orange County Great Park, encompassing Planning Areas 30 and 51, is northeast of the freeway junction at Interstate 5 (I-5) and Interstate 405 (I-405), within the City of Irvine. Figure 2-1 depicts the project location in a regional context and Figure 2-2 shows its local context.

Major roadways bordering the project are Sand Canyon Avenue to the northwest, Portola Parkway and Irvine Boulevard to the north, and Bake Parkway to the northeast. An aerial photograph of the project site and surrounding area is shown on Figure 2-3. The Irvine Station is adjacent to the SCRRA Metrolink tracks, which traverse the site and separate Planning Areas 30 and 51. Surrounding the site are residential and nonresidential uses under construction to the north and west, open space to the northeast, and nonresidential and mixed land uses to the east and southeast within the City of Lake Forest and City of Irvine.

2.2 PROJECT CHARACTERISTICS

2.2.1 Project Background

On May 27, 2003, the City Council certified a Final Environmental Impact Report and adopted a general plan amendment and zone change to implement the development of the Orange County Great Park. In order to develop at the maximum intensities allowed in the Overlay Plan shown in the General Plan and Zoning Code, the property owners entered into a development agreement, which required the dedication of land and the development or funding of infrastructure improvements in excess of the City's standard requirements, and the commitment to long-term maintenance of the public facilities.

In July 2005, Heritage Fields, LLC, the predecessor of Heritage Fields, purchased all four bid parcels through a US Department of Navy/General Services Agency online auction process. Subsequent to the land purchase, the Great Park Corporation and Heritage Fields initiated their respective master design and development processes for the OCGP. To facilitate additional design options, both the Great Park Corporation (GPC) and Heritage Fields requested and the City initiated an amendment to the General Plan and the Zoning Code to reconfigure the boundaries between the two properties. In addition, Heritage Fields requested the creation of a new mixed-use zoning district called the 8.1/8.1A Lifelong Learning District. They also proposed minor clarifications to the zoning text within Planning Areas 30 and 51. These revisions to the Overlay Plan were analyzed in Addendum No. 2 dated September 2006, and were approved as the Revised Overlay Plan (Overlay Plan) by the City Council on October 24, 2006. These changes did not increase the building intensity already approved for the Site, and did not increase any significant environmental impacts previously identified in the 2003 OCGP FEIR. Addendum No. 2 was also approved on October 24, 2006, and is on file with the City Community Development Department for review.

On June 28, 2006, and pursuant to Section 7.1 of the Development Agreement, Heritage Fields El Toro, LLC, (Heritage Fields) filed an application for the Master Subdivision Map (Vesting Tentative Tract Map No. 17008) for the Overlay Plan. The Master Subdivision Map was approved by the Planning Commission on May 17, 2007. The Master Subdivision Map subdivided approximately 3,585 gross acres of the Site into 44 numbered lots and 14 lettered lots, but did not authorize the construction of any trip-generating land uses or alter any land use or associated acreages to the approved Overlay Plan. As noted, CEQA compliance was accomplished via Addendum No. 3 approved on May 17, 2007. The City concluded that the Master

2. Project Description

Subdivision Map was consistent with the Overlay Plan land uses, as approved, and that no new areas were proposed for development. Addendum No. 3 is on file with the City Community Development Department for review.

In 2007, the GPC requested approval of a conceptual master plan for the Orange County Great Park Development (Great Park Master Plan). The Great Park Master Plan was approved by the Planning Commission on August 2, 2007. As noted, the CEQA compliance was established via Addendum No. 4 dated July 2007 and approved on August 2, 2007. Addendum No. 4 is on file with the City Community Development Department for review.

During preliminary consideration of the conceptual design of Marine Way, the California Department of Transportation (Caltrans) expressed concerns regarding the location of Marine Way and its relationship to the Bake Parkway freeway on-ramp. A revised alignment was first discussed in conjunction with the Master Subdivision Map for Heritage Fields and the Great Park. At that time, it was recognized that the revised alignment required an amendment to the General Plan and that further study of the alignment was warranted." Addendum No. 5 provided that additional analysis, based on which the City amended the City's General Plan, zoning code, and the Orange County Transportation Authority's Master Plan of Arterial Highways to effectuate that change. Addendum No. 5 also examined the amendments to the Development Agreement and related changes to the City's General Plan and Zoning Ordinance, the amendments clarified the backbone infrastructure components, phasing and fiscal responsibility; update the document to be consistent with current planning concepts for both the Great Park and Heritage Fields development; and provide internal consistency between documents, policies, and ordinances. This document was approved on July 22, 2008 by the City Council and is on file with the City Community Development Department for review.

The development analyzed in the OCGP FEIR and Addenda includes both Public Park (Great Park development) and private development components (Heritage Fields). The Great Park development, the public park component, is owned by the City and is being developed by the GPC. The Heritage Fields development, the private development component, is being developed by Heritage Fields.

2.2.2 Project Components

This Addendum addresses the potential for environmental issues associated with the requested entitlements. The Proposed Project includes the following requested actions:

Amended VTTM 17008

The City of Irvine Planning Commission approved the Master Subdivision Map (Vesting Tentative Tract Map No. 17008) on May 17, 2007. VTTM 17008 was submitted pursuant to Section 7.1 of the "Original Development Agreement", to identify the backbone infrastructure in the Overlay Plan project area, to define the areas for potential future subdivision and development and to delineate the limits of rough grading for the development on approximately 2,157 acres (Heritage Fields development) of the approximately 3,705 acres that the predecessor to Heritage Fields El Toro, LLC (Heritage Fields) purchased from the United States Department of the Navy (DON). Amended VTTM 17008 will revise the approved lot configuration and subdivide 3570.2 gross acres into 50 numbered lots and 12 lettered lots (00474083-PTT). The modification will change the street configuration to realign Marine Way between Alton Parkway and Bake Parkway and realign Rockfield Boulevard from the project perimeter to Marine Way consistent with General Plan Amendment (00468566-PGA) and Zone Change (00468567-PZC). In addition, slight modifications to the "O" Street alignment and "T" Street alignment are proposed within the Lifelong Learning District (see Figure 2-4). There are also changes to the lot configurations consistent with Amended Parcel Map 2006-271 (00467325-PTP) as approved by the Subdivision Committee on August 27, 2008.

2. Project Description

Proposed VTTM 17283

The proposed VTTM would subdivide the non-residential portions of the LLD to implement approved Overlay Plan densities and intensities in those portions of the LLD. The VTTM would subdivide approximately 525 gross acres within the LLD into 71 numbered lots and 3 lettered lots for future institutional (education-related) uses, mixed uses, commercial recreation, research and development/office, medical, and retail commercial (see Figure 2-5). The VTTM only authorizes the development of non-residential uses, and does not permit or provide for the development of any new residences or other changes to approved intensities; future residential projects will require the submittal of a master plan application and tentative tract map. The project has a zoning designation of 8.1 Lifelong Learning District.

The portion of the LLD included in the VTTM includes 1,452,600 square feet of industrial (educational) facility, 336,900 square feet of medical office, 638,400 square feet of research and development, and 150,000 square feet of commercial development. Table 2-1 summarizes the land uses assumed with the proposed development in the LLD.

Table 2-1		
VTTM 17283 Lifelong Learning District Land Use		
Land Use	Amount	Unit
Medical Office	336.9	TSF
R& D	638.4	TSF
Retail	150	TSF
Institutional (Education)	1,452.6	TSF

Project design features are associated with Proposed VTTM 17283. These project design features are as follows:

- Both the eastbound and westbound approaches of Burt Road at Sand Canyon Avenue will be restriped to one left turn lane and a shared through/de-facto right turn lane. Additionally, the traffic signal will be modified as needed to accommodate the operations with this movement. This Project Design Feature is not needed in the event that the proposed grade separated crossing of Sand Canyon and the railroad tracks is fully funded and scheduled for construction by 2012. In such an event, this Project Design feature is not needed and may be removed from the project at the discretion of the Director of Public Works.
- The westbound approach of Marine Way at Sand Canyon will be restriped to one left turn lane and one shared left/right turn lane. Additionally, the traffic signal will be modified as needed to accommodate the operations with this movement. This Project Design Feature is not needed in the event that the proposed grade separated crossing of Sand Canyon and the railroad tracks is fully funded and scheduled for construction by 2012. In such an event, this Project Design feature is not needed and may be removed from the project at the discretion of the Director of Public Works

Modification to OCGP Streetscape Design Guidelines (00475427-PMP)

The conceptual design of the Overlay Plan provided general land use patterns and types of development initially envisioned for the property. Based on the conceptual design of the Overlay Plan, the Planning

2. Project Description

Commission approved the OCGP Master Streetscape Design Guidelines on February 19, 2004. In conjunction with the Amended VTTM 17008, Heritage Fields submitted an application to modify the approved OCGP Master Streetscape Design Guidelines. These modifications will update the approved guidelines to provide consistency between documents.

Master Landscape and Trails Plan (MLTP) (00467322-PMP)

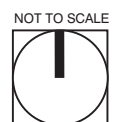
This master plan provides comprehensive information regarding trail connections (equestrian, pedestrian, and bicycle), walls and fences, and conceptual landscaping palette along primary streets within the project site such as Irvine Boulevard, Marine Way, “O” Street, and Trabuco Road. In addition, it ensures that a cohesive landscape and trails plan is provided throughout the entire site and the surrounding properties such as the Orange County Great Park.

Master Plan for the Lifelong Learning District Design Guidelines (00470483-PMP)

Master Plan 00470483-PMP provides a design program for the non-residential portions of Lifelong Learning District pursuant to Section 9-51-6 of the Zoning Code. This document is composed of three separate documents, namely, (1) master plan for non-residential development which has specific project details for VTTM 17283, (2) Lifelong Learning District Design Guidelines which identifies the design program for the entire Lifelong Learning District (i.e. architectural theme, landscape treatments, etc.), and (3) Green Book which is a visionary document that establishes the goals for creating an environmentally sustainable project and implementing the City’s Sustainable Travelway Guidelines. Together these documents specifically implement the design program for the non-residential portions of the Lifelong Learning District. Subsequent master plans and tentative tract maps are required for any future residential development within the Lifelong Learning District.

2. Project Description

Regional Location

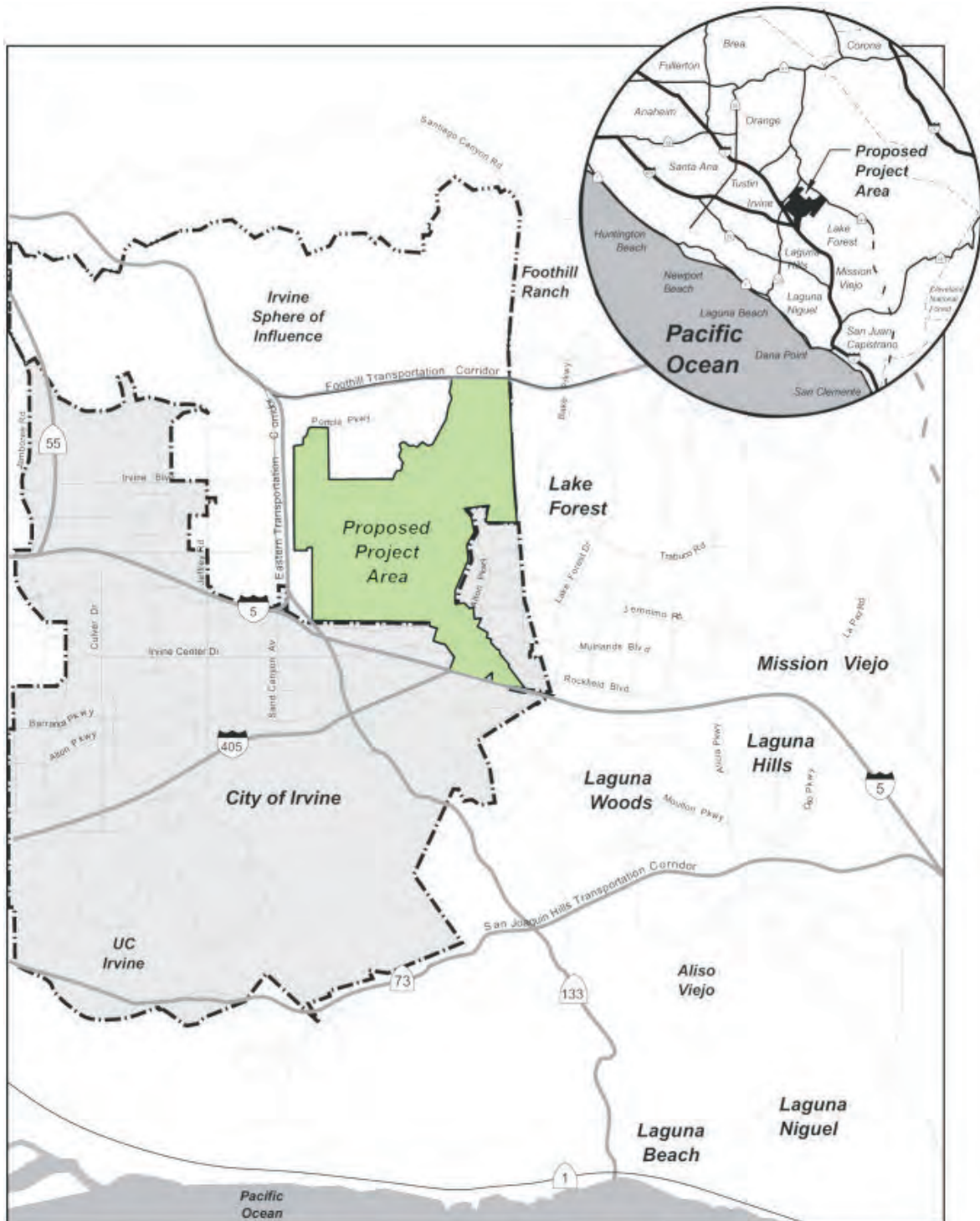


2. Project Description

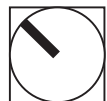
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2. Project Description

Vicinity Map



0 2.25
Scale (Miles)

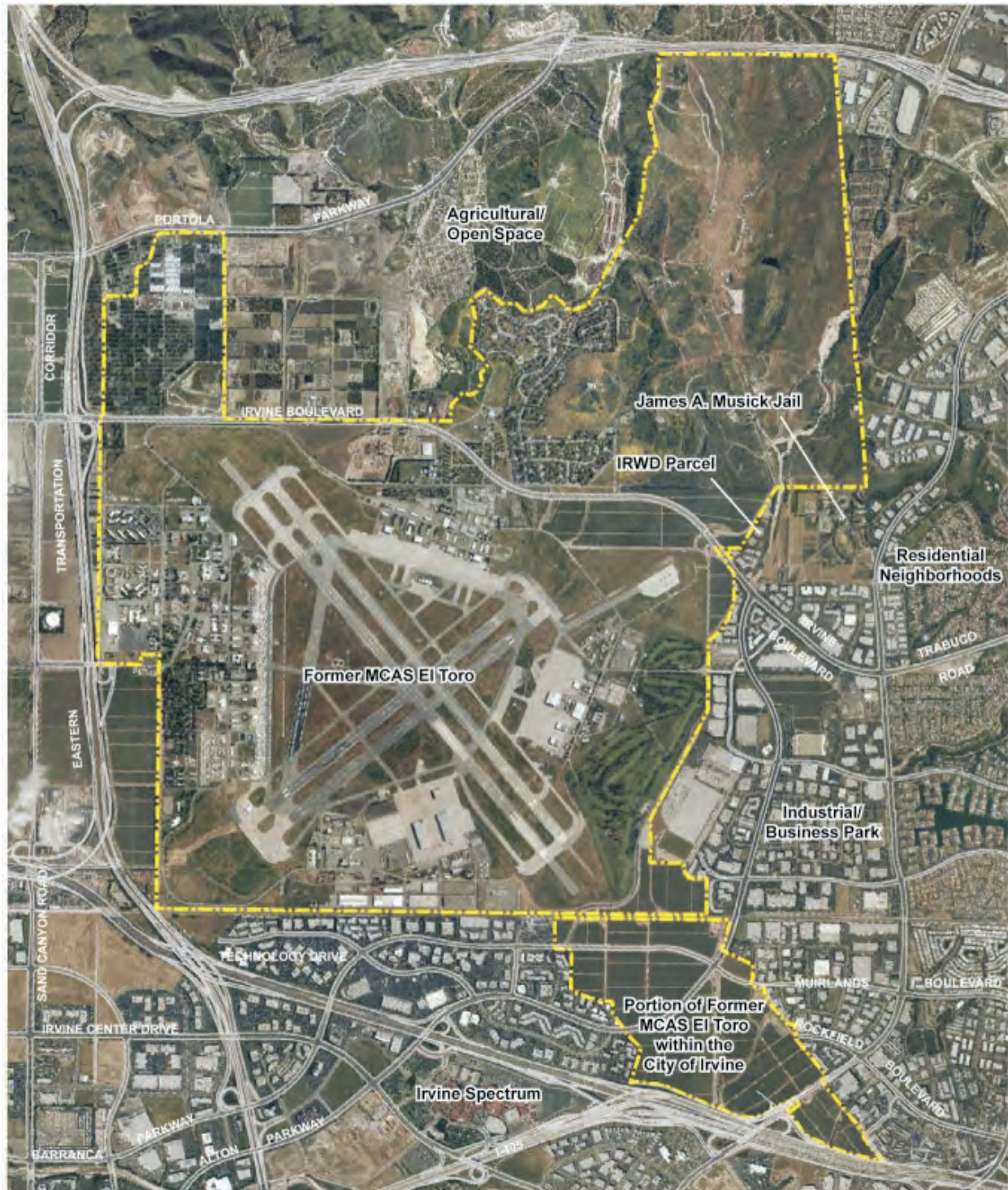


2. Project Description

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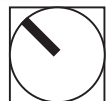
2. Project Description

Aerial Photograph



Orange County Great Park

0 3,300
Scale (Feet)



Source: EDAW

Addendum No. 6 Update for the Orange County Great Park EIR

City of Irvine • **Figure 2-3**

2. Project Description

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2.3 DISCRETIONARY APPROVALS

Implementation of the project includes the following discretionary action to be undertaken by the City:

- Adoption of this Addendum No. 6
- Approval of Amended Vesting Tentative Tract Map (VTTM) No. 17008 (00474083-PTT)
- Approval of Vesting Tentative Tract Map No. 17283 (00467853-PTT)
- Approval of Modification to OCGP Streetscape Design Guidelines (00475427-PMP)
- Approval of Master Landscape and Trails Plan (MLTP) (00467322-PMP)
- Approval of Master Plan for Lifelong Learning District Design Guidelines (00470483-PMP)

The OCGP FEIR lists additional discretionary actions to be taken by the City and other public agencies at or as part of the completion of the project—the adopted Overlay Plan (OCGP FEIR pages 3-29 and 3-30). The actions listed therein which have not yet been undertaken also are necessary for implementation of the project. The actions and responsible public agencies include, but are not necessarily limited to, these approvals:

- Master plans and subdivisions for development (City)
- Community facilities districts or other assessment districts (City)
- Actions to improve interim use activities (City and DON)
- Transfer of parcels within Planning Area 51 (DON)
- Clean Water Act section 404 permits (U.S. Army Corps of Engineers)
- Endangered Species Act compliance (U.S. Fish and Wildlife Service)
- Clean Water Act section 401 and National Pollutant Discharge Elimination System (NPDES) permits (Regional Water Quality Control Board)
- California Fish and Game Code 1602 permits (California Department of Fish and Game)
- Revisions to the Orange County Master Plan of Arterial Highways (Orange County Transportation Authority)

The City of Irvine Environmental Information Form and Environmental Checklist Form have been completed by the City and are included on the following pages. The Environmental Checklist Form is marked with the findings of the Community Development Department as to the environmental effects of the proposed changes to the project in comparison with the findings of the certified OCGP FEIR.

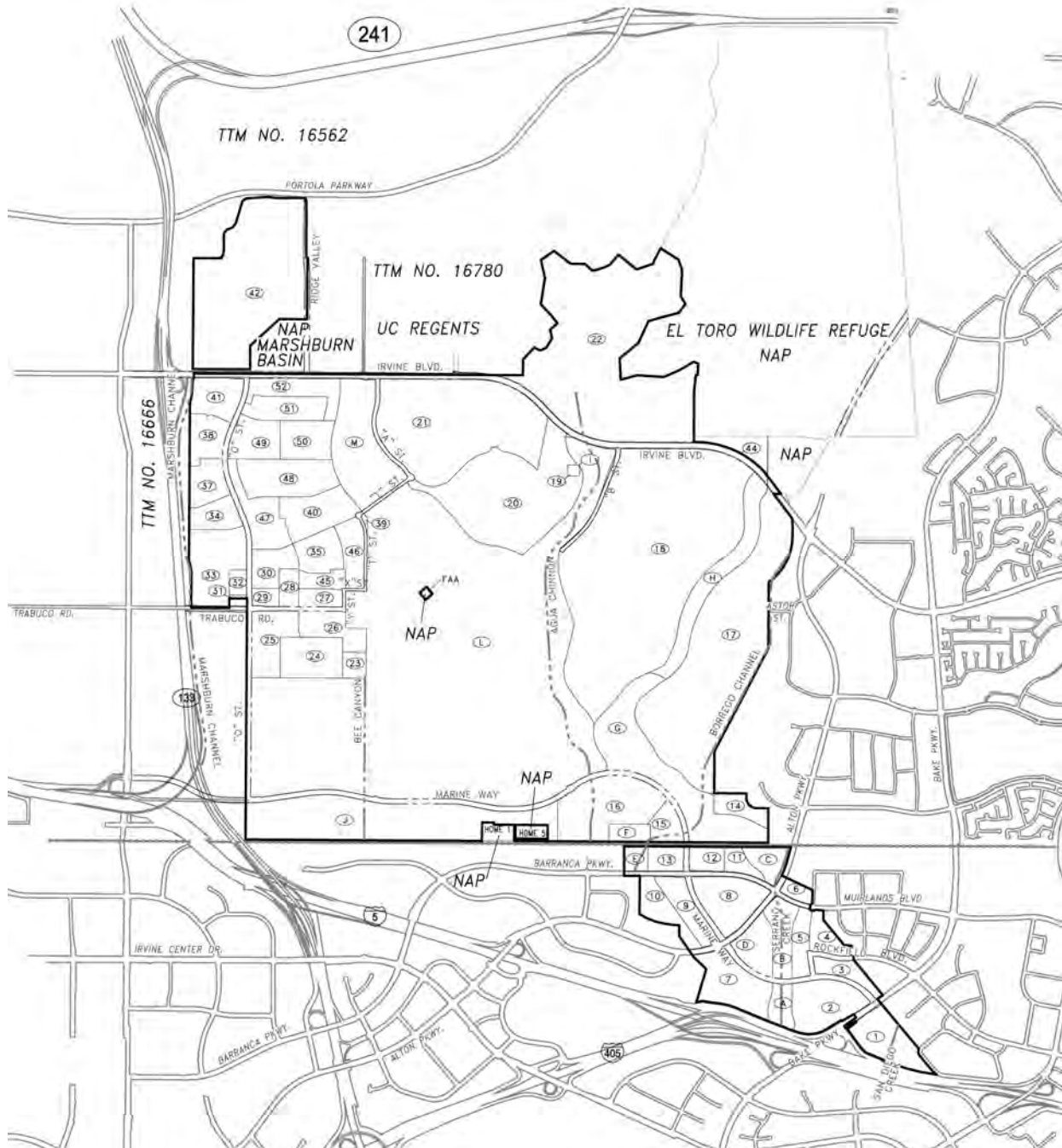
As explained above, this comparative analysis has been undertaken, pursuant to the provisions of the California Environmental Quality Act, to provide the City with the factual basis for determining whether any changes in the project, any changes in the circumstances, or any new information requires additional environmental review or preparation of a subsequent or supplemental EIR. The basis for each of the findings listed in the attached Environmental Checklist Form in Section 3 is explained in Section 4 of the Addendum.

2. Project Description

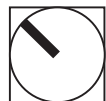
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2. Project Description

Vesting Tentative Map 17008



0 3,700
Scale (Feet)



Source: Hunsaker & Associates 2008

Addendum No. 6 Update for the Orange County Great Park EIR

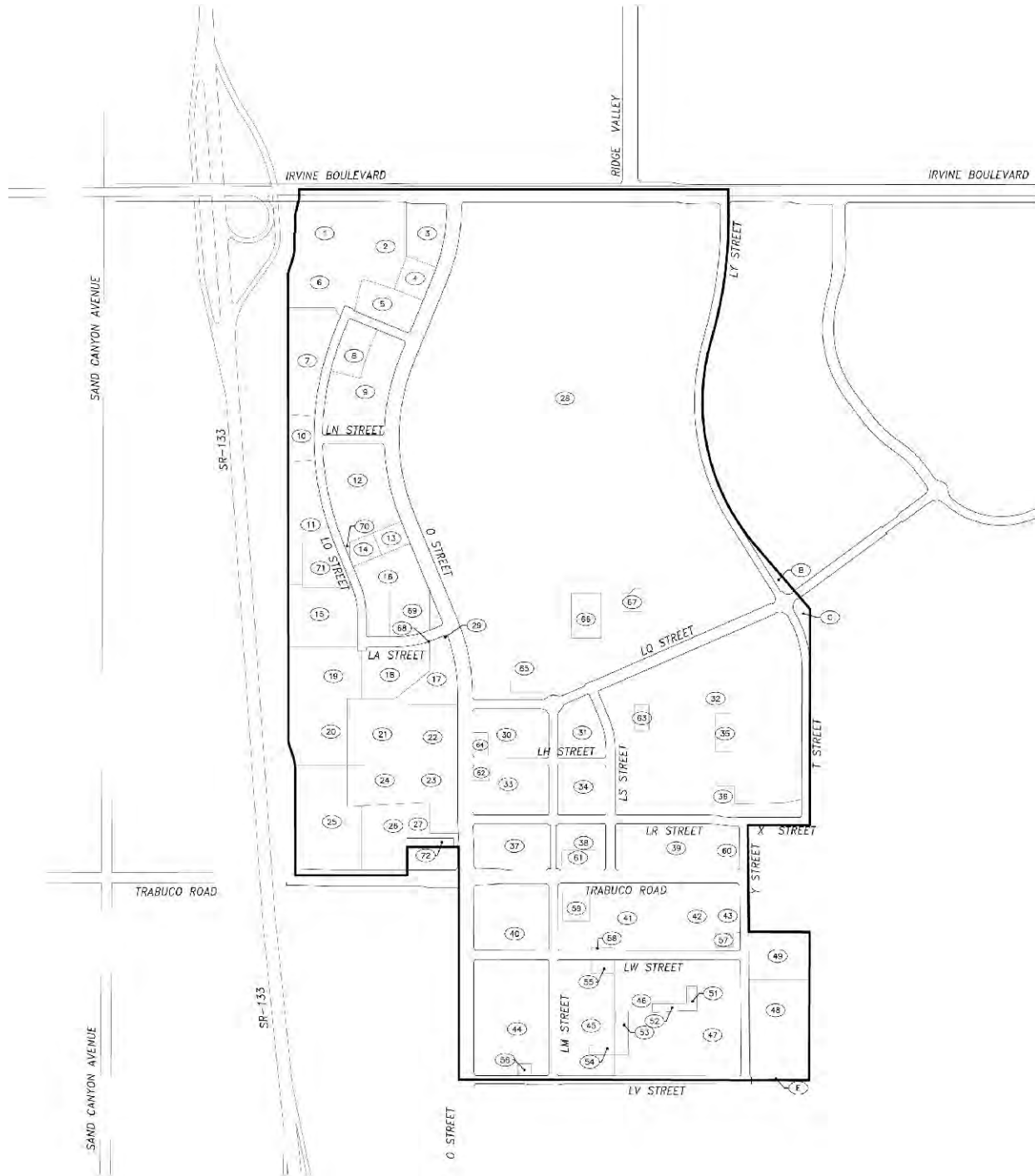
City of Irvine • **Figure 2-4**

2. Project Description

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2. Project Description

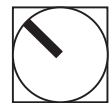
Vesting Tentative Map 17283



Source: Hunsaker & Associates 2008

Addendum No. 6 Update for the Orange County Great Park EIR

0 1,230
Scale (Feet)



City of Irvine • **Figure 2-5**

2. Project Description

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3. Environmental Checklist

3.1 CITY OF IRVINE INITIAL STUDY AND ENVIRONMENTAL EVALUATION

The City of Irvine Environmental Information Form and Environmental Checklist Form have been completed by the City and are included on the following pages. The Environmental Checklist Form is marked with the findings of the Community Development Department as to the environmental effects of the proposed VTTMs and related applications in comparison with the findings of the certified OCGP FEIR and Addenda.

As explained above, this comparative analysis has been undertaken, pursuant to the provisions of CEQA, to provide the City with the factual basis for determining whether any changes in the project, any changes in the circumstances under which the project is undertaken, or any new information requires additional environmental review or preparation of a subsequent or supplemental EIR. The basis for each of the findings listed in the attached Environmental Checklist Form is explained in Section 4 of the Addendum.

1. Project Title:

Orange County Great Park And Heritage Fields Amended VTTM No. 17008, VTTM No. 17283, and Other Associated Actions.

2. Lead Agency Name and Address:

City of Irvine Community Development Department
13825 "B" Street
Irvine, California 92618

3. Contact Person and Phone Number:

David R. Law, Senior Planner (949) 724-7459 and Michelle Drou  , Associate Planner (949) 724-6314

4. Project Location:

The project area is north of Interstate 5 (Santa Ana Freeway), east of State Route 133 (Eastern Transportation Corridor), west of the City of Lake Forest, and south of State Route 241 (Foothill Transportation Corridor).

5. Project Sponsor's Name and Address:

City of Irvine Community Development
13825 "B" Street
Irvine, California 92618

6. General Plan Designation: Orange County Great Park (OCGP)

3. Environmental Checklist

7. Zoning:

1.1 Exclusive Agriculture, 1.4 Preservation, 1.5 Recreation, 1.8 Golf Course Overlay, 2.2 Low Density Residential, 2.3 Medium Density Residential, 3.2 Transit Oriented Development, 4.3 Vehicle-Related Commercial, 5.4B General Industrial, 6.1 Institutional, and 8.1/8.1A Lifelong Learning District

8. Description of Project

See Section 1.6.2, *Project Components*.

9. Surrounding Land Uses and Setting (Briefly describe the project's surroundings):

The proposed project area (which consists of City of Irvine Planning Areas 30 and 51) is located in the central portion of Orange County, approximately 45 miles southeast of Los Angeles. The project area is generally bounded by Irvine Spectrum to the south, the City of Lake Forest to the east, the Woodbury residential community to the west, and the future Portola Springs residential development to the north.

The project area is north of I-5, east of SR-133, and south of SR-241. Major roadways bordering the project area include Barranca Parkway to the south, Sand Canyon Avenue to the west, Portola Parkway and Irvine Boulevard to the north, and Alton Parkway to the east.

10. Other Public Agencies Whose Approval Is Required (e.g., permits, financing approval, or participation agreement):

County of Orange
Orange County Transportation Authority (Master Plan of Arterial Highways)
Cal Trans

3. Environmental Checklist

3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology / Soils |
| <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use / Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation / Traffic |
| <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Mandatory Findings of Significance | |

3.3 DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☒ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

David R. Law, Senior Planner

Date

3. Environmental Checklist

3.4 EVALUATION OF ENVIRONMENTAL IMPACTS

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) **Earlier Analysis Used.** Identify and state where they are available for review.
 - b) **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) **Mitigation Measures.** For effects that are “Less Than Significant With Mitigation Incorporated,” describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

3. Environmental Checklist

- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
- a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significant.

	<i>Subsequent or Supplemental EIR</i>				<i>Addendum to EIR</i>	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
ENVIRONMENTAL ISSUES						
I. AESTHETICS: Would the project:						
a) Have a substantial adverse effect on a scenic vista?					X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway or local scenic expressway, scenic highway, or eligible scenic highway?					X	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?					X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?					X	
e) Result in the visible grading of over 5,000 cubic yards on any 20-acre portion of the project site; or visible cut and fill slope over 25 vertical feet?					X	
f) Result in the creation of light spillover and glare effects that present a nuisance to residential land uses?					X	
g) Result in the substantial alteration of the existing landform of the site or of a unique topographic feature on the site?					X	

3. Environmental Checklist

	Subsequent or Supplemental EIR				Addendum to EIR	
ENVIRONMENTAL ISSUES	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
II. AGRICULTURAL RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Mode (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:						
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?					X	
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?						X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?						X
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:						
a) Conflict with or obstruct implementation of the applicable air quality plan?						X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?					X	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?					X	
d) Expose sensitive receptors to substantial pollutant concentrations?					X	
e) Create objectionable odors affecting a substantial number of people?						X

3. Environmental Checklist

	Subsequent or Supplemental EIR				Addendum to EIR	
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IV. BIOLOGICAL RESOURCES: Would the project:						
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?					X	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?					X	
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?					X	
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?					X	
e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?					X	
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?						X
V. CULTURAL RESOURCES: Would the project:						
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the CEQA Guidelines?						X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the CEQA					X	

3. Environmental Checklist

	Subsequent or Supplemental EIR				Addendum to EIR	
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Guidelines?						
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?					X	
d) Disturb any human remains, including those interred outside of formal cemeteries?					X	
VI. GEOLOGY AND SOILS: Would the project:						
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:						
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.						X
ii) Strong seismic ground shaking?					X	
iii) Seismic-related ground failure, including liquefaction?						X
iv) Landslides?					X	
b) Result in substantial soil erosion or the loss of topsoil?					X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?						X
d) Be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?					X	
VII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:						
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?					X	

3. Environmental Checklist

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ENVIRONMENTAL ISSUES						
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?						X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter-mile of an existing or proposed school?						X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?					X	
e) For a project located within an airport land use plan, would the project result in a safety hazard for people residing or working in the project area?						X
f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?						X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?						X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?					X	
VIII. HYDROLOGY AND WATER QUALITY: Would the project:						
a) Violate any water quality standards or waste discharge requirements?					X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells						X

3. Environmental Checklist

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ENVIRONMENTAL ISSUES						
would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?						
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on-site or off-site?					X	
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?					X	
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of pollutant runoff?					X	
f) Otherwise substantially degrade water quality?					X	
g) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?					X	
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?					X	
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?						X
j) Inundation by seiche or mudflow?						X
IX. LAND USE AND PLANNING: Would the project						
a) Physically divide an established community?						X
b) Conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance)					X	

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adopted for the purpose of avoiding or mitigating an environmental effect?						
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?						X
X. MINERAL RESOURCES: Would the project:						
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?						X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use?						X
XI. NOISE: Would the project result in:						
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?					X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?					X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?					X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?					X	
e) For a project located within an airport land use plan, would the project expose people residing or working in the project area to excessive noise levels?						X
f) For a project within the vicinity of a private airstrip, heliport or helistop, would the project expose people residing or working in the project area to excessive noise levels?						X
XII. POPULATION AND HOUSING: Would the project:						
a) Induce substantial population growth in an area, either directly (for example, by					X	

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	Subsequent or Supplemental EIR				Addendum to EIR	
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proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure)?						
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?						X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?						X
XIII. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:						
a) Fire protection?					X	
b) Police protection?					X	
c) Schools?					X	
d) Parks?					X	
e) Other public facilities?					X	
XIV. RECREATION: Would the project:						
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?					X	
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?					X	
XV. TRANSPORTATION/TRAFFIC: Would the project:						
a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?					X	

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b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?					X	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or change in location that results in substantial safety risks?						X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?						X
e) Result in inadequate emergency access?					X	
f) Result in inadequate parking capacity?						X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus stops/routes, bicycle lanes, sidewalks, etc.)?						X
XVI. UTILITIES AND SERVICE SYSTEMS: Would the project:						
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?					X	
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?					X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?					X	
d) Have sufficient water supplies available to serve the project (including large scale developments as defined by Public Resources Code Section 21151.9 and described in Question No. 20 of the Environmental Checklist) from existing entitlements and resources, or are new or expanded entitlements needed?					X	

3. Environmental Checklist

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ENVIRONMENTAL ISSUES						
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?					X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?					X	
g) Comply with Federal, State, and local statutes and regulations related to solid waste?					X	
h) Result in a need for new systems or supplies, or substantial alterations related to electricity?					X	
i) Result in a need for new systems or supplies, or substantial alterations related to natural gas?					X	
j) Result in a need for new systems or supplies, or substantial alterations related to telephone service?					X	
k) Result in a need for new systems or supplies, or substantial alterations related to television service/reception?					X	
XVII. MANDATORY FINDINGS OF SIGNIFICANCE						
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?					X	
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)					X	

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	<i>Subsequent or Supplemental EIR</i>				<i>Addendum to EIR</i>	
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c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?					X	

3. Environmental Checklist

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4. Discussion of Checklist and Mitigation Measures

This section is intended to provide evidence to substantiate the conclusions set forth in the Environmental Checklist. The section will briefly summarize the OCGP FEIR conclusions and then discuss whether or not the proposed project is consistent with the findings contained in the OCGP FEIR.

4.1 AESTHETICS

4.1.1 Environmental Setting

The OCGP FEIR addressed in detail the potential visual impacts associated with the development of the former MCAS El Toro. The OCGP FEIR discussed the project's visual setting associated with its location adjacent to various arterial highways and state and federal highways. None of these roadways are designated County or State scenic highways; although Sand Canyon Avenue is designated as a highway with rural/natural character. The City's General Plan also designates I-5 as an urban character Scenic Highway.

Generally, views of the former military base are from the surrounding highways. From these highways, a variety of land uses, structures, and facilities of differing ages, sizes, and architectural styles may be viewed. Though agricultural areas are adjacent to and within the base, the predominant features are associated with the military use of the base, including runways, aprons, hangars, warehouses, barracks housing, recreational facilities, golf course, single-family housing, offices, and commercial structures.

The City of Lake Forest and the James A. Musick Branch Jail are to the southeast; Irvine Spectrum abuts the former base along the eastern and southern boundaries; and existing and developing residential developments are to the north and west. Further to the south are the residential areas of the Cities of Laguna Woods and Laguna Hills. These communities are at higher elevations and therefore have panoramic views of the project. Residences with views of the facility are not impacted by existing light sources on the site since the residences are at least two miles from the property.

4.1.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR discussed the potential aesthetic effects of the development of the site, including Planning Areas 51 and 30, under the adopted Overlay Plan and found that future development of these two planning areas would introduce new sources of light within the project area. These sources include street lighting along planned roadways and various forms of exterior lighting, including security lighting, parking lots, educational facilities, institutional and commercial developments, and lighting associated with athletic fields. The OCGP FEIR concluded that significant light impacts could have occurred if proposed light sources were directed into or located near existing or planned residential uses, which are sensitive to light intrusion during nighttime hours, but that, with the mitigation ultimately adopted by the City, these potential impacts would be less than significant. The OCGP FEIR and Addenda further concluded that the proposed mitigation measures for the project would reduce potentially significant light impacts to less than significant levels.

With regard to other aesthetic-related impact significance threshold presented in the OCGP FEIR, no other significant or potentially significant aesthetic impacts were identified. These other thresholds primarily concern visual aesthetic impacts and include such evaluative factors as view-shed obstruction or impairment, landform alteration, and the degradation of valued or unique scenic resources or features.

4. Discussion of Checklist and Mitigation Measures

4.1.3 Impacts Associated with the Requested Entitlements

There are no scenic routes, scenic resources, or unique geologic or topographic features within the project site. Amended VTTM No. 17008 shifts the Bake Parkway/Marine Way intersection approximately 900 feet to the east of the I-5 NB exit ramp and reconfigures Rockfield Boulevard consistent with General Plan Amendment (00468566-PGA) and Zone Change (00468567-PZC) GPA. In addition, Amended VTTM 17008 also proposes slight modifications to the street alignment to “O” and “T” Street within the Lifelong Learning District. Proposed VTTM No. 17283 allows for development of the Lifelong Learning District (LLD) consistent with the type and intensity of development analyzed in the OCGP EIR and Addenda. The roadways remain in the same general vicinity as the original planned roadways previously examined in the OCGP FEIR.

The project would not introduce new light sources or highly reflective building materials that would result in new sources of potential glare beyond those already considered by the OCGP FEIR, because it includes the same land uses and intensity, and comparable physical area for future development as the adopted Overlay Plan.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major revision to the certified OCGP FEIR due to any new significant environmental impact or a substantial increase in the severity of impacts.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project would have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that: 1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or 2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetics effects identified in and considered by the certified OCGP FEIR.

4.1.4 Mitigation from the OCGP FEIR and Applicability to the Requested Entitlements

The OCGP FEIR identified mitigation measures A1 and A2, which, if fulfilled, would reduce the effects of development under the adopted Overlay Plan to a less than significant level. Measures A1 and A2 are applicable to future development under the project.

4. Discussion of Checklist and Mitigation Measures

- A1 Prior to issuance of building permits, lighting plans and signage plans for new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent residential areas occurs.
- A2 Prior to the issuance of building permits, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.

4.2 AGRICULTURAL RESOURCES

4.2.1 Environmental Setting

The OCGP FEIR described the Farmland Mapping and Monitoring Program of the California Department of Conservation Division of Land Resources Protection classifications of agricultural lands present within the project area as follows:

- Prime Farmland: Land which has the best combination of physical and chemical features able to sustain long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for production of irrigated supply needed to produce sustained high yields. Land must have been used for production of irrigated crops at some time during the previous two map updates.
- Farmland of Statewide Importance: Similar to Prime Farmland, except this land has minor shortcomings such as greater slopes or less ability to store soil moisture than Prime Farmland. This land has minor shortcomings, such as greater slopes or less ability to store soil moisture than Prime Farmland. Land must have been used for production of irrigated crops at some time during the previous two map updates.
- Unique Farmland: Lesser quality soils used for the production of the state's leading crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climate zones in California. This land is used for the production of specific high economic value crops such as oranges, olives, avocados, rice, grapes, or cut flowers. Land must have been cropped at some time during the two previous maps updates.
- Farmland of Local Importance: Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

The OCGP FEIR identified approximately 659 acres of designated Prime Farmland, 70 acres of designated Unique Farmland, and 99 acres of designated Farmland of Statewide Importance. The Orange County Board of Supervisors has not designated any farmland as being of Local Importance.

City of Irvine Policies and Programs

The City of Irvine General Plan Objective L-10, as amended in 2002 and presented in the OCGP FEIR, includes the following policies to “encourage the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development”:

4. Discussion of Checklist and Mitigation Measures

Policy (a): Provide for farming opportunities in the community, where feasible and appropriate, through an Agricultural Legacy Program facilitating limited-scale agricultural operations and program on public lands. The program may include components such as edible landscape, metro-farming, heritage farming, model farming, education and community service farming and other farm or farm market program. Location for implementation of the Agricultural Legacy Program to be considered should, at a minimum, include:

- Designated open space spine network,
- Designated open space areas not subject to the Natural Community Conservation Plan (NCCP), and
- Other appropriate publicly owned lands.

Policy (b): Consider creating a “working model” farm to act as a center for education and enjoyment of all age groups pursuant to the Agricultural Legacy Program in conjunction with the City’s planning efforts concerning the reuse of MCAS El Toro, or with the South Coast Research Extension owned by UC Regents.

Policy (c): Permit agricultural use of land which is unsuitable for building because it is within flood plains, or is subject to hazards to public health, safety, and welfare or similar constraints precluding development. Conversion from agricultural use may be allowed where the identified hazard conditions have been eliminated.

Policy (d): Permit agricultural uses, on an interim bases, on land designated for development, and consider agricultural uses as part of the City’s planning efforts for the re-use of MCAS El Toro.

Policy (e): Encourage and support federal and state legislation proposed for the purpose of preservation of agricultural lands which are compatible with the City’s goals and objectives.

Policy (f): Allow for conversion of interim and permanent agricultural uses to development to provide land for the construction of housing units consistent with the Land Use and Housing Elements, and the development of commercial and industrial buildings consistent with the provision of job opportunities as described in the Land Use Element, where such conversion does not conflict with other L-10 policies.

Policy (g): Pursue the open space policies contained in the Conservation and Open Space Element and address any open space or aesthetic impacts from the conversion of interim and permanent agricultural uses to development as part of the City’s existing policies for the preservation of open space and existing policies for mitigation of views and aesthetic impacts under the policies in the Conservation and Open Space Element.

4.2.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR and Addenda determined the Overlay Plan would preserve in perpetuity 303 acres¹ of land for agricultural use, of which 251 acres are classified as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. The locations of the 303 acres of permanent agricultural land are listed below, and the Farmlands Map can be found in the OCGP FEIR as Figure 5.8-1:

¹ Please note that there is a typographical error within the OCGP FEIR: Table 1-2 on page 1-8 and Table 3-4 on pages 3-12 and 3-13 identify the total agricultural land as 303 acres; however on page 5.8-10 the agricultural use acreage is noted as 307.

4. Discussion of Checklist and Mitigation Measures

- **PA 30:** 13 acres within Planning Area Zone (PAZ) 26; and
- **PA 51:** 90 acres within PAZ 4; 200 acres within PAZ 1.

The Overlay Plan also resulted in the permanent loss of 802 acres of designated farmland comprised of 651 acres of Prime Farmland, 63 acres of Unique Farmland, and 88 acres of Farmland of Statewide Importance. This impact was considered significant and unavoidable.

It was determined the Overlay Plan resulted in a significant impact associated with the conversion of agricultural land to nonagricultural use. The OCGP FEIR noted the context of agricultural production in Orange County—including development pressures that have contributed to the decrease in agricultural production in the County overtime—which suggested that conversion of agricultural land to urban uses would occur with or without the development of the project.

Addendum No. 5 determined that the removal of 173 acres in PAZ 1 would not result in new significant impacts to agricultural resources (refer to Section 4.2.3 of Addendum No. 5 for additional details). Despite the Prime Farmland designation, none of the soils in PAZ 1 are currently used for growing crops. As well, existing regulatory programs, namely, the City of Irvine General Plan Objective L-10 and establishment of the Irvine Agricultural Legacy Program address and mitigate this loss of agricultural land. As a result, this project is required to preserve 130 acres for permanent agricultural use.

4.2.3 Impacts Associated with the Requested Entitlements

Modifications to VTTM 17008 include changes to the street and lot configuration within the Lifelong Learning District and Transit Oriented Development District. VTTM 17283 defines the subdivision area for non-residential development within the Lifelong Learning District. Both the VTTMs and related applications are consistent with the various land uses, densities, development standards, and intensities allowed under the existing General Plan and Zoning Code. Amended VTTM No. 17008, Proposed VTTM No. 17283, or the associated actions would not increase allowable intensities or areas planned for development and would not create any new impacts to agricultural resources beyond those evaluated in the OCGP FEIR and Addenda.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was certified, indicating

4. Discussion of Checklist and Mitigation Measures

that; 1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or 2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant agricultural effects identified in and considered by the certified OCGP FEIR.

4.2.4 Mitigation from the OCGP FEIR and Applicability to the Requested Entitlements

Mitigation measures AG1 through AG3 would be implemented in conjunction with master plan review and subsequent development permits. The project would neither change these mitigation measures nor their application to future development projects.

AG1 In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operators, City of Irvine Standard Discretionary Case Condition B.4 and City of Irvine Subdivision Condition 3.4 regarding disclosure statements shall be amended to include the following for subdivisions proposed adjacent to existing agricultural operations:

Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:

- Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.

AG2 Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.

AG3 Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operation and adjacent urban uses.

4.3 AIR QUALITY

4.3.1 Environmental Setting

The OCGP FEIR described the existing air quality regarding the following regulated pollutants: ozone (O₃), carbon monoxide (CO), suspended particulate matter (PM₁₀), nitrogen oxides (NO_x), sulfur dioxide (SO₂), lead (Pb), volatile organic compounds (VOC), and reactive organic gases (ROG). The South Coast Air Basin (SCAB) is described as a non-attainment area for O₃, CO, and PM₁₀; annual maximum concentrations of O₃, CO, PM₁₀, and SO₂ exceeded both federal and state standards in some or all areas in the SCAB during the reporting period (2000). In contrast, standards for nitrogen dioxide (NO₂), SO₂, and Pb were not exceeded during the reporting period. The OCGP FEIR also noted the pending promulgation by the U.S. Environmental Protection Agency (EPA) and California Air Resources Board of standards for PM_{2.5}.

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(particulate matter less than 2.5 microns in diameter). The standards are provided in Table 4-1 (Federal and State Standards for PM_{2.5}) below.

Table 4-1 Federal and State Standards^a for PM_{2.5}		
Averaging Time	Federal Standards	California Standards^b
Annual Arithmetic Mean	15 µg/m ³	12 µg/m ³
24-Hour	65 µg/m ³	No Separate Standard

Sources:
a www.epa.gov/pmdesignations/state/California.htm [June 5, 2006].
b 17 CFR §70200, Table of Standards.

The California Air Resources Board adopted the annual standard identified above but has postponed establishing a 24-hour standard for PM_{2.5}. EPA has identified several counties, including Orange County, as PM_{2.5} non-attainment areas. EPA is in the process of responding to comments on related regulations. At the local level, the South Coast Air Quality Management District (SCAQMD) is in the process of developing a methodology for calculating PM_{2.5} and PM_{2.5} significance thresholds for the purpose of analyzing local and regional air quality impacts in CEQA documents. A draft communication issued in May 2006 by the SCAQMD to its working group indicated that the methodology for calculating PM₁₀ could also be used to calculate PM_{2.5}.

4.3.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR identified significant air quality impacts associated with construction and operation of the Overlay Plan. The construction impact analysis assumed that demolition, grading, and new construction would occur in two phases; the first phase would begin in 2007 and end in 2016 and the second phase would begin in 2017 and end in 2025. The emissions associated with demolition of existing structures, including 31.2 million cubic feet of concrete from removal of the runways, site grading and development would generate construction air emissions above the significance thresholds for ROG, NO_x and PM₁₀. The OCGP FEIR described the construction air impacts after mitigation as significant and unavoidable. (Refer to OCGP FEIR pp. 5.3-16 through 5.3.20.)

The operations-related air quality impacts associated with build-out under the Overlay Plan included emissions associated with energy consumption and vehicular trips. The Urban Emissions (URBEMIS) 2001 model and EMFAC7F (motor vehicle emission factor model) were used in the OCGP FEIR to estimate air emissions associated with operation of the project site through the “post 2025” analysis year (i.e., General Plan build-out). The operations air emissions for project area and vehicular mobile sources were estimated at above the significance thresholds for ROG, NO_x, CO, and PM₁₀, are described in the OCGP FEIR as significant after mitigation, and are an unavoidable consequence of the project’ (adopted Plan). No other construction- and operations-related significant air quality impacts were identified in the OCGP FEIR. (Refer to OCGP FEIR pp. 5.3-20 through 5.3-58, and 7-19.)

In addition, the OCGP FEIR disclosed the results of the CO “hotspots” analysis, in which levels of CO concentrations were predicted for intersections with a LOS of “D” or higher at AM and PM peak hours using the CALINE 4.0 model and EMFAC7F motor vehicle emissions factors. No intersections in the traffic study area were expected to result in one-hour or eight-hour CO concentrations above the state standard of 20

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parts per million (ppm) for one-hour concentrations and 9 ppm for eight-hour concentrations. (Refer to OCGP FEIR pp. 5.3-31 through 5.3-53.)

As part of the certification of the OCGP FEIR, Findings of Fact and a Statement of Overriding Considerations were adopted for unmitigatable environmental effects, including air quality.

Operations Phase

Among the various sources of a project's operations-phase emissions, those attributable to mobile sources (i.e. vehicular traffic) comprise the largest proportion by far. Mobile source emissions are a function of both the number and trip length characteristics of vehicle trips directly and indirectly associated with the project under consideration. The OCGP FEIR estimates of the daily mobile source emission volumes attributable to OCGP project implementation were based on traffic volumes and average trip lengths associated with build out of the overall OCGP project pursuant to adopted Overlay Plan development parameters. The development parameters for the OCGP project as a whole under the Overlay Plan were provided in OCGP FEIR Table 3-4 beginning at Page 3-12.

Since the Amended VTTM No. 17008, Proposed VTTM No. 17283, and the associated actions implements a portion of the development of the LLD in the approved Overlay Plan, it is consistent with the development parameters that served as the basis for determining the operations phase-related mobile source emissions provided in the OCGP FEIR and Addenda, the results of the operations phase-related emissions provided in the OCGP FEIR and Addenda adequately characterize the potential air quality effects of the project and further analysis is neither warranted nor required.

Construction Phase

With regard to the Overlay Plan construction, more precise and refined information regarding earth movement quantities, locations and anticipated demolition activities and timeframes than what was known and analyzed in the July 2003 OCGP FEIR has become available. PCR Services Corporation prepared reports for Addendum No. 3 and 4 in which they conducted an analysis to determine whether the projected emissions associated with more recent, precise and refined information regarding the Overlay Plan and OCGP Conceptual Master Plan (refer to Section 4.3.3 of Addendum No. 3 and Section 4.3.3 of Addendum No. 4 for additional details). Both Addenda determined that earthmoving activities would be consistent with the emissions inventory assumed in the certified OCGP FEIR and within the envelope of the original air quality analysis. The subject reports are available for review in Appendix B of Addendum No. 3 and Appendix C of Addendum No. 4, OCGP FEIR.

The analysis was conducted using SCAQMD's recommended CEQA emissions inventory model URBEMIS. A new version of URBEMIS (URBEMIS 2007 Version 9.2) was released in 2007 and was used in this analysis in accordance with SCAQMD's most recent recommendations for preparation of air quality analyses. The new version of URBEMIS is considered a major overhaul to URBEMIS 2002. It incorporates the current version of California Air Resources Board's OFFROAD model (OFFROAD 2007) construction equipment emission factors and reflects a better estimate of the population, activity, and emissions estimate of the varied types of off-road equipment. The emissions estimates from the proposed grading equipment mix are provided in Table 4-2 (*Comparison of Daily Construction Emissions for OCGP Construction Activities*).

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Table 4-2
Comparison of Daily Construction Emissions for OCGP Construction Activities

<i>Emissions Inventory</i>	<i>Emission Totals, lbs./day [tons per day]</i>				
	<i>CO</i>	<i>NO_x</i>	<i>PM₁₀</i>	<i>VOC</i>	<i>SO_x</i>
OCGP FEIR	280	840	1440	4660 ^c	40
OCGP Site Grading ^a	174	343	663	37	<1
SCAQMD Significance Threshold ^b	550	100	150	75	150
Over (Under)	(376)	243	513	(38)	(149)
Significant for OCGP FEIR?	No	Yes	Yes	Yes	No
Significant for OCGP Equipment Mix?	No	Yes	Yes	No	No

Source: PCR Services Corporation 2007.

a Compiled using the URBEMIS 2007 emissions inventory model and EPA AP-42 emission factors for PM₁₀

b The OCGP FEIR misstated the CEQA Significant Thresholds on Tables 5.3-12 and 5.3-13 for VOC and NO_x as 0.03 tpd, which are the correct thresholds for those pollutants during the operational phase of a project. The significance determinations in the OCGP FEIR were correctly assessed.

c VOC emissions presented in the OCGP FEIR are for application of architectural coatings. VOC emissions for site grading would result in a slight decrease based on the other pollutant trends.

As shown in Table 4-2 above, the OCGP equipment mix results in an overall decrease in daily emissions associated with equipment exhaust and fugitive dust PM₁₀, as compared to those levels estimated for the FEIR. The equipment mix identified above could complete the grading associated the assumptions contained in the OCGP FEIR. As Addendum No. 4 concluded, no new significant impacts and no substantial increase in the severity of previously identified impacts would occur as a result of implementation of the OCGP equipment mix. The addendum does not address other construction activities, such as painting and paving, which resulted in the VOC emissions reported previously in the OCGP FEIR.

Concurrent Grading and Demolition Activities

The site grading and demolition will most likely occur in a phased approach, over the course of numerous years. PCR also conducted an analysis to determine whether the construction emissions inventory for a maximum plausible worst case day (consisting of concurrent grading of the OCGP Master Plan along with site grading activities for Heritage Fields, the Agua Chionon, and the wildlife corridor and runway demolition activities) is consistent with the emissions inventory presented in the OCGP FEIR and is within the envelope of the original air quality impact assessment.

- Assumptions were developed and refined consistent with the requirements for the proposed demolition and grading activities. Details of the emissions and calculation from the concurrent construction activities are provided in Section 4.3.3 of Addendum No. 4.

The analysis was conducted using SCAQMD's recommended CEQA emissions inventory model URBEMIS 2007 Version 9.2. The emission inventory prepared for Addendum No. 3 used the previous version of URBEMIS (URBEMIS 2002) and was therefore updated using URBEMIS 2007. The new version of URBEMIS is considered a major overhaul to URBEMIS 2002. . The emissions from the concurrent construction activities are provided in Table 4-3 (*Comparison of Daily Construction Emissions for Concurrent OCGP Construction Activities*). Concurrent grading and demolition activities results in a slight decrease in equipment exhaust emissions and fugitive dust PM₁₀ emissions, as compared to those levels estimated for the OCGP FEIR. While CO emissions show an increase, that increase is a function of updated emission factors in the current version of URBEMIS2007 and not a substantial change in the construction intensity. Regardless, CO

4. Discussion of Checklist and Mitigation Measures

emissions are less than the SCAQMD significance threshold and no new significant impacts and no substantial increase in the severity of previously identified impacts would occur as a result of concurrent construction activities. It should be noted that these emission estimates do not address other construction activities, such as painting and paving, which resulted in the VOC emissions reported previously in the OCGP FEIR.

Table 4-3
Comparison of Daily Construction Emissions for Concurrent OCGP Construction Activities

<i>Emissions Inventory</i>	<i>Emission Totals, lbs./day [tons per day]</i>				
	<i>CO</i>	<i>NOx</i>	<i>PM10</i>	<i>VOC</i>	<i>SOx</i>
Certified EIR	280	840	1440	4660 ^c	40
OCGP Site Grading ^a	174	343	663	37	<1
Heritage Fields Site Grading	171	332	663	37	<1
Runway Demolition	66	165	76	17	<1
Total	411	839	1402	91	<1
SCAQMD Significance Threshold ^b	550	100	150	75	150
Over (Under)	(139)	739	1252	16	(149)
Significant for Certified FEIR?	No	Yes	Yes	Yes	No
Significant for concurrent activities?	No	Yes	Yes	Yes	No

Source: PCR Services Corporation 2007.

a Compiled using the URBEMIS 2007 emissions inventory model and EPA AP-42 emission factors for PM10

b The OCGP FEIR misstated the CEQA Significant Thresholds on Tables 5.3-12 and 5.3-13 for VOC and NOx as 0.03 tpd, which are the correct thresholds for those pollutants during the operational phase of a project. The significance determinations in the OCGP FEIR were correctly assessed.

c VOC emissions presented in the OCGP FEIR are for application of architectural coatings. VOC emissions for site grading would result in a slight decrease based on the other pollutant trends.

4.3.3 Impacts Associated with the Requested Entitlements

Regional Construction Impacts

Construction activities associated with the proposed project would have a short-term impact on air quality. Construction emissions associated with construction of the backbone infrastructure and development within the LLD portion of Planning Area 51 were included in the OCGP FEIR and Addenda, since Amended VTTM No. 17008, Proposed VTTM No. 17283, and the associated actions are consistent with the adopted Overlay Plan. Neither VTTM allows any additional development intensity beyond that allowed by the adopted Overlay Plan and no increase in construction emissions would occur. In addition, the analytical assumptions concerning construction, development phasing, and operations of the adopted Overlay Plan remain appropriate for the project (OCGP FEIR Table 5.3-14). Consequently, the project would not increase the maximum daily air pollutant emissions generated during construction and demolition activities. The OCGP FEIR concluded that air pollutant emissions associated with construction and demolition activities of the Overlay Plan were considered a Significant Unavoidable Adverse Impact. As part of the certification of the OCGP FEIR, Findings of Fact and a Statement of Overriding Considerations were adopted for unmitigatable environmental effects, including air quality. The construction air emissions associated with the project are anticipated to be less than those addressed in the OCGP FEIR, and therefore would not result in any new significant impacts that were not previously anticipated.

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Regional Operational Impacts

Amended VTTM No. 17008, Proposed VTTM No. 17283, and the associated actions would not result in land use changes that would increase project-related stationary or mobile sources of air pollution generated by the approved Overlay Plan. Neither VTTMs or associated actions allows any additional development intensity beyond that allowed by the adopted Overlay Plan or increases project-generated trips. Consequently, the project would not increase the maximum daily air pollutant emissions generated during operational activities. The OCGP FEIR concluded that air pollutant emissions associated with operational activities of the Overlay Plan were considered a Significant Unavoidable Adverse Impact. As part of the certification of the OCGP FEIR for OCGP, Findings of Fact and a Statement of Overriding Considerations were adopted for unmitigatable environmental effects, including air quality. Therefore, the operational air emissions associated with the project are anticipated to be less than those addressed in the OCGP FEIR, and therefore would not result in any new significant impacts that were not previously anticipated.

Consistency Determination with the Air Quality Management Plan

The OCGP FEIR included a consistency evaluation with the SCAQMD's Air Quality Management Plan (AQMP). The consistency evaluation concluded development of the adopted Overlay Plan would have a negligible impact on the overall air quality within the South Coast Air Basin. The project would not result in new activities or new land uses that would change the consistency evaluation in the OCGP FEIR.

Localized Construction Impacts

As stated previously, the project would not increase the maximum daily air pollutant emissions generated during construction activities. However, the OCGP FEIR identified significant localized air quality impacts associated with construction of the adopted Overlay Plan based on the extent and schedule of construction activities, primarily from particulate matter (PM₁₀ and PM_{2.5}) emissions associated with fugitive dust. The OCGP FEIR concluded that air pollutant emissions associated with construction activities of the Overlay Plan were considered a Significant Unavoidable Adverse Impact. As part of the certification of the OCGP FEIR for OCGP, Findings of Fact and a Statement of Overriding Considerations were adopted for unmitigatable environmental effects, including air quality. The construction air emissions associated with the project are anticipated to be less than those addressed in the OCGP FEIR, and therefore would not result in any new significant impacts which were not previously anticipated.

Localized Operational Impacts

The OCGP FEIR did not identify significant localized air quality impacts associated with operation of the adopted Overlay Plan for either mobile sources or stationary sources. Because the project would not result in an increase of the number of units or permitted square footage of buildings on-site, the project would not increase the concentrations of stationary-source air pollutant emissions generated during operational activities.

Odors

The OCGP FEIR identified that development of the adopted Overlay Plan would not handle large amounts of solid waste, chemicals associated with heavy industry, or other uses that would generate objectionable odors and that no significant odor impacts would occur. The project would not result in new activities or new land uses that would change the odor evaluation in the OCGP FEIR.

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Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project would have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that; 1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or 2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant air quality effects identified in and considered by the certified OCGP FEIR.

4.3.4 Mitigation from the OCGP FEIR and Applicability to the Requested Entitlements

The OCGP FEIR identified mitigation measures AQ1 through AQ5, which reduce the air quality effects of construction and operations of development under the adopted Plan. However, as noted above, the OCGP FEIR found that short-term and long-term air quality impacts would remain significant and unavoidable. The measures are applicable to future development under the project.

- AQ1 Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors; etc.; shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.
- AQ2 Prior to the commencement of construction activities required to demolish and/or remove existing DON structures, including runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plan shall identify implementation procedures for each of the

4. Discussion of Checklist and Mitigation Measures

following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Evaluate the availability and use, if available, of low-emission (i.e., methanol- or natural gas-powered) construction equipment instead of diesel for each construction phase.
- Water exposed soils at least twice daily and maintain equipment and vehicle engines in good condition and in proper tune.
- Wash off trucks leaving the site.
- Replace ground cover on construction sites when it is determined that the site will be undisturbed for lengthy periods.
- Reduce speeds on unpaved roads to less than 15 miles per hour.
- Halt all grading and excavation operations when wind speeds exceed 25 miles per hour.
- Suspend all emission generating activities during smog alerts.
- Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible.
- Properly maintain diesel-powered on-site mobile equipment.
- Sweep streets at the end of the day if substantial visible soil material is carried over to the adjacent streets.
- Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible.
- Use of low-VOC asphalt.
- Cover all trucks hauling dirt, sand, soil or other loose material to and from the site.
- Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic.
- Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible.
- Reroute construction trucks away from congested streets, whenever feasible.
- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible.

AQ3 Prior to the issuance of building permits for any future development, the applicant shall submit, and Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following

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emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Utilize built-in energy-efficient appliances to reduce energy consumption and emissions.
- Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions.
- Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible.
- Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning.
- Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible.
- Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods.
- Centralize space heating and cooling for multiple-family dwelling units and commercial space.
- Orient buildings north/south for reducing energy-related combustion emissions.
- Use solar energy, when feasible.
- Use high rating insulation in walls and ceilings.

AQ4 At the time of residential and commercial lease and sales agreements, future sales information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find employment nearby.

AQ5 At the time of residential and commercial lease and sales agreements, the applicant shall demonstrate to the satisfaction of the Director of Community Development that future employment generating nonresidential development shall include measures to reduce vehicle trips including: the promotion of carpool incentives and alternative work schedules, easy access to public transit systems, trail linkages between uses, low emissions vehicles fleets, and the provision of on-site facilities such as banking and food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.

4.4 BIOLOGICAL RESOURCES

4.4.1 Environmental Setting

The OCGP FEIR described the biological resources within Planning Areas 30 and 51, including a 995-acre parcel of land in the easternmost portion of Planning Area 51 retained in federal ownership and designated as both “habitat reserve” and a part of the Orange County Central-Coastal Sub-region Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP). The areas outside the habitat reserve were

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described as: 1) providing minimal native or undisturbed habitat, and, 2) consisting of agricultural, ornamental, and domestic landscapes.

The OCGP FEIR identified nine vegetative communities within the project site, including Venturan-Diegan sage scrub, southern cactus scrub, chaparral, woodland, riparian scrub, grassland, open water, agriculture, and predominately disturbed or developed areas. Several sensitive plant species and a large number of mature trees also were identified as potentially occurring within the project site. The sensitive plant species potentially occurring in Planning Areas 30 and 51 include the southern tarplant, Palmer's grapplinghook, many-stemmed dudleya, Coulter's Matilija poppy, Catalina mariposa lily, and intermediate mariposa lily. The OCGP FEIR also noted the Coulter's saltbush, Laguna Beach dudleya, San Fernando Valley spineflower, and the Lewis's evening-primrose as having a moderate potential for occurrence. Species with a low potential for occurrence include the Los Angeles sunflower, south coast saltscale, Santa Monica Mountains dudleya, heart-leafed pitcher sage, coast wooly-heads, slender-horned spineflower, Santa Barbara morning glory, tecate cypress, and salt spring checkerbloom.

The OCGP FEIR documented an observation made of one sensitive wildlife species, a burrowing owl. This individual, observed during the conductance of protocol focus studies for a nearby development proposal, was outside the habitat reserve at the southwest end of Planning Areas 30 and 51 along Serrano Creek. Forty other sensitive wildlife species or species of local concern were identified as having a potential to occur on the site.

The OCGP FEIR also describes the Wildlife Corridor Concept Plan that would be incorporated into the eastern portion of the project site (Refer to pp. 5.9-9 through 5.9-14 of the OCGP FEIR) and explains the guidelines pursuant to which the ultimate corridor will be designed and constructed. The subject guidelines are primarily concerned with the creation and re-vegetation of wildlife habitats that would flourish in the proposed areas and serve as protective cover for target wildlife species that will presumably utilize the proposed corridor. A preliminary design concept for the creation and/or re-vegetation of the proposed route has also been prepared which is consistent with the guidelines described below (Draft Irvine Wildlife Corridor Master Plan, November 2002). The draft recommends a series of actions to improve the environmental quality for wildlife:

- Creation (establishes historical ecosystems on lands that did not previously support that ecosystem or on severely altered sites)
- Revegetation
- Reduce the amount of noise pollution and urban influence.
- Remove and restore the unnecessary developed (paved) areas within the corridor right-of-way.
- Create a protective habitat along the entire length of the corridor.
- Apply minimum height/width requirements based on the specific wildlife species.

OCGP FEIR Mitigation Measure BIO3, which continues to apply to this addendum, ensures that the City of Irvine will continue to work with State and federal agencies to implement the revegetation/restoration plan necessary to create a viable wildlife corridor within the project area. The City has already engaged in this process as is demonstrated through the preparation of the Draft Irvine Wildlife Corridor Master Plan, which is independent of this project.

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4.4.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR concluded that implementation of the overall project could result in the occurrence of the following potentially significant effects:

- The southern tarplant, a federal species of concern, might be adversely affected by project development.
- Although very limited in aerial extent and highly disturbed wetland, there exist isolated riparian habitat remnants that could be adversely impacted by project implementation.

The project site contains a large number of trees, many of which are mature, representing a wide range of species. Project implementation may result in damage and destruction of the trees. A significant impact related to conflicts with the City's Urban Forestry Ordinance could occur.

4.4.3 Impacts Associated with the Requested Entitlements

Amended VTTM No. 17008, Proposed VTTM No. 17283, and the associated actions are consistent with the adopted Overlay Plan, and the impacts of that development on Biological Resources were analyzed in the OCGP FEIR. Amended VTTM No. 17008, Proposed VTTM No. 17283, or the associated actions would not allow any additional development intensity beyond what is allowed by the adopted Overlay Plan, but merely implements the backbone infrastructure and allows development of the LLD consistent with that Plan. Therefore, the project would not result in any new or increased impacts to any biological resources beyond those evaluated in the OCGP FEIR.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project would have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that 1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or 2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures

4. Discussion of Checklist and Mitigation Measures

or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant biological effects identified in and considered by the certified OCGP FEIR.

4.4.4 Mitigation from the OCGP FEIR and Applicability to the Requested Entitlements

Mitigation measures BIO1 through BIO4 would be implemented in conjunction with master plan review and subsequent development permits. The project would neither change these mitigation measures nor their application to future development projects.

- BIO1 Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. Prior to approval of a subdivision map for development within or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).
- BIO2 Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, recreation (i.e., within the proposed wildlife corridor), and/or re-vegetation as deemed acceptable by the appropriate jurisdictional agencies.
- BIO3 The City shall continue to work with State and federal agencies during the implementation of the proposed project to implement the revegetation/restoration plan for the wildlife corridor. Measures such as sight and sound barriers, including artificial sound walls and natural diversions (e.g., hedges and tree lines) shall be incorporated into corridor design to ensure the viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the OCGP FEIR.
- BIO4 Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered "Significant Trees" under the City of Irvine's Urban Forestry Ordinance (UFO) (Sections 5-7-401 et al.) and the UFO shall apply to all trees included in this inventory.

4. Discussion of Checklist and Mitigation Measures

4.5 CULTURAL RESOURCES

4.5.1 Environmental Setting

Cultural Resources

The discussion of cultural resources includes archaeological and historical resources. The OCGP FEIR presents information pertaining to the regional setting of former MCAS El Toro from both a prehistoric and historic perspective. The OCGP FEIR reported the presence of ten prehistoric archaeological sites and eight isolated prehistoric artifacts that have been recorded in the northeastern habitat preserve portions of PA 51. These sites are generally on the ridges between Borrego Canyon Wash and the Agua Chinon Wash.

The former MCAS El Toro was surveyed to determine whether any of the structures would be eligible for the National Register. Generally, a structure that has achieved significance in the past 50 years is not considered eligible for the National Register unless it is of exceptional importance. The evaluation was expanded to include eligibility under the Legacy Cold War Project (Public Law No. 101-511, Section 8120). Portions of PAs 30 and 51 (the former MCAS El Toro) were established during WWII, and no structure earlier than this period is at the former MCAS El Toro. Therefore, the historical significance of any structures at the former military base would be as part of the Cold War Legacy. Surveys conducted by the US Army Corps of Engineers and the Department of the Navy in conjunction with the base's closure concluded there were no structures eligible for designation as Cold War Legacy or for inclusion in the National Register of Historic Places.

Paleontological Resources

The OCGP FEIR reported that a majority of Planning Areas 30 and 51 is on the Tustin Plain, a coastal alluvial plain. Alluvium from the Late Pleistocene to Holocene Epochs (approximately 2 million to 11,000 years ago) immediately underlies the majority of the project area, including the part occupying the coastal plain and washes in the eastern portion of PA 51. The Pleistocene Alluvium formation is widespread and believed to extend to depths of 1,000 feet in PA 30. A significant deposit of Pleistocene terrestrial vertebrates was recovered during excavation of a flood control basin four miles from PA 30; thus, it is possible that similar beds underlie PA 30 (OCGP FEIR 5.10-2).

The eastern portion of PA 51 is in the western foothills of the northern Santa Ana Mountains. The hills and ridges in the eastern part of PA 51 are composed of older, underlying marine and nonmarine rock units of early Oligocene to late Pleistocene (23 million to 2 million years ago). In order of decreasing geologic age, these latter rock units include the undifferentiated Sespe and Vaqueros Formations, Topanga and Monterey Formations, Oso Member of the Capistrano Formation, Niguel Formation, and Nonmarine Terrace Deposits. Nonmarine Terrace Deposits also underlie the terraces at the south corner of PA 51. The northwestern corner of PA 51 contains a small portion of the Santa Ana Mountains foothills, which were separated from the main formation by erosion. This small portion is composed of undifferentiated late Cretaceous (135 million years ago) Marine Williams Formation. The rock units underlying portions of PA 51 have previously yielded important fossil remains at recorded fossil sites on and near the site. There are three recorded fossil sites in PA 51. These sites occur in undifferentiated Sespe and Vaqueros Formations and in the Topanga Formation. Fossil types include marine invertebrates and vertebrates, continental vertebrates, land plants, and land mammals. The three recorded fossil sites lie within the proposed habitat preserve portion of PA 51 (OCGP FEIR p. 5.10-1 and Table 5.10-1).

4. Discussion of Checklist and Mitigation Measures

4.5.2 Impacts Identified in the OCGP FEIR and Addenda

Cultural Resources

The OCGP FEIR determined that development according to the adopted Overlay Plan would not cause a substantial adverse change in the significance of any historical structure. The consequence of grading activities associated with future development, however, could potentially result in a substantial adverse change in the significance of an archaeological resource. The OCGP FEIR also stated that grading activities could uncover previously unknown human remains, including those interred outside formal cemeteries.

Although the entire project area was the subject of previous cultural resources investigations as part of the Base Realignment and Closure process, it was later determined that an updated survey and report was necessary to supplement the previous work. PCR Services performed an additional Phase I and II cultural resources investigation, the results of which can be found in the *Cultural Resources Update and Review, Heritage Fields/The Great Park, City of Irvine, Orange County, California* report² dated September 2006. This report can be reviewed by the public at the City of Irvine, Community Development Department, at 13825 “B”, Irvine, California 92618.

Paleontological Resources

The OCGP FEIR stated that earthmoving operations associated with grading and trenching have the greatest potential to impact buried paleontological resources in the moderately to highly sensitive areas in the coastal plain and washes, northeastern, northwestern, and southern portions of Planning Area 51. The OCGP FEIR considered the potential impact associated with earthmoving operations as a significant impact for which mitigation was necessary.

4.5.3 Impacts Associated with Requested Entitlements

Cultural Resources

Amended VTTM No. 17008, Proposed VTTM No. 17283, or the associated actions provides a development that is consistent with the General Plan Land Use and Zoning designations for Planning Areas 30 and 51. The project would not allow any additional development intensity beyond what is allowed by the adopted Overlay Plan and would not open new areas to disturbance nor cause greater disturbance than reported in the OCGP FEIR. Therefore, impacts to cultural resources remain the same. The mitigation measures related to cultural resources developed for the OCGP FEIR remain applicable to future development under the project.

Paleontological Resources

As described in the OCGP FEIR, earthmoving operations such as grading and trenching have the potential to significantly impact buried paleontological resources. Amended VTTM No. 17008, Proposed VTTM No. 17283, or the associated actions would not allow any additional development intensity beyond what is allowed by the adopted Overlay Plan. Therefore, the impacts to paleontological resources remain the same. The paleontological mitigation measure developed for the OCGP FEIR remains applicable to future development under the project.

² *Cultural Resources Update and Review, Heritage Fields/The Great Park, City of Irvine, Orange County, California*, report is available for review at the City of Irvine.

4. Discussion of Checklist and Mitigation Measures

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project would have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that: 1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or 2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant cultural or paleontological effects identified in and considered by the certified OCGP FEIR.

4.5.4 Mitigation from the OCGP FEIR and Applicability to the Requested Entitlements

Cultural Resources

The OCGP FEIR identified mitigation measures CULT1 through CULT4 which, if fulfilled, would reduce the effects of development under the adopted Plan to a level less than significant. Measures CULT 1 through CULT 4 are applicable to future development under the project.

CULT1 Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PAs 51 and 30. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

CULT2 Monitoring of excavation and grading activities associated with future development in PAs 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure CULT1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and an assessment of their importance under CEQA

4. Discussion of Checklist and Mitigation Measures

and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.

CULT3 Prior to the issuance of grading permits and/or building permits for any future development in PAs 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City of Irvine to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.

CULT4 Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City of Irvine to address the accidental discovery of recognition of any human remains. The program shall include the following:

There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- The county coroner must be contacted to determine that no investigation of the cause of death is required, and

If the coroner determines the remains to be Native American:

- The coroner shall contact the Native American Heritage Commission within 24 hours.
- The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
- The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for the means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
- Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
 - The Native American heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
 - The descendant identified fails to make a recommendation; or

4. Discussion of Checklist and Mitigation Measures

- The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage commission fails to provide measures acceptable to the landowner.

Compliance with this measure shall be verified by the Community Development Department.

Paleontological Resources

The OCGP FEIR identified mitigation measure P1, which, if fulfilled, would reduce the effects of development under the adopted Overlay Plan to a level less than significant. Measure P1 is applicable to future development under the project.

- P1 Prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. (A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.

When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossil specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screening-washing operation on-site.

Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.

4.6 GEOLOGY AND SOILS

4.6.1 Environmental Setting

The OCGP FEIR describes the topography of the project site as nearly flat and gently sloping down to the west to southwest with elevations ranging from 450 feet above mean sea level (msl) to 200 feet above msl. Planning Area 30 is at the southeast margin of the Tustin plain with elevations ranging from about 260 to 300 feet above msl. Planning Area 51 includes some slopes of the Santa Ana foothills which each elevations of about 750 feet above msl. Alluvial soils of six major soil associations consisting predominantly of varying sands, silts, and clayey silty sands are present within PA 51. Soils underlying PA 30 contain clayey loam alluvial material, terrace deposits, and old and unconsolidated recent alluvium of the Myford and Sorrento series.

The OCGP FEIR identified the primary potential seismic hazard in the area as ground motion. Seismic Response Areas (SRA) designations are used by the City to assess the geologic and seismic risk associated

4. Discussion of Checklist and Mitigation Measures

with potential development. All of PA 30 and a majority of PA 51 are within SRA-2 (denser soils/deeper groundwater) and are considered suitable for development. The planned development area of PA 51 situated north of Irvine Boulevard is designated SRA-3 (alluvium/shallow bedrock) and also susceptible to ground motion.

No known active faults crossing or projecting into the project area were identified; however, the project site is within the seismically active southern California region and there are two active faults—Whittier-Elsinore Fault and Newport-Inglewood Fault—within 14 miles of the site.

4.6.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR disclosed the potential for future development of the project area to result in the exposure of people or structures to strong ground shaking in the event of a major earthquake along any one of the active faults in the region. The OCGP FEIR noted that new construction would be required to adhere to current seismic safety building codes which address seismic concerns. Existing buildings within current Planning Area 51 do not meet current seismic codes; therefore, the temporary or permanent reuse of the existing buildings and the associated exposure of people or structures to potential substantial adverse effects due to strong seismic-related ground shaking were considered significant impacts.

Because of the documented landslides in the northeastern Santa Ana foothills area of the Site, the OCGP FEIR analysis concluded that the project would result in a significant impact associated with landslides in the affected area of Planning Area 51 east of Irvine Boulevard, where future development of habitable structures could occur under the adopted Overlay Plan. The OCGP FEIR also concluded future development has the potential to result in soil erosion or the loss of topsoils and risk to life and property with the presence of expansive soils, and that these impacts are considered significant.

4.6.3 Impacts Associated with Requested Entitlements

The project occurs within the same development envelope as the OCGP FEIR, includes the same land uses and development areas as the adopted Overlay Plan, and does not provide for additional development intensity. Impacts related to seismic hazards, landslides, expansive soils, and loss of topsoil or soil erosion are not intensified by the proposed project. As a result, the conclusions drawn in the OCGP FEIR adequately describe the environmental effects of the project relative to soils, geologic hazards, and seismic safety, as well as the severity of the impacts. Consistent with the Mitigation Measures included in the OCGP FEIR and included below, an updated preliminary geotechnical report for VTTM 17283 by Leighton & Associates dated April 2008 has been prepared. VTTM 17283 will be developed in accordance with the recommendations of the preliminary geotechnical report. This report is on file with the Community Development Department.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is

4. Discussion of Checklist and Mitigation Measures

no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant geological effects identified in and considered by the certified OCGP FEIR.

4.6.4 Mitigation from the OCGP FEIR and Applicability to the Requested Entitlements

The OCGP FEIR identified four mitigation measures to reduce the effects of the adopted Overlay Plan on soils, geologic hazards and seismic safety. All of the mitigation measures are applicable to implementation of the project and would be carried forward to future development of the project site. Implementation of measures GS1 through GS4 (listed below) would reduce Project impacts to a level less than significant.

- GS1 Prior to issuance of a building permit, the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.
- GS2 Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.
1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be conducted. The purpose of the subsurface evaluation is to:
 - a. Further evaluate the subsurface conditions in the area of the proposed structures.
 - b. Provide specific data on potential geologic and geotechnical hazards.
 - c. Provide information pertaining to the engineering characteristics of earth materials in the project area.

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From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural section, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:

- Seismic Ground Shaking – Measures to prevent risk of loss, injury or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.
- Erosion or Loss of Topsoil – Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances.
- Where Expansive Soils Exist – Measures for the design of foundation, slabs, flatwork and other improvements subject to drainage from expansive soils.

Compliance with this measure shall be verified by the Community Development Department.

- GS3 Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of any existing structure if a building permit is not issued, a seismic evaluation of the structure including recommendations for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.
- GS4 Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

4.7 HAZARDS AND HAZARDOUS MATERIALS

4.7.1 Environmental Setting

Hazardous Materials and Hazardous Wastes

The OCGP FEIR discussed an environmental baseline survey (EBS) that was conducted for the project area. Information was used from the Base Realignment and Closure Business Plan for Marine Corps Air Station (MCAS) El Toro dated May 2002; the EBS dated 1995; and an update to the EBS—April 2003 Draft Final EBS. The 2003 EBS identified “76 potential release locations, all of which require further evaluation for potential releases to the environment and subsequent remediation, if required” (Refer to OCGP FEIR p. 5.5-5).

Regarding the Installation Restoration Program (IRP), the OCGP FEIR summarizes the status of each IRP site based on the information available at the time the EIR was prepared. Ten (10) IRP sites were identified as requiring “No Further Action,” including sites 4, 6, 7, 9, 10, 13, 14, 15, 19, 20, 21, 22 and 25. The IRP sites identified as “Action Required” included sites 1, 2, 3, anomaly 3, 5, 8, 11, 12, 16, 17, 18 (plume), and 24 (Refer to OCGP FEIR pp. 5.5-6 through 5.5-9).

4. Discussion of Checklist and Mitigation Measures

Of the 404 underground storage tanks (USTs) identified, 357 had been remediated and received findings of “no further action” at the time the OCGP FEIR was prepared. Of the 39 aboveground storage tanks (ASTs) on the property, 36 had been remediated and received findings of “no further action” (Refer to OCGP FEIR p. 5.5-10).

Evaluation and remediation of previously identified IRP sites within the project site continues with the resulting changes in the condition of the property largely anticipated in the OCGP FEIR. Subsequent to certification of the OCGP FEIR, the DON completed environmental related findings that support the suitability to transfer (FOST) real property made available through the Base Realignment and Closure process and to support of the lease of areas not yet suitable for transfer.³ (Refer to *Installation Restoration Program (IRP) Locations*, OCGP FEIR Addendum No. 4, Figure 4-2).

The areas suitable for lease encompass locations of concern identified in the 1995 and 2003 EBS, and in the OCGP FEIR, where future evaluation and/or actions are ongoing or required. These areas were identified as “carve-outs” in the DON documentation.⁴

Progress relative to conveyance of the carve-outs includes DON transfer of approximately eight acres of the project site to Heritage Fields and the Great Park Corporation on March 22, 2006. At the time of the initial land sale, these properties (carve-outs) were retained by the DON in order to complete environmental cleanup, and have since been approved by the regulatory agencies for transfer (FOST #2). The following sites were included in this transfer:

- Carve-out parcel II-J consists of approximately 0.2 acre in the central portion of former MCAS El Toro. It contains one building—Building No. 860—and 1 location of concern.
- Carve-out parcel II-Q (portion) consists of approximately 5 acres in the eastern portion of the former MCAS El Toro. It is an abandoned jet fuel (JP-5) pipeline.
- Carve-out parcel II-S consists of approximately 1.3 acres in the southeastern portion of former MCAS El Toro. It contains 6 buildings (347, 377, 447, 448, 566, and 726) and 13 locations of concern.
- Carve-out parcel II-T consists of approximately 0.5 acre in the southeastern portion of former MCAS El Toro. It contains 1 building—Building No. 761—and 4 locations of concern. The facility was a former aircraft wash rack.
- Carve-out parcel III-C consists of approximately 1 acre in the western portion of the former MCAS El Toro. It contains 1 building—Building No. 240—and 7 locations of concern. This site was a former ordnance storage facility.

Emergency Plans

The OCGP FEIR described the former MCAS El Toro site (Planning Areas 30 and 51) as a potential emergency response staging area because of its capacity for processing and storing large quantities of

³ U.S. Department of the Navy, 2004. *Final Finding of Suitability to Transfer, Parcel IV and Portions of Parcels I, II, and III, Former Marine Corps Air Station, El Toro, California, July 2004; Final Finding of Suitability to Lease for Carve-outs Within Parcels I, II, and III, Former Marine Corps Air Station, El Toro, California, July 2004.*

⁴ U.S. Department of the Navy, 2004a. *Final Finding of Suitability to Lease for Carve-outs within Parcels I, II, and III, Former Marine Corps Air Station, El Toro, California, July 2004.*

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cargo. The Orange County Emergency Plan, which incorporates the statewide standardized emergency management system (SEMS), guides multijurisdictional response to emergency conditions. No substantial change to the description of the setting regarding emergency plans has occurred that would alter the analysis and conclusions of the OCGP FEIR on emergency plans and response.

Wildland Fires

The OCGP FEIR identified high fire hazard areas within open space, undeveloped land northeast of and adjacent to Planning Area 51. The City has no construction records of existing buildings and structures on the property. No substantial change to the description of the setting relative to wildland fires has occurred that would alter the analysis and conclusions of the OCGP FEIR regarding wildland fires.

4.7.2 Impacts Identified in the OCGP FEIR and Addenda

Hazardous Materials and Wastes

The OCGP FEIR identified no significant impacts associated with the No Further Action IRP sites, which are listed in Table 4-4. Table 4-5 identifies each Action Required IRP site and its location relative to the adopted Overlay Plan. The OCGP FEIR disclosed the following environmental consequences of the adopted Overlay Plan as significant impacts:

- Construction activities involving demolition and possible substantial remodeling of existing structures in the project area as the project area develops could result in the disturbance of structures and soils containing asbestos-containing building materials (ACM) and lead-based paint.
- IRP site 24 is located in the 6.1 Institutional and 1.5 Recreation zoning districts. The site may be conveyed with temporary restrictions on use that are not appropriate for transportation facility use. This is considered a significant impact.
- Future uses of IRP site 3 may be potentially constrained by the implementation of institutional controls.
- IRP site 16 (Crash Crew Pit No. 2) is located in the 1.5 Recreation zoning district. The site may be conveyed with temporary restrictions on use that are not appropriate for recreational land uses.

4. Discussion of Checklist and Mitigation Measures

Table 4-4
No Further Action IRP Sites and Zoning

IRP Site	IRP Designation	Adopted Overlay Plan Zoning District
4	Ferrocene Spill Area	8.1 Lifelong Learning District
6	Drop Tank Drainage Area No. 1	2.2 Low-Density Residential with 1.8 Golf Course Overlay
9	Crash Crew Pit No. 1	1.5 Recreation
10	Petroleum Disposal Area	1.5 Recreation
13	Oil Change Area	1.5 Recreation
15	Suspended Fuel Tanks	1.5 Recreation
19	Air Craft Expeditionary Refueling	2.2 Low-Density Residential with 1.8 Golf Course Overlay
20	Hobby Shop	8.1 LLD
21	Materials Management Group	6.1 Institutional
22	Tactical Air Fuel Dispensing System	1.5 Recreation

Source: OCGP FEIR, Table 5.5-3, p. 5.5-21; SEMA Associates (June 7, 2006) (rev June 2008).

Table 4-5
Action Required IRP Sites and Zoning

IRP Site	IRP Designation	Adopted Overlay Plan Zoning District
1	EOD Range	1.4 Preservation
2	Magazine Road Landfill	1.4 Preservation
3	Original Landfill	8.1 Lifelong Learning District
5	Perimeter Road Landfill	1.5 Recreation
7	Drop Tank Drainage Area No. 2	1.5 Recreation
8	DRMO Storage Yard	6.1 Institutional/ 3.2 Transit Oriented Development
11	Transformer Storage Area	1.5 Recreation
12	Sludge Drying Beds	6.1 Institutional
14	Battery Acid Disposal Area	1.5 Recreation
16	Crash Crew Pit No. 2	1.5 Recreation
17	Communications Station Landfill	1.4 Preservation
24	VOC Source Area	6.1 Institutional/ 1.5 Recreation/ 3.2 Transit Oriented Development

Source: OCGP FEIR, Table 5.5-4, p. 5.5-22; SEMA Associates (June 7, 2006) (rev June 2008).

Emergency Plans

The OCGP FEIR determined the Overlay Plan would not be expected to interfere with emergency response and evacuation plans on the basis that other sites within Orange County are already designated as emergency staging areas and portions of the OCGP would remain available to non-aviation emergency response equipment. Accordingly, the OCGP FEIR concluded that the adopted Overlay Plan would not result in a significant impact related to emergency response and evacuation plans.

4. Discussion of Checklist and Mitigation Measures

Wildland Fires

The OCGP FEIR concluded that the Habitat Reserve, Wildlife Corridor, and Recreational areas in the northeastern portion of Planning Area 51 would be exposed to the highest level of fire risk from wildland fires under the adopted Overlay Plan, and that reuse of existing buildings require inspection for conformance to fire life safety code requirements. The OCGP FEIR identified the wildland fire impacts as potentially significant.

4.7.3 Impacts Associated with the Requested Entitlements

Hazardous Materials and Wastes

Amended VTTM No. 17008, Proposed VTTM No. 17283, or the associated actions would not allow any additional development intensity beyond what is allowed by the adopted Overlay Plan. As a result, the proposed project would not alter the findings and conclusions previously certified and adopted in the OCGP FEIR and Addenda. Therefore, the OCGP FEIR adequately describes the environmental effects of the project relative to hazardous materials and wastes for the project site. No new or modified mitigation measures are required.

Emergency Plans

Amended VTTM No. 17008, Proposed VTTM No. 17283, or the associated actions would not allow any additional development intensity or new land uses beyond what is allowed by the adopted Overlay Plan, and would not be expected to interfere with emergency response and evacuation plans. Other sites within Orange County are already designated emergency staging areas and portions of the OCGP would remain available to non-aviation emergency response equipment. Accordingly, the proposed project would not change the OCGP FEIR conclusions; the project would not result in a significant impact related to emergency response and evacuation plans.

Wildland Fires

As previously stated in the OCGP FEIR, the Habitat Reserve, Wildlife Corridor, and recreational areas in the northeastern portion of current Planning Area 51 would be exposed to the highest level of fire risk from wildland fires, and reuse of existing buildings would require inspection for conformance to fire life safety code requirements. Amended VTTM No. 17008, Proposed VTTM No. 17283, or the associated actions would not allow any additional development intensity and would not alter the findings and conclusions of the OCGP FEIR and Addenda regarding wildland fires.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the

4. Discussion of Checklist and Mitigation Measures

exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant hazardous effects identified in and considered by the certified OCGP FEIR.

4.7.4 Mitigation from the OCGP FEIR and Applicability to the Requested Entitlements

The OCGP FEIR identified six mitigation measures to reduce the effects of the adopted Overlay Plan on public health and safety—specifically, environmental effects associated with hazardous materials and waste, emergency response, and wildland fires—to a level less than significant. All of the mitigation measures are applicable to implementation of the proposed project and would be carried forward to future development of the project site. Measures HH1 through HH6 are listed below:

- HH1
- a. Prior to the conveyance of the property and issuance of subsequent grading permits, where the presence of ACMs is identified, the DON or its transference shall ensure that all available information concerning ACMs has been provided to the City of Irvine, and the purchasers of the property, including:
 - The type, location and condition of ACMs
 - The results of any asbestos testing
 - Description of asbestos control measures taken, if any
 - The costs or time necessary to remove existing ACMs
 - The results of any site-specific asbestos inventory updates
 - b. For any structures known to contain ACMs that will be renovated and/or demolished prior to transfer, the DON shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.
 - c. Prior to transfer of any structure constructed before October 1988, scheduled for renovation and/or demolition, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by the DON. This requirement can be waived if an architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building material, and to the best of their knowledge, no ACMs were used as a building material.

4. Discussion of Checklist and Mitigation Measures

- d. Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.
 - e. Any renovation and/or LBP abatement activities on residential units at former MCAS El Toro, shall be conducted in accordance with all applicable federal, state and local regulatory requirements.
- HH2
- a. Prior to transfer, the City shall receive from the DON, with the concurrence of the appropriate regulatory agencies, a statement that the “Action Required” IRP Site 3 is to be conveyed for restricted use and that all institutional controls have been identified and implemented. The City Irvine will adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.
 - b. Prior to transfer, if the DON chooses to impose temporary restrictions on the use of Sites 16 and 24 pending adequate remediation of groundwater, the City of Irvine shall receive from the DON a statement of temporary restrictions on the use of the sites and the release of the sites for restricted use following implementation of adequate remediation of groundwater. The City of Irvine shall adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are appropriate and shall be established by master plan approval.
- HH3
- The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for “Development Within and Exclusion from Very High Fire Severity Zones” and “Fuel Modification Plans and Maintenance.” Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the proposed project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.
- HH4
- Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.

4. Discussion of Checklist and Mitigation Measures

- HH5 Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event that unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director of Community Development of the City of Irvine in a timely manner. Additionally, said Protocol Plan shall be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities.
- HH6 The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells on the former MCAS El Toro in a geographic information systems database (GIS). The City will review all permit applications on the former air station for monitoring well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to monitoring wells will be limited to authorized personnel.

4.8 HYDROLOGY AND WATER QUALITY

4.8.1 Environmental Setting

The OCGP FEIR describes the project site as within the San Diego Creek watershed, which includes the San Diego Creek, Peters Canyon Channel, and the tributaries to these water courses. The major drainage channels that traverse the site (PA 51) are the Marshburn Channel, Bee Canyon Channel, Agua Chinon Channel, and Borrego Canyon Channel. Serrano Creek and Upper San Diego Creek Channel traverse PA 30 in the southern tip of the project site, south of the existing SCRRA Metrolink railroad tracks.

San Diego Creek and Upper Newport Bay are listed as impaired water bodies under Section 303(d) of the Clean Water Act. Accordingly, Total Maximum Daily Load (TMDL) for pollutants that have impaired these water bodies has been established and was included in the OCGP FEIR (Refer to OCGP FEIR Table 5.7-2).

The OCGP FEIR also notes the County of Orange and the City of Irvine hold a Nationwide Pollution Discharge Elimination System (NPDES) permit for the storm drain systems, and that the State has issued a NPDES general permit relating to construction activities on sites over five acres in the area. Lastly, the flood control improvements associated with the SR-133 toll road were noted in the OCGP FEIR as having reduced the 100-year flood zone north and west of the property.

4.8.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR identified several significant impacts on hydrology and water quality associated with future development under the adopted Overlay Plan before mitigation. First, grading and excavation activities required for future development could result in the exposure of bare soils to both wind- and water-related erosion and associated significant water quality impacts (specifically, a violation of water quality standards or waste discharge requirements). Compliance with City grading and water quality regulations—including the NPDES discharge permitting requirements and preparation of a Storm Water Pollution Prevention Plan (SWPPP) and a Water Quality Management Plan (WQMP)—are the primary means of controlling the potential impacts of grading and excavation activities. These City requirements, which are described in mitigation measures H/WQ1 and H/WQ2, will reduce the impact to a less-than-significant level.

4. Discussion of Checklist and Mitigation Measures

According to the OCGP FEIR, the existing drainage patterns and stream courses will not be substantially altered by future development under the adopted Overlay Plan. In addition, the potential for inundation is reduced by improvements to upstream flood-control facilities. Without project-related flood-control facilities, the rate or amount of surface runoff due to new development would result in flooding on- and off-site, depending on the nature of the specific development. Although this impact was identified as significant, the effect of increased runoff will be reduced to a less-than-significant level through preparation and implementation of hydraulic studies and recommendations for the specific development and the construction of flood-control improvements commensurate with the specific development (Mitigation Measure H/WQ3).

The impact analysis for the Overlay Plan assumed development of the land use patterns created by the zoning designations for the Overlay Plan area and a backbone storm drain system. The storm drain system took into consideration and included improvements identified in the San Diego Creek Flood Control Master Plan (Refer to OCGP FEIR p. 5.7-16 and Figure 5.7-2). The drainage plan for the Overlay Plan area included improvements to the major drainages, including Marshburn Channel, Bee Canyon Channel, Agua Chinon Channel, and the Borrego Channel, Wildlife Corridor and Serrano Creek, and San Diego Creek, as described in the OCGP FEIR and Addenda.

While relatively conceptually defined in the OCGP FEIR, the foregoing area-wide drainage and flood control facility system has since been undergoing increasingly more definitive design engineering refinement. The latest formal expression of these system enhancements is memorialized in the following documents: Master Plan of Drainage, Fuscoe Engineering February 23, 2007,⁵ Orange County Great Park – Hydrology/Hydraulic Report, Fuscoe Engineering June 12, 2007 (collectively, Fuscoe Reports); Planning Area 51 and Planning Area 30 Bee Canyon, Agua Chinon, Borrego, Serrano and Upper San Diego Creek Update, RBF Consulting July 14, 2008, and Planning Area 51 Marshburn Watershed Update, RBF Consulting July 15, 2008 (collectively, RBF Reports). These reports merely refine the drainage control system components described above, and are on file with the City, and available for inspection at the Irvine Community Development Department during normal business hours. The on-site channels will continue to drain the project site as under existing conditions. Additional backbone storm drain facilities will be designed to accommodate the changes in the land use surface runoff within the Heritage Fields development. The post-development hydrology was analyzed per the Orange County Hydrology Manual for a 100-year peak storm design event.

OCGP FEIR Mitigation Measure H/WQ3 states that prior to approval of the first tentative tract or parcel map in the project area, detailed hydrologic and hydraulic analysis shall be conducted. Studies and analyses shall be prepared in accordance with Orange County Flood Control District (OCFCD) methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. In compliance with the mitigation measure, the Fuscoe Reports, and RBF Reports were prepared. The primary focus of these reports was to evaluate the proposed drainage concept for the Heritage Fields development with respect to surface water hydrology. The studies identified surface water runoff as well as drainage and flood-control improvements for the proposed project. The reports also provide a brief discussion of the local hydrologic regime; an overview which ranges from the watershed delineation of the San Diego Creek Watershed to the physical drainage characteristics of Heritage Fields in Orange County.

4.8.3 Impacts Associated with the Requested Entitlements

According to the Project Engineer, the watersheds and land uses proposed for Amended VTTM No. 17008 are consistent with the approved VTTM No. 17008. (See letter from Hunsaker & Associates to City of Irvine

⁵ This report was submitted to the City of Irvine as a part of the Master Subdivision Map application.

4. Discussion of Checklist and Mitigation Measures

dated September 8, 2008.) As a result, the changes made to Amended VTTM No. 17008 have no significant changes to drainage patterns and no impacts downstream. In addition, the downstream points of connection are the same, and the resulting flowrates calculated at the downstream points of connection do not result in a significant impact to existing regional flood control facilities.

Amended VTTM No. 17008, Proposed VTTM No. 17283, or the associated actions would not allow any additional development intensity or permit additional residences. Development of the proposed project will not expand the development boundary and will implement all mitigation measures identified in the OCGP FEIR and Addenda. The Fuscoe Reports and RBF Reports, described above, evaluate the proposed drainage concept for the Heritage Fields development, including the proposed project, with respect to surface water hydrology. The studies identified surface water runoff as well as drainage and flood-control improvements for the proposed project. The OCGP FEIR mitigation measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and development occurs in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation of the Newport Bay watershed. As a result, the requested entitlements will have no additional impact to the hydrology and water quality. Accordingly, the impact analysis presented in OCGP FEIR Section 5.7 adequately describes the project effects on hydrology and water quality.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant hydrology effects identified in and considered by the certified OCGP FEIR.

4. Discussion of Checklist and Mitigation Measures

4.8.4 Mitigation from the OCGP FEIR and Applicability to the Requested Entitlements

The OCGP FEIR identified four mitigation measures to reduce the effects of the project on hydrology and water quality. All of the mitigation measures are applicable to implementation of the project and would be carried forward to future development of the project site. Implementation of measures H/WQ 1 through H/WQ 4 (listed below) would reduce project impacts to a less than significant level.

H/WQ1 Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City of Irvine adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that “industrial/commercial construction operations that result in a disturbance of one acre or more of total land area...and residential construction sites that result in the disturbance of five acres or more...shall be required to develop and implement BMPs...to control erosion and siltation and contaminated runoff from the construction sites.” Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of one acre or more.

The City’s standard conditions of approval indicate that a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.

Additionally, prior to the issuance of a grading permit, project applicants must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, lessee, etc.), and shall reference the location(s) of structural BMPs.

Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOI) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the Director of Community Development of any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

4. Discussion of Checklist and Mitigation Measures

- H/WQ2 Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water quality Control Board Basin Plan, including Total Maximum Daily Load (TMDL) Implementation Plan adopted for this watershed.
- H/WQ3 Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrologic and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.
- H/WQ4 Prior to issuance of a building permit, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.

After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process.

4.9 LAND USE

4.9.1 Environmental Setting

The OCGP FEIR described the existing and former land uses on Planning Areas 30 and 51, and other areas adjoining and surrounding these planning areas. Subsequent to the City's approval of the General Plan Amendment and Zone Change for the Overlay Plan, the DON initiated an auction process for the sale of the former MCAS El Toro property. To facilitate the transfer, the property was divided into and presented to prospective buyers as four distinct parcels. Interested parties were invited to bid on one or more of the parcels. In 2005, Heritage Fields successfully purchased all four parcels from the DON (3,671 acres), and entered into a Development Agreement with the City of Irvine on July 12, 2005. The Development Agreement sets forth the terms and conditions of subsequent development and implementation of the Great Park Plan, including dedication in fee of 1,096 acres of the property for development of the Great Park Plan.

The condition of Planning Area 30—generally, the cultivation of agricultural lands—is substantially the same as the OCGP FEIR baseline year. Consistent with a provision in the zoning code, there are interim uses that reuse existing buildings on-site. These uses include offices occupied by the City of Irvine Community Development Department, Great Park Corporation (GPC), and Heritage Fields. Other tenants include Second Harvest Food Bank, Families Forward, Orange County Great Park Balloon Preview Park, California State University, Fullerton. A day-care facility is immediately adjacent to these office uses. A few parcels such as Tierra Verde Industries have been leased and are operating on an interim basis.

4. Discussion of Checklist and Mitigation Measures

4.9.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR identified no significant impact to established communities. There were no residents living within the Planning Areas 30 and 51 at the time the OCGP FEIR was prepared and there has been no change in this regard; there are no residents living within the project site. The OCGP FEIR analyzed certain amendments to the City's General Plan that were adopted on May 27, 2003, as part of the City's adoption of the Overlay Plan. Further revisions were analyzed in the Addenda and found to be consistent. The adopted Overlay Plan was determined to be consistent with each element of the General Plan, as summarized below.

Land Use Element: The goal of the Land Use Element is to “promote land use patterns that maintain safe residential neighborhoods, bolster economic prosperity, preserve open space, and enhance the overall quality of life in Irvine.” The “OCGP, Orange County Great Park” land use category was created to reflect the types, intensity, and density of uses and activities contemplated in the OCGP and was determined to be consistent with the goal of the Land Use Element.

Circulation Element: The Circulation Element's goal is to “provide a balanced transportation system.” Adoption of the Overlay Plan included the following modifications to the General Plan Circulation Element:

- Policy B-1(c) was changed to include the following provision:

“In conjunction with individual subdivision map level traffic studies for development proposed in the Overlay Plan area, a LOS [level of service] ‘E’ would be considered acceptable for application to intersections impacted in Planning Areas 13, 30, 31, 32, 34, 35, and 39.”
- Figure B-1 (Master Plan of Arterial Highways) and Figure B-2 (Operational Characteristics) were amended to reflect the alignment of roadways within the OCGP, including:
 - Marine Way is aligned to terminate at Bake Parkway approximately 900 feet east of the northbound exit ramp from Interstate 5.
 - Trabuco Road terminates at the Orange County Great Park Trabuco Entry.
 - Rockfield Boulevard is realigned to terminate at Marine Way.
 - On-site circulation includes a new commuter highway/collector (Y Street [Ridge Valley]).
 - Research Parkway is renamed College Road and modified to extend from Irvine Boulevard to Marine Way.
- Figure B-3 (Public Transit) was amended to reflect the alignment of roadways within the OCGP.
- Figure B-4 (Trails Network) was amended to reflect the alignment of roadways within the OCGP.

Housing Element: The goal of the Housing Element is to “provide for safe and decent housing for all economic segments of the community.” The adopted Overlay Plan would add up to 3,625 new dwelling units and carry forward all adopted policies and objectives of the Housing Element; specifically, the residential development component would explore opportunities for maintenance of the housing stock and help the City meet its Regional Housing Needs Assessment through year 2025.

4. Discussion of Checklist and Mitigation Measures

Conservation and Open Space Element: The goal of this element is to “maintain and preserve the environmental systems as a major feature in the City.” This goal would be achieved through the implementation of Objectives L-1 through L-12 and corresponding policies. Objective L-10 encourages “the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development.” The adopted Overlay Plan includes 1,096 acres of Great Park recreational land, 130 acres of permanent agricultural land, and 974 acres of Habitat Preserve.

Cultural Resources: The goal of the Cultural Resources Element is to “ensure the proper disposition of historical, archaeological, and paleontological resources to minimize adverse impacts, and to develop an increased understanding and appreciation for the community’s historic and prehistoric heritage, and that of the region.” The OCGP FEIR identified the flatland area of the property as a low paleontological sensitivity zone and the hillside areas north of Irvine Boulevard as a high paleontological sensitivity zone. No objective of this element was amended by the adopted Overlay Plan and all of the objectives and implementing policies were to be implemented as part of the adopted Overlay Plan.

Noise Element: The Noise Element’s goal is to “contribute to a healthy and safe environment by minimizing noise impacts.” The adopted Overlay Plan would not affect the mobile noise, stationary noise, and noise abatement objectives and implementing policies of the Noise Element.

Public Facilities and Services Element: The goal of this element is to “provide a full range of necessary public facilities and services that are convenient to users, economical, reinforce City and community identity, and reflect the participation of citizens.” The facilities and services described in the Urban Service Plan for the adopted Overlay Plan were formulated through a public participatory process and found to implement the goal and adopted objectives and related policies of this element.

Integrated Waste Management Element: This element seeks to “encourage solid waste reduction and provide for the efficient recycling and disposal of refuse and solid waste material without deteriorating the environment.” The OCGP FEIR disclosed that the Overlay Plan would not affect the adopted objectives and implementing policies regarding solid waste, waste, wastewater, and solid waste facility siting requirements; rather, it would provide the opportunity to better respond to the City’s solid waste reduction requirements and other provisions of the element by broadening the range of design options.

Growth Management Element: The goal of the Growth Management Element is to “ensure that growth and development are integrally planned with, and phased concurrently with, the City of Irvine’s ability to provide an adequate circulation system and public facilities.” When the OCGP FEIR was certified, it was disclosed that though the project made changes to the *Master Plan of Arterial Highways*, the project would not change any of the objectives or implementing policies of the Growth Management Element.

Parks and Recreation Element: The goal of the Parks and Recreation Element is to “provide park and recreation opportunities at a level that maximizes available funds and enables residents of all ages to utilize their leisure time in a rewarding, relaxing, and creative manner.” The OCGP FEIR reported that there would be no change to the objectives or implementing policies of this element.

Seismic Element: The goal of the Seismic Element is to “minimize the loss of life, disruption of goods and services, and the destruction of property associated with an earthquake.” Five Seismic Response Area (SRA) designations are used to describe the magnitude and types of potential seismic hazards present within the City, and to provide policy guidance. The OCGP FEIR reported that the majority of the El Toro property was in category SRA-2 and that no objectives or implementing policies would be changed as a result of the project.

4. Discussion of Checklist and Mitigation Measures

Safety Element: The goal of the Safety Element is to “minimize the danger to life and property from man-made and natural hazards, including fire hazards, flood hazards, non-seismic geologic hazards and air hazards.” The OCGP FEIR disclosed the need for fuel modification to mitigate potential wildland fire hazards and drainage improvements to lessen flood hazards associated with implementation of the adopted Overlay Plan, and concluded no objectives or implementing policies would be changed as a result of the adopted Overlay Plan.

4.9.3 Impacts Associated with the Requested Entitlements

The project is consistent with the land uses approved in the OCGP FEIR and Addenda. Amended VTTM No. 17008, Proposed VTTM No. 17283, and the associated actions would implement approved development, and therefore would not affect the goals, objectives, or policies, or the facilities and services described in any of the General Plan Elements. No changes or new impacts would occur. The following analysis discusses the proposed project in consideration of each General Plan element.

Land Use Element: The Land Use Element designates Planning Areas 30 and 51 as “Orange County Great Park.” The proposed project is consistent with the General Plan designation, and would not interfere with the City’s or Heritage Fields’ opportunity to develop regionally significant conservation and open space, parks and recreation, educational facilities, and other public-oriented land uses, integrated with privately developed multi-use, residential, commercial, and industrial properties. Amended VTTM No. 17008, Proposed VTTM No. 17283, or the associated actions does not allow any additional development intensity and would not change the previously approved acreages for the project area.

Circulation Element: The goal of the Circulation Element is “to provide a balanced transportation system.” The project would not alter the planned network of arterials and connections to roadways in the surrounding area; nor would they materially change the riding and hiking trails and trail linkages; pedestrian and bicycle circulation; and transit, air transportation, and telecommunication opportunities.

Housing Element: The goal of the Housing Element is to “provide for safe and decent housing for all economic segments of the community.” The project would not permit new residential units or increase allowable development intensity. However, the project implements a portion of the adopted Overlay Plan, which, overall, distribute 3,625 residential dwelling units throughout Planning Areas 51 and 30, and would carry forward the adopted policies and objectives of the Housing Element, specifically by helping the City meet its Regional Housing Needs Assessment through 2025 and implement the provisions of the Development Agreement regarding the residential component of the adopted Overlay Plan.

Cultural Resources: The project would not affect the adopted goals, objectives, and policies of this element. Development would be required to comply with this element’s requirements and to implement mitigation measures found in the OCGP FEIR. With implementation of OCGP FEIR measures P1 and CULT1 through CULT4, the impacts of new development on paleontological and cultural resources would be less than significant. Furthermore, the proper disposition of such resources, if any are encountered prior to or during construction would be ensured; and through the information recovered, the community’s understanding and appreciation for its historic and prehistoric heritage will have been enhanced.

Noise Element: The project would not affect the goal of this element – “to contribute to a healthy and safe environment by minimizing noise impacts” – or the mobile noise, stationary noise, and noise abatement objectives and implementing policies of the element.

Public Facilities and Services Element: The project would not affect facilities or services described in the Urban Service Plan for the adopted Overlay Plan. As no substantive change in the Urban Service Plan is

4. Discussion of Checklist and Mitigation Measures

necessary, and that plan was a principle means of demonstrating consistency with the Public Facilities and Services Element, the project also is consistent with this element of the General Plan. Additionally, development would be required to implement the element's objectives and policies to ensure that a full range of necessary public facilities and services that are convenient to users are provided.

Integrated Waste Management Element: The project would not affect the adopted objectives and implementing policies regarding solid waste, waste, wastewater, and solid waste facility siting requirements. This element seeks to “encourage solid waste reduction and provide for the efficient recycling and disposal of refuse and solid waste material without deteriorating the environment.”

Growth Management Element: The goal of the Growth Management Element is to “ensure that growth and development are integrally planned with, and phased concurrently with, the City of Irvine’s ability to provide an adequate circulation system and public facilities.” When the OCGP FEIR was certified it disclosed that though the project made changes to the Master Plan of Arterial Highways, the project would not change any of the objectives or implementing policies of the Growth Management Element. The project likewise would not alter any of the objectives or implementing policies because it would remain consistent with the development phasing already a part of the overall development plan.

Parks and Recreation Element: The goal of the Parks and Recreation Element is to “provide park and recreation opportunities at a level that maximizes available funds and enables residents of all ages to utilize their leisure time in a rewarding, relaxing, and creative manner.” The OCGP FEIR reported there would be no changes to the objectives or implementing policies of the Element. Amended VTTM No. 17008, Proposed VTTM No. 17283, or the associated actions will not result in any losses of park land or increases in development intensity for the project. Furthermore, through the Great Park Development Agreement, Heritage Fields has dedicated 1,096 acres: 367 acres for the park, 165 acres for the sports park, 229 acres for the drainage corridor, 179 acres for the wildlife corridor, and 156 acres for the exposition center south.

Conservation and Open Space Element: The goal of this element is to “maintain and preserve the environmental systems as a major feature in the City.” This goal would continue to be achieved through the implementation of objectives L-1 through L-12 and corresponding policies. Objective L-10 encourages “the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development.” The project would not alter any of the objectives or implementing policies.

Seismic Element: The goal of the Seismic Element is to “minimize the loss of life, disruption of goods and services, and the destruction of property associated with an earthquake.” Five Seismic Response Area (SRA) designations are used to describe the magnitude and types of potential seismic hazards present within the City, and provide policy guidance. The OCGP FEIR reported that the majority of the El Toro property was in category SRA-2. All of Planning Area 30 and the portions of the Lifelong Learning District (LLD) and the Park District southwest of Irvine Boulevard are identified as SRA-2. The areas of the LLD and the Park District situated northeast of Irvine Boulevard are designated SRA-3; the SRA-4 classification has been applied to small areas along the northern edge of the LLD, and the Park District’s boundary within the Habitat Preserve area. The OCGP FEIR reported that no objectives or implementing policies would be changed as a result of the project. Likewise, the project would not alter that finding/conclusion because all project development remains within the previously established boundaries.

Safety Element: The goal of the Safety Element is to “minimize the danger to life and property from man made and natural hazards, including fire hazards, flood hazards, non-seismic geologic hazards, and air hazards.” The OCGP FEIR disclosed the need for fuel modification to mitigate potential wildland fire hazards and drainage improvements to lessen flood hazards associated with implementation of the project, and concluded no objectives or implementing policies would be changed as a result of the adopted Overlay Plan.

4. Discussion of Checklist and Mitigation Measures

The project does not contain elements that would alter the findings, conclusions and mitigation measures because all project development remains within the previously established project boundaries.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed projects would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. In that the OCGP FEIR did not identify any significant land use impacts there is no need for further alternatives to the project or the imposition of mitigation measure requirements.

4.9.4 Mitigation from the OCGP FEIR and Applicability to the Requested Entitlements

The OCGP FEIR identified no significant land use impact; therefore no mitigation measures were proposed.

4.10 NOISE

4.10.1 Environmental Setting

The OCGP FEIR described mobile noise sources from nearby freeways, roadways, rail facilities, and vehicle use at adjacent commercial businesses, light industrial facilities, and agricultural lands as the dominate noise source in the project area. Stationary sources of noise included temporary and intermittent noise from construction activities and agricultural operations, noise associated with the industrial/business parks to the east and the business park and entertainment uses to the south.

The OCGP FEIR presents the results of a noise survey conducted on December 10–12, 2002, in which noise measurements were conducted at nine locations. Ambient noise levels at the four surveyed representative residential locations ranged from 58 dBA to 65 dBA CNEL (Refer to OCGP FEIR p. 5.4-18, Figure 5.4-6, and Table 5.4-7). The audible noise sources included local traffic, distant traffic, birds, aircraft, and human voices, all of which were characterized as typical of suburban areas.

4. Discussion of Checklist and Mitigation Measures

4.10.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR concluded that development of the Overlay Plan would not result in any significant noise effects. The noise assessment considered a worst-case condition of simultaneous demolition and construction activities with the combined sound level of 20 pieces of large mobile equipment operating at a distance of 5,000 feet; 5 concrete breakers operating at a distance of 6,000 feet; and 2 crusher plants operating at a distance of 10,000 feet from the nearest off-project area residential location. The distances represented the closest possible location of the construction equipment to the nearest off-project area residences during a heavy construction period. The nearest off-site residential uses (sensitive noise source) were located approximately 4,000 feet from the property boundary. Under this scenario, the analysis estimated sound levels of approximately 56 dBA at the nearest off-site residential location. (Refer to OCGP FEIR, p. 5.4-24 and Table 5.4-8.)

As buildout of the project site was assumed to occur over time (years 2007–2025), construction-related noise impacts on residential areas within the project site were also estimated. Using the same construction equipment assumptions and a distance of 600 feet from the nearest residential area, the combined effect of the equipment was estimated at a sound level of 70 dBA at the nearest on-site residential locations during a heavy construction period. While the City of Irvine Noise Ordinance does not specify a limit on construction noise levels, it stipulates the days and hours during which construction activities may occur and when construction would not be allowed unless a temporary waiver is requested and granted; specifically, construction is allowed Monday through Friday between 7:00 a.m. and 7:00 p.m., and on Saturdays between 9:00 a.m. and 6:00 p.m.; no construction is allowed outside those hours, on Sundays, or on federal holidays. (Refer to OCGP FEIR, p. 5.4-31.)

4.10.3 Impacts Associated with the Requested Entitlements

The OCGP FEIR noise assessment considered a worst-case condition of simultaneous demolition and construction activities. The worst-case assumptions described for the adopted Overlay Plan remain reasonable assumptions for the project; no new information about future demolition and construction has become available that would increase the number of pieces of equipment to be operated simultaneously.

Construction Noise

Construction activities associated with the proposed project would have a short-term impact on ambient noise levels in the project vicinity. Amended VTTM No. 17008, Proposed VTTM No. 17283, or the associated actions does not allow any additional development intensity beyond what is allowed by the adopted Overlay Plan, and therefore would not result in an increase in construction noise levels. In addition, the analytical assumptions concerning construction, development phasing, and operations of the adopted Overlay Plan remain appropriate for the project. Consequently, the project would not increase the noise levels generated during construction activities. Therefore, the construction noise levels associated with this component of the project are anticipated to be similar to those addressed in the OCGP FEIR and Addenda and would not result in any new significant impacts which were not previously anticipated.

Construction Vibration

The OCGP FEIR identified that nuisance vibration from construction activities associated with the adopted Overlay Plan would result in noticeable vibration levels. However, because vibration from construction activities would be temporary, nuisance vibration would be less than significant. The project would not generate significantly higher levels of vibration. Therefore, the construction vibration levels associated with

4. Discussion of Checklist and Mitigation Measures

the project are anticipated to be similar to those addressed in the OCGP FEIR and Addenda and would not result in any new significant impacts which were not previously anticipated.

Operation

Current information regarding the noise impacts within the non-residential portions of the LLD (VTTM 17283) have been evaluated in a preliminary acoustical report by Wieland Acoustics dated October 2008 (see Appendix B). The proposed project includes Project Design Features that will attenuate for both present and future noise levels to meet City standards, which will not result in any new significant impacts. Project Design Features include standard wall construction, sound rated windows and doors, and mechanical ventilation for five general areas, which is discussed in detail and shown in Figure 1-2 of the report. Amended VTTM No. 17008, Proposed VTTM No. 17283, or the associated actions would not result in land use changes that would increase project-related stationary or mobile source noise generated by the project. Therefore, the noise levels associated with the project are anticipated to be similar to those addressed in the OCGP FEIR and would not result in any new significant impacts which were not previously anticipated.

Airport Noise

The former MCAS El Toro operations have ceased and no public airport, public use airport, or airport land use plan exists in the project vicinity.

Land Use Compatibility

The project includes land use types and intensity identical to the adopted Overlay Plan. Because the OCGP FEIR and Addenda did not identify any significant impacts related to land use compatibility, the proposed project is also compatible with the Irvine General Plan and zoning code for noise and vibration compatibility.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or

4. Discussion of Checklist and Mitigation Measures

alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant noise effects identified in and considered by the certified OCGP FEIR.

4.10.4 Mitigation from the OCGP FEIR and Applicability to the Requested Entitlements

The OCGP FEIR identified no significant noise impacts; therefore no mitigation measures were proposed.

4.11 POPULATION AND HOUSING

4.11.1 Environmental Setting

The OCGP FEIR discussed the caretaker status of the base following its closure. At the time the OCGP FEIR was prepared there was a limited number of military and civilian staff working on the base. There are no residents living on the base. Consequently, there are 4,380 vacant group quarters units and 1,209 residential dwelling units. The OCGP FEIR examined demographics in the context of the existing and projected population of the Orange County region and the City of Irvine. Population and housing information was developed based on the 2000 United States Bureau of Census population, household, and employment census information. The areas surrounding the former base and the Orange County subregion are considered jobs-rich and housing-poor. The Southern California Association of Governments (SCAG) seeks to encourage housing growth over job growth in the Orange County subregion. The OCGP FEIR reported that the ratio of jobs to housing in the area has environmental implications related to transportation and air quality. Thus, a major focus of the regional planning efforts has been to improve the ratio of jobs to housing in all affected subregions in order to reduce vehicular trips, costly infrastructure improvements, and resultant air emissions. Despite attempts, according to SCAG projections, the Orange County subregion's jobs/housing balance will worsen through the year 2025 as the number of jobs surpasses housing gains.

4.11.2 Impacts Identified in the OCGP FEIR and Addenda

As noted above, the area surrounding the former MCAS El Toro and the Orange County subregion are considered jobs-rich and housing-poor. SCAG seeks to discourage job growth over housing growth in the Orange County subregion. The OCGP FEIR reported that regional projections are dynamic and, as a compilation of local land use projections, reflect changing community views on the location and the types of growth desired. Although implementation of the adopted Overlay Plan would not have exceeded the Orange County Preferred-2000 employment projections, its impact on employment was considered significant because the Orange County subregion is anticipated to become increasingly jobs-rich over the next 20 years and the Overlay Plan-related employment would exacerbate the subregional jobs/housing imbalance. The Overlay Plan is expected to result in the provision of 3,625 dwelling units. Based on the city's zoning categories planned for this site, the dwelling units could accommodate up to 9,000 people. This increase in population will not substantially exceed projections contained for the site in OCP-2000. No significant impacts to population and housing were identified (www.scag.ca.gov).

4.11.3 Impacts Associated with the Requested Entitlements

The project would not alter the population, housing, and employment information contained in the OCGP FEIR. The project would not introduce new levels of development that would improve the ratio of jobs to housing beyond that already considered by the OCGP FEIR. The adopted Overlay Plan, including the proposed project, would result in:

4. Discussion of Checklist and Mitigation Measures

- an increase of up to 9,000 people (resident population);
- development of 3,625 residential dwelling units—1,100 low density, 860 medium density, 1,500 medium-high density, and 165 dwelling units allocated to homeless providers; and
- an approximate increase of 16,510 jobs.

The project's impacts would be the same as those identified in the OCGP FEIR, that is, less than significant for population and housing, and significant and unavoidable for employment.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant effects identified in and considered by the certified OCGP FEIR.

4.11.4 Mitigation from the OCGP FEIR and Applicability to the Requested Entitlements

The OCGP FEIR identified a significant impact associated with the jobs/housing ratio. The OCGP FEIR also stated that no mitigation is available to rectify conflicts between the numerical objectives of regional planning documents including the jobs/housing ratio. This finding remains applicable to the Amended VTTM 17008, VTTM 17283, and related applications.

4. Discussion of Checklist and Mitigation Measures

4.12 PUBLIC SERVICES

4.12.1 Environmental Setting

Law Enforcement

At the time of the certification of the OCGP FEIR, law enforcement was provided by the Orange County Sheriff through a contract with the Department of the Navy (DON) in PA 51 and the Irvine Police Department provided law enforcement within PA 30. Subsequent to the annexation of the property, the City of Irvine Police Department has assumed law enforcement responsibility within both planning areas. The Irvine Police Department is headquartered at the Irvine Civic Center Complex and also has a satellite facility in the Irvine Spectrum Entertainment Complex. The OCGP FEIR stated that the current police facilities are adequate to handle the personnel and equipment that are employed and utilized by the department for PA 30. The OCGP FEIR also stated that the Irvine Police Department is researching the expansion of their facilities, although the specific details of constructing a substation were not known.

Fire and Emergency Medical Services

At the time of the certification of the OCGP FEIR, primary fire protection to PAs 30 and 51 was provided by Orange County Fire Authority (OCFA) under contract to the County of Orange on an interim basis. Subsequent to the annexation of the property, OCFA has continued to provide fire protection service to the project area. The OCGP FEIR stated that OCFA is planning two additional fire stations in the general vicinity. OCFA also has in place an agreement with the Irvine Company as part of the Northern Sphere Area that should provide adequate service to all areas surrounding the project.

Parks and Recreation

The site presently contains no parks, trails, bike lanes or other recreation facilities that are open to the public. However, many public facilities are located within five miles of the OCGP including neighborhood and community parks, recreational trails, and open space.

There are approximately 506 acres of neighborhood and community parks and recreational trails in the City of Irvine's public park system, including one aquatic complex containing three competition size pools. William R. Mason Regional Park, a County of Orange facility, and numerous private parks and recreation facilities are also available throughout Irvine that provide additional recreational opportunities for the City's residents.

The City of Irvine, through its Conservation and Open Space Element has established an open space program comprehensively aggregating open space, adjoining other regional open space, promoting conservation and passive recreational opportunities (e.g. Bommer Canyon, Shady Canyon and Limestone Canyon).

At the time of the certification of the OCGP FEIR, the DON, acting in a caretaker's role, offered public access to a variety of existing recreational facilities including the existing Marine Memorial Golf Course and equestrian stables. Currently, these facilities remain closed and are under demolition and preparation for future development.

4. Discussion of Checklist and Mitigation Measures

School Services

Planning Areas 30 and 51 are within the school service boundaries of the Irvine Unified School District (IUSD) and the Saddleback Valley Unified School District (SVUSD). Prior to the closure of the base, an IUSD elementary school with a 600-student capacity was operated on the former base property.

4.12.2 Impacts Identified in the OCGP FEIR

Law Enforcement

The OCGP FEIR discussed the law enforcement needs of both Planning Areas 30 and 51, and stated that following annexation, the Irvine Police Department would provide law enforcement for the entire project area. The OCGP FEIR also analyzed the number of police officers, police supervisors and support staff, as well as the number of vehicles, equipment, and services. The OCGP FEIR stated that police protection for the park area would be funded through the use of a special park assessment. As stated in the OCGP FEIR, the general impacts associated with construction and operation of public facilities were analyzed in the OCGP FEIR as part of the planned land uses which also included the construction of a new Police substation.

Fire and Emergency Medical Services

Subsequent to annexation of the property, Planning Areas 30 and 51 continue to be served by OCFA. The OCGP FEIR stated that there was the likelihood that additional fire services infrastructure would be required to support the proposed project. To date, a temporary fire station (Station No. 20) located southeast of Trabuco Road and Sand Canyon is under construction and will be used to serve the OCGP. Specific details of the permanent facility and specific environmental impact of constructing the new fire facilities to serve the project could not be determined as specific site plans and locations has not been prepared.

Parks and Recreation

As discussed in detail in OCGP FEIR, the parkland acreage under the project will greatly exceed the existing City of Irvine's standards, and will provide a regional open space amenity for the benefit of Orange County. The OCGP FEIR calculated a total of 45.1 acres of parkland required for the proposed development. A portion of that acreage will be in neighborhood parks, primarily for pools and tot lots within close proximity of homes.

The community park requirement for the future Heritage Fields development has been addressed through the Development Agreement between the City and Heritage Fields (Recorded on July 12, 2005). Conveyance of the OCGP to the City satisfied any requirement imposed on the developer for the dedication or development of community parks as required by the City's General Plan and Municipal Ordinance. The neighborhood park requirements for the future Heritage Fields development will be met within the Heritage Fields development, outside the OCGP. Details of specific park locations, ownership, sizes, and improvements will be presented to the Community Services Commission as a part of the Park Plan for the new residential developments. This is consistent with the findings of the OCGP FEIR.

The OCGP FEIR also discussed the Implementation Agreement regarding the Natural Community Conservation Plan (NCCP) for the Central/Coastal Orange County Sub-region of the Coastal Sage Scrub NCCP (July 1996), and that the Habitat Reserve will be established on approximately 974 acres in the northeastern portion of current Planning Area 51. It is noted that that acreage was not sold by the Navy, but rather transferred to the Federal Aviation Administration (FAA). The FAA has an agreement with the Department of the Interior (DOI) for the maintenance of extant gnatcatcher habitat. There are two designated

4. Discussion of Checklist and Mitigation Measures

drainage corridors and one wildlife corridor on the Site. The wildlife corridor is located on the southern portion of the project area. The adopted Overlay Plan also includes opportunities for museums, theaters, gardens and other cultural facilities, as well as a sports park, a golf course, and network of recreational riding and hiking trails throughout the project site.

School Services

The OCGP FEIR discussed in detail the proposed project, the related student generation, and the required school facilities. Based on an initial analysis, the IUSD estimated the need for one 13-acre K–8 site as well as funding for expansion and modernization of existing middle and high school facilities by project buildout.

4.12.3 Impacts Associated with the Requested Entitlements

Law Enforcement

The project does not change the intensity or type of land uses in the approved Overlay Plan, and, therefore, the demand on law enforcement is within the envelope of analysis presented in the OCGP FEIR.

Fire and Emergency Medical Services

Since the project does not change the intensity or type of land uses in the approved Overlay Plan, the demand on fire protection is within the envelope of analysis presented in the previously certified OCGP FEIR.

Parks and Recreation

The project does not propose changes to the land use intensities and types in the approved Overlay Plan, and maintains all of these facilities and amenities as project features. Therefore, the project remains within the envelope analyzed in the previously certified OCGP FEIR.

School Services

Since the project does not propose changes to the number and type of residential units, or to any of the other land uses in the approved Overlay Plan, the proposed project remains within the envelope analyzed in the previously certified OCGP FEIR.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

4. Discussion of Checklist and Mitigation Measures

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant effects identified in and considered by the certified OCGP FEIR.

4.12.4 Mitigation from the OCGP FEIR and Applicability to the Requested Entitlements

The OCGP FEIR determined the mitigation measures identified in other sections of the OCGP FEIR (Sections 5.1–5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of facilities for police, fire protection, park and recreation, and education to serve new growth expected in the northern portion of the City.

4.13 RECREATION

Issues related to Recreation are discussed above under Section 4.11, *Public Services*.

4.14 TRANSPORTATION/TRAFFIC

4.14.1 Environmental Setting

The OCGP FEIR describes the traffic and circulation conditions of a study area that encompassed 145 existing intersection analysis sites (2007) and an additional 11 future sites (Post 2025) in the City of Irvine, and portions of 7 adjacent jurisdictions including the Cities of Lake Forest, Mission Viejo, Laguna Hills, Laguna Woods, Aliso Viejo, Laguna Beach, and unincorporated areas of Orange County.

The OCGP FEIR used the City of Irvine Traffic Performance Criteria, which establishes level of service (LOS) “A” to “D” as the peak-hour minimum acceptable service level. In its adoption of the Overlay Plan, the City General Plan Policy B-1 (C), which identified LOS E as acceptable for application to intersections in Planning Areas 13, 31, 32, 34, 35 and 39, was changed to include the effects of future development in Planning Areas 30 and 51 on the intersections in those Planning Areas. The City’s performance criteria also includes a standard of 0.02—roadway volume to capacity (V/C) ratio or the intersection capacity utilization (ICU)—to identify significant project impacts and associated need for improvements at both roadways and intersections.

At the time the OCGP FEIR was prepared the following 10 study area intersections experienced deficient peak hour traffic operations:

- Culver Drive and Walnut Avenue
- Culver Drive and University Drive
- Jeffrey Road and Alton Parkway
- Jeffrey Road and I-405 Northbound Ramps
- Bake Parkway and Irvine Boulevard

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- Bake Parkway and Jeronimo Road
- El Toro Road and Aliso Creek Road
- Los Alisos Boulevard and Los Alisos Boulevard
- Muirlands Boulevard and Los Alisos Boulevard
- Trabuco Road and Alicia Parkway

4.14.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR concluded that the adopted Overlay Plan would cause an increase in traffic which would be substantial in relation to the existing traffic load and capacity of the street system—that is, a substantial increase in either the number of vehicle trips, the V/C on roadways, or congestion at intersections—in the year 2007, year 2025, and post-2025 scenarios (OCGP FEIR page 5.2-66):

Year 2007

- I-5 Freeway at Alton Parkway—southbound off-ramp (A.M.)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (A.M.)

Year 2025

- University Drive from the I-405 Freeway to Michelson Drive (A.M.)
- I-5 Freeway from Sand Canyon Avenue to Jeffrey Road—northbound (P.M.)
- I-5 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-405 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-5 Freeway at Jeffrey Road—southbound on-ramp (A.M.)
- I-5 Freeway at Sand Canyon Avenue—northbound on-ramp (P.M.)
- I-5 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-5 Freeway at Alton Parkway—southbound off-ramp (A.M.)
- I-5 Freeway at Bake Parkway—southbound off-ramp (A.M.)
- I-405 Freeway at Sand Canyon Avenue—northbound direct on-ramp (P.M.)
- I-405 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (A.M.)
- SR-241 Tollway at Lake Forest Drive—southbound off-ramp (A.M.)
- SR-133 Freeway at Barranca Parkway—northbound direct on-ramp (P.M.)

Post-2025

- I-5 Freeway from Sand Canyon Avenue to Jeffrey Road—northbound (P.M.)
- I-5 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-405 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-5 Freeway at Jeffrey Road—southbound on-ramp (A.M.)
- I-5 Freeway at Jeffrey Road—northbound off-ramp (P.M.)
- I-5 Freeway at Sand Canyon Avenue—northbound on-ramp (P.M.)
- I-5 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-5 Freeway at Alton Parkway—southbound off-ramp (A.M.)
- I-5 Freeway at Bake Parkway—southbound off-ramp (A.M.)
- I-5 Freeway at El Toro Road—southbound off-ramp (P.M.)
- I-405 Freeway at Sand Canyon Avenue—northbound direct on-ramp (A.M./P.M.)
- I-405 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)

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- I-405 Freeway at Irvine Center Drive—southbound off-ramp (A.M.)

Intersections

For the list of impacted intersections by analysis year, please refer to the following OCGP FEIR tables:

- Table 5.2-12 for year 2007
- Table 5.2-13 for year 2025
- Table 5.2-15 for post 2025

4.14.3 Impacts Analyzed in the OCGP FEIR and Addenda

The OCGP FEIR established trip thresholds (also known as “trip caps”) for each of the planning areas within the Great Park area. The trip cap is based on socioeconomic data average daily trip generation for the approved Orange County Great Park plan (the Overlay Plan area), which the Heritage Fields development is a part. The traffic impacts of the 2006 GPA/ZC project were analyzed in Addendum No. 2 by distributing project-related traffic over existing and future traffic conditions. The three future conditions (year 2010, year 2025 and post-2025) are based on the existing circulation system plus fully funded intersection improvements that were planned to be in place in each future time frame and the land use and development growth that is projected in each future time frame. In each case, project impacts were identified by comparing traffic conditions with and without the 2006 GPA/ZC project.

The circulation system performance criteria applied in the analysis were the criteria approved in the 2003 North Irvine Transportation Model (NITM) Program Nexus Study. The performance criteria were also consistent with the criteria adopted by the jurisdictions that are within the project study area. The criteria include components for arterial roadways, intersections, freeway/tollway ramps, and freeway/tollway mainline segments.

The results of the year 2010, year 2025 and post-2025 analysis indicated that the proposed 2006 GPA/ZC project was not forecast to significantly impact any roadway segment based on the second level of analysis (the City’s peak hour link capacity analysis methodology), intersection, freeway/tollway ramp, or any freeway/tollway mainline segment.

Subsequently, as addressed in Addendum No. 3, a Traffic Study (refer to Appendix C of Addendum No. 3) for the Master Subdivision Map was prepared by Austin-Foust Associates, Inc. (dated April 11, 2007) to address the transportation impacts for the “project,” i.e. backbone infrastructure with no new land use development in an interim year timeframe consistent with the TTM scope of work of the North Irvine Transportation Mitigation (NITM) Program Ordinance.

The Traffic Study analyzed the impacts of the Master Subdivision Map (MSM) application based on Year 2010 traffic conditions in the traffic analysis study area.

That proposed project was presented in Figure 4-2 to Addendum No. 3, and included Marine Way from Sand Canyon Avenue to Bake Parkway, Trabuco Road from the SR-133 to “O” Street, and the extension of Rockfield Boulevard to Marine Way as four-lane primary arterials, Ridge Valley (formerly “Y” Street) from Portola Parkway to Irvine Boulevard and “O” Street (formerly College Road) as four-lane secondary arterials, Trabuco Road east of “O” Street, “A” Street, “B” Street, “C” Street and “D” Street as two-lane local road ways. The mid-block lanes were shown in Figure 4-3 to Addendum No. 3. It should be noted that the proposed project included the construction of two lanes on “O” Street between Trabuco Road and Marine

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Way. The remaining two lanes will be built by the owner of the adjacent property (west side of “O” Street) when that property is developed.

An Internal Circulation Analysis (refer to Appendix D to Addendum No. 3) for the Master Subdivision Map in the Overlay Plan area was prepared by Austin-Foust Associates, Inc. to analyze the access and internal circulation for the Heritage Fields project. Project access was illustrated in Figure 4-4 in Addendum No. 3, which showed the proposed access locations for the Lifelong Learning District, the Park District, and the Transit Oriented Development (TOD) District. The project traffic loaded directly onto the surrounding arterial system at several locations. These include access to Irvine Boulevard via Ridge Valley; “O” Street (formerly College Road), “A” Street and “B” Street to Sand Canyon Avenue via Trabuco Road and Marine Way (and indirectly via Irvine Boulevard); and to Alton Parkway, Barranca Parkway, and Bake Parkway via Marine Way. Project access to the SR-133 is provided directly via a planned interchange at Trabuco Road and indirectly via “O” Street to the Irvine Boulevard interchange.

The intersections shown in Figure 4-5 in Addendum No. 3 were analyzed using intersection capacity utilization (ICU) values to determine level of service (LOS). The results of this analysis showed that all intersections operate at an acceptable level of service under Post-2025 buildout conditions. The intersections were then analyzed for signalization needs. Traffic signal warrants based on peak hour volumes (as adopted by the Federal Highway Administration and Caltrans) were used to determine the need for signalization. The results of this analysis were illustrated in the Figure 4-4 in Addendum No. 3. Based on the application of the warrants, it was determined that traffic signals should be installed at all of the analyzed intersections except for the intersections of “C” Street and “D” Street at Marine Way.

Recommended on-site traffic-control measures included one-way stop signs, signals, and roundabouts. Left-turn pocket lengths for project access intersections with exclusive left-turn lanes were estimated using the County of Orange Environmental Management Agency (EMA) Highway Design Manual. The estimated left-turn storage length requirements for the analyzed intersections were based on peak hour volumes.

Right-turn lanes will be provided for select project access locations on site where additional intersection capacity is needed. The length of the right-turn lane is a function of the adjacent through-traffic queue and LOS at the intersection. A minimum length of 250 feet plus a 120-foot transition will be provided at these locations. Right-turn deceleration lanes are provided along the periphery of the project site and along major roadways within the project site where higher speeds prevail (i.e., Irvine Boulevard, Trabuco Road, and on Marine Way with the exception of locations within the TOD District). The right-turn deceleration lane will be a minimum of 150 feet with a 120-foot transition, in order to provide a safe transition from the through lane to the right-turn lane.

Addendum No. 5 analyzed the impacts associated with realignment of the Marine Way/Bake Parkway intersection and concluded that the project would not produce or substantially worsen significant impacts identified in the OCGP FEIR. Consistent with the conclusions in the OCGP FEIR, traffic and circulation impacts associated with the project would be less than significant, as the future development would implement all applicable laws and regulations to reduce impacts on traffic and circulation. However, the following project design features would need to be implemented as part of the project:

Bake Parkway/I-5 Northbound Ramp

The General Plan approved Bake Parkway at Marine Way intersection provides direct access from the Bake Parkway at the I-5 northbound ramps intersection onto Marine Way. The proposed Bake Parkway at Marine Way intersection is relocated north (east) of the General Plan approved Bake Parkway at Marine Way intersection on Bake Parkway. The relocation of the Bake Parkway at Marine Way intersection includes

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project design features along Bake Parkway. Specifically, Bake Parkway is proposed to be widened north (east) of the existing I-5 bridge to provide four through lanes to Rockfield Boulevard while southbound (westbound) Bake Parkway from Rockfield Boulevard will be widened to provide four through lanes which reduces to three through lanes at the I-5 NB on-ramp. In addition, the proposed Bake Parkway at Marine Way relocation is also accompanied by improvements at the I-5 northbound off-ramp. The I-5 northbound off-ramp at Bake Parkway will be widened to provide one left-turn lane and three right-turn lanes. The project design features at this location needed for Year 2030 and Post-2030 operations, tied to the construction of the Bake Parkway and Marine Way intersection will provide acceptable levels of service at this intersection.

Sand Canyon/I-5 Northbound Ramp

The proposed relocation of the Bake Parkway/Marine Way intersection resulted in the need for restriping at the eastbound approach or the southbound approach of the Sand Canyon/I-5 Northbound Ramp intersection. As part of the project design features, the southbound approach at this intersection will be restriped to provide two left-turn lanes, four through lanes, and one right-turn lane. The restriping improvement provides ICU values lower than the Without Project condition.

4.14.4 Impacts Associated with the Requested Entitlements

A traffic study analyzing the potential impacts of the Proposed VTTM No. 17283 was prepared by the City of Irvine and Iteris, Inc. in October 2008 and is included in its entirety as Appendix C. The following summarizes the analysis and conclusions contained in the traffic study.

A traffic study was carried out to determine the potential impacts of Vesting Tentative Tract Map 17283 (VTTM 17283) for a portion of the Lifelong Learning District (LLD) of the Heritage Fields site located in Planning Area (PA) 51 in the City of Irvine. The purpose of the study is to provide traffic analysis data for the VTTM 17283 application for this development for the year 2012 horizon. The study presents data that will be the basis of design for key on-site project roadways in support of the VTTM 17283 application. The study also identifies the location, timing and prioritization of NITM improvements related to potential impacts caused by traffic from the proposed project. The traffic study was conducted in accordance with the requirements of an approved Scope of Work (see Appendix D of Traffic Study).

The results of the year 2012 analysis indicate that the proposed project is forecast to result in the need for improvements at two freeway ramps within the NITM study area based on peak hour intersection and ramp performance criteria. The ramp locations requiring improvements are:

- I-405 at Sand Canyon - NB Direct On Ramp (Convert the HOV lane to a second metered mixed flow lane)
- I-405 at Sand Canyon - SB Off Ramp (Add a second drop lane from I-405 to the off ramp)

The proposed improvements will bring the ramp locations to an acceptable level of service. These improvements have been previously identified as mitigation requirements in the underlying EIR and are included in the NITM Program. The development of VTTM 17283 requires the advancement of these NITM improvements from 2025 to 2012 in the NITM Program. The NITM Program allocates a fair share portion of the improvement costs at these freeway ramp locations to this development. Therefore the projects participation in the NITM Program fulfills the project's mitigation requirement at these ramp locations. For internal intersections and roadway segments, the report presents the proposed lane configurations, traffic control and turn lane pocket lengths per the City of Irvine Transportation Design Procedures.

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Project Design Features

- Included as a Project Design Feature, both the eastbound and westbound approaches of Burt Road at Sand Canyon Avenue will be restriped to one left turn lane and a shared through/de-facto right turn lane. Additionally, the traffic signal will be modified as needed to accommodate the operations with this movement. This Project Design Feature is not needed in the event that the proposed grade separated crossing of Sand Canyon and the railroad tracks is fully funded and scheduled for construction by 2012. In such an event, this Project Design feature is not needed and may be removed from the project at the discretion of the Director of Public Works.
- Included as a Project Design Feature the westbound approach of Marine Way at Sand Canyon will be restriped to one left turn lane and one shared left/right turn lane. Additionally, the traffic signal will be modified as needed to accommodate the operations with this movement. This Project Design Feature is not needed in the event that the proposed grade separated crossing of Sand Canyon and the railroad tracks is fully funded and scheduled for construction by 2012. In such an event, this Project Design feature is not needed and may be removed from the project at the discretion of the Director of Public Works.

Conclusion

The proposed project will not produce new or substantially worsen significant impacts identified in the OCGP FEIR or addenda. Consistent with the conclusions in the OCGP FEIR, traffic and circulation impacts associated with the project would be considered less than significant as the future development would implement all applicable laws and regulations to reduce impacts on traffic and circulation.

The OCGP FEIR disclosed the traffic analysis assumptions that the cumulative impact of the Revised Overlay Plan traffic along with other regional growth at the identified ramp and freeway locations would be mitigated through a combination of regional programs that area the responsibility of other agencies and, if said programs are implemented for the cumulative freeway/tollway ramp, impacts would remain significant and unavoidable (OCGP FEIR page 7-19). The project will not alter this conclusion. Mitigation measures have been developed for the intersection locations identified as being impacted by the OCGP development. This mitigation measure are not considered new; rather, they are funded NITM Improvements identified in previous traffic studies and related CEQA document.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

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No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant effects identified in and considered by the certified OCGP FEIR.

4.14.5 Mitigation from the OCGP FEIR and Applicability to the Requested Entitlements

The OCGP FEIR identified mitigation measures TRAN1 through TRAN8 which, if fulfilled prior to specified development approvals, would eliminate or substantially reduce the traffic and circulation effects of development under the adopted Plan. The measures are applicable to future development under the project.

TRAN 1 Prior to the approval of any final map (other than a financing and conveyance map) allocating building intensity within Planning Areas 30 and 51, and prior to issuances of any building permits for permanent improvements within Planning Areas 30 and 51, the landowner or subsequent project applicant shall either (i) apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs, to reduce traffic, air quality and noise impacts or (ii) develop and implement a similar transportation management plan containing the elements and meeting the criteria described below as approved by the Director of Public Works:

Transportation Management Plan (TMP)

The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for Planning Areas 30 and 51. This document summarizes the key elements of the TMP.

A. Introduction

The purpose of this document is to provide an outline for a comprehensive TMP for the Planning Areas 30 and 51 ("Great Park TMP"). This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.

The applicant may elect to annex Planning Area 51 and a portion of Planning Area 30 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring

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participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.

In the event that the applicant elects not to annex into Spectrumotion, a TMP similar to that provided by Spectrumotion will be developed and implemented. This document sets forth the components of the TMP should it be necessary.

B. Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

New Hire Orientation: Inform newly hired employees of commuting services available to them.

Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services ((i.e., OCTA buses, Metrolink, Amtrak, etc.).

Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.

On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.

Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.

Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.

Website: Maintain a website with all of their program information available.

Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.

Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.

Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.

C. Transportation Management Plan Implementation

As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Planning Areas 30 and 51. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.

TRAN2 Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure

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fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of the OCGP FEIR.

- TRAN3 Prior to issuance of any building permits for permanent improvements within Planning Areas 30 and 51, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the NITM Ordinance.
- TRAN4 Prior to approval of each Tentative Map or Master Plan that allocates intensity for numbered lots, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Tentative Map or Master Plan that allocates intensity for numbered lots. The traffic study area shall be the same as the study area utilized in the NITM Nexus Study. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated traffic forecasts. The updated traffic study will evaluate at a minimum the cumulative impact of the subject map and/or Master Plans that allocates intensity and all previously approved or concurrently submitted maps and/or Master Plans. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City approved traffic study scope of work. The landowner or subsequent project applicant shall construct or bond for and enter into a funding agreement for necessary improvements identified in the updated traffic study and/or participate in the City fee program (OCGP FEIR Mitigation Measure TRAN2) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of the OCGP FEIR.

Traffic signals that are on-site or directly related to the development in Planning Areas 30 and 51 will be installed as warranted through the mitigation implementation plan process.

- TRAN5 In conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/toll way ramp locations in conjunctions with fulfilling its regional role, that landowner or subsequent project applicant and the City will take the following actions:
1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-toll way ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in the OCGP FEIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines.
 2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency.
 3. The landowner or subsequent project applicant shall enter into an agreement with the City prior to recordation of the first final map for each Master Tentative map or equivalent to establish the method and timing of payment of the identified percentage responsibility.

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4. The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or funding participation in a regional transportation improvement fee program, if adopted.

TRAN6 The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 in the OCGP FEIR show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.

TRAN7 Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a new Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-complete clause or any similar agreement restricting a public agency's authority to construct improvement.

TRAN8 Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of any building permits within the base property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdictions to amend the Orange County Master Plan of Arterial Highways (MPAH). Marine Way, Trabuco Road from the SR-133 toll way to College Road, and Y Street should be included on the MPAH.

The timing of mitigation measure TRAN 1 and TRAN 4 has been changed above to be able to effectively implement these measures.

4.15 UTILITIES AND SERVICE SYSTEMS

4.15.1 Environmental Setting

Potable Water

The OCGP FEIR described the potable water system for the project. The IRWD is the jurisdictional agency responsible for plan approval and water service to the project area. Planning Areas 30 and 51 are within Zone 3 North and Zone 4 of the IRWD water system. The existing on-site distribution system includes a network of distribution system pipelines, six reservoirs, and two pump stations.

Recycled Water

As stated in the OCGP FEIR, IRWD is the jurisdictional agency responsible for plan approval and water service for the project area. Recycled water is currently supplied to Planning Areas 30 and 51 via a 12-inch IRWD Zone B pipeline and connecting to an 8-inch former military base pipeline in the southwest corner of the property.

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Sewer

As stated in the OCGP FEIR, IRWD is the jurisdictional agency responsible for plan approval and sewer service for the project area. Planning Areas 30 and 51 are served by a two-branched system with flow, mainly by gravity, from the northeast to the southwest. The system includes a series of pipes ranging from 6 to 15 inches in diameter.

Solid Waste

The OCGP FEIR discussed in detail the environmental setting for solid waste for the project. Solid waste at the project site is collected by Waste Management, Inc., and is disposed of at the Frank R. Bowerman Landfill owned by the County of Orange Integrated Waste Management Department (IWMD).

The IWMD's Countywide Integrated Waste Management Plan (CIWMP) was approved in 1996 pursuant to California Integrated Waste Management Board requirement. The CIWMP shows that there is sufficient solid waste disposal capacity in the County for the next 30 years.

Energy and Communications

Southern California Edison (SCE) serves the project via two primary substations. The Southern California Gas Company serves Planning Areas 30 and 51. AT&T is the communications provider for these Planning Areas. Detailed information regarding the environmental setting of dry utilities was included in the OCGP FEIR.

4.15.2 Impacts Identified in the OCGP FEIR and Addenda

Potable Water

The OCGP FEIR projected the potable water demand to be less than 1.75 million gallons per day (MGD) calculated for the land uses proposed within the project. Since the Proposed Entitlements do not include any additional intensity or change in the mix of land uses, the demand projection is consistent with the OCGP FEIR and Addenda. As stated in the OCGP FEIR, selected portions of the existing potable water facilities are assumed to remain in place and operational through project buildout. The OCGP FEIR stated that the existing system will be expanded and integrated into the IRWD system and thus provide a backbone service to all users on the project site. The OCGP FEIR assumed a potable water system that would follow the routing of existing and proposed roadways. The approved Master Subdivision Map includes the alignment for water lines throughout Heritage Fields, which was an additional project design detail and is not a change in the project.

Recycled Water

The OCGP FEIR stated that on January 27, 2003, the IRWD Board of Directors approved the assessment of water supply for the project. According to the findings of the assessment, the IRWD has determined that a sufficient non-potable water supply is available to serve the project. Since the proposed entitlements do not increase the intensity or change the mix of land uses, the total non-potable water supplies will meet the project demand.

The OCGP FEIR stated that the implementation of the project would require the expansion of the recycled water transmission lines to serve the project. It was assumed that selected on-site facilities would remain in place and operational through buildout. The OCGP FEIR stated that the existing system will be expanded

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and integrated into the IRWD system and provide a backbone service to all users in the project site. The OCGP FEIR assumed a non-potable system that would follow the routing of existing and proposed roadways within the project. The approved Master Subdivision Map included the alignment for the recycled water lines throughout Heritage Fields, which was an additional project design detail and is not a change in the project.

Sewer

The OCGP FEIR stated that the IRWD will continue to provide sewer service to the project. The IRWD has indicated that it would have sufficient capacity to meet the future demand; however, additional wastewater treatment capacity may need to be purchased by project proponents as specific development projects come forward. The OCGP FEIR stated that projected buildout demand for sewer services based on the land uses in the project were 0.89 MGD and that the project would require an increase of sewer transmission capacity to serve the project. The proposed sewer system would preserve selected, existing on-site facilities in place and operational through buildout and would expand the system through extension of existing sewer lines. The OCGP FEIR stated that additional IRWD maintenance and equipment could be required to operate and maintain the proposed system.

The adopted Master Subdivision Map ensured that any projected use of the existing sewer system would be in conformance with all applicable regional and state requirements and the mitigation requirements of the OCGP FEIR and Addenda. It included the alignment for the sewer lines throughout the project, which was an additional project design detail and did not change the project description.

Solid Waste

As stated in OCGP FEIR, demolition of existing runways, buildings, and structures within PA 51 will generate debris materials that will have to be disposed of at local landfills. Green waste will be also generated as a result of ongoing park and landscaping maintenance. In addition to the City requirement for recycling of construction and demolition material to reduce waste, solid waste reduction will also be achieved through compliance with AB 939, which requires that a minimum of 50 percent of the solid waste generated in cities in California be diverted from landfills. Further, SB 1374 requires that all cities implement measures that require diversion of 75 percent of all construction and demolition waste from landfills. While the OCGP FEIR identified a potential impact related to solid waste, it concluded that, with the recommended, City-adopted mitigation measures, the impact would be less than significant.

Energy and Communications

The Overlay Plan has proposed to install the new systems generally along a routing that coincides with the existing and proposed roadway within the project. A portion of the routing, (specifically the portion along the “loop road”) is not included in the project and will require an adjustment to the routing system for the expansion of the dry utilities system. However, the expansion of the system will generally coincide with the existing and proposed roadways consistent with the OCGP FEIR. The OCGP FEIR further stated that the specific impacts of constructing new energy and communication transmission facilities could not be determined at the program level analysis, as site-specific plans for the installation of the energy and communication transmission backbone system have not been prepared. The general significant impacts associated with the construction and operation of public facilities, including the project’s construction and operation of the transmission system, were addressed in the OCGP FEIR.

4. Discussion of Checklist and Mitigation Measures

4.15.3 Impacts Associated with the Requested Entitlements

Potable Water

Amended VTTM No. 17008, Proposed VTTM No. 17283, or the associated actions does not allow any additional development intensity. Therefore, the demand projection for potable water is consistent with the OCGP FEIR and Addenda. No additional mitigation measures or change in any mitigation measure is required.

Recycled Water

The OCGP FEIR stated that on January 27, 2003, the IRWD Board of Directors approved the assessment of water supply for the project. Amended VTTM No. 17008, Proposed VTTM No. 17283, or the associated actions does not allow any additional development intensity, and the total nonpotable water supplies would meet the project demand, as analyzed in the OCGP FEIR and Addenda.

Sewer

Amended VTTM No. 17008, Proposed VTTM No. 17283, or the associated actions does not allow any additional development intensity. Therefore, demand projections and proposed system expansion would remain the same. The OCGP FEIR further stated that the specific environmental impact of constructing new sewer facilities to serve the project cannot be determined at the program level analysis, as site-specific plans for the installation of the sewer backbone system had not been prepared. However, the general significant impacts associated with the construction and operation of public facilities, including the project's construction and operation of the sewer system, has been addressed in the OCGP FEIR.

Solid Waste

As stated in OCGP FEIR, demolition of existing runways, buildings, and structures within Planning Area 51 would generate debris materials that would have to be disposed of at local landfills. Green waste would also be generated as a result of ongoing park and landscaping maintenance. The project would not change the land uses or intensity in the approved Overlay Plan; therefore, no change in impact to solid waste is anticipated. No additional mitigation measures or changes in any mitigation measure are required.

Energy and Communications

Amended VTTM No. 17008, Proposed VTTM No. 17283, or the associated actions does not allow any additional development intensity and would have no impact on the fuel and energy consumption projected for the project, which the OCGP FEIR previously analyzed in detail. The analysis and conclusions in the OCGP FEIR do not change since the intensity and types of land uses in the revised plan have not changed from those previously analyzed in the OCGP FEIR.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The project would not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the record or otherwise available indicating substantial changes in circumstances that would require major changes to certified OCGP FEIR.

4. Discussion of Checklist and Mitigation Measures

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR.

This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was certified, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was certified, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant effects identified in and considered by the certified OCGP FEIR.

4.15.4 Mitigation from the OCGP FEIR and Applicability to the Requested Entitlements

The OCGP FEIR determined the mitigation measures identified in other sections of the OCGP FEIR (5.1-5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of facilities for the following types of utilities to serve new growth expected in the project area:

- potable water
- recycled water
- wastewater
- energy and communication transmission facilities

Mitigation Measures SW1 through SW5 apply to future demolition and new construction, and would be carried forward through permit approvals for subsequent development projects. The proposed project would neither change these mitigation measures nor their application to future development projects.

SW1 It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other deconstruction of the aged structures and property, including but not limited to buildings and runways, at MCAS El Toro is contaminated with lead-based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the MCAS El Toro site by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.

4. Discussion of Checklist and Mitigation Measures

If it is determined by the technical evaluation that material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as “waste-to-energy” (WTE) plants.

SW2 For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant must submit a written plan to the City and implement such plan to ensure that 75% of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.

SW3 For that solid waste which the technical study deems to be suitable for recycling, the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75% of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180 (“Recycling” does not include transformation, as defined in Public Resources Code Section 40201).

SW4 To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by “weight ticket” receipts from state-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.

To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.

SW 5 For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50% of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.

4.16 DETERMINATION

Based on the information and analysis in this Initial Study/Addendum, and pursuant to Section 15162 of the State CEQA Guidelines, the City has determined that:

1. There are no substantial changes to the project that will require major revisions to the OCGP FEIR due to new, significant environmental effects or a substantial increase in the severity of impacts identified in the OCGP FEIR;
2. Substantial changes have not occurred in the circumstances under which the project is being undertaken that will require major revisions of the OCGP FEIR to disclose new, significant environmental effects or a substantial increase in the severity of the impacts identified in the OCGP FEIR; and

4. Discussion of Checklist and Mitigation Measures

3. There is no new information of substantial importance not known at the time the OCGP FEIR was certified that shows any of the following:
 - a) The project will have any new significant effects not discussed in the OCGP FEIR;
 - b) There are impacts that were determined to be significant in the OCGP FEIR that will be substantially increased;
 - c) There are additional mitigation measures or alternatives to the project that would substantially reduce one or more of the significant effects identified in the OCGP FEIR; or
 - d) There are additional mitigation measures or alternatives that were rejected by the project proponent that are considerably different from those analyzed in the OCGP FEIR that would substantially reduce any significant impact identified in that EIR.

5. Organizations and Persons Consulted

5.1 PREPARERS

CITY OF IRVINE (LEAD AGENCY)

Community Development Department

Doug Williford, AICP	Director of Community Development
Tim Gehrich	Manager of Planning and Development Services
Barry Curtis, AICP	Principal Planner
David R. Law	Senior Planner
Kelly M. Koldus	Associate Planner
Michelle Drouse	Associate Planner

City Attorney

Phil Kohn	City Attorney
Jeffrey Melching	Assistant City Attorney

Heritage Fields El Toro, LLC

Lynn Jochim	Division President
Jennifer Bohen	Manager of Engineering, Planning/Design

The Planning Center

William Halligan	Director
Azurde Harris	Assistant Planner

5. Organizations and Persons Consulted

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Appendix A.

OCGP FEIR Mitigation Monitoring and Reporting Program

**ORANGE COUNTY GREAT PARK
FINAL EIR (FEIR)
CITY OF IRVINE
MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST**

1.0 INTRODUCTION

Section 21081.6 to the State of California Public Resources Code requires a lead or responsible agency that approves or carries out a project where an environmental impact report (EIR) has identified significant environmental effects to adopt a “reporting or monitoring program for adopted or required changes to mitigate or avoid significant environmental effects.” The City of Irvine is the lead agency for the Great Park Plan EIR, and therefore is responsible for implementation of the mitigation monitoring program. An EIR has been prepared for this project which addresses potential environmental impacts and, where appropriate, recommends measures to mitigate these impacts. As such, a mitigation reporting or monitoring program is required to ensure that adopted mitigation measures are implemented.

The project is located in the center of Orange County and includes land within the City or Irvine as well as unincorporated area. The project area encompasses approximately 4,701 acres, or 7.5 square miles. The total area proposed for annexation is 4,287 acres.

The project area is bounded by the City of Lake Forest to the south and southeast, the City of Irvine to the west and southwest, and the County of Orange to the north. The former MCAS El Toro is generally located north of the Santa Ana (I-5) Freeway, east of the Eastern Transportation Corridor (SR-133), and south of the Foothill Transportation Corridor (SR-241). Major roadways bordering the project area include Barranca Parkway to the south, Sand Canyon Avenue to the west, Portola Parkway and Irvine Boulevard to the north, and Alton Parkway to the east. The James A. Musick Jail Facility is located on a 105-acre site northwest of existing Bake Parkway and east of the future extension of Alton Parkway. The northern boundary of the Musick Jail abuts the former MCAS El Toro. Existing buildings of the Irvine Spectrum abut the Musick Jail site to the west/southwest. An eight-acre parcel west of the Musick Jail contains the IRWD East Irvine Pumping Station, Zone III 5-million gallon potable water reservoir, and a 7-million gallon potable water reservoir.

The project consists of the following actions: 1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; 2) Annexation of the unincorporated portion of Planning Area 35 (the Irvine Ranch Water District Parcel); 3) General Plan Amendment and Zone Change for Planning Area 30 with is presently in the City of Irvine; and, 4) Approval in the form of a Development Agreement vesting approval of higher intensity overlay uses in consideration of dedication of land for public purposes and for funding certain infrastructure improvements and maintenance of the public uses by the

purchaser/developer and subsequent landowners and funds for specified park, roadways, and other circulation facilities and infrastructure. The proposed project also includes the dedication of approximately 21 acres to be used for the Jeffrey Pine Open Space Spine (JOSS). The JOSS acreage will serve as a connector to the regional open space system and will provide recreational opportunities in the Northern Sphere.

2.0 PROGRAM MANAGEMENT

The mitigation monitoring and reporting program (MMRP) for the Great Park Plan will be in place through all phases of project approval. Enforcement of the MMRP will be the responsibility of a Project Manager (PM) at the City of Irvine.

2.1 Roles and Responsibilities: Project Manager

The role is assigned by the Community Development Director. The PM assigned to the proposed project will supervise the MMRP during design, construction, and operation of the project and is responsible for the overall management of the MMRP. The PM is thoroughly familiar with the project and qualified to determine if an adopted measure is being properly implemented. The PM oversees the MMRP and reviews the Reporting and Implementation (R&I) Forms to ensure they are filled out correctly and proper action is being taken on each measure. The PM and/or an assignee will also be responsible for the filling and updating of the R&I Forms during all phases of the project. The PM will determine the need for a measure to be modified and ensure the use of a mitigation specialist if technical expertise beyond the PM's is required. If it is found that an adopted mitigation measure is not being properly implemented, the PM will require corrective actions to ensure adequate implementation. The responsibilities of the PM include the following:

1. An MMRP Reporting Form will be prepared for each potential significant impact and its corresponding mitigation, as identified in the list of significant impacts and mitigation measures attached hereto.
2. Appropriate specialists will be retained, as needed, to monitor specific mitigation activities and provide appropriate written approvals to the PM.
3. The PM and/or an assignee will approve, by signature and date, the completion of each action item that was identified on the MMRP Reporting Form.
4. All MMRP Reporting Forms for an impact issue requiring no further monitoring will be signed off as completed by the PM and/or an assignee at the bottom of the MMRP Reporting Form.

5. Unanticipated circumstances may arise requiring the refinement or addition of mitigation measures. The PM is responsible for approving any such refinements or additions. An MMRP Reporting Form will be completed by the PM and/or an assignee. The completed form will be provided to the appropriate design, construction, or operational personnel.
6. The PM has the authority to stop the work of construction contractors if compliance with any aspects of the MMRP is not occurring after written notification has been issued. The PM also has authority to hold certificates of occupancies if compliance with a mitigation measure attached herein is not occurring. The PM also has authority to hold the issuance of a building permit until all mitigation measures are implemented. Should the applicant/contractor disagree with the findings and actions of the PM, an appeal to the Community Development Director can be submitted.

2.2 General Procedures

MMRP Program Definitions

The MMRP consists of key program elements. The elements are summarized below.

MMRP Files

Files are established to document and retain records of the MMO. The file organization is established by the PM according to mitigation measures and project phases.

R&I Forms

R&I Forms are designed to record the monitoring activity in a consistent manner with appropriate approvals. The R&I Forms are placed in the MMRP files.

Environmental Compliance Verification

At the completion of construction contracts that are part of the overall development of the project, a verification of environmental compliance is executed by the PM. The verification concludes the construction monitoring process for the contract.

Mitigation Monitoring and Reporting Program Procedures

The policies and procedures for the MMRP described herein are intended to provide focused, yet flexible guidelines for monitoring the implementation of the mitigation measures discussed in the final EIR. The Mitigation Monitoring and Reporting Checklist lists each mitigation measure, the method of verification for each mitigation measure, and the party responsible for monitoring efforts. The Mitigation Monitoring and Reporting Checklist also provides the PM a verification of compliance for each mitigation measure during each applicable phase of the project. An R&I form is prepared for each potential significant impact and its corresponding mitigation measure. After each measure is

verified for compliance, no further action is required for the specific phase. The PM shall initial and date the measure on Mitigation Monitoring and Reporting Checklist.

Disposition of Monitoring Forms

All actions and completed R&I Forms are kept in the MMRP file with the City of Irvine during the pre-design, design, construction, and operational phases of the project. Reports will be available from the city upon request at the following address:

City of Irvine (Lead Agency)
Community Development Department
One Civic Center Plaza
Irvine, California 92623-9575

MITIGATION MONITORING AND REPORTING PROGRAM

ORANGE COUNTY GREAT PARK

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
5.1 LAND USE (Base Plan and Overlay Plan)					
	No mitigation measures are required.				
5.2 TRAFFIC/CIRCULATION (Base Plan and Overlay Plan)					
TRAN1	<p>Prior to the approval of any final map (other than a financing and conveyance map) allocating building intensity within Planning Areas 30 and 51, and prior to issuances of any building permits for permanent improvements within Planning Areas 30 and 51, the landowner or subsequent project applicant shall either (i) apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs, to reduce traffic, air quality and noise impacts or (ii) develop and implement a similar transportation management plan containing the elements and meeting the criteria described below as approved by the Director of Public Works:</p> <p><i>Transportation Management Plan (TMP)</i></p> <p>The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for Planning Areas 30 and 51. This document summarizes the key elements of the TMP.</p> <p><i>A. Introduction</i></p> <p>The purpose of this document is to provide an outline for a</p>	<p>Requires submittal of annexation plans by project applicant in accordance with the Irvine Spectrum TMA. Failure to obtain approval of such plans requires project applicant to develop and implement a TMP as described in TRAN1.</p>	<p>Prior to the approval of any final map (other than a financing and conveyance map) allocating building intensity within Planning Areas 30 and 51, and prior to issuances of any building permits for permanent improvements within Planning Areas 30 and 51.</p>	<p>Director of Community Development or designee.</p>	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>comprehensive TMP for the Planning Areas 30 and 51 ("Great Park TMP"). This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.</p> <p>The applicant may elect to annex Planning Area 51 and a portion of Planning Area 30 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.</p> <p>In the event that the applicant elects not to annex into Spectrumotion, a TMP similar to that provided by Spectrumotion will be developed and implemented. This document sets forth the components of the TMP should it be necessary.</p> <p><i>B. Transportation Management Plan Framework</i></p> <p>The key elements of the Great Park TMP are set forth below:</p> <p><i>New Hire Orientation:</i> Inform newly hired employees of commuting services available to them.</p> <p><i>Public Transportation Pass Sales:</i> Provide a central location</p>				

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>for purchase of passes to available transit services ((i.e., OCTA buses, Metrolink, Amtrak, etc.).</p> <p><i>Vanpool and Carpool Formation Assistance:</i> Perform all of the administrative work necessary to establish van pools and car pools.</p> <p><i>On-site Promotions:</i> Hold rideshare promotions at work sites and assist in employer assistance promotions.</p> <p><i>Telecommuting/Alternative Work Schedule Consulting:</i> Assist employers in developing and implementing a telecommuting or alternative work schedule program.</p> <p><i>Personalized Commute Consulting:</i> Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.</p> <p><i>Website:</i> Maintain a website with all of their program information available.</p> <p><i>Rideshare Promotions:</i> Conduct high visibility rideshare promotions as a means to advertise its services.</p> <p><i>Subsidies:</i> To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.</p> <p><i>Public Agency Coordination:</i> Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.</p> <p><i>Transportation Management Plan Implementation</i></p> <p>As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the</p>				

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	Planning Areas 30 and 51. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.				
TRAN2	Prior to the issuance of the first building permit, City shall establish, and the landowner or subsequent project applicant shall commit to participate in, a transportation system/infrastructure fee program to fund improvements identified as mitigation measures listed in Tables 5.2-16 and 5.2-17 of the OCGP FEIR.	Requires contractual agreement between the City of Irvine and project applicant to fund improvement listed in the EIR.	Prior to the issuance of the first building permit.	Director of Community Development or designee.	
TRAN3	Prior to issuance of any building permits for permanent improvements within Planning Areas 30 and 51, the landowner or subsequent project applicant shall implement or contribute its percentage funding responsibility for traffic improvements as identified in the NITM Ordinance.	Requires contractual agreement between the City of Irvine and project applicant to fund improvement listed in the EIR.	Prior to issuance of any building permits for permanent improvements in the project area.	Director of Community Development or designee.	
TRAN4	Prior to approval of each Tentative Map or Master Plan that allocates intensity for numbered lots, the landowner or subsequent project applicant shall prepare, subject to City review and approval, an updated traffic study consistent with the City of Irvine Traffic Study Guidelines inclusive of a phasing plan for traffic improvements associated with the subject Tentative Map or Master Plan that allocates intensity for numbered lots. The traffic study area shall be the same as the study area utilized in the NITM Nexus Study. The phasing plan will specify the timing, funding, construction, and responsibilities for all traffic improvements identified in the updated traffic study. The updated traffic study will determine whether any additional or alternative traffic improvements are necessary based on updated traffic forecasts. The updated traffic study will evaluate at a minimum the cumulative impact of the subject map and/or Master Plans that allocates intensity and all previously approved or concurrently submitted maps and/or Master Plans. The methodology for the study area, applicable land use and circulation modifications, and standards for assessing and mitigating impacts employed in the updated traffic study shall be consistent with a City	Requires the separate submission of updated traffic study developed in accordance with City of Irvine Traffic Study Guidelines.	Prior to the approval of each Tentative Map or Master Plan that allocates intensity for numbered lots	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>approved traffic study scope of work. The landowner or subsequent project applicant shall construct or bond for and enter into a funding agreement for necessary improvements identified in the updated traffic study and/or participate in the City fee program (OCGP FEIR Mitigation Measure TRAN2) to the extent that the improvements identified in the updated traffic study are listed in Tables 5.2-16 and 5.2-17 of the OCGP FEIR.</p> <p>Traffic signals that are on-site or directly related to the development in Planning Areas 30 and 51 will be installed as warranted through the mitigation implementation plan process.</p>				
TRAN5	<p>In conjunction with the preparation of any updated traffic study as required in Mitigation Measure Tran 4 for each master tentative map or equivalent, and assuming that a regional transportation agency has not already programmed and funded the warranted improvements to the impacted freeway mainline or freeway/tollway ramp locations in conjunctions with fulfilling its regional role, the landowner or subsequent project applicant and the City will take the following actions:</p> <ol style="list-style-type: none"> 1. The City shall ensure that the updated traffic study identifies the project's proportionate impact on the specific freeway mainline and/or freeway-tollway ramp locations and its percentage responsibility for mitigating these impacts (assuming tolled conditions on the Transportation Corridors) based on thresholds of significance, performance standards and methodologies used in the OCGP FEIR and established in the Orange County Congestion Management Program and City of Irvine Traffic Study Guidelines. 2. The City shall estimate the cost of the project's percentage responsibility in cooperation with Caltrans and the Transportation Corridor Agency. 3. The landowner or subsequent project applicant shall enter 	Requires the separate submission of updated traffic study developed in accordance with City of Irvine Traffic Study Guidelines.	Prior to the approval of each Master Tentative Map or equivalent document.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>into an agreement with the City prior to recordation of the first final map for each Master Tentative Map or equivalent to establish the method and timing of payment of the identified percentage responsibility.</p> <p>4. The City shall allocate landowner or subsequent project applicant's percentage contribution to traffic improvements that result in improved traffic flow on the impacted mainline and ramp locations, including but not limited to construction of physical or operational improvements, contributions to mandated trip reduction or transit programs, or funding participation in a regional transportation improvement fee program, if adopted.</p>				
TRAN6	The project shall mitigate to insignificant levels all project impacts at significantly impacted study area intersections. Tables 5.2-16 and 5.2-17 in the OCGP FEIR show the mitigation program for each phase. With regard to impacts that require improvements in other jurisdictions, the City of Irvine shall cooperate with the affected jurisdiction to ensure that the improvements are constructed in a timely manner.	Requires the separate submission of updated traffic study developed in accordance with City of Irvine Traffic Study Guidelines. May require additional documentation and/or submission to other jurisdictions, depending on location of proposed improvement.	Prior to the approval of each Master Tentative Map or equivalent document.	Director of Community Development or designee.	
TRAN7	Assuming that a regional transportation agency has not already programmed and funded the improvements, the City of Irvine shall coordinate with Caltrans and the Transportation Corridor Agencies, and submit for their approval, proposed plans for modifications to the state highway system and the transportation corridors, as required to provide ramp connections to Trabuco Road. If needed, the City shall prepare a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study for review by Caltrans	Requires the development and submission of a Project Study Report, a New Connection Request, and a Detailed Traffic Revenue Study by	Prior to the approval of each Master Tentative Map or equivalent document.	Director of Community Development for submission to Caltrans and potentially effected TCA's.	

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	and the Transportation Corridor Agency for the proposed connection of Trabuco Road to the Eastern Transportation Corridor. The City shall perform toll and revenue impact studies for any mitigation measure (improvement) that may be impacted by the non-compete clause or any similar agreement restricting a public agency's authority to construct improvement.	the City of Irvine.			
TRAN8	Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of any building permits within the base property, the City of Irvine shall enter into a cooperative study with OCTA and other affected jurisdictions to amend the Orange County Master Plan of Arterial Highways (MPAH). Marine Way, Trabuco Road from the SR-133 tollway to College Road, and Y Street should be included on the MPAH.	Requires cooperate study and subsequent amendment to Orange County Master Plan of Arterial Highways.	Following adoption of a land use plan and circulation plan for the project site and before the issuance of any building permits.	Director of Community Development, OCTA, and other affected jurisdictions.	
5.3 AIR QUALITY (Base Plan and Overlay Plan)					
AQ1	Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors; etc.; shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.	Requires written notification to potentially affected sensitive receptors (residents and landowners).	Prior to the start of demolition and construction within the project area.	Director of Community Development or designee.	
AQ2	Prior to the commencement of construction activities required to demolish and/or remove existing DON structures, including runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plan	Requires the development, submission, and approval of a construction emissions mitigation plan by project applicant.	Prior to the start of demolition and construction within the project area.	Director of Community Development or designee.	

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	<p>shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.</p> <ul style="list-style-type: none"> X Evaluate the availability and use, if available, of low-emission (i.e., methanol- or natural gas-powered) construction equipment instead of diesel for each construction phase. X Water exposed soils at least twice daily and maintain equipment and vehicle engines in good condition and in proper tune. X Wash off trucks leaving the site. X Replace ground cover on construction sites when it is determined that the site will be undisturbed for lengthy periods. X Reduce speeds on unpaved roads to less than 15 miles per hour. X Halt all grading and excavation operations when wind speeds exceed 25 miles per hour. X Suspend all emission generating activities during smog alerts. X Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible. X Properly maintain diesel-powered on-site mobile equipment. X Sweep streets at the end of the day if substantial visible soil material is carried over to the adjacent streets. X Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible. X Use of low-VOC asphalt. X Cover all trucks hauling dirt, sand, soil or other loose material to and from the site. X Provide temporary traffic controls (e.g., flag persons) 				

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	<p>during all phases of construction to ensure minimum disruption of traffic.</p> <p>X Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible.</p> <p>X Reroute construction trucks away from congested streets, whenever feasible.</p> <p>X Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible.</p>				
AQ3	<p>Prior to the issuance of building permits for any future development, the applicant shall submit, and the Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.</p> <p>X Utilize built-in energy-efficient appliances to reduce energy consumption and emissions.</p> <p>X Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions.</p> <p>X Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible.</p> <p>X Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning.</p> <p>X Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible.</p> <p>X Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods.</p> <p>X Centralize space heating and cooling for multiple-family dwelling units and commercial space.</p> <p>X Orient buildings north/south for reducing energy-related combustion emissions.</p>	Requires the development, submission, and approval of an operation-emissions mitigation plan by project applicant.	Prior to the issuance of building permits within the project area.	Director of Community Development or designee.	

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	X Use solar energy, when feasible. X Use high rating insulation in walls and ceilings.				
AQ4	At the time of residential and commercial lease and sales agreements, future sales information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find employment nearby.	Requires written notification to employees and residents within the project area.	On-going (at the time of residential and commercial lease and sales agreements).	Director of Community Development or designee.	
AQ5	At the time of residential and commercial lease and sales agreements, the applicant shall demonstrate to the satisfaction of the Director of Community Development that future employment generating non-residential development shall include measures to reduce vehicle trips including carpool incentives, easy access to public transit systems, trail linkages between uses, low-emissions vehicle fleets, and the provision of on-site facilities such as banking and food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.	Requires submission of potential measures to reduce vehicle trips, as identified in AQ5.	On-going (prior, during and upon completion of development of the project area).	Director of Community Development or designee.	
5.4 NOISE (Base Plan and Overlay Plan)					
	No mitigation measures are required.				
5.5 PUBLIC HEALTH AND SAFETY (Base Plan and Overlay Plan)					
HH1	a. Prior to the conveyance of the property and issuance of subsequent grading permits, where the presence of ACMs is identified, the DON or its transference shall ensure that all available information concerning ACMs has been provided to the City of Irvine, and the purchasers of the property, including: X The type, location and condition of ACMs X The results of any asbestos testing X Description of asbestos control measures taken, if any X The costs or time necessary to remove	Requires submission of Record of Decision (ROD) or similar applicable federal/state documentation to verify information provided to the City of Irvine by the DON.	Prior to the conveyance of the former MCAS EI Toro property; prior to the occupation of existing structures on the former MCAS EI Toro property.	Manager of Building and Safety; Director of Community Development.	

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	<p>existing ACMs</p> <p>X The results of any site-specific asbestos inventory updates</p> <p>b. For any structures known to contain ACMs that will be renovated and/or demolished prior to transfer, the DON shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.</p> <p>c. Prior to transfer of any structure constructed before October 1988, scheduled for renovation and/or demolition, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by the DON. This requirement can be waived if an architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building material, and to the best of their knowledge, no ACMs were used as a building material.</p> <p>d. Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.</p> <p>e. Any renovation and/or LBP abatement activities on residential units at former MCAS El Toro shall be conducted in accordance with all applicable federal, state and local regulatory requirements.</p>				
HH2	a. Prior to transfer, the City of Irvine shall receive from the DON, with the concurrence of the appropriate regulatory agencies, a statement that the "Action Required" IRP Site 3 is to be conveyed for restricted	Requires submission of Record of Decision (ROD) or similar	Prior to the conveyance of the former MCAS El Toro property;	Manager of Building and Safety; Director of Community	

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	<p>use and that all institutional controls have been identified and implemented. The City of Irvine will adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.</p> <p>b. Prior to transfer, if the DON chooses to impose temporary restrictions on the use of Sites 16 and 24 pending adequate remediation of groundwater, the City of Irvine shall receive from the DON a statement of temporary restrictions on the use of the sites and the release of the sites for restricted use following implementation of adequate remediation of groundwater. The City of Irvine shall adopt appropriate rules, policies, and regulations necessary to avoid actions that compromise the integrity of the remediated sites and that uphold the institutional controls. The actions of the City of Irvine shall be in accordance with the General Development Standards for the zone, which requires the Planning Commission to approve a master plan for the entire Planning Area indicating location, acreage, and types of land use within the Planning Area. As stated under Sec. 9-51-5 General Development Standards, boundaries and acreages are approximate and shall be established by master plan approval.</p>	applicable federal/state documentation to verify information provided to the City of Irvine by the DON.	prior to the use of Locations of Concern on the former MCAS El Toro property.	Development; City Council.	
HH3	The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible	Requires submission of	Prior to the approval of	Manager of Building and	

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	for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for "Development Within and Exclusion from Very High Fire Severity Zones" and "Fuel Modification Plans and Maintenance." Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the proposed project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.	development plans by potential project applicants for review and approval.	development plans.	Safety ; Orange County Fire Authority.	
HH4	Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.	Requires submission of development plans for existing structures for review and approval of required improvements.	Prior to the occupation of existing structures located on the former MCAS El Toro property.	Manager of Building and Safety; Orange County Fire Authority.	
HH5	Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event of unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director of	Requires the development, submission, and approval of a protocol plan by the potential project applicant.	On-going (prior to the issuance of a grading permit within the project area; in the event of the discovery of unknown hazardous materials).	Director of Community Development or designee; the DON.	

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	Community Development of the City of Irvine in a timely manner. Additionally, said protocol plan shall be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities.				
HH6	The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells located on the former MCAS El Toro in a geographic information systems database (GIS). The City will review all permit applications on the former air station for monitoring well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to monitoring wells will be limited to authorized personnel.	Requires the development and maintenance of a GIS database by the City of Irvine.	On-going (prior to the issuance of grading permits; during construction activities).	Department of Public Works.	
4.6 GEOLOGY AND SEISMICITY (Base Plan and Overlay Plan)					
GS1	Prior to issuance of a building permit, the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.	Requires potential project applicant to address seismic design provisions in geotechnical reports per adopted Building Codes.	Prior to the issuance of a building permit.	Director of Community Development.	
GS2	<p>Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.</p> <p>1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be</p>	Requires potential project applicant to prepare geotechnical studies in support of specific development plans.	Prior to the issuance of a building permit.	Director of Community Development.	

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	<p>conducted. The purpose of the subsurface evaluation is to:</p> <ul style="list-style-type: none"> a. Further evaluate the subsurface conditions in the area of the proposed structures. b. Provide specific data on potential geologic and geotechnical hazards. c. Provide information pertaining to the engineering characteristics of earth materials in the project area. <p>From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural sections, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:</p> <ul style="list-style-type: none"> X Seismic Ground Shaking - Measures to prevent risk of loss, injury or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults. X Erosion or Loss of Topsoil – Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances. X Where Expansive Soils Exist – Measures for the design of foundations, slabs, flatwork and other improvements subject to drainage from expansive soils. 				

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	Compliance with this measure shall be verified by the Community Development Department.				
GS3	Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of any existing structure if a building permit is not issued, a seismic evaluation of the structure including recommendations for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.	Requires potential project applicant to develop and submit a seismic evaluation in accordance with adopted Building Codes.	Prior to the issuance of a building permit for the occupation of any existing structure at the former MCAS El Toro.	Manager of Building and Safety.	
GS4	Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.	Requires potential project applicant to develop and submit geotechnical and hydrology reports in accordance with adopted local/state/federal regulations.	Prior to the issuance of a grading permit.	Director of Community Development.	
5.7 Hydrology/Water Quality (Base Plan and Overlay Plan)					
H/WQ1	Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City of Irvine adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area . . . and residential construction sites that result in the disturbance of five acres or more . . . shall be required to develop and	Potential project applicant must show compliance with City of Irvine Grading and Water Quality Ordinances via approval of a NPDES permit, SWPPP, and WQMP. Notices of Intent (NOIs) for coverage	Prior to the issuance of a grading permit.	Director of Community Development; Manager of Building and Safety; City Engineer; State/Regional Water Quality Control Boards.	

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	<p>implement BMPs . . . to control erosion and siltation and contaminated runoff from the construction sites." Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of one acre or more.</p> <p>The City's standard conditions of approval indicate that a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.</p> <p>Additionally, prior to the issuance of a grading permit, project applicants must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which details implementation of BMPs whenever they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, leasee, etc.), and shall reference the location(s) of structural BMPs. (Completed with the WQMP (Fusco, June 28, 2006, Revised September 15, 2006).</p> <p>Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOIs) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the</p>	<p>of potential projects under the General Construction Activity Storm Water Runoff Permit must be submitted to the State Water Resources Control Board.</p>			

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	<p>project area. This requirement will be met to the satisfaction of the Director of Community Development for any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES Permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.</p> <p>The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.</p>				
H/WQ2	Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TDML) Implementation Plan adopted for this watershed.	Submission of a construction management plan required by the potential project applicant.	Prior to the issuance of a grading permit.	Director of Community Development; City Engineer; State/Regional Water Quality Control Boards.	
H/WQ3	Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrology studies and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance	Requires the submission of a hydrology study and hydraulic analysis by the potential project applicant.	Prior to the approval of the first tentative tract or parcel map in the project area.	Director of Community Development; City Engineer.	

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	with this measure shall be verified by the Community Development Department.				
H/WQ4	<p>Prior to issuance of a building permit, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.</p> <p>After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process.</p>	Requires the development, review, and approval of a Letter of Map Revision; physical improvement of property located in 100-year floodplain by project applicant.	Prior to the issuance of a building permit.	Director of Community Development; City Engineer.	
5.8 AGRICULTURAL RESOURCES (Base Plan and Overlay Plan)					
AG1	<p>In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operations, City Of Irvine Standard Discretionary Case Condition B.4 and City Of Irvine Standard Subdivision Condition 3.4 regarding disclosure statements shall be amended to include the following for subdivisions proposed adjacent to existing agricultural operations:</p> <p>Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following</p>	Project applicant shall complete and receive approval for an occupancy disclosure form per the standards stated in Mitigation Measure AG1.	Prior to the issuance of a building permit.	Director of Community Development.	

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	information: X Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.				
AG2	Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.	May require development of a cooperative agreement.	On-going (prior to and during development of the project area).	Director of Community Development.	
AG3	Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operations and adjacent urban uses.	May require development of a cooperative agreement.	On-going (prior to and during development of the project area).	Director of Community Development.	
5.9 BIOLOGICAL RESOURCES (Base Plan and Overlay Plan)					
BIO1	Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. Prior to approval of a subdivision map for development within, or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owls, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).	Requires the development and submission of focused biological surveys for resources indicated in BIO1.	Prior to the approval of a subdivision map.	Director of Community Development; US Fish and Wildlife Service; California Department of Fish and Game.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
BIO2	Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, re-creation (i.e. within the proposed wildlife corridor), and/or revegetation as deemed acceptable by the appropriate jurisdictional agencies.	Requires the development and submission of wetland survey for potential wetland resources.	Prior to the approval of a subdivision map.	Director of Community Development; US Army Corps of Engineers; US Fish and Wildlife Service; California Department of Fish and Game.	
BIO3	The City shall continue to work with State and federal agencies during the implementation of the proposed project to implement the revegetation/restoration plan for the wildlife corridor. Measures such as sight and sound barriers, including artificial sound walls and natural diversions (e.g. hedges and tree lines) shall be incorporated into corridor design to ensure the viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the OCGP FEIR.	May require development of a revegetation and/or restoration plan for the identified wildlife corridor.	On-going (prior to and during development of the project area).	Director of Community Development; US Fish and Wildlife Service; California Department of Fish and Game.	
BIO4	Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered "Significant Trees" under the City of Irvine's Urban Forestry Ordinance (UFO) (Section 5-7-401 et al) and the UFO shall apply to all trees included in this inventory.	Requires the development and submission of a tree inventory per the regulations outlined in the City of Irvine Urban Forestry Ordinance.	Prior to the issuance of a grading permit.	Director of Community Development; International Society of Arboriculture.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
5.10 PALEONTOLOGICAL RESOURCES (Base Plan and Overlay Plan)					
P1	<p>Prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. (A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.</p> <p>When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossils specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screen-washing operation on-site.</p> <p>Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.</p>	Submittal of resource recovery and disposition plans to the Community Development Department; qualified paleontologists' attendance at pre-grading conference(s) and field observation.	Prior to issuance of a grading permit and during site grading.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
5.11 CULTURAL RESOURCES (Base Plan and Overlay Plan)					
CULT1	Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PAs 51 and 30. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.	Requires development and submission of an archaeological resources report for PAs 51 and 30 by project applicant.	Prior to the issuance of subdivision maps.	Director of Community Development or designee.	September 2006 DL
CULT2	Monitoring of excavation and grading activities associated with future development in PAs 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure Cult1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and an assessment of their importance under CEQA and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.	Requires field inspection and monitoring by qualified archaeologist implementing recommendations outlined in the report noted above.	Field inspection and monitoring required during grading activities.	Director of Community Development or designee.	
CULT3	Prior to the issuance of grading permits and/or building permits for any future development in PAs 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City of Irvine to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant archaeological sites. These include retaining a qualified	Requires the development and submission of an archaeological mitigation program by project applicant.	Prior to the issuance of grading permits and/or building permits in PAs 51 and 30.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	archaeologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.				
CULT4	<p>Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City of Irvine to address the accidental discovery or recognition of any human remains. The program shall include the following:</p> <p>X There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:</p> <p>The county coroner must be contacted to determine that no investigation of the cause of death is required, and</p> <p>If the coroner determines the remains to be Native American:</p> <p>X The coroner shall contact the Native American Heritage Commission within 24 hours.</p> <p>X The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.</p> <p>X The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or</p> <p>X Where the following conditions occur, the landowner or his</p>	Requires the development and submission of an archaeological mitigation program by project applicant.	Prior to the issuance of grading permits and/or building permits.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.</p> <ul style="list-style-type: none"> • The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission. • The descendant identified fails to make a recommendation; or • The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner. <p>Compliance with this measure shall be verified by the Community Development Department.</p>				
5.12 AESTHETICS (Base Plan and Overlay Plan)					
A1	Prior to issuance of building permits, lighting plans and signage plans for new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent residential areas occurs.	Requires review of site specific plans for light intrusion and spillover by City of Irvine.	Prior to the issuance of building permits, lighting plans, and/or signing plans.	Director of Community Development or designee.	
A2	Prior to the issuance of building permits, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.	Discourages use of mirrored or reflective surfaces in proposed development; designs to be reviewed by the City of Irvine.	On-going (prior to the issuance of building permits; during master plan review).	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
5.13 POPULATION AND HOUSING (Base Plan and Overlay Plan)					
	No mitigation measures are available.				
5.14 PUBLIC SERVICES AND FACILITIES (Base Plan and Overlay Plan)					
	Mitigation Measures identified in other sections of the OCGP FEIR (Section 5.1 – 5.13) address the impacts associated with the construction and operation of new public services and facilities (including law enforcement, fire and emergency medical services, parks and recreation, and school services). Refer to the individual sections mentioned above for a discussion on specific mitigation monitoring and reporting programs.				
5.15 UTILITIES (Base Plan and Overlay Plan)					
	Mitigation Measures identified in other sections of the OCGP FEIR (Section 5.1 – 5.13) address the impacts associated with the construction and operation of new utilities (including potable water, recycled water, and sewer). Refer to the individual sections mentioned above for a discussion on specific mitigation monitoring and reporting programs. Mitigation Measures pertaining to solid waste are described below.				
SW1	<p>It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other deconstruction of the aged structures and property, including but not limited to buildings and runways, at MCAS El Toro, is contaminated with lead based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the MCAS El Toro site by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.</p> <p>If it is determined by the technical evaluation that the material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and</p>	Requires the development and submission of a technical evaluation by the project applicant to determine the composition of solid waste materials generated during the development of the project area.	Prior to the issuance of grading permits.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as "waste-to-energy" (WTE) plants.				
SW2	For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant must submit a written plan to the City and implement such plan to ensure that 75 percent of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.	Requires the project applicant to submit written plans to the City of Irvine to ensure recycling maximum feasible levels of solid waste material is recycled.	Prior to the issuance of grading permits.	Director of Community Development or designee.	
SW3	For that solid waste which the technical study deems to be suitable for recycling, the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75% of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180. ("Recycling" does not include transformation, as defined in Public Resources Code Section 40201.)	Requires the project applicant to submit written plans to the City of Irvine to ensure recycling maximum feasible levels of solid waste material is recycled.	Prior to the issuance of grading permits.	Director of Community Development or designee.	
SW4	To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by "weight ticket" receipts from state-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with	Requires the project applicant to submit quarterly solid waste tonnage reports to the City of Irvine in order to demonstrate solid waste diversion has occurred.	Prior to the issuance of grading permits.	Director of Community Development or designee.	

NO.	MITIGATION MEASURE	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PERSON	DATE OF COMPLETION/ INITIALS
	<p>AB939.</p> <p>To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.</p>				
SW5	<p>For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50 percent of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.</p>	<p>Requires the project applicant to submit a written plan to the City of Irvine to ensure recycling of the maximum feasible amount of green waste material (minimum of 50 percent) by qualified agent.</p>	<p>Prior to the issuance of grading permits.</p>	<p>Director of Community Development or designee.</p>	

Appendices

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Appendix B.

*Acoustical Analysis by Wieland Acoustics dated October
2008*

Appendices

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Appendix C.

*Traffic Impact Analysis for Vesting Tentative Tract Map
17283 (Portion of the Lifelong Learning District) dated
October 2008*

(Provided under a separate cover)

Appendices

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Addendum #7 to the Final Environmental Impact Report for the Orange County Great Park Irvine, California

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1.0 PURPOSE AND BACKGROUND

1.1 PURPOSE

According to Section 15164(a) of the California Environmental Quality Act (CEQA) Guidelines, the lead agency or responsible agency shall prepare an addendum to an approved environmental impact report (EIR) if only minor technical changes or additions are necessary or none of the conditions described in Section 15162, which call for preparation of a subsequent or supplemental EIR, have occurred. The City of Irvine (City), as the lead agency under CEQA, has determined that an addendum to the Orange County Great Park Final EIR (State Clearinghouse Number 2002101020) would be required. The purpose of this Addendum is to discuss the changes to the Final EIR (namely the removal of mitigation measures at seven intersections and one ramp), evaluate the impacts of the changes, and document the findings of the evaluation.

1.2 BACKGROUND

1.2.1 The Great Park

As part of the July 1993 Base Realignment and Closure Act, the Department of the Navy made the decision to close the Marine Corps Air Station (MCAS) El Toro. Following that decision, the County of Orange, the El Toro Reuse Planning Authority and the City of Irvine, as well as other entities, developed plans for the properties reuse. A portion of the former MCAS El Toro was within the City of Irvine (414 acres) and a portion was within an unincorporated area of Orange County (4,392 acres). In March 2002 the Orange County voters passed the Measure W Initiative. Measure W amended the Orange County General Plan to change the designation of the unincorporated land from commercial airport to park, open space and other uses. After Measure W passed, the City of Irvine revised their plans for the properties reuse to be more consistent with the goals of the Measure W Initiative. In April 2002 the County of Orange voted against continuing plans for the former MCAS El Toro reuse, discontinued pursuit of purchasing the property, moved to support the annexation by the City of Irvine, and negotiated with the Department of the Navy for termination of the El Toro Master Lease. The lease was terminated in July 2002. The Orange County Great Park Plan was developed by the City of Irvine to be consistent with the concept for the MCAS El Toro reuse, while allowing for a reasonable economic return to private sector buyers.

The reuse plan analyzed in the Orange County Great Park Final EIR is consistent with the reuse concept adopted by the voters in 2002. In 2003 the City approved the Orange County Great Park Final EIR. The Project included a General Plan Amendment, Zone Change, and annexation of unincorporated portions of the site. The Project is centrally located within Orange County just northeast of Interstate 5 and the Eastern Transportation Corridor Toll Road (Figure 1-1). The cities of Irvine and Lake Forest border the site on the south and east, and an unincorporated area in the County of Orange borders the site's northern limit. The actions included in the Orange County Great Park Final EIR are as follows:

- Annexation, General Plan Amendment, Pre-Zoning (prior to annexation) and Zoning of the unincorporated portion of Planning Area 51
- Annexation of the unincorporated portion of Planning Area 35 (James A. Musick Branch Jail and the Irvine Ranch Water District Parcel)
- General Plan Amendment and Zone Change for Planning Area 30 which is presently in the City of Irvine
- Approval of the form of a Development Agreement vesting approval of higher intensity overlay uses in consideration for dedication of land for public purposes and for developing and funding certain infrastructure improvements and maintenance of the public uses by the purchaser/developer and

subsequent landowners and funding of specific park, roadway, and other circulation facilities and infrastructure

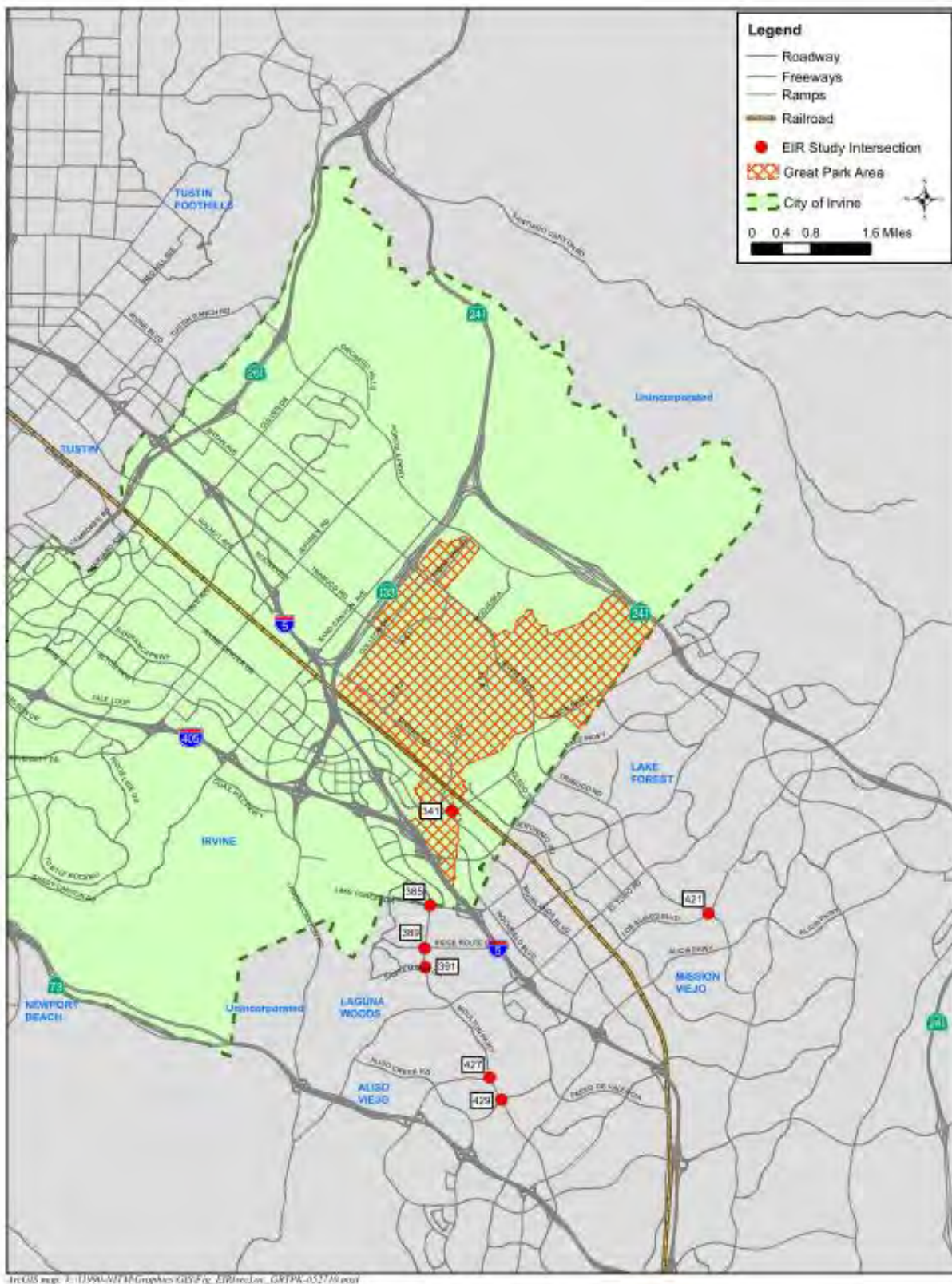
The Orange County Great Park Final EIR was processed as a program-level document so it could be used to address subsequent discretionary approvals as the area prepared for development. The Final EIR identified measures to reduce the anticipated impacts to traffic. The measures included various geometric and design improvements to satisfy level of service (LOS) requirements as development occurred.

1.2.2 North Irvine Transportation Mitigation (NITM) Program

In April 2003, the City developed the North Irvine Transportation Mitigation (NITM) program to implement and expedite circulation mitigation measures in previously certified CEQA documents by providing a mechanism for funding for the coordinated and phased installation of required traffic and transportation improvements in connection with land use entitlements for City Planning Areas 1, 2, 5, 6, 8, 9, 30, 40 and 51. The list of improvements in the NITM program included both fully funded and fair share improvements.

In 2007, the NITM Five Year Review was initiated for the purpose of updating cost allocations, proposing alternative mitigation measures, or eliminating specific traffic and/or transportation improvements that are no longer necessary. The NITM Five-Year Review Traffic Study determined that traffic mitigation measures were no longer needed for seven intersections (Alton Parkway/Barranca Parkway, Lake Forest Drive/Irvine Center Drive, Ridge Route Drive/Moulton Parkway, Santa Maria Drive/Moulton Parkway, Los Alisos Boulevard/Trabuco Road, Moulton Parkway/Glenwood Drive-Indian Creek Lane, and Moulton Parkway/Laguna Hills Drive) and one ramp (SR-241 at Lake Forest Drive) (Figure 1-1). These intersections were found to operate within an acceptable level of service (LOS) under baseline interim and long-term conditions. The improvements were therefore deleted from the List of NITM Improvements. Since improvements at these locations were incorporated in the Final Orange County Great Park EIR as mitigation, an addendum to the Final EIR was required to evaluate the removal of the improvements from the list of mitigation measures.

Figure 1-1 Project Area



2.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT PROCESS

2.1 CEQA COMPLIANCE

The City of Irvine has the approval authority for the Orange County Great Park Project. This Addendum has been prepared in accordance with Section 15164 and Section 15162 of CEQA guidelines. This document discusses the revisions to the Orange County Great Park Project and whether those changes would result in substantial changes as defined by Section 15162.

Section 15164 of the CEQA guidelines states:

- (a) The lead agency or a responsible agency shall prepare an addendum to a previously certified EIR (Environmental Impact Report) if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.
- (b) An addendum may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred.
- (c) An addendum need not be circulated for public review but can be included in or attached to the final EIR or adopted negative declaration.
- (d) The decision-making body shall consider the addendum with the final EIR or adopted negative declaration prior to making a decision on the project.
- (e) A brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR, the lead agency's required findings on the project, or elsewhere in the record. The explanation must be supported by substantial evidence.

Section 15162 of the CEQA guidelines states:

- (a) When an EIR has been certified or negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:
 - (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
 - (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
 - (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR, was certified as complete or the negative declaration was adopted, shows any of the following:
 - (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
 - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR.

3.0 DESCRIPTION OF CHANGES

3.1 PROJECT CHANGES

The Orange County Great Park Final EIR identified traffic improvements at intersections as mitigation measures for the development and annexation of the Great Park. Based on the findings of the NITM Five-Year Review Traffic Study and subsequent analysis utilizing ITAM 8.4-10, it was determined that previously proposed traffic mitigation strategies were not required for those intersections since they operate at an acceptable LOS under all interim year and build-out conditions. In addition, improvements above and beyond the baseline conditions for these locations are not warranted based on forecast future traffic activity.

The seven intersections and one ramp were found to operate within an acceptable LOS under baseline interim and long-term conditions. Therefore, the associated traffic improvements proposed as mitigation measures in the Orange County Great Park Final EIR are no longer required. The following specific improvements are to be deleted from the List of NITM Improvements:

- Intersection #341: Alton Parkway and Barranca Parkway (Irvine) — Restripe eastbound approach to provide 2.5 left-turn lanes, 1.5 through lanes and no right-turn lane and modify signal to provide east/west split phasing
- Intersection #385: Lake Forest Drive and Irvine Center Drive (Irvine/Laguna Hills) — Designate LOS "E" as acceptable and make a contribution to the City of Irvine Traffic Management Systems Operation Study (TMSOS) in an amount equal to the construction cost of the following improvement that would be needed to achieve LOS D: convert eastbound de-facto right-turn lane to fourth through lane
- Intersection #389: Ridge Route Drive and Moulton Parkway (Laguna Hills/Laguna Woods) — Restripe northbound approach to provide 1 left-turn lane, 1.5 through lanes and 1.5 right-turn lanes
- Intersection #391: Santa Maria Drive and Moulton Parkway (Laguna Hills/Laguna Woods) — Convert eastbound right-turn lane to fourth through lane and add fourth westbound through lane
- Intersection #421: Los Alisos Boulevard and Trabuco Road (Mission Viejo) — Add second northbound left-turn lane and delete northbound de-facto right-turn lane
- Intersection #427: Moulton Parkway and Glenwood Drive/Indian Creek Lane (Aliso Viejo/Laguna Hills) — Add fourth northbound through lane
- Intersection #429: Moulton Parkway and Laguna Hills Drive (Aliso Viejo/Laguna Hills) — Restripe eastbound approach to provide 3 left-turn lanes, 2 through lanes and 1 right-turn lane
- Ramp #18: SR-241 at Lake Forest Drive, Southbound Off-ramp (Caltrans) — Add second drop lane from SR-241 to the off-ramp

For the locations that will be deleted from the List of NITM Improvements, one intersection, Alton Parkway at Barranca Parkway (#341) in the City of Irvine, was expected to be fully funded by the NITM program. The remaining locations that will be deleted from the improvement list were to be funded on a fair share basis.

3.2 CHANGES TO FINAL EIR

Sections in the Orange County Great Park Final EIR that will be removed as a result of subsequent analysis through application of ITAM 8.4-10 are as follows:

- Alton Parkway & Muirlands Boulevard (Barranca Parkway) – Construct westbound right turn lane (2025 Overlay Plan, FEIR page 5.2-72)
- Lake Forest Drive & Irvine Center Drive

- Restripe eastbound de-facto right turn lane into shared right through lane (2025 Base Plan, FEIR page 5.2-39)
 - Construct second westbound left turn lane (2025 Overlay Plan, FEIR page 5.2-57). This improvement is already constructed.
- Ridge Route Drive & Moulton Parkway – Convert one northbound through lane into a northbound right turn lane (Post-2025 Overlay, FEIR page 5.2-61)
- Santa Maria Drive & Moulton Parkway
 - Construct eastbound right turn lane (2025 Base Plan, FEIR page 5.2-39 & 2025 Overlay Plan, FEIR page 5.2-57) Construct second northbound left turn lane (Post-2025 Base Plan, FEIR, page 5.2-40)
 - Construct second northbound left turn lane and fourth eastbound through lane (Post-2025 Overlay, FEIR page 5.2-61)
- Los Alisos Boulevard & Trabuco Road – Construct second northbound left turn lane (2025 Base Plan, FEIR page 5.2-39)
- Moulton Parkway & Glenwood Drive/Indian Creek Lane – Add fourth northbound through lane (Post-2025 Overlay Plan, FEIR page 5.2-60)
- Moulton Parkway & Laguna Hills Drive
 - Construct third westbound through lane and provide westbound right turn overlap phase (Post 2025 Base Plan, FEIR page 5.2-40)
 - Construct third eastbound left turn lane (Post-2025 Overlay Plan, FEIR page 5.2-60, page 5.2-73) or alternate mitigation to convert southbound de-facto right turn lane into southbound through lane (Buildout, FEIR page 5.2-73)
- SR-241 at Lake Forest Drive – southbound off-ramp (2025 Overlay Plan, FEIR significant impact - page 5.2-66, potential impact - Table 2-1, page 2-14)

Furthermore, the Final EIR does not contain an analysis of Greenhouse Gas (GHG) Emissions as this was not a required analysis under State CEQA Guidelines prior to March 2010. The analysis of GHG as it relates to the proposed changes in this Addendum has been added to respond to recent California legislation.

4.0 ENVIRONMENTAL CHECKLIST

In preparing this Addendum, the potential impacts identified on the CEQA “Environmental Checklist Form” were considered. Table 4-1 shows the environmental topic areas that are addressed in the CEQA Checklist and which of those topic areas would be affected by the proposed changes to the EIR. If the analysis conducted for this Addendum determined there was a change from the previous analysis, the change was evaluated to determine if it was substantially different from previously identified effects and whether it would have a new significant impact. For those topic areas where no change would occur, the box indicating ‘no substantial change’ is marked.

Table 4-1: Environmental Checklist

Environmental Issues	New Significant Impact	Substantial Change from Previous Analysis	No Substantial Change from Previous Analysis
1. Aesthetics	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Agriculture and Forest Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Air Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Biological Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Cultural Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Geology and Soils	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Greenhouse Gas Emissions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Hazards and Hazardous Materials	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9. Hydrology and Water Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Land Use and Planning	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. Mineral Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12. Noise	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13. Population and Housing	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14. Public Services	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15. Recreation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16. Transportation/Traffic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17. Utilities and Service Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18. Mandatory Findings of Significance	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Final EIR did not contain an analysis of GHG emissions as this was not a required analysis under State CEQA Guidelines prior to March 2010. The analysis of GHG as it relates to the proposed changes in this

Addendum has been added to respond to recent California legislation, namely Senate Bill 97 and Assembly Bill 32.

In addition, the traffic analysis was conducted for the removal of traffic mitigation measures. This analysis was a change from the previous analysis in the Final EIR. However, the analysis indicated that the removal of the traffic mitigation measures would not result in a new significant impact. Therefore, the removal of the traffic mitigation is considered a minor technical change consistent with CEQA Guidelines Section 15062 and 15064.

5.0 ANALYSIS OF POTENTIAL EFFECTS

As indicated in the CEQA Checklist Form in Section 4.0, impacts to all environmental issue areas would not be affected by the changes in the Final EIR or by removal of the traffic mitigation measures at the seven intersections and one ramp as identified in the NITM Five-Year Review.

1. Aesthetics

Would the project:

- a) Have a substantial adverse effect on a scenic vista?
- b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?
- c) Substantially degrade the existing visual character or quality of the site and its surroundings?
- d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

No Substantial Change from Previous Analysis. Impacts of the project on aesthetic resources are related to the potential effects of urban light and glare. The removal of street improvements at seven street intersections and one ramp would not introduce additional adverse impacts on scenic resources, aesthetic character and quality or light conditions. Therefore, there would be no substantial changes to the findings in the Final EIR for aesthetic resources.

2. Agriculture and Forest Resources

Would the project:

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?
- c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?
- d) Result in the loss of forest land or conversion of forest land to non-forest use?
- e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Substantial Change from Previous Analysis.

In the Final EIR the conversion of Prime and Unique Farmland and Farmland of Statewide Importance to non-agricultural uses was determined to be a significant impact. Removal of the traffic mitigation measures at seven intersections and one ramp would not result in any construction. It would not result in conflicts with agricultural zoning, convert farmland to non-farmland uses or result in a loss of forest land. There would be no substantial changes to the findings in the Final EIR for agricultural and forest resources.

3. Air Quality

Would the project:

- a) Conflict with or obstruct implementation of the applicable air quality plan?
- b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?
- c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?
- d) Expose sensitive receptors to substantial pollutant concentrations?
- e) Create objectionable odors affecting a substantial number of people?

No Substantial Change from Previous Analysis. According to the NITM Five-Year Review Traffic Study and subsequent traffic analysis utilizing ITAM 8.4-10, the proposed elimination of traffic mitigation measures would not impact traffic operations or traffic volumes. Since there is no change in traffic volumes, no change in operations emissions are anticipated. It would not result in any additional construction or construction-related emissions. Therefore, the removal of the traffic mitigation measures at the seven intersections and one ramp would not result in substantial changes to air quality or change the required mitigation measures for reducing impacts on air quality in the Final EIR. There would be no substantial changes to the findings in the Final EIR in regards to air quality.

4. Biological Resources

Would the project:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Substantial Change from Previous Analysis. In the Final EIR, the Project was found to have impacts on a federal species of concern, highly disturbed wetland habitat, and a large number of mature trees. Mitigation measures identified to reduce impacts to less than significant included:

- focused surveys for southern tarplant, mountain plover, burrowing owl, least Bell's vireo and southwestern willow flycatcher;
- wetlands delineation;
- implementation of the revegetation and restoration plan for the wildlife corridor;
- an inventory of trees with trunk diameter at breast height greater than six inches and any significant plants.

The removal of the traffic mitigation measures would not affect biological resources or result in additional impacts on biological resources. There would be no construction associated with the removal of mitigation measures; therefore, there would be no impacts to species or habitat. In addition, none of the mitigation measures proposed to reduce impacts to biological resources would be affected by the removal of intersection mitigation. There would be no substantial changes to the findings in the Final EIR for biological resources.

5. Cultural Resources

Would the project:

- a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?
- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?
- c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?
- d) Disturb any human remains, including those interred outside of formal cemeteries?

No Substantial Change from Previous Analysis. In the Final EIR Project activities were identified to have the potential to affect as yet unidentified paleontological and archeological resources and unknown human remains. In addition, pleistocene terrestrial vertebrates were discovered near one of the planning areas and therefore, may be located within that planning area. These impacts were reduced to less than significant through mitigation measures aimed at preconstruction surveying, resource recovery, additional analyses, construction monitoring, and mitigation plans for discovered resources.

These mitigation measures would not be affected by changes in the traffic and transportation mitigation nor would there be additional impacts to these resources as a result of the change in traffic mitigation. In general, the mitigation measures for cultural resources would not be affected by changes in the traffic measures nor would additional adverse impacts to cultural resources occur. Since traffic improvements are removed, no construction at the seven intersections would commence. This eliminates the potential to affect yet unidentified prehistoric, historic and archeological sites and the potential to impact any paleontological resources at the seven locations. The changes in the traffic measures would not substantially change the findings in the Final EIR for cultural resources.

6. Geology and Soils

Would the project:

- a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?
 - ii. Strong seismic ground shaking?
 - iii. Seismic-related ground failure, including liquefaction?
 - iv. Landslides?
- b) Result in substantial soil erosion or the loss of topsoil?

- c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?
- d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?
- e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Substantial Change from Previous Analysis. The proposed elimination of traffic improvements at seven intersections and one ramp would not affect the mitigation measures discussed above or have any additional adverse impact on geology or soils. By removing traffic mitigation measures, no grading or structures would be required at the eight locations. This would slightly reduce impacts regarding geology and soils. Therefore, there would be no substantial changes to the findings in the Final EIR for geology and soils.

7. Greenhouse Gas Emissions

Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Atmospheric gases that trap heat are called greenhouse gases (GHG). The accumulation of GHG in the atmosphere heats the earth's surface. GHGs are emitted through natural processes as well as by human activity. It is believed that human activities have elevated these gas concentrations beyond naturally occurring levels resulting in global warming. Global warming has been attributed to significant changes in climate patterns. GHG include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) as well as other gases. Carbon dioxide, methane, and nitrous oxide are generated by human activity. GHG are primarily considered to be associated with energy consumption resulting from heating and air conditioning and lighting and fuel consumption from new residential and non-residential development, construction equipment, and motor vehicle travel.

The Final EIR did not contain an analysis of GHG Emissions as this was not a required analysis under State CEQA Guidelines prior to March 2010. The analysis of GHG as it relates to the proposed changes in this Addendum has been added to respond to recent California legislation, namely Senate Bill 97 and Assembly Bill 32.

Senate Bill 97 (Chapter 185, 2007) directed the Governor's Office of Planning and Research to develop CEQA guidelines that would address how state and local agencies should analyze and mitigate greenhouse gas emissions. On April 13, 2009 the Governor's Office submitted recommendations for amending the State Guidelines to the Secretary for Natural Resources. On March 18, 2010 the amendments became effective.

Presently, there are no CEQA thresholds of significance established for GHG. However, California Assembly Bill (AB) 32 passed in September 2006, called for the California Air Resources Board (CARB) to adopt regulations requiring statewide greenhouse gas emissions reporting, and set a year 2020 statewide greenhouse gas emissions limit equivalent to 1990 levels. Ultimately, it can be assumed that local air districts and agencies will be responsible for enacting regulations, in response to CARB mandates.

According to Recommendations by the Association of Environmental Professionals on *How to Analyze GHG Emissions and Global Climate change in CEQA Documents* (March 5, 2007), an individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable."

The changes in traffic mitigations would not include additional construction or development that could add to additional human uses or affect the overall operations, traffic volume or level of service for the proposed transportation systems. The proposed changes in the traffic mitigation measures would not conflict with applicable plans, policies or adopted regulations aimed at reducing emissions of GHGs. The changes proposed by this Addendum would not result in GHG emissions and would not alter the incremental contribution of the project to GHG emissions. Mitigation measures promoting the use of alternative methods of transportation in the Final EIR would also not be affected or hindered by the proposed changes. The removal of the traffic improvements at the seven intersections and one ramp would not affect any significance conclusions in the Final EIR.

8. Hazards and Hazardous Materials

Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
- f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?
- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Substantial Change from Previous Analysis. The changes in traffic mitigations would not include additional construction or development. The proposed project changes would not affect existing hazards, introduce new hazards, or modify proposed hazards and hazardous waste mitigation. It would not generate solid waste, particularly waste containing hazardous materials. There would be no substantial change to the findings in the Final EIR in regards to hazards and hazardous waste.

9. Hydrology and Water Quality

Would the project:

- a) Violate any water quality standards or waste discharge requirements?
- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?
- d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
- e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
- f) Otherwise substantially degrade water quality?
- g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?
- h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?
- i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?
- j) Inundation by seiche, tsunami, or mudflow

No Substantial Change from Previous Analysis. The removal of the traffic mitigation measures eliminates the associated construction at the seven intersections and one ramp. The proposed changes would not increase impervious surfaces, generate additional runoff, or affect existing or proposed stormwater systems. There would be no substantial change to the findings in the Final EIR.

10. Land Use and Planning

Would the project:

- a) Physically divide an established community?
- b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?
- c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Substantial Change from Previous Analysis. No land use impacts were identified during the Final EIR evaluation. The changes in traffic mitigations would not include additional construction or development. The removal of the traffic measures would not affect existing land use or land use plans. The proposed project changes would not result in any additional significant impacts to land use and planning; thus, they would not require mitigation measures. There would be no substantial change to the findings in the Final EIR.

11. Mineral Resources

Would the project:

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?
- b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Substantial Change from Previous Analysis. The findings of the Final EIR determined that the Project would not have the potential for impacting mineral resources. The proposed elimination of traffic mitigation measures in eight locations also would not affect mineral resources. There would be no substantial change to the findings in the Final EIR.

12. Noise

Would the project:

- a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?
- c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?
- d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?
- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?
- f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Substantial Change from Previous Analysis. No noise impacts were identified during the Final EIR evaluation. The changes in traffic mitigations would not include additional construction or development. Construction related noise would be eliminated at these locations. The removal of traffic mitigation would not generate additional long-term noise. There would be no substantial change to the findings in the EIR.

13. Population and Housing

Would the project:

- a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
- b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?
- c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Substantial Change from Previous Analysis. The changes in traffic mitigations would not include additional construction or development. It would not result in the inducement of substantial unplanned growth or displacement of housing or people. Hence, there would be no additional impacts to population and housing and no substantial change to the findings in the Final EIR.

14. Public Services

Would the project:

- a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
 - i. Fire protection?
 - ii. Police protection?
 - iii. Schools?
 - iv. Parks?
 - v. Other public facilities?

No Substantial Change from Previous Analysis. The proposed project changes would not result in any additional adverse impacts to public services. The removal of the traffic mitigation measures would not increase demand for public services, would not require expansion or other alteration of existing public facilities. There would be no substantial change to the findings in the Final EIR.

15. Recreation

Would the project:

- a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Substantial Change from Previous Analysis. The removal of the traffic mitigation measures would not increase demand for recreational facilities and would not require expansion or other alteration of existing facilities. The proposed project changes would not result in any additional adverse impacts to recreational resources. There would be no substantial change to the findings in the Final EIR.

16. Transportation and Traffic

Would the project:

- a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?
- b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?
- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?
- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- e) Result in inadequate emergency access?
- f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Substantial Change from Previous Analysis.

The following traffic analysis was prepared to validate the removal of the seven intersection improvements and one ramp identified as mitigations in the Orange County Great Park Final EIR.

16.1 Introduction

The Orange County Great Park Environmental Impact Report (EIR) certified on May 27, 2003 identified a list of traffic mitigations to address the traffic and transportation impacts resulting from the proposed reuse of the Marine Corps Air Station (MCAS) El Toro.

On June 10, 2003, the City Council adopted the North Irvine Transportation Mitigation (NITM) Program to establish a funding program to implement the traffic and transportation improvements in connections with land use entitlements for the following future development areas: PA 1 and 2, Northern Sphere, Spectrum 8/PA 40 and the Great Park properties.

In 2007, the NITM Five Year Review was initiated for the purpose of updating cost allocations, proposing alternative mitigation measures, or eliminating specific traffic and/or transportation improvements that are no longer necessary. The recommendations from the NITM Five Year Review include deletion of seven intersection improvements and one ramp improvement, locations for which mitigation measures were previously identified in the Orange County Great Park EIR, from the NITM program.

This traffic and transportation analysis has been conducted to verify that the deletion of the NITM improvements at the following locations does not create an adverse impact on the circulation system and that improvements at these locations can be deleted from the list of mitigation identified in the Orange County Great Park EIR:

- #341 Alton Parkway/Barranca Parkway
- #385 Lake Forest Drive/Irvine Center Drive
- #389 Ridge Route Drive/Moulton Parkway
- #391 Santa Maria Drive/Moulton Parkway
- #421 Los Alisos Boulevard/Trabuco Road
- #427 Moulton Parkway/Glenwood Drive/Indian Creek Lane
- #429 Moulton Parkway/Laguna Hills Drive
- #18 SR-241 at Lake Forest Drive (southbound off-ramp)

16.2 Analysis Methodology

The NITM Five Year Review was conducted utilizing Irvine Transportation Analysis Model (ITAM) Version 7.3 and did not include projects under review at that time such as the Planning Area 40 General Plan Amendment/Zone Change and the Lake Forest Vacant Land Opportunities Studies. This traffic study was conducted through the application of the Irvine Transportation Analysis Model (ITAM) Version 8.4-10 released on April 13, 2010. The study analyzed three horizon years: 2015, 2030 and Post-2030. The land uses include projects approved through February 4, 2010.

16.2.1 Performance Criteria

Intersection capacity utilization (ICU) analyses were prepared to evaluate the need for improvements at the seven intersections identified. Volume to capacity (V/C) ratio analysis was prepared to evaluate the operations of the ramp location. The level of service is based on peak hour intersection capacity utilization (ICU) and V/C values. The following criteria were applied to determine the need for these improvements:

- Level of Service C or better at fully funded NITM locations;
- Level of Service C or better for NITM locations within the City of Irvine; and
- Level of Service D or better for fair share funded NITM improvements.

- Traffic Analysis Summary

16.3 Year 2015 Analysis

16.3.1 Year 2015 Land Use

Year 2015 land use assumptions are presented in Table 5-1. Detailed land use assumptions are included in Appendix A.

Table 5-1: Project Area Year 2015 Land Use

ITAM Land Use Description	Unit	Land Use Quantity
		2015
Commercial Recreation	TSF	0.0
Medical Office	TSF	336.9
Open Space	ACRE	1,558.6
Agriculture	ACRE	72.8
Auto Center	TSF	20.0
Education	STU	7,800
Elementary School	STU	650
Retail	TSF	150.0
University Residential	DU	0
Senior Housing	DU	160
Transitional Housing	DU	45
Research and Development	TSF	953.4
Institutional Warehouse	TSF	50.0
OCTA Facility	TSF	35.0
Transportation Center	SPACE	695
Cultural Institution	TSF	60.0
Agriculture	ACRE	402.1
Golf Course	ACRE	0.0
Wildlife Corridor	ACRE	232.4
OS Park	ACRE	411.5
Cemetery	ACRE	73.0
Chapel/Mortuary	TSF	10.0
Sports Park	ACRE	35.0
TOD Residential	DU	0
TOD Retail	TSF	0.0
TOD Office	TSF	0.0
Residential Golf Village	DU	220
Exposition Center	TSF	140.0
Parking	SPACE	1,560
Institutional/Educational	TSF	1,452.6
Museum	TSF	95.0

Source: City of Irvine, ITAM 8.4-10

16.3.2 Year 2015 Analysis

Table 5-2 presents the peak hour intersection performance of the seven intersections under Year 2015 conditions. The intersection assumptions at these intersections do not include NITM improvements. As no Great Park Final EIR mitigation is required under 2015 conditions, Table 5-2 presents the operations without

assuming any Great Park mitigation at these locations and reveals that the intersections operate at an acceptable level of service. The Year 2015 ICU worksheets are included in Appendix B. Table 5-3 presents the 2015 peak hour ramp performance and indicates that the ramp operates at acceptable conditions. As no mitigation was specified for this ramp in the EIR, no analysis that incorporates EIR mitigation is warranted.

Table 5-2: Year 2015 Intersection Peak Hour Performance

Intersections		AM Peak		PM Peak	
		ICU	LOS	ICU	LOS
Irvine					
341	Alton Parkway & Barranca Parkway				
	ITAM 8.4-10 (04.13.10 Release)	0.58	A	0.67	B
	With EIR Mitigation	#N/A	#N/A	#N/A	#N/A
385	Lake Forest Drive & Irvine Center Drive				
	ITAM 8.4-10 (04.13.10 Release)	0.50	A	0.57	A
	With EIR Mitigation	#N/A	#N/A	#N/A	#N/A
Laguna Hills/Laguna Woods					
389	Ridge Route Drive & Moulton Parkway				
	ITAM 8.4-10 (04.13.10 Release)	0.46	A	0.66	B
	With EIR Mitigation	#N/A	#N/A	#N/A	#N/A
391	Santa Maria Drive & Moulton Parkway				
	ITAM 8.4-10 (04.13.10 Release)	0.53	A	0.74	C
	With EIR Mitigation	#N/A	#N/A	#N/A	#N/A
Mission Viejo					
421	Los Alisos Boulevard & Trabuco Road				
	ITAM 8.4-10 (04.13.10 Release)	0.74	C	0.67	B
	With EIR Mitigation	#N/A	#N/A	#N/A	#N/A
Aliso Viejo/Laguna Hills					
427	Moulton Parkway & Glenwood Drive/Indian Creek Lane				
	ITAM 8.4-10 (04.13.10 Release)	0.58	A	0.53	A
	With EIR Mitigation	#N/A	#N/A	#N/A	#N/A
429	Moulton Parkway & Laguna Hills Drive				
	ITAM 8.4-10 (04.13.10 Release)	0.61	B	0.68	B
	With EIR Mitigation	#N/A	#N/A	#N/A	#N/A

Source: ITAM 8.4-10

Note: #N/A - no mitigation identified in the EIR for the specified year

Table 5-3: Year 2015 Ramp Peak Hour Performance

Caltrans/TCA Ramp Location	Lanes	Capacity	AM Peak Hour			PM Peak Hour		
			Volume	V/C	LOS	Volume	V/C	LOS
SR-241 at Lake Forest Drive, Southbound Off-ramp #18 (Fair Share)								
2015								
ITAM 8.4-10 (04.13.10 Release)	1	1,500	660	0.44	A	310	0.21	A

Source: ITAM 8.4-10

16.4 Year 2030 Analysis

16.4.1 Year 2030 Land Use

Year 2030 land use assumptions are presented in Table 5-4. Detailed land use assumptions are included in Appendix A.

Table 5-4: Project Area Year 2030 Land Use

ITAM Land Use Description	Unit	Land Use Quantity	
		2015	2030
Commercial Recreation	TSF	0.0	0.0
Medical Office	TSF	336.9	336.9
Open Space	ACRE	1,558.6	974.0
Agriculture	ACRE	72.8	0.0
Auto Center	TSF	20.0	102.0
Education	STU	7,800	7,800
Elementary School	STU	650	650
Retail	TSF	150.0	150.0
University Residential	DU	0	60
Senior Housing	DU	160	800
Transitional Housing	DU	45	165
Research and Development	TSF	953.4	2,238.4
Institutional Warehouse	TSF	50.0	263.0
OCTA Facility	TSF	35.0	176.0
Transportation Center	SPACE	695	1,050
Cultural Institution	TSF	60.0	300.0
Agriculture	ACRE	402.1	302.5
Golf Course	ACRE	0.0	366.0
Wildlife Corridor	ACRE	232.4	278.0
OS Park	ACRE	411.5	550.4
Cemetery	ACRE	73.0	73.0
Chapel/Mortuary	TSF	10.0	50.0
Sports Park	ACRE	35.0	35.0
TOD Residential	DU	0	1,500
TOD Retail	TSF	0.0	75.0
TOD Office	TSF	0.0	75.0
Residential Golf Village	DU	220	1,100
Exposition Center	TSF	140.0	708.0
Parking	SPACE	1,560	5,505
Institutional/Educational	TSF	1,452.6	1,452.6
Museum	TSF	95.0	468.0

Source: City of Irvine, ITAM 8.4-10

16.4.2 Year 2030 Intersection Analysis

Table 5-5 presents the peak hour intersection performance of the seven intersections under Year 2030 conditions. The intersection assumptions at these intersections do not include NITM improvements. Operating conditions with and without the Great Park mitigation measures are presented, where mitigation was identified in the EIR as required in the Year 2025. All locations are shown to operate at an acceptable level of service. The Year 2030 ICU worksheets are included in Appendix B. Table 5-6 presents the 2030 peak hour ramp performance and indicates that the ramp operates at acceptable conditions. As no mitigation was specified for this ramp in the EIR, no analysis that incorporates EIR mitigation is warranted.

Table 5-5: Year 2030 Intersection Peak Hour Performance

Intersections		2015				2030			
		AM Peak		PM Peak		AM Peak		PM Peak	
		ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS
Irvine									
341	Alton Parkway & Barranca Parkway								
	ITAM 8.4-10 (04.13.10 Release)	0.58	A	0.67	B	0.62	B	0.75	C
	With EIR Mitigation (2025 Overlay Plan)	#N/A	#N/A	#N/A	#N/A	0.59	A	0.72	C
385	Lake Forest Drive & Irvine Center Drive								
	ITAM 8.4-10 (04.13.10 Release)	0.50	A	0.57	A	0.51	A	0.75	C
	With EIR Mitigation (2025 Base Plan)	#N/A	#N/A	#N/A	#N/A	0.50	A	0.70	B
Laguna Hills/Laguna Woods									
389	Ridge Route Drive & Moulton Parkway								
	ITAM 8.4-10 (04.13.10 Release)	0.46	A	0.66	B	0.58	A	0.72	C
	With EIR Mitigation	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
391	Santa Maria Drive & Moulton Parkway								
	ITAM 8.4-10 (04.13.10 Release)	0.53	A	0.74	C	0.67	B	0.79	C
	With EIR Mitigation(2025 Base Plan and 2025 Overlay Plan)	#N/A	#N/A	#N/A	#N/A	0.67	B	0.76	C
Mission Viejo									
421	Los Alisos Boulevard & Trabuco Road								
	ITAM 8.4-10 (04.13.10 Release)	0.74	C	0.67	B	0.77	C	0.71	C
	With EIR Mitigation (2025 Base Plan)	#N/A	#N/A	#N/A	#N/A	0.70	B	0.68	B
Aliso Viejo/Laguna Hills									
427	Moulton Parkway & Glenwood Drive/Indian Creek Lane								
	ITAM 8.4-10 (04.13.10 Release)	0.58	A	0.53	A	0.72	C	0.70	B
	With EIR Mitigation	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
429	Moulton Parkway & Laguna Hills Drive								
	ITAM 8.4-10 (04.13.10 Release)	0.61	B	0.68	B	0.83	D	0.82	D
	With EIR Mitigation	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Source ITAM 8.4-10

Note: #N/A - no mitigation identified in the EIR for the specified year

Table 5-6: Year 2030 Ramp Peak Hour Performance

Caltrans/TCA Ramp Location	Lanes	Capacity	AM Peak Hour			PM Peak Hour		
			Volume	V/C	LOS	Volume	V/C	LOS
SR-241 at Lake Forest Drive, Southbound Off-ramp #18 (Fair Share)								
2015								
ITAM 8.4-10 (04.13.10 Release)	1	1,500	660	0.44	A	310	0.21	A
2030								
ITAM 8.4-10 (04.13.10 Release)	1	1,500	920	0.61	B	410	0.27	A

Source: ITAM 8.4-10

16.5 Post-2020 Analysis

16.5.1 Year 2030 Land Use

Post-2030 land use assumptions are presented in Table 5-7. Detailed land use assumptions are included in Appendix A.

Table 5-7: Project Area Post-2030 Land Use

ITAM Land Use Description	Unit	Land Use Quantity		
		2015	2030	Post-2030
Commercial Recreation	TSF	0.0	0.0	26.0
Medical Office	TSF	336.9	336.9	336.9
Open Space	ACRE	1,558.6	974.0	974.0
Agriculture	ACRE	72.8	0.0	0.0
Auto Center	TSF	20.0	102.0	102.0
Education	STU	7,800	7,800	7,800
Elementary School	STU	650	650	650
Retail	TSF	150.0	150.0	150.0
University Residential	DU	0	60	60
Senior Housing	DU	160	800	800
Transitional Housing	DU	45	165	165
Research and Development	TSF	953.4	2,238.4	2,238.4
Institutional Warehouse	TSF	50.0	263.0	263.0
OCTA Facility	TSF	35.0	176.0	176.0
Transportation Center	SPACE	695	1,050	1,050
Cultural Institution	TSF	60.0	300.0	300.0
Agriculture	ACRE	402.1	302.5	302.5
Golf Course	ACRE	0.0	366.0	366.0
Wildlife Corridor	ACRE	232.4	278.0	278.0
OS Park	ACRE	411.5	550.4	550.4
Cemetery	ACRE	73.0	73.0	73.0
Chapel/Mortuary	TSF	10.0	50.0	50.0
Sports Park	ACRE	35.0	35.0	165.0
TOD Residential	DU	0	1,500	1,500
TOD Retail	TSF	0.0	75.0	75.0
TOD Office	TSF	0.0	75.0	75.0
Residential Golf Village	DU	220	1,100	1,100
Exposition Center	TSF	140.0	708.0	708.0
Parking	SPACE	1,560	5,505	5,505
Institutional/Educational	TSF	1,452.6	1,452.6	1,452.6
Museum	TSF	95.0	468.0	468.0

Source: City of Irvine, ITAM 8.4-10

16.5.2 Post-2030 Intersection Analysis

Table 5-8 presents the peak hour intersection performance of the seven intersections under Post-2030 conditions. The intersection assumptions at these intersections do not include NITM improvements. Operating conditions with and without the Great Park mitigation measures are presented and both conditions are shown to operate at acceptable levels of service for each intersection. The Post-2030 ICU worksheets are included in Appendix B. Table 5-9 presents the Post-2030 peak hour ramp performance and indicates that the ramp operates at acceptable conditions. As no mitigation was specified for this ramp in the EIR, no analysis with incorporates EIR mitigation is warranted.

Table 5-8: Post-2030 Intersection Peak Hour Performance

Intersections		2015				2030				Post-2030			
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
		ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS
Irvine													
341	Alton Parkway & Barranca Parkway												
	ITAM 8.4-10 (04.13.10 Release)	0.58	A	0.67	B	0.62	B	0.75	C	0.62	B	0.73	C
	With EIR Mitigation (2025 Overlay Plan)	#N/A	#N/A	#N/A	#N/A	0.59	A	0.72	C	#N/A	#N/A	#N/A	#N/A
385	Lake Forest Drive & Irvine Center Drive												
	ITAM 8.4-10 (04.13.10 Release)	0.50	A	0.57	A	0.51	A	0.75	C	0.43	A	0.56	A
	With EIR Mitigation (2025 Overlay Plan)	#N/A	#N/A	#N/A	#N/A	0.50	A	0.70	B	#N/A	#N/A	#N/A	#N/A
Laguna Hills/Laguna Woods													
389	Ridge Route Drive & Moulton Parkway												
	ITAM 8.4-10 (04.13.10 Release)	0.46	A	0.66	B	0.58	A	0.72	C	0.52	A	0.76	C
	With EIR Mitigation(Post-2025 Overlay Plan)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.54	A	0.73	C
391	Santa Maria Drive & Moulton Parkway												
	ITAM 8.4-10 (04.13.10 Release)	0.53	A	0.74	C	0.67	B	0.79	C	0.50	A	0.74	C
	With EIR Mitigation (Post-2025 Base Plan)	#N/A	#N/A	#N/A	#N/A	0.67	B	0.76	C	0.49	A	0.74	C
	With EIR Mitigation (Post-2025 Overlay Plan)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.49	A	0.60	A
Mission Viejo													
421	Los Alisos Boulevard & Trabuco Road												
	ITAM 8.4-10 (04.13.10 Release)	0.74	C	0.67	B	0.77	C	0.71	C	0.69	B	0.74	C
	With EIR Mitigation (2025 Base Plan)	#N/A	#N/A	#N/A	#N/A	0.70	B	0.68	B	#N/A	#N/A	#N/A	#N/A
Aliso Viejo/Laguna Hills													
427	Moulton Parkway & Glenwood Drive/Indian Creek Lane												
	ITAM 8.4-10 (04.13.10 Release)	0.58	A	0.53	A	0.72	C	0.70	B	0.72	C	0.68	B
	With EIR Mitigation (Post-2025 Overlay Plan)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.60	A	0.68	B
429	Moulton Parkway & Laguna Hills Drive												
	ITAM 8.4-10 (04.13.10 Release)	0.61	B	0.68	B	0.83	D	0.82	D	0.82	D	0.83	D
	With EIR Mitigation (Post-2025 Overlay Plan)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.76	C	0.82	D
	With Alternate EIR Mitigation: (Post-2025 Overlay Plan)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.82	D	0.83	D
	With EIR Mitigation (Post-2025 Base Plan)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.74	C	0.74	C

Source ITAM 8.4-10

Note: #N/A - no mitigation identified in the EIR for the specified year

Table 5-9: Post-2030 Ramp Peak Hour Performance

Caltrans/TCA Ramp Location	Lanes	Capacity	AM Peak Hour			PM Peak Hour		
			Volume	V/C	LOS	Volume	V/C	LOS
SR-241 at Lake Forest Drive, Southbound Off-ramp #18 (Fair Share)								
2015								
ITAM 8.4-10 (04.13.10 Release)	1	1,500	660	0.44	A	310	0.21	A
2030								
ITAM 8.4-10 (04.13.10 Release)	1	1,500	920	0.61	B	410	0.27	A
Post-2030								
ITAM 8.4-10 (04.13.10 Release)	1	1,500	760	0.51	A	310	0.21	A

Source: ITAM 8.4-10

16.6 Traffic Analysis Summary

Based on the results presented in Table 5-8, the traffic analyses conducted for three horizon years reveal mitigation previously identified in the Orange County Great Park EIR for these seven intersections is no longer required. Since the Great Park intersection mitigation measures are no longer required to satisfy future level of service thresholds, no improvements above and beyond baseline conditions are warranted. Based on the results presented in Table 5-9, the SR-241 at Lake Forest Drive southbound off-ramp is forecast to operate at acceptable levels of service, therefore it should not be classified as a significant impact and future fair share contributions as a result of this prior impact are no longer required.

The removal of the improvements described in this Addendum at the specified locations would not result in any adverse impacts to Traffic and Transportation within the Great Park study area.

17. Utilities and Service Systems

Would the project:

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
- b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
- c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
- d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?
- e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
- f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?
- g) Comply with federal, state, and local statutes and regulations related to solid waste?

No Substantial Change from Previous Analysis. The removal of the traffic mitigation measures would not increase demand for utility services and would not require expansion or other alteration of existing utilities and service systems. There would be no substantial change to the findings in the Final EIR.

18. Mandatory Findings of Significance

- a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?
- b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?
- c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

No Substantial Change from Previous Analysis. Removal of the traffic mitigation measures at the seven intersections would not degrade the quality of the environment or affect fish, wildlife, or plant species. The proposed changes to the Final EIR would not cause cumulatively considerable impacts or environmental effects that would cause substantial adverse effects on human beings. Therefore, there would be no substantial change to the findings in the Final EIR.

6.0 CONCLUSION

This Addendum has been prepared to remove traffic improvements at seven intersections (Alton Parkway/Barranca Parkway, Lake Forest Drive/Irvine Center Drive, Ridge Route Drive/Moulton Parkway, Santa Maria Drive/Moulton Parkway, Los Alisos Boulevard/Trabuco Road, Moulton Parkway/Glenwood Drive-Indian Creek Lane, and Moulton Parkway/Laguna Hills Drive) from the list of traffic mitigation measures in the Orange County Great Park Final EIR. In addition, the notation of a significant impact for one ramp (SR-241 at Lake Forest Drive) will be removed and therefore there will be no responsibility to participate in fair share contributions towards study area circulation improvements for this prior ramp impact. In determining that an addendum to the Orange County Great Park Final EIR is required, the City has concluded that none of the conditions described in Section 15162 calling for preparation of a subsequent environmental document have occurred. No new significant environmental effects would occur, nor would the severity of impacts previously identified in the Orange County Great Park Final EIR substantially increase. Further, no new information of substantial importance, which was not known at the time the Final EIR was certified, has been noted. This does not represent a substantive change to the Orange County Great Park Final EIR. Therefore, this Addendum to the Final EIR is consistent with Sections 15162 and 15164 of the CEQA Guidelines. Per Section 15164(c) of CEQA Guidelines, this Addendum will not be circulated for public review, but will be attached to the Final EIR.

Appendix A Land Use By ITAM 8.4-10 TAZ

Year 2015

Study Area Land Use By ITAM 8.4-10 Taz

Analysis Year:

2015

Reference Number:

RunId:

ITAM 8.4-10

Build Date: 5/22/2010

Land Use:

2015 Baseline

Build Time:

Network:

Y2015Base_033110.HNT

Modeler: Other

ITAM TAZ	ITAM Code	Units	Description	Quantity
1	101	DU	Single Family Detached	331.000
1	102	DU	Condominiums	236.000
1	139	ACRE	Park	5.800
2	101	DU	Single Family Detached	657.000
2	102	DU	Condominiums	80.000
2	136	STU	ELEMENTARY/MIDDLE - ITAM	700.000
2	139	ACRE	Park	15.900
2	142	TSF	Child Care Center	10.000
3	132	TSF	Government Facility	244.314
4	101	DU	Single Family Detached	270.000
4	102	DU	Condominiums	98.000
4	139	ACRE	Park	6.800
6	101	DU	Single Family Detached	169.000
7	101	DU	Single Family Detached	142.000
9	103	DU	Apartments	500.000
11	16	TSF	GAS STATION	2.945
11	109	TSF	Commercial (EQ)	117.000
11	113	TSF	Restaurant	7.500
11	114	TSF	Fast Food Restaurant	7.000
11	116	SITE	GAS STATION	1.000
11	120	TSF	Bank	0.000
15	101	DU	Single Family Detached	0.000
15	102	DU	Condominiums	0.000
15	132	TSF	Government Facility	8.977
15	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
15	139	ACRE	Park	0.000
16	101	DU	Single Family Detached	100.000
16	102	DU	Condominiums	206.000
16	139	ACRE	Park	2.000
17	35	TSF	High-School	200.000
17	135	STU	HIGH-SCHOOL - ITAM	2,000.000
18	101	DU	Single Family Detached	0.000
18	102	DU	Condominiums	0.000
18	139	ACRE	Park	0.000
23	101	DU	Single Family Detached	104.000
23	102	DU	Condominiums	147.000
24	101	DU	Single Family Detached	447.000

Analysis Year:**2015****Reference Number:**

RunId:

ITAM 8.4-10

Build Date: 5/22/2010

Land Use:

2015 Baseline

Build Time:

Network:

Y2015Base_033110.HNT

Modeler: Other

ITAM TAZ	ITAM Code	Units	Description	Quantity
25	101	DU	Single Family Detached	151.000
25	102	DU	Condominiums	190.000
26	101	DU	Single Family Detached	202.000
27	101	DU	Single Family Detached	509.000
27	102	DU	Condominiums	503.000
27	103	DU	Apartments	378.000
27	109	TSF	Commercial (EQ)	85.000
28	101	DU	Single Family Detached	110.000
28	102	DU	Condominiums	218.000
29	101	DU	Single Family Detached	32.000
30	101	DU	Single Family Detached	179.000
30	102	DU	Condominiums	259.000
31	101	DU	Single Family Detached	188.000
31	136	STU	ELEMENTARY/MIDDLE - ITAM	635.000
32	101	DU	Single Family Detached	313.000
33	102	DU	Condominiums	38.000
33	103	DU	Apartments	392.000
33	109	TSF	Commercial (EQ)	6.618
34	103	DU	Apartments	744.000
35	102	DU	Condominiums	0.000
35	103	DU	Apartments	724.000
35	109	TSF	Commercial (EQ)	441.082
36	16	TSF	Gas Station	2.929
36	101	DU	Single Family Detached	2.000
36	109	TSF	Commercial (EQ)	125.992
36	114	TSF	Fast Food Restaurant	2.816
36	116	SITE	GAS STATION	1.000
36	142	TSF	Child Care Center	11.680
37	101	DU	Single Family Detached	82.000
37	102	DU	Condominiums	24.000
38	101	DU	Single Family Detached	548.000
38	102	DU	Condominiums	333.000
39	15	TSF	Cinema	48.346
39	109	TSF	Commercial (EQ)	215.712
39	113	TSF	Restaurant	7.590
39	115	SEAT	CINEMA - ITAM	1,785.000
40	103	DU	Apartments	138.000
40	109	TSF	Commercial (EQ)	126.825
40	113	TSF	Restaurant	7.827
41	102	DU	Condominiums	0.000

Analysis Year:**2015****Reference Number:**

RunId:

ITAM 8.4-10

Build Date: 5/22/2010

Land Use:

2015 Baseline

Build Time:

Network:

Y2015Base_033110.HNT

Modeler: Other

ITAM TAZ	ITAM Code	Units	Description	Quantity
41	103	DU	Apartments	756.000
41	125	TSF	Research and Development	0.000
41	161	TSF	Mini Warehouse	106.183
42	121	TSF	Office	319.748
42	125	TSF	Research and Development	300.591
43	101	DU	Single Family Detached	0.000
43	102	DU	Condominiums	0.000
43	103	DU	Apartments	0.000
43	135	STU	HIGH-SCHOOL - ITAM	2,000.000
44	101	DU	Single Family Detached	0.000
44	102	DU	Condominiums	225.000
44	103	DU	Apartments	162.000
44	121	TSF	Office	347.615
44	125	TSF	Research and Development	281.323
44	132	TSF	Government Facility	0.000
44	139	ACRE	Park	10.000
45	102	DU	Condominiums	117.000
46	101	DU	Single Family Detached	215.000
46	102	DU	Condominiums	211.000
47	102	DU	Condominiums	204.000
48	101	DU	Single Family Detached	161.000
49	36	TSF	Elementary/Middle	59.178
49	101	DU	Single Family Detached	196.000
49	129	TSF	Community Facility	1.318
49	136	STU	ELEMENTARY/MIDDLE - ITAM	900.000
50	101	DU	Single Family Detached	483.000
51	101	DU	Single Family Detached	78.000
51	130	TSF	Church/Synagogue	17.131
51	142	TSF	Child Care Center	12.508
52	101	DU	Single Family Detached	152.000
53	101	DU	Single Family Detached	140.000
54	101	DU	Single Family Detached	54.000
55	36	TSF	Elementary/Middle	0.000
55	101	DU	Single Family Detached	0.000
55	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
56	36	TSF	Elementary/Middle	0.000
56	101	DU	Single Family Detached	0.000
56	102	DU	Condominiums	0.000
56	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
56	139	ACRE	Park	0.000

Analysis Year: 2015
RunId: ITAM 8.4-10
Land Use: 2015 Baseline
Network: Y2015Base_033110.HNT

Reference Number:
Build Date: 5/22/2010
Build Time:
Modeler: Other

ITAM TAZ	ITAM Code	Units	Description	Quantity
59	139	ACRE	Park	20.000
61	101	DU	Single Family Detached	356.000
61	102	DU	Condominiums	88.000
62	101	DU	Single Family Detached	403.000
62	102	DU	Condominiums	0.000
62	103	DU	Apartments	520.000
62	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
63	121	TSF	Office	0.000
63	125	TSF	Research and Development	0.000
65	101	DU	Single Family Detached	367.000
65	102	DU	Condominiums	262.000
65	103	DU	Apartments	357.000
66	100	DU	Estate	0.000
68	101	DU	Single Family Detached	699.000
68	102	DU	Condominiums	378.000
70	101	DU	Single Family Detached	380.000
70	102	DU	Condominiums	356.000
70	103	DU	Apartments	221.000
70	136	STU	ELEMENTARY/MIDDLE - ITAM	750.000
70	139	ACRE	Park	10.700
70	142	TSF	Child Care Center	10.000
71	101	DU	Single Family Detached	341.000
71	102	DU	Condominiums	122.000
71	137	ACRE	Open Space	0.585
71	139	ACRE	Park	2.418
72	101	DU	Single Family Detached	128.000
73	101	DU	Single Family Detached	373.000
73	102	DU	Condominiums	3.000
74	101	DU	Single Family Detached	457.000
74	102	DU	Condominiums	3.000
74	139	ACRE	Park	3.913
75	36	TSF	Elementary/Middle	33.694
75	101	DU	Single Family Detached	380.000
75	136	STU	ELEMENTARY/MIDDLE - ITAM	618.000
75	139	ACRE	Park	3.970
76	36	TSF	Elementary/Middle	82.850
76	101	DU	Single Family Detached	233.000
76	102	DU	Condominiums	53.000
76	136	STU	ELEMENTARY/MIDDLE - ITAM	1,379.000
76	137	ACRE	Open Space	0.364

Analysis Year:**2015****Reference Number:**

RunId:

ITAM 8.4-10

Build Date: 5/22/2010

Land Use:

2015 Baseline

Build Time:

Network:

Y2015Base_033110.HNT

Modeler: Other

ITAM TAZ	ITAM Code	Units	Description	Quantity
77	102	DU	Condominiums	608.000
78	101	DU	Single Family Detached	297.000
78	102	DU	Condominiums	1.000
78	139	ACRE	Park	1.796
79	101	DU	Single Family Detached	250.000
79	102	DU	Condominiums	5.000
79	129	TSF	Community Facility	7.552
79	139	ACRE	Park	10.800
80	16	TSF	Gas Station	1.000
80	109	TSF	Commercial (EQ)	128.661
80	114	TSF	Fast Food Restaurant	5.863
80	116	SITE	GAS STATION	1.000
80	120	TSF	Bank	9.524
80	121	TSF	Office	54.562
81	36	TSF	Elementary/Middle	35.828
81	101	DU	Single Family Detached	464.000
81	136	STU	ELEMENTARY/MIDDLE - ITAM	552.000
81	139	ACRE	Park	6.007
82	101	DU	Single Family Detached	289.000
82	139	ACRE	Park	0.421
83	101	DU	Single Family Detached	197.000
83	103	DU	Apartments	0.000
84	104	DU	Housing B (Mobile Home)	533.000
84	139	ACRE	Park	3.500
85	16	TSF	Gas Station	5.394
85	102	DU	Condominiums	256.000
85	103	DU	Apartments	289.000
85	116	SITE	GAS STATION	1.000
85	121	TSF	Office	16.106
85	139	ACRE	Park	0.142
86	101	DU	Single Family Detached	309.000
86	139	ACRE	Park	3.155
87	101	DU	Single Family Detached	290.000
87	139	ACRE	Park	5.532
88	36	TSF	Elementary/Middle	34.002
88	101	DU	Single Family Detached	198.000
88	136	STU	ELEMENTARY/MIDDLE - ITAM	601.000
88	139	ACRE	Park	6.132
89	130	TSF	Church/Synagogue	16.558
89	139	ACRE	Park	0.000

Analysis Year: 2015
RunId: ITAM 8.4-10
Land Use: 2015 Baseline
Network: Y2015Base_033110.HNT

Reference Number:
Build Date: 5/22/2010
Build Time:
Modeler: Other

ITAM TAZ	ITAM Code	Units	Description	Quantity
89	161	TSF	Mini Warehouse	228.957
89	164	SPACE	RV Storage	0.000
90	101	DU	Single Family Detached	213.000
90	139	ACRE	Park	2.731
91	109	TSF	Commercial (EQ)	16.620
91	130	TSF	Church/Synagogue	5.280
92	101	DU	Single Family Detached	218.000
92	102	DU	Condominiums	182.000
92	107	DU	Congregate Care	0.000
93	101	DU	Single Family Detached	184.000
93	139	ACRE	Park	3.670
94	101	DU	Single Family Detached	129.000
95	102	DU	Condominiums	348.000
95	103	DU	Apartments	604.000
95	139	ACRE	Park	5.801
96	102	DU	Condominiums	179.000
96	103	DU	Apartments	96.000
96	130	TSF	Church/Synagogue	15.983
97	16	TSF	Gas Station	2.837
97	36	TSF	Elementary/Middle	14.458
97	109	TSF	Commercial (EQ)	171.366
97	116	SITE	GAS STATION	1.000
97	120	TSF	Bank	3.500
97	121	TSF	Office	138.496
97	130	TSF	Church/Synagogue	54.498
97	136	STU	ELEMENTARY/MIDDLE - ITAM	180.000
98	109	TSF	Commercial (EQ)	0.000
98	121	TSF	Office	312.634
99	101	DU	Single Family Detached	297.000
100	101	DU	Single Family Detached	519.000
100	102	DU	Condominiums	314.000
101	101	DU	Single Family Detached	417.000
101	102	DU	Condominiums	552.000
101	103	DU	Apartments	991.000
101	136	STU	ELEMENTARY/MIDDLE - ITAM	900.000
102	102	DU	Apartments	157.000
102	135	STU	HIGH-SCHOOL - ITAM	1,200.000
103	101	DU	Single Family Detached	512.000
103	102	DU	Condominiums	575.000
103	103	DU	Apartments	540.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
104	121	TSF	Office	0.000
104	125	TSF	Research and Development	0.000
105	102	DU	Condominiums	0.000
105	103	DU	Apartments	695.000
105	109	TSF	Commercial (EQ)	0.000
105	114	TSF	Fast Food Restaurant	0.000
106	101	DU	Single Family Detached	464.000
106	102	DU	Condominiums	264.000
106	129	TSF	Community Facility	8.000
106	136	STU	ELEMENTARY/MIDDLE - ITAM	624.000
106	142	TSF	Child Care Center	17.500
107	102	DU	Condominiums	0.000
107	103	DU	Apartments	402.000
108	101	DU	Single Family Detached	481.000
108	102	DU	Condominiums	84.000
108	103	DU	Apartments	598.000
108	136	STU	ELEMENTARY/MIDDLE - ITAM	900.000
109	121	TSF	Office	0.000
109	136	STU	ELEMENTARY/MIDDLE - ITAM	1,200.000
110	121	TSF	Office	0.000
111	103	DU	Apartments	617.000
111	153	TSF	OCTA Facility	0.000
112	101	DU	Single Family Detached	286.000
112	121	TSF	Office	0.000
113	103	DU	Apartments	453.000
113	121	TSF	Office	0.000
114	124	TSF	Warehouse	0.000
114	130	TSF	Church/Synagogue	0.000
115	121	TSF	Office	0.000
116	121	TSF	Office	9.298
116	124	TSF	Warehouse	24.868
116	125	TSF	Research and Development	0.000
116	130	TSF	Church/Synagogue	4.600
116	153	TSF	OCTA Facility	48.389
116	186	SG	OCTD SB MAINT. YARD	0.000
117	109	TSF	Commercial (EQ)	286.530
118	109	TSF	Commercial (EQ)	0.000
118	121	TSF	Office	382.827
118	123	TSF	Manufacturing	213.542
118	124	TSF	Warehouse	417.301

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ITAM TAZ	ITAM Code	Units	Description	Quantity
118	126	TSF	Health Club	41.000
119	109	TSF	Commercial (EQ)	0.000
119	121	TSF	Office	0.000
120	121	TSF	Office	155.272
120	124	TSF	Warehouse	26.656
120	125	TSF	Research and Development	180.000
121	101	DU	Single Family Detached	570.000
122	121	TSF	Office	187.317
122	124	TSF	Warehouse	16.814
122	125	TSF	Research and Development	69.410
123	121	TSF	Office	481.520
123	123	TSF	Manufacturing	78.040
123	124	TSF	Warehouse	12.529
124	103	DU	Apartments	100.000
125	29	ACRE	Homeowner's Assoc. Rec. Area	2.763
125	101	DU	Single Family Detached	475.000
127	103	DU	Apartments	24.000
127	129	TSF	Community Facility	5.897
127	139	ACRE	Park	19.400
128	36	TSF	Elementary/Middle	0.000
128	101	DU	Single Family Detached	425.000
128	139	ACRE	Park	2.600
129	36	TSF	Elementary/Middle	39.950
129	101	DU	Single Family Detached	413.000
129	136	STU	ELEMENTARY/MIDDLE - ITAM	595.000
129	137	ACRE	Open Space	0.300
129	139	ACRE	Park	3.000
130	102	DU	Condominiums	191.000
131	16	TSF	Gas Station	1.543
131	109	TSF	Commercial (EQ)	60.636
131	114	TSF	Fast Food Restaurant	1.585
131	116	SITE	GAS STATION	1.000
131	120	TSF	Bank	4.500
131	121	TSF	Office	5.486
132	102	DU	Condominiums	424.000
132	103	DU	Apartments	444.000
132	139	ACRE	Park	1.580
133	16	TSF	Gas Station	3.491
133	109	TSF	Commercial (EQ)	202.519
133	113	TSF	Restaurant	12.261

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ITAM TAZ	ITAM Code	Units	Description	Quantity
133	114	TSF	Fast Food Restaurant	6.688
133	116	SITE	GAS STATION	3.000
133	120	TSF	Bank	3.964
133	121	TSF	Office	7.284
133	141	TSF	Nursery	7.826
134	16	TSF	Gas Station	0.560
134	109	TSF	Commercial (EQ)	235.348
134	113	TSF	Restaurant	35.198
134	114	TSF	Fast Food Restaurant	2.454
134	116	SITE	GAS STATION	1.000
134	120	TSF	Bank	11.995
134	121	TSF	Office	39.843
135	101	DU	Single Family Detached	21.000
135	102	DU	Condominiums	210.000
136	35	TSF	High-School	97.978
136	129	TSF	Community Facility	68.993
136	133	TSF	Library	21.000
136	135	STU	HIGH-SCHOOL - ITAM	2,395.000
136	139	ACRE	Park	27.100
136	142	TSF	Child Care Center	2.880
137	36	TSF	Elementary/Middle	36.604
137	101	DU	Single Family Detached	627.000
137	136	STU	ELEMENTARY/MIDDLE - ITAM	429.000
137	139	ACRE	Park	6.060
138	101	DU	Single Family Detached	510.000
138	139	ACRE	Park	1.511
139	102	DU	Condominiums	187.000
139	139	ACRE	Park	2.137
140	29	ACRE	Homeowner's Assoc. Rec. Area	0.060
140	101	DU	Single Family Detached	112.000
140	102	DU	Condominiums	175.000
140	139	ACRE	Park	1.111
141	36	TSF	Elementary/Middle	44.207
141	101	DU	Single Family Detached	285.000
141	136	STU	ELEMENTARY/MIDDLE - ITAM	715.000
141	139	ACRE	Park	2.915
142	102	DU	Condominiums	124.000
142	103	DU	Apartments	334.000
142	130	TSF	Church/Synagogue	39.532
143	101	DU	Single Family Detached	364.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
144	36	TSF	Elementary/Middle	35.761
144	101	DU	Single Family Detached	143.000
144	103	DU	Apartments	288.000
144	130	TSF	Church/Synagogue	19.044
144	136	STU	ELEMENTARY/MIDDLE - ITAM	400.000
144	137	ACRE	Open Space	2.923
144	139	ACRE	Park	1.161
145	29	ACRE	Homeowner's Assoc. Rec. Area	1.254
145	101	DU	Single Family Detached	107.000
145	102	DU	Condominiums	176.000
145	139	ACRE	Park	2.294
146	29	ACRE	Homeowner's Assoc. Rec. Area	1.075
146	102	DU	Condominiums	292.000
147	36	TSF	Elementary/Middle	70.060
147	101	DU	Single Family Detached	247.000
147	129	TSF	Community Facility	3.873
147	136	STU	ELEMENTARY/MIDDLE - ITAM	600.000
147	137	ACRE	Open Space	2.217
147	139	ACRE	Park	10.600
148	16	TSF	Gas Station	1.610
148	109	TSF	Commercial (EQ)	121.234
148	113	TSF	Restaurant	7.562
148	114	TSF	Fast Food Restaurant	2.113
148	116	SITE	GAS STATION	1.000
148	121	TSF	Office	43.386
149	102	DU	Condominiums	10.000
149	104	DU	Housing B (Mobile Home)	356.000
150	101	DU	Single Family Detached	304.000
150	121	TSF	Office	32.730
150	122	TSF	Medical Office	37.226
150	124	TSF	Warehouse	1.080
150	130	TSF	Church/Synagogue	25.010
150	142	TSF	Child Care Center	5.734
151	101	DU	Single Family Detached	429.000
151	139	ACRE	Park	3.081
152	36	TSF	Elementary/Middle	38.763
152	102	DU	Condominiums	96.000
152	136	STU	ELEMENTARY/MIDDLE - ITAM	551.000
152	139	ACRE	Park	1.804
153	109	TSF	Commercial (EQ)	41.068

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ITAM TAZ	ITAM Code	Units	Description	Quantity
153	120	TSF	Bank	9.964
153	121	TSF	Office	5.475
154	27	TSF	Commercial Recreation	0.285
155	121	TSF	Office	3.750
155	124	TSF	Warehouse	139.975
155	125	TSF	Research and Development	31.850
155	140	ACRE	Golf Course	220.000
156	85	TSF	Travel Land	54.684
156	118	TSF	Auto Dealer	0.000
156	121	TSF	Office	37.500
156	124	TSF	Warehouse	0.000
156	125	TSF	Research and Development	62.500
157	27	TSF	Commercial Recreation	20.249
157	121	TSF	Office	289.370
157	123	TSF	Manufacturing	12.709
157	124	TSF	Warehouse	177.828
157	125	TSF	Research and Development	6.250
157	130	TSF	Church/Synagogue	11.434
158	43	TSF	Community College	150.001
158	130	TSF	Church/Synagogue	0.000
159	121	TSF	Office	15.000
159	123	TSF	Manufacturing	2.500
159	124	TSF	Warehouse	208.142
159	125	TSF	Research and Development	72.980
159	132	TSF	Government Facility	100.666
160	29	ACRE	Homeowner's Assoc. Rec. Area	1.197
160	101	DU	Single Family Detached	272.000
160	102	DU	Condominiums	780.000
160	103	DU	Apartments	60.000
160	125	TSF	Research and Development	0.000
160	130	TSF	Church/Synagogue	40.684
160	137	ACRE	Open Space	2.961
161	121	TSF	Office	489.376
161	125	TSF	Research and Development	25.000
162	103	DU	Apartments	210.000
163	109	TSF	Commercial (EQ)	0.000
163	121	TSF	Office	469.132
164	16	TSF	Gas Station	2.432
164	36	TSF	Elementary/Middle	14.326
164	109	TSF	Commercial (EQ)	141.032

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ITAM TAZ	ITAM Code	Units	Description	Quantity
164	116	SITE	GAS STATION	1.000
164	120	TSF	Bank	3.635
165	101	DU	Single Family Detached	4.000
165	102	DU	Condominiums	135.000
166	101	DU	Single Family Detached	78.000
166	102	DU	Condominiums	57.000
167	101	DU	Single Family Detached	36.000
167	102	DU	Condominiums	287.000
167	103	DU	Apartments	730.000
167	129	TSF	Community Facility	9.649
167	139	ACRE	Park	2.504
167	142	TSF	Child Care Center	12.660
168	102	DU	Condominiums	210.000
168	139	ACRE	Park	0.667
169	101	DU	Single Family Detached	101.000
169	102	DU	Condominiums	102.000
170	101	DU	Single Family Detached	13.000
170	102	DU	Condominiums	104.000
171	101	DU	Single Family Detached	82.000
172	102	DU	Condominiums	106.000
172	103	DU	Apartments	364.000
172	109	TSF	Commercial (EQ)	0.000
173	103	DU	Apartments	224.000
173	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
174	101	DU	Single Family Detached	151.000
175	101	DU	Single Family Detached	112.000
176	11	TSF	Hotel	61.512
176	34	BEDS	HOSPITAL - ITAM	0.000
176	111	ROOM	HOTEL - ITAM	122.000
176	121	TSF	Office	33.873
176	122	TSF	Medical Office	49.081
176	125	TSF	Research and Development	0.000
176	134	TSF	Hospital	0.000
176	137	ACRE	Open Space	7.400
177	121	TSF	Office	331.743
177	125	TSF	Research and Development	0.000
177	137	ACRE	Open Space	10.100
178	122	TSF	Medical Office	115.762
178	134	TSF	Hospital	745.263
179	121	TSF	Office	252.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
179	125	TSF	Research and Development	0.000
179	137	ACRE	Open Space	10.900
180	121	TSF	Office	55.900
180	124	TSF	Warehouse	139.418
180	125	TSF	Research and Development	348.500
181	121	TSF	Office	0.000
181	122	TSF	Medical Office	452.000
181	125	TSF	Research and Development	0.000
181	134	TSF	Hospital	848.000
182	121	TSF	Office	216.058
182	124	TSF	Warehouse	0.000
182	125	TSF	Research and Development	0.000
183	121	TSF	Office	148.213
184	121	TSF	Office	65.351
184	124	TSF	Warehouse	0.000
184	125	TSF	Research and Development	115.170
184	137	ACRE	Open Space	10.100
184	161	TSF	Mini Warehouse	0.000
185	121	TSF	Office	104.000
185	124	TSF	Warehouse	0.000
185	125	TSF	Research and Development	189.200
186	121	TSF	Office	221.054
186	124	TSF	Warehouse	252.820
186	125	TSF	Research and Development	186.659
186	137	ACRE	Open Space	18.400
187	127	ACRE	COMMERCIAL RECREATION - ITAM	4.400
187	129	TSF	Community Facility	9.804
187	132	TSF	Government Facility	191.233
187	142	TSF	Child Care Center	11.162
188	121	TSF	Office	61.497
189	102	DU	Condominiums	259.000
189	103	DU	Apartments	1,161.000
189	115	SEAT	CINEMA - ITAM	1,698.000
189	137	ACRE	Open Space	5.744
189	139	ACRE	Park	3.187
190	16	TSF	Gas Station	1.500
190	109	TSF	Commercial (EQ)	308.319
190	113	TSF	Restaurant	18.440
190	116	SITE	GAS STATION	1.000
191	102	DU	Condominiums	397.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
192	15	TSF	Cinema	42.826
192	16	TSF	Gas Station	1.632
192	109	TSF	Commercial (EQ)	213.150
192	113	TSF	Restaurant	22.413
192	115	SEAT	CINEMA - ITAM	1,698.000
192	116	SITE	GAS STATION	1.000
192	117	SITE	CAR WASH	1.000
193	36	TSF	Elementary/Middle	44.000
193	101	DU	Single Family Detached	576.000
193	103	DU	Apartments	354.000
193	136	STU	ELEMENTARY/MIDDLE - ITAM	552.000
193	139	ACRE	Park	10.002
193	142	TSF	Child Care Center	10.345
194	101	DU	Single Family Detached	317.000
194	103	DU	Apartments	200.000
194	139	ACRE	Park	3.997
195	103	DU	Apartments	426.000
195	129	TSF	Community Facility	0.000
195	139	ACRE	Park	5.117
196	16	TSF	Gas Station	2.070
196	17	TSF	Car Wash	5.703
196	109	TSF	Commercial (EQ)	5.470
196	114	TSF	Fast Food Restaurant	3.408
196	116	SITE	GAS STATION	1.000
196	117	SITE	CAR WASH	1.000
196	119	TSF	Auto Repair	10.338
197	101	DU	Single Family Detached	154.000
197	139	ACRE	Park	2.258
198	36	TSF	Elementary/Middle	45.490
198	101	DU	Single Family Detached	145.000
198	129	TSF	Community Facility	0.000
198	136	STU	ELEMENTARY/MIDDLE - ITAM	969.000
198	139	ACRE	Park	0.120
199	109	TSF	Commercial (EQ)	102.506
200	102	DU	Condominiums	286.000
200	137	ACRE	Open Space	0.903
200	139	ACRE	Park	0.978
201	103	DU	Apartments	513.000
202	101	DU	Single Family Detached	460.000
202	139	ACRE	Park	3.657

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ITAM TAZ	ITAM Code	Units	Description	Quantity
203	29	ACRE	Homeowner's Assoc. Rec. Area	2.261
203	101	DU	Single Family Detached	241.000
203	102	DU	Condominiums	123.000
203	139	ACRE	Park	2.549
204	101	DU	Single Family Detached	132.000
204	102	DU	Condominiums	185.000
204	139	ACRE	Park	3.819
205	29	ACRE	Homeowner's Assoc. Rec. Area	0.401
205	101	DU	Single Family Detached	92.000
205	102	DU	Condominiums	257.000
205	139	ACRE	Park	4.651
206	101	DU	Single Family Detached	31.000
206	102	DU	Condominiums	133.000
206	103	DU	Apartments	220.000
206	139	ACRE	Park	3.873
207	36	TSF	Elementary, Middle	56.730
207	101	DU	Single Family Detached	110.000
207	102	DU	Condominiums	64.000
207	136	STU	ELEMENTARY, MIDDLE - ITAM	1,685.000
207	139	ACRE	Park	1.908
208	36	TSF	Elementary, Middle	33.874
208	101	DU	Single Family Detached	131.000
208	102	DU	Condominiums	103.000
208	136	STU	ELEMENTARY, MIDDLE - ITAM	539.000
208	137	ACRE	Open Space	2.546
208	139	ACRE	Park	4.999
209	101	DU	Single Family Detached	57.000
209	102	DU	Condominiums	258.000
209	139	ACRE	Park	1.998
210	101	DU	Single Family Detached	105.000
210	102	DU	Condominiums	138.000
210	113	TSF	Restaurant	12.470
210	121	TSF	Office	23.000
210	139	ACRE	Park	1.999
211	113	TSF	Restaurant	12.667
211	121	TSF	Office	148.208
212	101	DU	Single Family Detached	48.000
212	102	DU	Condominiums	295.000
212	139	ACRE	Park	2.592
213	35	TSF	High-School	23.098

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ITAM TAZ	ITAM Code	Units	Description	Quantity
213	106	DU	Senior Housing	165.000
213	109	TSF	Commercial (EQ)	29.656
213	121	TSF	Office	82.974
213	130	TSF	Church, Synagogue	5.164
213	135	STU	HIGH-SCHOOL - ITAM	113.000
213	142	TSF	Child Care Center	15.389
214	29	ACRE	Homeowner's Assoc. Rec. Area	5.028
214	36	TSF	Elementary, Middle	33.808
214	101	DU	Single Family Detached	181.000
214	102	DU	Condominiums	256.000
214	136	STU	ELEMENTARY, MIDDLE - ITAM	553.000
214	139	ACRE	Park	4.009
215	129	TSF	Community Facility	1.750
216	36	TSF	Elementary, Middle	0.000
216	101	DU	Single Family Detached	0.000
216	102	DU	Condominiums	414.000
216	103	DU	Apartments	375.000
216	136	STU	ELEMENTARY, MIDDLE - ITAM	0.000
216	139	ACRE	Park	4.000
217	101	DU	Single Family Detached	64.000
217	102	DU	Condominiums	356.000
217	139	ACRE	Park	2.041
218	101	DU	Single Family Detached	98.000
218	102	DU	Condominiums	151.000
219	35	TSF	High-School	193.431
219	130	TSF	Church, Synagogue	111.632
219	135	STU	HIGH-SCHOOL - ITAM	2,115.000
219	137	ACRE	Open Space	3.369
220	16	TSF	Gas Station	0.000
220	17	TSF	Car Wash	5.554
220	109	TSF	Commercial (EQ)	182.726
220	114	TSF	Fast Food Restaurant	0.000
220	115	SEATS	CINEMA - ITAM	0.000
220	117	SITE	ITAM Car Wash	1.000
220	120	TSF	Bank	12.418
220	122	TSF	Medical Office	11.174
220	142	TSF	Child Care Center	5.730
221	29	ACRE	Homeowner's Assoc. Rec. Area	5.332
221	101	DU	Single Family Detached	289.000
221	102	DU	Condominiums	210.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
221	139	ACRE	Park	4.003
222	103	DU	Apartments	136.000
223	101	DU	Single Family Detached	51.000
223	102	DU	Condominiums	72.000
224	5	TSF	Convalescent Home	93.857
224	105	BEDS	CONVALESCENT HOME	123.000
224	114	TSF	Fast Food Restaurant	4.008
224	121	TSF	Office	122.952
224	122	TSF	Medical Office	118.100
224	130	TSF	Church, Synagogue	40.236
225	29	ACRE	Homeowner's Assoc. Rec. Area	6.352
225	101	DU	Single Family Detached	270.000
225	102	DU	Condominiums	332.000
225	139	ACRE	Park	2.088
226	36	TSF	Elementary, Middle	24.810
226	106	DU	Senior Housing	116.000
226	109	TSF	Commercial (EQ)	0.976
226	121	TSF	Office	16.015
226	122	TSF	Medical Office	75.898
226	136	STU	ELEMENTARY, MIDDLE - ITAM	138.000
226	161	TSF	Mini Warehouse	117.648
227	36	TSF	Elementary, Middle	52.393
227	101	DU	Single Family Detached	57.000
227	102	DU	Condominiums	268.000
227	136	STU	ELEMENTARY, MIDDLE - ITAM	596.000
227	139	ACRE	Park	4.258
228	17	TSF	Car Wash	5.545
228	103	DU	Apartments	176.000
228	107	DU	Congregate Care	140.000
228	117	SITE	ITAM Car Wash	1.000
228	121	TSF	Office	35.046
228	123	TSF	Manufacturing	0.000
228	124	TSF	Warehouse	7.917
228	130	TSF	Church, Synagogue	141.099
229	129	TSF	Community Facility	23.500
229	132	TSF	Government Facility	7.500
230	101	DU	Single Family Detached	24.000
231	101	DU	Single Family Detached	179.000
231	102	DU	Condominiums	149.000
231	139	ACRE	Park	6.661

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ITAM TAZ	ITAM Code	Units	Description	Quantity
232	36	TSF	Elementary, Middle	47.334
232	101	DU	Single Family Detached	235.000
232	102	DU	Condominiums	361.000
232	136	STU	ELEMENTARY, MIDDLE - ITAM	625.000
232	139	ACRE	Park	3.993
233	16	TSF	Gas Station	1.310
233	109	TSF	Commercial (EQ)	108.849
233	113	TSF	Restaurant	6.650
233	114	TSF	Fast Food Restaurant	4.300
233	116	SITE	ITAM Gas Station	1.000
234	36	TSF	Elementary, Middle	62.624
234	101	DU	Single Family Detached	73.000
234	102	DU	Condominiums	176.000
234	136	STU	ELEMENTARY, MIDDLE - ITAM	560.000
235	101	DU	Single Family Detached	168.000
235	102	DU	Condominiums	20.000
235	103	DU	Apartments	320.000
236	102	DU	Condominiums	331.000
236	103	DU	Apartments	258.000
236	139	ACRE	Park	4.003
237	101	DU	Single Family Detached	17.000
237	102	DU	Condominiums	368.000
239	132	TSF	Government Facility	8.827
241	101	DU	Single Family Detached	1.000
241	102	DU	Condominiums	527.000
241	103	DU	Apartments	927.000
241	109	TSF	Commercial (EQ)	145.500
241	114	TSF	Fast Food Restaurant	3.500
241	116	SITE	GAS STATION	1.000
241	129	TSF	Community Facility	3.139
242	103	DU	Apartments	182.000
242	137	ACRE	Open Space	18.000
243	103	DU	Apartments	0.000
243	121	TSF	Office	1,054.000
244	36	TSF	Elementary/Middle	0.000
244	101	DU	Single Family Detached	385.000
244	102	DU	Condominiums	771.000
244	103	DU	Apartments	0.000
244	109	TSF	Commercial (EQ)	0.000
244	130	TSF	Church/Synagogue	55.000

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244	136	STU	ELEMENTARY/MIDDLE - ITAM	700.000
244	137	ACRE	Open Space	33.000
244	139	ACRE	Park	51.500
245	121	TSF	Office	6.000
246	101	DU	Single Family Detached	175.000
251	27	TSF	Commercial Recreation	75.238
251	127	ACRE	COMMERCIAL RECREATION - ITAM	1.677
252	103	DU	Apartments	880.000
252	130	TSF	Church/Synagogue	31.235
252	139	ACRE	Park	3.380
253	127	ACRE	COMMERCIAL RECREATION - ITAM	3.600
253	130	TSF	Church/Synagogue	38.077
254	16	TSF	Gas Station	6.980
254	17	TSF	Car Wash	6.152
254	102	DU	Condominiums	177.000
254	103	DU	Apartments	368.000
254	109	TSF	Commercial (EQ)	0.000
254	116	SITE	GAS STATION	0.000
254	117	SITE	CAR WASH	1.000
254	120	TSF	Bank	7.438
254	126	TSF	Health Club	6.037
254	129	TSF	Community Facility	9.374
254	130	TSF	Church/Synagogue	37.567
254	137	ACRE	Open Space	0.469
254	140	ACRE	Golf Course	83.000
255	102	DU	Condominiums	372.000
255	137	ACRE	Open Space	0.396
256	101	DU	Single Family Detached	0.000
256	102	DU	Condominiums	362.000
256	137	ACRE	Open Space	18.079
256	139	ACRE	Park	2.234
257	101	DU	Single Family Detached	158.000
257	137	ACRE	Open Space	1.076
258	101	DU	Single Family Detached	106.000
259	16	TSF	Gas Station	2.065
259	109	TSF	Commercial (EQ)	48.553
259	114	TSF	Fast Food Restaurant	3.000
259	116	SITE	ITAM - Gas Station	1.000
259	120	TSF	Bank	5.307
259	121	TSF	Office	11.504

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ITAM TAZ	ITAM Code	Units	Description	Quantity
260	36	TSF	Elementary, Middle	71.724
260	136	STU	ELEMENTARY, MIDDLE - ITAM	872.000
261	101	DU	Single Family Detached	133.000
261	102	DU	Condominiums	63.000
261	137	ACRE	Open Space	9.498
261	139	ACRE	Park	7.279
262	101	DU	Single Family Detached	116.000
262	137	ACRE	Open Space	0.265
263	101	DU	Single Family Detached	0.000
263	102	DU	Condominiums	173.000
264	101	DU	Single Family Detached	0.000
264	102	DU	Condominiums	334.000
265	101	DU	Single Family Detached	0.000
265	102	DU	Condominiums	387.000
265	130	TSF	Church, Synagogue	42.464
265	137	ACRE	Open Space	18.619
265	139	ACRE	Park	2.183
266	36	TSF	Elementary, Middle	55.394
266	102	DU	Condominiums	98.000
266	129	TSF	Community Facility	14.524
266	136	STU	ELEMENTARY, MIDDLE - ITAM	551.000
266	139	ACRE	Park	7.200
267	101	DU	Single Family Detached	101.000
267	102	DU	Condominiums	181.000
267	137	ACRE	Open Space	16.102
268	36	TSF	Elementary, Middle	0.000
268	101	DU	Single Family Detached	246.000
268	136	STU	ELEMENTARY, MIDDLE - ITAM	0.000
268	139	ACRE	Park	4.753
269	16	TSF	Gas Station	2.000
269	103	DU	Apartments	296.000
269	109	TSF	Commercial (EQ)	46.778
269	113	TSF	Restaurant	7.000
269	116	SITE	ITAM - Gas Station	1.000
269	121	TSF	Office	12.081
269	122	TSF	Medical Office	6.932
270	102	DU	Condominiums	165.000
270	130	TSF	Church/Synagogue	25.997
270	137	ACRE	Open Space	13.444
271	140	ACRE	Golf Course	100.000

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272	29	ACRE	Homeowner's Assoc. Rec. Area	0.718
272	43	TSF	Community College	244.216
272	101	DU	Single Family Detached	151.000
272	127	ACRE	COMMERCIAL RECREATION - ITAM	0.718
272	137	ACRE	Open Space	0.408
272	140	ACRE	Golf Course	0.000
273	140	ACRE	Golf Course	97.000
274	35	TSF	High-School	159.652
274	103	DU	Apartments	252.000
274	135	STU	HIGH-SCHOOL - ITAM	2,515.000
275	101	DU	Single Family Detached	126.000
275	102	DU	Condominiums	74.000
275	103	DU	Apartments	216.000
276	101	DU	Single Family Detached	135.000
276	102	DU	Condominiums	150.000
277	29	ACRE	Homeowner's Assoc. Rec. Area	0.927
277	101	DU	Single Family Detached	2.000
277	102	DU	Condominiums	188.000
278	101	DU	Single Family Detached	142.000
278	102	DU	Condominiums	114.000
278	137	ACRE	Open Space	0.588
279	36	TSF	Elementary/Middle	38.573
279	101	DU	Single Family Detached	129.000
279	136	STU	ELEMENTARY/MIDDLE - ITAM	300.000
280	101	DU	Single Family Detached	23.000
280	102	DU	Condominiums	152.000
281	101	DU	Single Family Detached	151.000
282	101	DU	Single Family Detached	112.000
282	102	DU	Condominiums	39.000
283	101	DU	Single Family Detached	288.000
283	137	ACRE	Open Space	0.150
283	139	ACRE	Park	1.875
284	29	ACRE	Homeowner's Assoc. Rec. Area	0.514
284	101	DU	Single Family Detached	45.000
284	102	DU	Condominiums	524.000
284	137	ACRE	Open Space	0.399
284	139	ACRE	Park	2.620
285	101	DU	Single Family Detached	72.000
285	102	DU	Condominiums	175.000
285	137	ACRE	Open Space	0.989

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ITAM TAZ	ITAM Code	Units	Description	Quantity
286	36	TSF	Elementary/Middle	32.073
286	101	DU	Single Family Detached	167.000
286	136	STU	ELEMENTARY/MIDDLE - ITAM	267.000
286	139	ACRE	Park	3.100
287	101	DU	Single Family Detached	192.000
287	139	ACRE	Park	1.665
288	101	DU	Single Family Detached	151.000
288	129	TSF	Community Facility	19.746
288	139	ACRE	Park	7.600
289	101	DU	Single Family Detached	58.000
289	137	ACRE	Open Space	70.000
289	139	ACRE	Park	0.000
290	100	DU	Estate	201.000
290	101	DU	Single Family Detached	76.000
290	137	ACRE	Open Space	114.000
291	27	TSF	Commercial Recreation	42.605
291	100	DU	Estate	35.000
291	101	DU	Single Family Detached	74.000
291	102	DU	Condominiums	0.000
291	137	ACRE	Open Space	100.000
291	140	ACRE	Golf Course	200.000
292	100	DU	Estate	100.000
292	101	DU	Single Family Detached	83.000
292	102	DU	Condominiums	64.000
292	137	ACRE	Open Space	30.000
293	103	DU	Apartments	1,000.000
294	44	TSF	Utilities (Gas/Water)	84.999
294	123	TSF	Manufacturing	0.000
294	139	ACRE	Park	300.000
295	130	TSF	Church/Synagogue	95.744
295	142	TSF	Child Care Center	12.839
296	103	DU	Apartments	40.000
297	29	ACRE	Homeowner's Assoc. Rec. Area	0.656
297	102	DU	Condominiums	286.000
297	103	DU	Apartments	320.000
297	139	ACRE	Park	5.705
298	139	ACRE	Park	100.700
299	29	ACRE	Homeowner's Assoc. Rec. Area	0.423
299	102	DU	Condominiums	209.000
299	103	DU	Apartments	162.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
299	105	BEDS	Convalescent Home	372.000
299	106	DU	Senior Housing	86.000
299	107	DU	Congregate Care	363.000
300	16	TSF	Gas Station	0.638
300	102	DU	Condominiums	439.000
300	103	DU	Apartments	58.000
300	116	SITE	GAS STATION	1.000
300	129	TSF	Community Facility	9.971
300	139	ACRE	Park	2.142
301	15	TSF	Cinema	23.411
301	36	TSF	Elementary/Middle	13.271
301	103	DU	Apartments	446.000
301	109	TSF	Commercial (EQ)	104.567
301	112	TSF	Bar	5.916
301	113	TSF	Restaurant	12.066
301	114	TSF	Fast Food Restaurant	10.939
301	115	SEAT	CINEMA - ITAM	1,556.000
301	121	TSF	Office	211.284
301	126	TSF	Health Club	19.105
301	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
302	29	ACRE	Homeowner's Assoc. Rec. Area	0.282
302	103	DU	Apartments	221.000
302	106	DU	Senior Housing	160.000
302	109	TSF	Commercial (EQ)	57.592
302	113	TSF	Restaurant	9.283
302	114	TSF	Fast Food Restaurant	1.872
302	120	TSF	Bank	6.600
302	137	ACRE	Open Space	0.000
302	139	ACRE	Park	3.002
303	121	TSF	Office	103.336
303	124	TSF	Warehouse	0.903
303	125	TSF	Research and Development	142.391
304	121	TSF	Office	312.144
304	125	TSF	Research and Development	431.475
305	35	TSF	High-School	134.868
305	36	TSF	Elementary/Middle	111.068
305	126	TSF	Health Club	48.730
305	129	TSF	Community Facility	0.000
305	130	TSF	Church/Synagogue	83.490
305	135	STU	HIGH-SCHOOL - ITAM	520.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
305	136	STU	ELEMENTARY/MIDDLE - ITAM	1,110.000
305	142	TSF	Child Care Center	27.780
306	101	DU	Single Family Detached	130.000
306	102	DU	Condominiums	5.000
306	129	TSF	Community Facility	120.334
307	103	DU	Apartments	436.000
307	126	TSF	Health Club	35.000
307	130	TSF	Church/Synagogue	424.830
307	142	TSF	Child Care Center	22.000
308	101	DU	Single Family Detached	2.000
308	102	DU	Condominiums	70.000
309	102	DU	Condominiums	0.000
309	103	DU	Apartments	600.000
310	102	DU	Condominiums	325.000
310	136	STU	ELEMENTARY/MIDDLE - ITAM	750.000
310	139	ACRE	Park	20.500
311	101	DU	Single Family Detached	412.000
311	102	DU	Condominiums	199.000
312	101	DU	Single Family Detached	85.000
312	102	DU	Condominiums	99.000
312	103	DU	Apartments	600.000
312	139	ACRE	Park	4.000
314	137	ACRE	Open Space	772.000
315	129	TSF	Community Facility	1.524
315	137	ACRE	Open Space	499.100
315	139	ACRE	Park	14.998
316	137	ACRE	Open Space	754.000
317	137	ACRE	Open Space	257.000
318	103	DU	Apartments	435.000
318	109	TSF	Commercial (EQ)	0.000
318	121	TSF	Office	0.000
318	123	TSF	Manufacturing	32.400
318	137	ACRE	Open Space	202.000
318	138	ACRE	Agriculture	12.500
319	123	TSF	Manufacturing	0.000
319	132	TSF	Government Facility	140.000
320	137	ACRE	Open Space	47.470
321	138	ACRE	Agriculture	34.300
321	270	DU	TOD Residential	0.000
321	271	TSF	TOD Retail	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
322	138	ACRE	Agriculture	38.500
322	270	DU	TOD Residential	0.000
322	271	TSF	TOD Retail	0.000
323	138	ACRE	Agriculture	0.000
323	258	TSF	Research and Development	100.000
324	138	ACRE	Agriculture	0.000
324	251	TSF	Auto Center	20.000
333	121	TSF	Office	0.000
333	124	TSF	Warehouse	0.000
333	212	TSF	High Tech	172.882
334	121	TSF	Office	0.000
334	124	TSF	Warehouse	0.000
334	125	TSF	Research and Development	0.000
334	212	TSF	High Tech	339.025
335	121	TSF	Office	0.000
335	124	TSF	Warehouse	0.000
335	212	TSF	High Tech	436.431
336	121	TSF	Office	0.000
336	123	TSF	Manufacturing	0.000
336	124	TSF	Warehouse	0.000
336	125	TSF	Research and Development	0.000
336	212	TSF	High Tech	494.793
337	121	TSF	Office	0.000
337	124	TSF	Warehouse	0.000
337	125	TSF	Research and Development	0.000
337	187	TSF	Train Station	22.874
337	212	TSF	High Tech	468.403
337	261	Space	Transportation Center	1,651.000
338	16	TSF	Gas Station	0.000
338	109	TSF	Commercial (EQ)	493.825
338	116	SITE	GAS STATION	2.000
338	120	TSF	Bank	4.000
339	121	TSF	Office	0.000
339	124	TSF	Warehouse	0.000
339	125	TSF	Research and Development	0.000
339	212	TSF	High Tech	743.094
340	121	TSF	Office	0.000
340	124	TSF	Warehouse	0.000
340	125	TSF	Research and Development	0.000
340	212	TSF	High Tech	268.561

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ITAM TAZ	ITAM Code	Units	Description	Quantity
341	121	TSF	Office	0.000
341	124	TSF	Warehouse	0.000
341	125	TSF	Research and Development	0.000
341	212	TSF	High Tech	750.105
342	11	TSF	Hotel	37.049
342	109	TSF	Commercial (EQ)	16.136
342	111	ROOM	HOTEL - ITAM	149.000
342	121	TSF	Office	0.000
342	125	TSF	Research and Development	0.000
342	212	TSF	High Tech	345.771
343	121	TSF	Office	0.000
343	124	TSF	Warehouse	0.000
343	212	TSF	High Tech	343.394
344	121	TSF	Office	527.182
345	121	TSF	Office	614.708
346	121	TSF	Office	428.104
346	125	TSF	Research and Development	0.000
347	121	TSF	Office	327.516
348	11	TSF	Hotel	142.357
348	111	ROOM	HOTEL - ITAM	252.000
349	121	TSF	Office	449.000
350	121	TSF	Office	629.000
351	121	TSF	Office	50.000
352	121	TSF	Office	178.226
353	103	DU	Apartments	0.000
353	121	TSF	Office	626.496
353	137	ACRE	Open Space	15.379
353	139	ACRE	Park	0.000
353	142	TSF	Child Care Center	0.000
354	103	DU	Apartments	1,456.000
355	121	TSF	Office	450.412
356	103	DU	Apartments	1,550.000
357	121	TSF	Office	327.634
358	15	TSF	Cinema	0.000
358	109	TSF	Commercial (EQ)	1,550.000
358	113	TSF	Restaurant	0.000
358	115	SEAT	CINEMA - ITAM	0.000
359	121	TSF	Office	450.412
360	109	TSF	Commercial (EQ)	7.200
360	122	TSF	Medical Office	150.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
361	121	TSF	Office	628.154
362	121	TSF	Office	376.076
363	109	TSF	Commercial (EQ)	130.300
363	118	TSF	Auto Dealer	0.000
363	121	TSF	Office	0.000
363	123	TSF	Manufacturing	0.000
363	124	TSF	Warehouse	0.000
363	125	TSF	Research and Development	428.984
364	16	TSF	Gas Station	0.000
364	109	TSF	Commercial (EQ)	36.600
364	119	TSF	Auto Repair	0.000
364	121	TSF	Office	0.000
364	124	TSF	Warehouse	0.000
364	125	TSF	Research and Development	478.201
364	126	TSF	Health Club	36.442
364	262	TSF	Cultural/Institutional/Exposition	27.750
365	118	TSF	Auto Dealer	0.000
365	121	TSF	Office	0.000
365	123	TSF	Manufacturing	0.000
365	125	TSF	Research and Development	85.000
366	121	TSF	Office	0.000
366	123	TSF	Manufacturing	0.000
366	124	TSF	Warehouse	0.000
366	125	TSF	Research and Development	485.564
366	132	TSF	Government Facility	9.996
367	121	TSF	Office	0.000
367	124	TSF	Warehouse	0.000
367	125	TSF	Research and Development	182.739
368	118	TSF	Auto Dealer	24.781
368	121	TSF	Office	0.000
368	123	TSF	Manufacturing	0.000
368	124	TSF	Warehouse	0.000
368	125	TSF	Research and Development	382.064
369	118	TSF	Auto Dealer	0.000
369	119	TSF	Auto Repair	0.000
369	121	TSF	Office	0.000
369	124	TSF	Warehouse	0.000
369	125	TSF	Research and Development	367.154
370	121	TSF	Office	338.415
370	124	TSF	Warehouse	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
371	121	TSF	Office	0.000
371	124	TSF	Warehouse	0.000
371	125	TSF	Research and Development	139.760
372	121	TSF	Office	0.000
372	124	TSF	Warehouse	0.000
372	125	TSF	Research and Development	252.351
373	118	TSF	Auto Dealer	0.000
373	121	TSF	Office	0.000
373	123	TSF	Manufacturing	0.000
373	124	TSF	Warehouse	0.000
373	125	TSF	Research and Development	293.943
374	121	TSF	Office	0.000
374	123	TSF	Manufacturing	0.000
374	124	TSF	Warehouse	0.000
374	125	TSF	Research and Development	347.209
375	116	SITE	GAS STATION	0.000
375	121	TSF	Office	0.000
375	123	TSF	Manufacturing	0.000
375	124	TSF	Warehouse	0.000
375	125	TSF	Research and Development	576.202
375	130	TSF	Church/Synagogue	0.000
375	161	TSF	Mini Warehouse	0.000
376	16	TSF	Gas Station	2.484
376	109	TSF	Commercial (EQ)	130.300
376	113	TSF	Restaurant	0.000
376	116	SITE	GAS STATION	1.000
376	118	TSF	Auto Dealer	0.000
376	125	TSF	Research and Development	106.353
377	121	TSF	Office	242.323
377	124	TSF	Warehouse	0.000
377	125	TSF	Research and Development	171.933
378	121	TSF	Office	0.000
378	124	TSF	Warehouse	0.000
378	125	TSF	Research and Development	280.679
379	121	TSF	Office	2.688
379	123	TSF	Manufacturing	112.593
379	124	TSF	Warehouse	4.358
379	125	TSF	Research and Development	5.222
379	138	ACRE	Agriculture	0.000
380	180	SG	J. MUSICK FACILITY - ITAM	62,101.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
381	121	TSF	Office	101.527
381	124	TSF	Warehouse	206.402
381	125	TSF	Research and Development	32.740
382	121	TSF	Office	423.122
382	124	TSF	Warehouse	434.412
382	125	TSF	Research and Development	146.159
382	130	TSF	Church/Synagogue	1.704
383	109	TSF	Commercial (EQ)	0.000
383	121	TSF	Office	176.747
383	124	TSF	Warehouse	321.121
384	121	TSF	Office	76.210
384	124	TSF	Warehouse	610.527
384	125	TSF	Research and Development	0.000
385	121	TSF	Office	265.265
385	123	TSF	Manufacturing	7.793
385	124	TSF	Warehouse	684.376
385	125	TSF	Research and Development	13.760
385	129	TSF	Community Facility	8.887
386	121	TSF	Office	226.257
386	123	TSF	Manufacturing	34.986
386	124	TSF	Warehouse	718.046
386	125	TSF	Research and Development	235.785
386	161	TSF	Mini Warehouse	136.032
387	11	TSF	Hotel	67.772
387	109	TSF	Commercial (EQ)	0.000
387	111	ROOM	HOTEL - ITAM	112.000
387	121	TSF	Office	837.981
387	122	TSF	Medical Office	25.000
387	123	TSF	Manufacturing	43.439
387	124	TSF	Warehouse	1,012.193
387	125	TSF	Research and Development	363.181
388	121	TSF	Office	233.536
388	123	TSF	Manufacturing	1.080
388	124	TSF	Warehouse	536.754
388	125	TSF	Research and Development	0.000
389	121	TSF	Office	512.659
389	123	TSF	Manufacturing	8.851
389	124	TSF	Warehouse	1,226.236
389	125	TSF	Research and Development	38.997
390	109	TSF	Commercial (EQ)	4.708

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ITAM TAZ	ITAM Code	Units	Description	Quantity
390	121	TSF	Office	317.879
390	123	TSF	Manufacturing	24.289
390	124	TSF	Warehouse	455.417
390	125	TSF	Research and Development	21.750
391	121	TSF	Office	44.459
391	124	TSF	Warehouse	71.741
392	121	TSF	Office	82.224
392	124	TSF	Warehouse	85.764
393	109	TSF	Commercial (EQ)	0.000
393	119	TSF	Auto Repair	37.388
393	121	TSF	Office	328.398
393	124	TSF	Warehouse	344.371
393	130	TSF	Church/Synagogue	9.434
393	161	TSF	Mini Warehouse	101.225
394	109	TSF	Commercial (EQ)	0.000
394	118	TSF	Auto Dealer	267.785
394	119	TSF	Auto Repair	208.491
394	121	TSF	Office	129.460
394	123	TSF	Manufacturing	17.377
394	124	TSF	Warehouse	183.491
395	238	TSF	Office Mix	68.846
395	239	TSF	Industrial Mix	357.706
396	238	TSF	Office Mix	194.449
396	239	TSF	Industrial Mix	408.746
397	236	TSF	Retail mix	22.109
397	238	TSF	Office Mix	56.907
397	239	TSF	Industrial Mix	243.813
398	236	TSF	Retail mix	12.052
398	238	TSF	Office Mix	64.499
398	239	TSF	Industrial Mix	168.382
399	238	TSF	Office Mix	109.105
399	239	TSF	Industrial Mix	289.499
400	238	TSF	Office Mix	114.447
400	239	TSF	Industrial Mix	551.910
401	238	TSF	Office Mix	119.230
401	239	TSF	Industrial Mix	231.849
402	238	TSF	Office Mix	85.175
402	239	TSF	Industrial Mix	136.185
403	236	TSF	Retail mix	237.693
403	238	TSF	Office Mix	14.899

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ITAM TAZ	ITAM Code	Units	Description	Quantity
403	239	TSF	Industrial Mix	18.610
404	238	TSF	Office Mix	215.049
404	239	TSF	Industrial Mix	156.864
405	238	TSF	Office Mix	143.741
405	239	TSF	Industrial Mix	224.252
406	238	TSF	Office Mix	21.415
406	239	TSF	Industrial Mix	129.081
407	238	TSF	Office Mix	26.871
407	239	TSF	Industrial Mix	117.130
408	236	TSF	Retail mix	0.910
408	238	TSF	Office Mix	112.021
408	239	TSF	Industrial Mix	132.687
409	238	TSF	Office Mix	229.111
409	239	TSF	Industrial Mix	156.347
410	238	TSF	Office Mix	33.358
410	239	TSF	Industrial Mix	143.356
411	235	DU	Multi-family	192.000
411	236	TSF	Retail mix	5.000
411	238	TSF	Office Mix	120.489
411	239	TSF	Industrial Mix	345.651
412	238	TSF	Office Mix	53.111
412	239	TSF	Industrial Mix	120.728
413	238	TSF	Office Mix	121.923
413	239	TSF	Industrial Mix	251.333
414	236	TSF	Retail mix	4.330
414	238	TSF	Office Mix	235.815
414	239	TSF	Industrial Mix	319.852
414	241	ROOM	HOTEL-EXTENDED STAY - ITAM	78.925
415	238	TSF	Office Mix	57.464
415	239	TSF	Industrial Mix	70.180
416	236	TSF	Retail mix	4.000
416	238	TSF	Office Mix	0.000
416	239	TSF	Industrial Mix	210.337
417	238	TSF	Office Mix	139.669
417	239	TSF	Industrial Mix	13.986
418	238	TSF	Office Mix	134.968
418	239	TSF	Industrial Mix	158.835
419	238	TSF	Office Mix	1.910
419	239	TSF	Industrial Mix	69.440
420	238	TSF	Office Mix	125.350

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ITAM TAZ	ITAM Code	Units	Description	Quantity
420	239	TSF	Industrial Mix	280.974
421	238	TSF	Office Mix	139.500
421	239	TSF	Industrial Mix	118.674
422	235	DU	Multi-family	1.000
422	238	TSF	Office Mix	0.000
422	239	TSF	Industrial Mix	206.378
422	240	TSF	Mini Warehouse	64.280
423	238	TSF	Office Mix	177.103
424	238	TSF	Office Mix	0.000
424	239	TSF	Industrial Mix	158.715
425	238	TSF	Office Mix	300.700
426	236	TSF	Retail mix	1.760
426	238	TSF	Office Mix	304.216
426	239	TSF	Industrial Mix	79.691
427	238	TSF	Office Mix	59.019
427	239	TSF	Industrial Mix	59.674
428	236	TSF	Retail mix	1.902
428	238	TSF	Office Mix	69.340
428	239	TSF	Industrial Mix	175.770
429	238	TSF	Office Mix	144.279
429	239	TSF	Industrial Mix	273.644
430	238	TSF	Office Mix	440.780
430	239	TSF	Industrial Mix	166.265
431	236	TSF	Retail mix	1.930
431	238	TSF	Office Mix	94.254
431	239	TSF	Industrial Mix	278.240
432	238	TSF	Office Mix	74.178
432	239	TSF	Industrial Mix	43.919
433	238	TSF	Office Mix	40.303
433	239	TSF	Industrial Mix	157.309
434	238	TSF	Office Mix	109.398
434	239	TSF	Industrial Mix	146.061
435	238	TSF	Office Mix	23.292
435	239	TSF	Industrial Mix	67.700
436	238	TSF	Office Mix	173.828
436	239	TSF	Industrial Mix	75.073
437	236	TSF	Retail mix	0.600
437	238	TSF	Office Mix	126.289
437	239	TSF	Industrial Mix	45.696
438	238	TSF	Office Mix	144.538

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ITAM TAZ	ITAM Code	Units	Description	Quantity
438	239	TSF	Industrial Mix	262.960
439	238	TSF	Office Mix	245.841
439	239	TSF	Industrial Mix	384.005
440	238	TSF	Office Mix	14.870
440	239	TSF	Industrial Mix	192.220
441	236	TSF	Retail mix	30.965
441	238	TSF	Office Mix	120.143
441	239	TSF	Industrial Mix	187.637
442	238	TSF	Office Mix	26.737
442	239	TSF	Industrial Mix	92.070
443	236	TSF	Retail mix	20.562
443	238	TSF	Office Mix	64.266
443	239	TSF	Industrial Mix	6.094
444	238	TSF	Office Mix	36.391
444	239	TSF	Industrial Mix	26.561
445	238	TSF	Office Mix	47.043
445	239	TSF	Industrial Mix	128.372
446	235	DU	Multi-family	187.000
446	238	TSF	Office Mix	88.251
446	239	TSF	Industrial Mix	249.836
447	236	TSF	Retail mix	3.724
447	238	TSF	Office Mix	29.718
447	239	TSF	Industrial Mix	117.983
448	236	TSF	Retail mix	13.900
448	238	TSF	Office Mix	106.519
448	239	TSF	Industrial Mix	30.581
449	238	TSF	Office Mix	65.884
449	239	TSF	Industrial Mix	196.890
450	238	TSF	Office Mix	18.023
450	239	TSF	Industrial Mix	126.562
451	238	TSF	Office Mix	92.560
451	239	TSF	Industrial Mix	2.748
452	236	TSF	Retail mix	4.558
452	238	TSF	Office Mix	264.845
452	239	TSF	Industrial Mix	11.091
453	238	TSF	Office Mix	267.370
453	239	TSF	Industrial Mix	2.024
454	238	TSF	Office Mix	129.400
455	238	TSF	Office Mix	65.561
455	239	TSF	Industrial Mix	112.164

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ITAM TAZ	ITAM Code	Units	Description	Quantity
456	236	TSF	Retail mix	86.441
456	238	TSF	Office Mix	159.790
456	239	TSF	Industrial Mix	597.674
457	238	TSF	Office Mix	85.356
457	239	TSF	Industrial Mix	136.941
458	238	TSF	Office Mix	94.931
458	239	TSF	Industrial Mix	50.841
459	236	TSF	Retail mix	4.880
459	238	TSF	Office Mix	415.642
459	239	TSF	Industrial Mix	42.088
460	238	TSF	Office Mix	64.995
460	239	TSF	Industrial Mix	127.119
461	238	TSF	Office Mix	40.434
461	239	TSF	Industrial Mix	184.693
462	238	TSF	Office Mix	93.027
462	239	TSF	Industrial Mix	340.969
463	238	TSF	Office Mix	40.130
463	239	TSF	Industrial Mix	40.681
464	235	DU	Multi-family	179.000
464	238	TSF	Office Mix	102.839
464	239	TSF	Industrial Mix	67.994
465	238	TSF	Office Mix	41.052
465	239	TSF	Industrial Mix	105.962
466	236	TSF	Retail mix	7.968
466	238	TSF	Office Mix	36.475
466	239	TSF	Industrial Mix	12.800
467	238	TSF	Office Mix	212.570
468	238	TSF	Office Mix	55.088
468	239	TSF	Industrial Mix	176.265
469	238	TSF	Office Mix	144.377
469	239	TSF	Industrial Mix	12.000
470	236	TSF	Retail mix	62.988
470	238	TSF	Office Mix	134.367
470	239	TSF	Industrial Mix	78.386
471	236	TSF	Retail mix	2.669
471	238	TSF	Office Mix	289.330
471	239	TSF	Industrial Mix	134.006
471	240	TSF	Mini Warehouse	101.956
472	238	TSF	Office Mix	20.126
472	239	TSF	Industrial Mix	52.712

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ITAM TAZ	ITAM Code	Units	Description	Quantity
473	238	TSF	Office Mix	94.366
473	239	TSF	Industrial Mix	132.188
474	238	TSF	Office Mix	149.423
474	239	TSF	Industrial Mix	353.186
475	236	TSF	Retail mix	27.134
475	238	TSF	Office Mix	5.237
476	238	TSF	Office Mix	54.117
476	239	TSF	Industrial Mix	89.805
477	238	TSF	Office Mix	131.635
477	239	TSF	Industrial Mix	132.093
478	238	TSF	Office Mix	579.946
479	238	TSF	Office Mix	45.072
479	239	TSF	Industrial Mix	61.819
480	236	TSF	Retail mix	20.602
480	238	TSF	Office Mix	394.897
481	238	TSF	Office Mix	54.028
481	239	TSF	Industrial Mix	327.693
482	238	TSF	Office Mix	292.069
482	239	TSF	Industrial Mix	75.878
483	238	TSF	Office Mix	49.383
483	239	TSF	Industrial Mix	190.763
484	236	TSF	Retail mix	164.800
484	238	TSF	Office Mix	741.248
484	239	TSF	Industrial Mix	58.336
485	235	DU	Multi-family	71.000
485	238	TSF	Office Mix	23.563
485	239	TSF	Industrial Mix	104.249
486	235	DU	Multi-family	539.810
487	11	TSF	HOTEL	0.000
487	236	TSF	Retail mix	0.000
487	237	ROOM	HOTEL - ITAM	293.000
487	238	TSF	Office Mix	379.000
488	236	TSF	Retail mix	0.000
488	238	TSF	Office Mix	1,283.612
488	239	TSF	Industrial Mix	14.116
489	238	TSF	Office Mix	29.042
489	239	TSF	Industrial Mix	46.594
489	240	TSF	Mini Warehouse	100.426
490	11	TSF	HOTEL	0.000
490	235	DU	Multi-family	476.190

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ITAM TAZ	ITAM Code	Units	Description	Quantity
490	236	TSF	Retail mix	15.120
490	237	ROOM	HOTEL - ITAM	153.000
490	238	TSF	Office Mix	485.862
491	238	TSF	Office Mix	330.777
491	239	TSF	Industrial Mix	14.778
491	240	TSF	Mini Warehouse	84.046
491	241	ROOM	HOTEL-EXTENDED STAY - ITAM	82.147
492	238	TSF	Office Mix	25.745
492	239	TSF	Industrial Mix	150.490
493	236	TSF	Retail mix	15.492
493	238	TSF	Office Mix	226.995
494	11	TSF	HOTEL	0.000
494	236	TSF	Retail mix	2.419
494	237	ROOM	HOTEL - ITAM	340.000
494	238	TSF	Office Mix	167.916
495	236	TSF	Retail mix	24.417
495	238	TSF	Office Mix	126.955
495	239	TSF	Industrial Mix	288.464
496	238	TSF	Office Mix	225.839
496	239	TSF	Industrial Mix	107.371
497	235	DU	Multi-family	290.000
497	236	TSF	Retail mix	14.908
497	238	TSF	Office Mix	35.071
497	239	TSF	Industrial Mix	2.336
497	241	ROOM	HOTEL-EXTENDED STAY - ITAM	174.000
498	236	TSF	Retail mix	106.273
498	238	TSF	Office Mix	882.449
499	236	TSF	Retail mix	16.312
499	238	TSF	Office Mix	156.085
499	239	TSF	Industrial Mix	196.156
500	238	TSF	Office Mix	448.222
501	11	TSF	HOTEL	0.000
501	237	ROOM	HOTEL - ITAM	502.000
502	238	TSF	Office Mix	68.640
503	236	TSF	Retail mix	0.188
503	238	TSF	Office Mix	418.019
503	239	TSF	Industrial Mix	8.766
503	240	TSF	Mini Warehouse	34.757
504	236	TSF	Retail mix	0.393
504	238	TSF	Office Mix	858.104

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ITAM TAZ	ITAM Code	Units	Description	Quantity
505	11	TSF	HOTEL	0.000
505	237	ROOM	HOTEL - ITAM	526.000
505	239	TSF	Industrial Mix	1.124
506	236	TSF	Retail mix	18.369
506	238	TSF	Office Mix	74.073
507	238	TSF	Office Mix	93.840
508	235	DU	Multi-family	430.500
509	236	TSF	Retail mix	3.267
509	238	TSF	Office Mix	838.199
509	240	TSF	Mini Warehouse	64.547
510	236	TSF	Retail mix	12.039
510	238	TSF	Office Mix	1,127.056
511	11	TSF	HOTEL	0.000
511	236	TSF	Retail mix	12.011
511	237	ROOM	HOTEL - ITAM	215.000
511	238	TSF	Office Mix	69.197
512	238	TSF	Office Mix	116.575
513	238	TSF	Office Mix	94.006
513	239	TSF	Industrial Mix	1.600
514	236	TSF	Retail mix	32.660
514	238	TSF	Office Mix	33.081
515	235	DU	Multi-family	370.230
515	236	TSF	Retail mix	19.700
515	238	TSF	Office Mix	22.388
516	235	DU	Multi-family	158.400
516	236	TSF	Retail mix	154.495
516	237	ROOM	HOTEL - ITAM	0.000
516	238	TSF	Office Mix	1,119.523
516	239	TSF	Industrial Mix	0.000
517	238	TSF	Office Mix	0.000
517	239	TSF	Industrial Mix	81.647
518	238	TSF	Office Mix	120.621
519	11	TSF	HOTEL	0.000
519	237	ROOM	HOTEL - ITAM	293.000
520	238	TSF	Office Mix	74.633
521	238	TSF	Office Mix	265.682
521	239	TSF	Industrial Mix	63.252
522	236	TSF	Retail mix	13.753
522	238	TSF	Office Mix	218.683
522	239	TSF	Industrial Mix	14.558

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ITAM TAZ	ITAM Code	Units	Description	Quantity
523	235	DU	Multi-family	517.600
523	236	TSF	Retail mix	0.000
523	237	ROOM	HOTEL - ITAM	0.000
523	238	TSF	Office Mix	1,683.348
524	238	TSF	Office Mix	413.395
525	238	TSF	Office Mix	490.464
525	239	TSF	Industrial Mix	202.253
526	235	DU	Multi-family	338.000
526	236	TSF	Retail mix	3.000
526	238	TSF	Office Mix	65.858
527	235	DU	Multi-family	104.500
528	236	TSF	Retail mix	7.750
528	238	TSF	Office Mix	495.000
528	239	TSF	Industrial Mix	0.000
529	238	TSF	Office Mix	72.346
529	239	TSF	Industrial Mix	108.037
530	238	TSF	Office Mix	0.000
531	238	TSF	Office Mix	137.700
532	235	DU	Multi-family	825.000
532	238	TSF	Office Mix	2.174
532	239	TSF	Industrial Mix	0.100
533	238	TSF	Office Mix	45.289
533	239	TSF	Industrial Mix	1.193
534	236	TSF	Retail mix	8.850
534	238	TSF	Office Mix	466.288
534	239	TSF	Industrial Mix	1.665
535	236	TSF	Retail mix	7.750
535	238	TSF	Office Mix	487.130
536	238	TSF	Office Mix	39.087
536	239	TSF	Industrial Mix	22.824
537	236	TSF	Retail mix	20.962
537	238	TSF	Office Mix	69.724
538	236	TSF	Retail mix	15.772
538	238	TSF	Office Mix	339.810
538	239	TSF	Industrial Mix	12.000
539	238	TSF	Office Mix	66.289
539	239	TSF	Industrial Mix	20.366
540	235	DU	Multi-family	617.000
541	238	TSF	Office Mix	75.972
542	236	TSF	Retail mix	35.635

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ITAM TAZ	ITAM Code	Units	Description	Quantity
542	238	TSF	Office Mix	81.182
542	239	TSF	Industrial Mix	0.779
543	236	TSF	Retail mix	8.500
543	238	TSF	Office Mix	114.035
543	239	TSF	Industrial Mix	17.536
544	235	DU	Multi-family	1,809.000
544	236	TSF	Retail mix	11.343
544	238	TSF	Office Mix	167.343
545	236	TSF	Retail mix	16.325
545	238	TSF	Office Mix	90.877
545	239	TSF	Industrial Mix	82.557
546	236	TSF	Retail mix	68.820
546	238	TSF	Office Mix	1,366.875
546	239	TSF	Industrial Mix	18.310
547	103	DU	Apartments	227.000
548	101	DU	Single Family Detached	202.000
548	142	TSF	Child Care Center	9.783
549	101	DU	Single Family Detached	321.000
550	101	DU	Single Family Detached	23.000
550	102	DU	Condominiums	22.000
551	101	DU	Single Family Detached	166.000
551	102	DU	Condominiums	243.000
551	135	STU	HIGH-SCHOOL - ITAM	311.000
551	136	STU	ELEMENTARY/MIDDLE - ITAM	1,140.000
552	101	DU	Single Family Detached	251.000
552	136	STU	ELEMENTARY/MIDDLE - ITAM	786.000
553	36	TSF	Elementary/Middle	61.154
553	101	DU	Single Family Detached	235.000
553	102	DU	Condominiums	346.000
553	136	STU	ELEMENTARY/MIDDLE - ITAM	786.000
554	101	DU	Single Family Detached	143.000
554	102	DU	Condominiums	167.000
554	103	DU	Apartments	462.000
555	29	ACRE	Homeowner's Assoc. Rec. Area	0.330
555	102	DU	Condominiums	426.000
555	103	DU	Apartments	812.000
556	101	DU	Single Family Detached	150.000
556	102	DU	Condominiums	425.000
557	102	DU	Condominiums	0.000
557	103	DU	Apartments	1,750.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
557	127	ACRE	COMMERCIAL RECREATION - ITAM	0.000
557	181	SG	AMUSEMENT PARK	0.000
558	102	DU	Condominiums	0.000
558	103	DU	Apartments	0.000
558	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
559	108	BEDS	DORM	2,254.000
559	143	PERSON	UCI Staff	210.000
559	144	STU	UCI Students	1,258.000
560	123	TSF	Manufacturing	54.600
560	143	PERSON	UCI Staff	21.000
560	145	TSF	Special Venue	100.000
561	143	PERSON	UCI Staff	464.000
561	145	TSF	Special Venue	160.000
562	143	PERSON	UCI Staff	401.000
562	144	STU	UCI Students	4,655.000
563	108	BEDS	DORM	2,656.000
563	121	TSF	Office	0.000
563	123	TSF	Manufacturing	0.000
563	126	TSF	Health Club	0.000
564	122	TSF	Medical Office	0.000
564	125	TSF	Research and Development	106.670
564	143	PERSON	UCI Staff	1,624.000
564	144	STU	UCI Students	435.000
566	143	PERSON	UCI Staff	815.000
566	144	STU	UCI Students	1,894.000
567	108	BEDS	DORM	2,731.000
567	122	TSF	Medical Office	44.000
567	123	TSF	Manufacturing	44.100
567	143	PERSON	UCI Staff	110.000
567	144	STU	UCI Students	706.000
568	108	BEDS	DORM	1,583.000
568	143	PERSON	UCI Staff	1,018.000
568	144	STU	UCI Students	7,211.000
569	123	TSF	Manufacturing	20.000
569	143	PERSON	UCI Staff	775.000
569	144	STU	UCI Students	2,834.000
570	123	TSF	Manufacturing	40.000
570	129	TSF	Community Facility	0.000
571	143	PERSON	UCI Staff	693.000
571	144	STU	UCI Students	472.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
572	143	PERSON	UCI Staff	287.000
572	144	STU	UCI Students	77.000
573	143	PERSON	UCI Staff	979.000
573	144	STU	UCI Students	3,430.000
574	101	DU	Single Family Detached	275.000
574	103	DU	Apartments	0.000
574	123	TSF	Manufacturing	0.000
575	101	DU	Single Family Detached	178.000
575	103	DU	Apartments	140.000
575	108	BEDS	DORM	1,196.000
575	123	TSF	Manufacturing	0.000
576	108	BEDS	DORM	0.000
576	123	TSF	Manufacturing	38.700
576	125	TSF	Research and Development	507.730
576	143	PERSON	UCI Staff	66.000
576	144	STU	UCI Students	183.000
577	101	DU	Single Family Detached	48.000
577	103	DU	Apartments	0.000
578	103	DU	Apartments	0.000
578	108	BEDS	DORM	0.000
578	123	TSF	Manufacturing	23.000
579	125	TSF	Research and Development	253.760
580	108	BEDS	DORM	402.000
581	125	TSF	Research and Development	623.150
582	137	ACRE	Open Space	37.000
583	101	DU	Single Family Detached	277.000
583	103	DU	Apartments	0.000
584	101	DU	Single Family Detached	233.000
585	137	ACRE	Open Space	38.000
586	263	Acre	Agriculture	168.580
587	122	TSF	Medical Office	272.500
588	257	DU	Transitional Housing	45.000
589	256	DU	Senior Housing	0.000
590	256	DU	Senior Housing	0.000
591	137	ACRE	Open Space	974.000
592	267	Acre	Cemetery	73.000
592	268	TSF	Chapel/Mortuary	10.000
593	253	STU	Elementary School	650.000
593	276	TSF	Exposition Center	140.000
594	273	DU	Residential Golf Village	90.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
595	263	Acre	Agriculture	31.420
596	256	DU	Senior Housing	0.000
597	256	DU	Senior Housing	80.000
598	256	DU	Senior Housing	80.000
599	255	DU	University Residential	0.000
599	256	DU	Senior Housing	0.000
600	252	STU	Education	642.000
600	278	TSF	Institutional \ Educational	119.486
601	252	STU	Education	201.000
601	254	TSF	Retail	150.000
601	258	TSF	R&D	42.500
601	278	TSF	Institutional \ Educational	37.731
602	122	TSF	Medical Office	64.400
602	258	TSF	Research and Development	595.900
603	252	STU	Education	1,143.000
603	278	TSF	Institutional \ Educational	212.638
604	252	STU	Education	1,502.000
604	278	TSF	Institutional \ Educational	279.718
605	252	STU	Education	4,312.000
605	278	TSF	Institutional \ Educational	803.027
606	137	ACRE	Open Space	141.390
606	264	Acre	Golf Course	0.000
606	273	DU	Residential Golf Village	0.000
607	137	ACRE	Open Space	93.350
607	264	Acre	Golf Course	0.000
607	273	DU	Residential Golf Village	130.000
608	27	TSF	Commercial Recreation	0.000
608	137	ACRE	Open Space	211.000
608	264	Acre	Golf Course	0.000
608	279	HOLE	Golf Course	0.000
609	263	Acre	Agriculture	12.500
610	270	DU	TOD Residential	0.000
610	271	TSF	TOD Retail	0.000
611	270	DU	TOD Residential	0.000
612	263	Acre	Agriculture	10.300
612	270	DU	TOD Residential	0.000
612	272	TSF	TOD Office	0.000
613	263	Acre	Agriculture	18.300
613	270	DU	TOD Residential	0.000
614	263	Acre	Agriculture	33.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
615	258	TSF	Research and Development	0.000
615	263	Acre	Agriculture	5.900
618	101	DU	Single Family Detached	87.101
618	102	DU	Condominiums	99.667
618	103	DU	Apartments	276.376
618	106	DU	Senior Housing	0.000
619	136	STU	ELEMENTARY/MIDDLE - ITAM	550.000
619	280	Acre	Sports Park	24.100
620	109	TSF	Commercial (EQ)	5.960
620	305	ROOM	Transitional Housing	192.000
621	109	TSF	Commercial (EQ)	40.695
621	121	TSF	Office	18.893
622	109	TSF	Commercial (EQ)	23.566
622	121	TSF	Office	27.563
622	125	TSF	Research and Development	319.520
622	139	ACRE	Park	90.956
622	280	Acre	Sports Park	23.000
623	101	DU	Single Family Detached	54.844
623	102	DU	Condominiums	15.227
623	139	ACRE	Park	0.724
624	135	STU	HIGH-SCHOOL - ITAM	0.000
625	121	TSF	Office	13.704
625	123	TSF	Manufacturing	0.000
626	135	STU	HIGH-SCHOOL - ITAM	0.000
627	101	DU	Single Family Detached	57.186
627	105	BEDS	Convalescent Home	0.000
627	109	TSF	Commercial (EQ)	30.684
627	121	TSF	Office	11.889
627	139	ACRE	Park	2.078
627	280	Acre	Sports Park	8.050
629	121	TSF	Office	22.692
629	123	TSF	Manufacturing	0.000
629	125	TSF	Research and Development	95.557
629	139	ACRE	Park	4.432
630	101	DU	Single Family Detached	29.915
630	102	DU	Condominiums	8.306
630	139	ACRE	Park	0.395
631	109	TSF	Commercial (EQ)	3.984
631	121	TSF	Office	73.103
631	123	TSF	Manufacturing	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
631	125	TSF	Research and Development	40.953
631	139	ACRE	Park	12.054
631	280	Acre	Sports Park	4.800
632	109	TSF	Commercial (EQ)	12.539
632	121	TSF	Office	155.221
632	280	Acre	Sports Park	23.000
633	103	DU	Apartments	410.242
633	109	TSF	Commercial (EQ)	26.505
633	111	ROOM	HOTEL - ITAM	120.000
633	121	TSF	Office	59.904
633	139	ACRE	Park	7.666
634	103	DU	Apartments	71.839
634	109	TSF	Commercial (EQ)	3.803
634	121	TSF	Office	3.262
634	139	ACRE	Park	1.298
635	101	DU	Single Family Detached	24.508
635	105	BEDS	Convalescent Home	0.000
635	109	TSF	Commercial (EQ)	26.580
635	121	TSF	Office	7.713
635	136	STU	ELEMENTARY/MIDDLE - ITAM	180.000
635	139	ACRE	Park	1.363
635	280	Acre	Sports Park	4.200
636	101	DU	Single Family Detached	66.017
636	102	DU	Condominiums	60.710
636	103	DU	Apartments	121.151
636	136	STU	ELEMENTARY/MIDDLE - ITAM	1,020.000
636	139	ACRE	Park	7.600
636	280	Acre	Sports Park	4.250
637	102	DU	Condominiums	237.255
638	103	DU	Apartments	24.230
638	109	TSF	Commercial (EQ)	5.979
638	121	TSF	Office	26.902
639	15	TSF	Cinema	0.000
639	103	DU	Apartments	19.561
639	109	TSF	Commercial (EQ)	41.379
639	111	ROOM	HOTEL - ITAM	360.000
639	115	SEAT	CINEMA - ITAM	1,000.000
639	121	TSF	Office	107.522
639	126	TSF	Health Club	0.000
639	139	ACRE	Park	0.313

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ITAM TAZ	ITAM Code	Units	Description	Quantity
640	103	DU	Apartments	74.751
641	101	DU	Single Family Detached	156.181
641	102	DU	Condominiums	64.072
641	139	ACRE	Park	2.821
642	103	DU	Apartments	36.345
642	109	TSF	Commercial (EQ)	8.968
642	121	TSF	Office	40.352
643	121	TSF	Office	6.196
643	280	Acre	Sports Park	3.200
644	109	TSF	Commercial (EQ)	1.259
644	121	TSF	Office	16.374
645	109	TSF	Commercial (EQ)	28.200
645	121	TSF	Office	0.000
646	15	TSF	Cinema	0.000
646	109	TSF	Commercial (EQ)	532.140
646	115	SEAT	CINEMA - ITAM	525.000
647	101	DU	Single Family Detached	100.000
647	102	DU	Condominiums	96.000
647	103	DU	Apartments	0.000
648	15	TSF	Cinema	0.000
648	109	TSF	Commercial (EQ)	370.260
648	115	SEAT	CINEMA - ITAM	2,975.000
697	121	TSF	Office	0.000
697	123	TSF	Manufacturing	717.860
697	125	TSF	Research and Development	0.000
698	113	TSF	Restaurant	8.500
698	121	TSF	Office	0.000
698	123	TSF	Manufacturing	1,041.820
698	125	TSF	Research and Development	0.000
699	139	ACRE	Park	0.950
702	139	ACRE	Park	0.950
703	121	TSF	Office	378.824
703	123	TSF	Manufacturing	846.840
703	125	TSF	Research and Development	378.824
703	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
707	109	TSF	Commercial (EQ)	92.244
707	113	TSF	Restaurant	8.970
707	114	TSF	Fast Food Restaurant	5.880
707	121	TSF	Office	80.540
707	123	TSF	Manufacturing	2,128.460

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ITAM TAZ	ITAM Code	Units	Description	Quantity
707	125	TSF	Research and Development	0.000
707	161	TSF	Mini Warehouse	0.000
711	109	TSF	Commercial (EQ)	14.802
711	121	TSF	Office	28.180
711	123	TSF	Manufacturing	1,599.380
711	125	TSF	Research and Development	0.000
711	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
714	109	TSF	Commercial (EQ)	0.000
714	113	TSF	Restaurant	0.000
714	121	TSF	Office	0.000
715	109	TSF	Commercial (EQ)	0.000
715	113	TSF	Restaurant	0.000
715	121	TSF	Office	0.000
715	122	TSF	Medical Office	0.000
715	123	TSF	Manufacturing	0.000
715	125	TSF	Research and Development	0.000
718	121	TSF	Office	0.000
719	109	TSF	Commercial (EQ)	0.000
719	111	ROOM	HOTEL - ITAM	0.000
719	113	TSF	Restaurant	0.000
719	121	TSF	Office	0.000
719	126	TSF	Health Club	0.000
719	129	TSF	Community Facility	0.000
720	109	TSF	Commercial (EQ)	0.000
720	111	ROOM	HOTEL - ITAM	0.000
720	113	TSF	Restaurant	0.000
720	121	TSF	Office	0.000
720	126	TSF	Health Club	0.000
721	109	TSF	Commercial (EQ)	0.000
721	113	TSF	Restaurant	0.000
721	114	TSF	Fast Food Restaurant	0.000
721	121	TSF	Office	0.000
721	123	TSF	Manufacturing	0.000
721	125	TSF	Research and Development	0.000
723	121	TSF	Office	0.000
729	139	ACRE	Park	0.000
730	118	TSF	Auto Dealer	0.000
732	103	DU	Apartments	0.000
733	139	ACRE	Park	0.950
734	101	DU	Single Family Detached	168.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
734	102	DU	Condominiums	208.000
734	103	DU	Apartments	736.000
734	109	TSF	Commercial (EQ)	35.000
734	113	TSF	Restaurant	6.350
734	139	ACRE	Park	14.230
736	101	DU	Single Family Detached	0.000
736	139	ACRE	Park	0.000
738	103	DU	Apartments	0.000
738	109	TSF	Commercial (EQ)	55.000
738	139	ACRE	Park	0.950
739	124	TSF	Warehouse	0.000
739	125	TSF	Research and Development	0.000
739	130	TSF	Church/Synagogue	0.000
739	132	TSF	Government Facility	0.000
739	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
742	139	ACRE	Park	0.950
743	102	DU	Condominiums	0.000
744	101	DU	Single Family Detached	0.000
745	101	DU	Single Family Detached	0.000
745	102	DU	Condominiums	0.000
746	103	DU	Apartments	764.000
748	101	DU	Single Family Detached	400.000
748	139	ACRE	Park	9.000
750	102	DU	Condominiums	0.000
752	102	DU	Condominiums	0.000
753	139	ACRE	Park	0.950
754	101	DU	Single Family Detached	6.000
754	139	ACRE	Park	4.200
755	102	DU	Condominiums	200.000
756	101	DU	Single Family Detached	579.000
756	136	STU	ELEMENTARY/MIDDLE - ITAM	498.000
756	139	ACRE	Park	9.730
757	139	ACRE	Park	0.950
760	102	DU	Condominiums	30.000
760	130	TSF	Church/Synagogue	27.070
762	101	DU	Single Family Detached	0.000
762	102	DU	Condominiums	0.000
762	109	TSF	Commercial (EQ)	0.000
762	139	ACRE	Park	0.000
762	140	ACRE	Golf Course	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
764	101	DU	Single Family Detached	118.000
764	102	DU	Condominiums	120.000
764	109	TSF	Commercial (EQ)	74.400
764	121	TSF	Office	12.900
768	101	DU	Single Family Detached	0.000
768	102	DU	Condominiums	0.000
773	139	ACRE	Park	0.950
779	101	DU	Single Family Detached	0.000
781	101	DU	Single Family Detached	0.000
781	139	ACRE	Park	0.000
783	139	ACRE	Park	0.950
785	101	DU	Single Family Detached	0.000
785	102	DU	Condominiums	0.000
785	139	ACRE	Park	0.000
787	101	DU	Single Family Detached	0.000
797	103	DU	Apartments	0.000
797	109	TSF	Commercial (EQ)	0.000
797	121	TSF	Office	0.000
797	130	TSF	Church/Synagogue	0.000
797	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
797	142	TSF	Child Care Center	0.000
798	103	DU	Apartments	0.000
798	142	TSF	Child Care Center	0.000
801	139	ACRE	Park	0.000
803	102	DU	Condominiums	0.000
803	106	DU	Senior Housing	0.000
803	130	TSF	Church/Synagogue	0.000
817	102	DU	Condominiums	282.000
818	102	DU	Condominiums	0.000
818	103	DU	Apartments	0.000
818	139	ACRE	Park	20.000
819	109	TSF	Commercial (EQ)	141.500
819	113	TSF	Restaurant	20.000
819	114	TSF	Fast Food Restaurant	7.000
819	116	SITE	GAS STATION	1.000
819	120	TSF	Bank	4.000
819	129	TSF	Community Facility	0.000
821	109	TSF	Commercial (EQ)	383.140
821	113	TSF	Restaurant	6.530
821	114	TSF	Fast Food Restaurant	7.160

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ITAM TAZ	ITAM Code	Units	Description	Quantity
821	116	SITE	GAS STATION	0.000
821	120	TSF	Bank	8.170
821	121	TSF	Office	0.000
821	126	TSF	Health Club	41.280
823	103	DU	Apartments	533.000
823	121	TSF	Office	0.000
824	102	DU	Condominiums	306.000
824	121	TSF	Office	0.000
825	121	TSF	Office	0.000
826	121	TSF	Office	0.000
827	121	TSF	Office	0.000
828	11	TSF	Hotel	76.359
828	109	TSF	Commercial (EQ)	36.533
828	111	ROOM	HOTEL - ITAM	148.000
828	113	TSF	Restaurant	9.723
828	114	TSF	Fast Food Restaurant	5.695
828	117	SITE	CAR WASH	1.000
828	132	TSF	Government Facility	1.496
829	121	TSF	Office	336.631
829	125	TSF	Research and Development	0.000
830	121	TSF	Office	540.644
831	121	TSF	Office	200.851
831	125	TSF	Research and Development	514.396
832	121	TSF	Office	93.265
832	125	TSF	Research and Development	188.360
833	121	TSF	Office	207.120
833	125	TSF	Research and Development	207.120
834	121	TSF	Office	175.257
834	125	TSF	Research and Development	360.985
835	121	TSF	Office	470.451
835	125	TSF	Research and Development	128.055
836	125	TSF	Research and Development	521.605
837	125	TSF	Research and Development	247.543
838	125	TSF	Research and Development	0.000
839	124	TSF	Warehouse	213.800
840	125	TSF	Research and Development	224.606
841	109	TSF	Commercial (EQ)	41.541
841	114	TSF	Fast Food Restaurant	4.696
841	120	TSF	Bank	3.459
842	121	TSF	Office	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
842	125	TSF	Research and Development	164.044
843	122	TSF	Medical Office	50.381
843	125	TSF	Research and Development	55.229
844	122	TSF	Medical Office	177.421
845	132	TSF	Government Facility	116.520
846	125	TSF	Research and Development	0.000
846	129	TSF	Community Facility	0.000
846	164	SPC	RV Storage	1,000.000
847	122	TSF	Medical Office	42.963
847	125	TSF	Research and Development	37.240
848	161	TSF	Mini Warehouse	96.656
902	101	DU	Single Family Detached	400.000
903	101	DU	Single Family Detached	150.000
903	139	ACRE	Park	4.000
904	101	DU	Single Family Detached	350.000
905	127	ACRE	COMMERCIAL RECREATION - ITAM	20.000
906	101	DU	Single Family Detached	185.000
906	136	STU	ELEMENTARY/MIDDLE - ITAM	800.000
906	139	ACRE	Park	4.000
907	102	DU	Condominiums	523.000
907	103	DU	Apartments	82.000
908	103	DU	Apartments	65.000
908	127	ACRE	COMMERCIAL RECREATION - ITAM	19.000
909	101	DU	Single Family Detached	94.000
910	101	DU	Single Family Detached	72.000
911	102	DU	Condominiums	132.000
912	101	DU	Single Family Detached	0.000
912	111	ROOM	HOTEL - ITAM	0.000
912	140	ACRE	Golf Course	0.000
913	101	DU	Single Family Detached	0.000
914	101	DU	Single Family Detached	0.000
917	258	TSF	Research and Development	105.000
917	263	Acre	Agriculture	0.000
918	258	TSF	Research and Development	80.000
918	263	Acre	Agriculture	0.000
919	258	TSF	Research and Development	30.000
919	263	Acre	Agriculture	0.000
920	263	Acre	Agriculture	57.000
922	263	Acre	Agriculture	11.200
922	265	Acre	Wildlife Corridor	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
923	260	TSF	OCTA Facility	0.000
923	261	SPC	Transportation Center	0.000
923	263	Acre	Agriculture	40.300
923	265	Acre	Wildlife Corridor	0.000
924	263	Acre	Agriculture	13.600
924	265	Acre	Wildlife Corridor	0.000
925	261	SPC	Transportation Center	495.000
926	261	SPC	Transportation Center	200.000
927	137	ACRE	Open Space	0.000
927	263	Acre	Agriculture	0.000
927	265	Acre	Wildlife Corridor	189.200
928	137	ACRE	Open Space	0.000
928	263	Acre	Agriculture	0.000
928	265	Acre	Wildlife Corridor	43.200
929	137	ACRE	Open Space	0.000
929	265	Acre	Wildlife Corridor	0.000
929	266	ACRE	OS Park	64.700
930	137	ACRE	Open Space	0.000
930	266	ACRE	OS Park	67.300
930	277	SPC	Parking (GP)	100.000
931	137	ACRE	Open Space	0.000
931	266	ACRE	OS Park	279.500
931	277	SPC	Parking (GP)	302.000
932	137	ACRE	Open Space	138.900
932	266	ACRE	OS Park	0.000
932	277	SPC	Parking (GP)	647.000
932	279	TSF	Museum	95.000
933	27	TSF	Commercial Recreation	0.000
933	137	ACRE	Open Space	0.000
933	269	ACRE	Sports Park	35.000
933	277	SPC	Parking (GP)	511.000
933	279	TSF	Museum	0.000
934	123	TSF	Manufacturing	0.000
934	260	TSF	OCTA Facility	35.000
935	259	TSF	Institutional Warehouse	0.000
935	260	TSF	OCTA Facility	0.000
935	262	TSF	Cultural Institutional/Exposition	30.000
936	259	TSF	Institutional Warehouse	50.000
936	262	TSF	Cultural Institutional/Exposition	30.000
1237	101	DU	Single Family Detached	122.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
1237	102	DU	Condominiums	120.000
1239	127	ACRE	COMMERCIAL RECREATION - ITAM	45.000
1242	101	DU	Single Family Detached	0.000
1243	101	DU	Single Family Detached	0.000
1244	101	DU	Single Family Detached	200.000
1244	139	ACRE	Park	4.000
1247	101	DU	Single Family Detached	85.000
1247	103	DU	Apartments	100.000
1248	101	DU	Single Family Detached	153.000
1441	101	DU	Single Family Detached	1,072.000
1441	102	DU	Condominiums	210.000
1441	109	TSF	Commercial (EQ)	110.000
1593	101	DU	Single Family Detached	109.000
1593	139	ACRE	Park	4.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
1	101	DU	Single Family Detached	331.000
1	102	DU	Condominiums	322.000
1	139	ACRE	Park	5.800
2	101	DU	Single Family Detached	657.000
2	102	DU	Condominiums	80.000
2	136	STU	ELEMENTARY/MIDDLE - ITAM	700.000
2	139	ACRE	Park	15.900
2	142	TSF	Child Care Center	10.000
3	132	TSF	Government Facility	244.314
4	101	DU	Single Family Detached	270.000
4	102	DU	Condominiums	98.000
4	139	ACRE	Park	6.800
6	101	DU	Single Family Detached	169.000
7	101	DU	Single Family Detached	142.000
9	103	DU	Apartments	500.000
11	109	TSF	Commercial (EQ)	117.000
11	113	TSF	Restaurant	7.500
11	114	TSF	Fast Food Restaurant	7.000
11	116	SITE	GAS STATION	1.000
11	120	TSF	Bank	0.000
15	101	DU	Single Family Detached	500.000
15	102	DU	Condominiums	0.000
15	132	TSF	Government Facility	8.977
15	136	STU	ELEMENTARY/MIDDLE - ITAM	700.000
15	139	ACRE	Park	8.400
16	101	DU	Single Family Detached	240.000
16	102	DU	Condominiums	267.000
16	139	ACRE	Park	2.000
17	35	TSF	High-School	200.000
17	135	STU	HIGH-SCHOOL - ITAM	2,758.000
18	101	DU	Single Family Detached	412.000
18	102	DU	Condominiums	100.000
18	139	ACRE	Park	4.100
23	101	DU	Single Family Detached	104.000
23	102	DU	Condominiums	147.000
24	101	DU	Single Family Detached	447.000
25	101	DU	Single Family Detached	151.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
25	102	DU	Condominiums	190.000
26	101	DU	Single Family Detached	202.000
27	101	DU	Single Family Detached	509.000
27	102	DU	Condominiums	503.000
27	103	DU	Apartments	378.000
27	109	TSF	Commercial (EQ)	85.000
28	101	DU	Single Family Detached	110.000
28	102	DU	Condominiums	218.000
29	101	DU	Single Family Detached	32.000
30	101	DU	Single Family Detached	179.000
30	102	DU	Condominiums	259.000
31	101	DU	Single Family Detached	188.000
31	136	STU	ELEMENTARY/MIDDLE - ITAM	635.000
32	101	DU	Single Family Detached	313.000
33	102	DU	Condominiums	38.000
33	103	DU	Apartments	392.000
33	109	TSF	Commercial (EQ)	6.618
34	103	DU	Apartments	744.000
35	102	DU	Condominiums	0.000
35	103	DU	Apartments	724.000
35	109	TSF	Commercial (EQ)	441.082
36	16	TSF	Gas Station	2.929
36	101	DU	Single Family Detached	2.000
36	109	TSF	Commercial (EQ)	130.255
36	114	TSF	Fast Food Restaurant	2.816
36	116	SITE	GAS STATION	1.000
36	142	TSF	Child Care Center	11.680
37	101	DU	Single Family Detached	82.000
37	102	DU	Condominiums	24.000
38	101	DU	Single Family Detached	548.000
38	102	DU	Condominiums	333.000
39	15	TSF	Cinema	48.346
39	109	TSF	Commercial (EQ)	215.712
39	113	TSF	Restaurant	7.590
39	115	SEAT	CINEMA - ITAM	1,785.000
40	103	DU	Apartments	138.000
40	109	TSF	Commercial (EQ)	126.825
40	113	TSF	Restaurant	7.827
41	102	DU	Condominiums	0.000
41	103	DU	Apartments	756.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
41	125	TSF	Research and Development	30.000
41	161	TSF	Mini Warehouse	106.183
42	121	TSF	Office	319.748
42	125	TSF	Research and Development	300.591
43	101	DU	Single Family Detached	0.000
43	102	DU	Condominiums	0.000
43	103	DU	Apartments	0.000
43	135	STU	HIGH-SCHOOL - ITAM	2,000.000
44	101	DU	Single Family Detached	0.000
44	102	DU	Condominiums	225.000
44	103	DU	Apartments	162.000
44	121	TSF	Office	347.615
44	125	TSF	Research and Development	281.323
44	132	TSF	Government Facility	0.000
44	139	ACRE	Park	10.000
45	102	DU	Condominiums	117.000
46	101	DU	Single Family Detached	215.000
46	102	DU	Condominiums	211.000
47	102	DU	Condominiums	204.000
48	101	DU	Single Family Detached	161.000
49	36	TSF	Elementary/Middle	59.178
49	101	DU	Single Family Detached	196.000
49	129	TSF	Community Facility	1.318
49	136	STU	ELEMENTARY/MIDDLE - ITAM	900.000
50	101	DU	Single Family Detached	483.000
51	101	DU	Single Family Detached	78.000
51	130	TSF	Church/Synagogue	17.131
51	142	TSF	Child Care Center	12.508
52	101	DU	Single Family Detached	152.000
53	101	DU	Single Family Detached	140.000
54	101	DU	Single Family Detached	54.000
55	36	TSF	Elementary/Middle	0.000
55	101	DU	Single Family Detached	543.000
55	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
56	36	TSF	Elementary/Middle	29.589
56	101	DU	Single Family Detached	723.000
56	102	DU	Condominiums	634.000
56	136	STU	ELEMENTARY/MIDDLE - ITAM	900.000
56	139	ACRE	Park	6.000
59	139	ACRE	Park	20.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
61	101	DU	Single Family Detached	356.000
61	102	DU	Condominiums	88.000
62	101	DU	Single Family Detached	403.000
62	102	DU	Condominiums	0.000
62	103	DU	Apartments	520.000
62	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
63	121	TSF	Office	105.000
63	125	TSF	Research and Development	195.000
65	101	DU	Single Family Detached	367.000
65	102	DU	Condominiums	262.000
65	103	DU	Apartments	357.000
66	100	DU	Estate	0.000
68	101	DU	Single Family Detached	699.000
68	102	DU	Condominiums	378.000
70	101	DU	Single Family Detached	380.000
70	102	DU	Condominiums	356.000
70	103	DU	Apartments	221.000
70	136	STU	ELEMENTARY/MIDDLE - ITAM	750.000
70	139	ACRE	Park	10.700
70	142	TSF	Child Care Center	10.000
71	101	DU	Single Family Detached	341.000
71	102	DU	Condominiums	122.000
71	137	ACRE	Open Space	0.585
71	139	ACRE	Park	2.418
72	101	DU	Single Family Detached	128.000
73	101	DU	Single Family Detached	373.000
73	102	DU	Condominiums	3.000
74	101	DU	Single Family Detached	457.000
74	102	DU	Condominiums	3.000
74	139	ACRE	Park	3.913
75	36	TSF	Elementary/Middle	33.694
75	101	DU	Single Family Detached	380.000
75	136	STU	ELEMENTARY/MIDDLE - ITAM	618.000
75	139	ACRE	Park	3.970
76	36	TSF	Elementary/Middle	82.850
76	101	DU	Single Family Detached	233.000
76	102	DU	Condominiums	53.000
76	136	STU	ELEMENTARY/MIDDLE - ITAM	1,379.000
76	137	ACRE	Open Space	0.364
77	102	DU	Condominiums	608.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
78	101	DU	Single Family Detached	297.000
78	102	DU	Condominiums	1.000
78	139	ACRE	Park	1.796
79	101	DU	Single Family Detached	250.000
79	102	DU	Condominiums	5.000
79	129	TSF	Community Facility	7.552
79	139	ACRE	Park	10.800
80	16	TSF	Gas Station	1.000
80	109	TSF	Commercial (EQ)	128.817
80	114	TSF	Fast Food Restaurant	5.863
80	116	SITE	GAS STATION	1.000
80	120	TSF	Bank	9.524
80	121	TSF	Office	54.562
81	36	TSF	Elementary/Middle	35.828
81	101	DU	Single Family Detached	464.000
81	136	STU	ELEMENTARY/MIDDLE - ITAM	552.000
81	139	ACRE	Park	6.007
82	101	DU	Single Family Detached	289.000
82	139	ACRE	Park	0.421
83	101	DU	Single Family Detached	197.000
83	103	DU	Apartments	0.000
84	104	DU	Housing B (Mobile Home)	533.000
84	139	ACRE	Park	3.500
85	16	TSF	Gas Station	5.394
85	102	DU	Condominiums	256.000
85	103	DU	Apartments	289.000
85	116	SITE	GAS STATION	1.000
85	121	TSF	Office	16.106
85	139	ACRE	Park	0.142
86	101	DU	Single Family Detached	309.000
86	139	ACRE	Park	3.155
87	101	DU	Single Family Detached	290.000
87	139	ACRE	Park	5.532
88	36	TSF	Elementary/Middle	34.002
88	101	DU	Single Family Detached	198.000
88	136	STU	ELEMENTARY/MIDDLE - ITAM	601.000
88	139	ACRE	Park	6.132
89	130	TSF	Church/Synagogue	16.558
89	139	ACRE	Park	0.000
89	161	TSF	Mini Warehouse	228.957

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ITAM TAZ	ITAM Code	Units	Description	Quantity
89	164	SPACE	RV Storage	0.000
90	101	DU	Single Family Detached	213.000
90	139	ACRE	Park	2.731
91	109	TSF	Commercial (EQ)	16.620
91	130	TSF	Church/Synagogue	5.280
92	101	DU	Single Family Detached	218.000
92	102	DU	Condominiums	182.000
92	107	DU	Congregate Care	0.000
93	101	DU	Single Family Detached	184.000
93	139	ACRE	Park	3.670
94	101	DU	Single Family Detached	129.000
95	102	DU	Condominiums	348.000
95	103	DU	Apartments	604.000
95	139	ACRE	Park	5.801
96	102	DU	Condominiums	179.000
96	103	DU	Apartments	96.000
96	130	TSF	Church/Synagogue	15.983
97	16	TSF	Gas Station	2.837
97	36	TSF	Elementary/Middle	16.086
97	103	DU	Apartments	0.000
97	109	TSF	Commercial (EQ)	177.084
97	120	TSF	Bank	3.500
97	121	TSF	Office	147.200
97	129	TSF	Community Facility	0.000
97	130	TSF	Church/Synagogue	54.498
97	136	STU	ELEMENTARY/MIDDLE - ITAM	180.000
98	109	TSF	Commercial (EQ)	0.000
98	121	TSF	Office	312.634
99	101	DU	Single Family Detached	297.000
100	101	DU	Single Family Detached	549.000
100	102	DU	Condominiums	314.000
101	101	DU	Single Family Detached	447.000
101	102	DU	Condominiums	552.000
101	103	DU	Apartments	991.000
101	136	STU	ELEMENTARY/MIDDLE - ITAM	900.000
102	102	DU	Apartments	157.000
102	135	STU	HIGH-SCHOOL - ITAM	1,200.000
103	101	DU	Single Family Detached	512.000
103	102	DU	Condominiums	575.000
103	103	DU	Apartments	540.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
104	121	TSF	Office	70.000
104	125	TSF	Research and Development	130.000
105	102	DU	Condominiums	0.000
105	103	DU	Apartments	695.000
105	109	TSF	Commercial (EQ)	0.000
105	114	TSF	Fast Food Restaurant	0.000
106	101	DU	Single Family Detached	464.000
106	102	DU	Condominiums	264.000
106	129	TSF	Community Facility	8.000
106	136	STU	ELEMENTARY/MIDDLE - ITAM	624.000
106	142	TSF	Child Care Center	17.500
107	102	DU	Condominiums	0.000
107	103	DU	Apartments	402.000
108	101	DU	Single Family Detached	481.000
108	102	DU	Condominiums	84.000
108	103	DU	Apartments	598.000
108	136	STU	ELEMENTARY/MIDDLE - ITAM	900.000
109	136	STU	ELEMENTARY/MIDDLE - ITAM	1,200.000
110	101	DU	Single Family Detached	311.000
111	103	DU	Apartments	617.000
111	153	TSF	OCTA Facility	0.000
112	101	DU	Single Family Detached	534.000
112	139	ACRE	Park	6.790
113	103	DU	Apartments	453.000
114	109	TSF	Commercial (EQ)	178.000
114	113	TSF	Restaurant	7.000
114	114	TSF	Fast Food Restaurant	8.000
114	116	SITE	GAS STATION	1.000
114	120	TSF	Bank	9.000
114	121	TSF	Office	461.968
114	124	TSF	Warehouse	0.000
114	130	TSF	Church/Synagogue	0.000
115	121	TSF	Office	1,200.000
116	121	TSF	Office	9.298
116	124	TSF	Warehouse	24.868
116	125	TSF	Research and Development	1,216.507
116	130	TSF	Church/Synagogue	4.600
116	153	TSF	OCTA Facility	48.389
116	186	SG	OCTD SB MAINT. YARD	0.000
117	109	TSF	Commercial (EQ)	286.530

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ITAM TAZ	ITAM Code	Units	Description	Quantity
118	109	TSF	Commercial (EQ)	0.000
118	121	TSF	Office	382.827
118	123	TSF	Manufacturing	213.542
118	124	TSF	Warehouse	417.301
118	126	TSF	Health Club	41.000
119	109	TSF	Commercial (EQ)	3.238
119	121	TSF	Office	0.000
120	121	TSF	Office	155.272
120	124	TSF	Warehouse	26.656
120	125	TSF	Research and Development	180.000
121	101	DU	Single Family Detached	570.000
122	121	TSF	Office	187.317
122	124	TSF	Warehouse	16.814
122	125	TSF	Research and Development	180.000
123	121	TSF	Office	481.520
123	123	TSF	Manufacturing	78.040
123	124	TSF	Warehouse	12.529
124	103	DU	Apartments	100.000
125	29	ACRE	Homeowner's Assoc. Rec. Area	2.763
125	101	DU	Single Family Detached	475.000
127	103	DU	Apartments	24.000
127	129	TSF	Community Facility	5.897
127	139	ACRE	Park	19.400
128	36	TSF	Elementary/Middle	14.326
128	101	DU	Single Family Detached	425.000
128	139	ACRE	Park	2.600
129	36	TSF	Elementary/Middle	39.950
129	101	DU	Single Family Detached	413.000
129	136	STU	ELEMENTARY/MIDDLE - ITAM	595.000
129	137	ACRE	Open Space	0.300
129	139	ACRE	Park	3.000
130	102	DU	Condominiums	191.000
131	16	TSF	Gas Station	1.543
131	109	TSF	Commercial (EQ)	60.636
131	114	TSF	Fast Food Restaurant	1.585
131	116	SITE	GAS STATION	1.000
131	120	TSF	Bank	4.500
131	121	TSF	Office	5.486
132	102	DU	Condominiums	424.000
132	103	DU	Apartments	444.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
132	139	ACRE	Park	1.580
133	16	TSF	Gas Station	3.491
133	109	TSF	Commercial (EQ)	210.615
133	113	TSF	Restaurant	12.261
133	114	TSF	Fast Food Restaurant	6.688
133	116	SITE	GAS STATION	3.000
133	120	TSF	Bank	3.964
133	121	TSF	Office	7.284
133	141	TSF	Nursery	7.826
134	109	TSF	Commercial (EQ)	235.348
134	113	TSF	Restaurant	35.198
134	114	TSF	Fast Food Restaurant	2.454
134	116	SITE	GAS STATION	1.000
134	120	TSF	Bank	11.995
134	121	TSF	Office	39.843
135	101	DU	Single Family Detached	21.000
135	102	DU	Condominiums	210.000
136	35	TSF	High-School	97.978
136	129	TSF	Community Facility	68.993
136	133	TSF	Library	21.000
136	135	STU	HIGH-SCHOOL - ITAM	2,395.000
136	139	ACRE	Park	27.100
136	142	TSF	Child Care Center	2.880
137	36	TSF	Elementary/Middle	36.604
137	101	DU	Single Family Detached	627.000
137	136	STU	ELEMENTARY/MIDDLE - ITAM	429.000
137	139	ACRE	Park	6.060
138	101	DU	Single Family Detached	510.000
138	139	ACRE	Park	1.511
139	102	DU	Condominiums	187.000
139	139	ACRE	Park	2.137
140	29	ACRE	Homeowner's Assoc. Rec. Area	0.060
140	101	DU	Single Family Detached	112.000
140	102	DU	Condominiums	175.000
140	139	ACRE	Park	1.111
141	36	TSF	Elementary/Middle	44.207
141	101	DU	Single Family Detached	285.000
141	136	STU	ELEMENTARY/MIDDLE - ITAM	715.000
141	139	ACRE	Park	2.915
142	102	DU	Condominiums	124.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
142	103	DU	Apartments	334.000
142	130	TSF	Church/Synagogue	39.532
143	101	DU	Single Family Detached	364.000
144	36	TSF	Elementary/Middle	35.761
144	101	DU	Single Family Detached	143.000
144	103	DU	Apartments	288.000
144	130	TSF	Church/Synagogue	19.044
144	136	STU	ELEMENTARY/MIDDLE - ITAM	400.000
144	137	ACRE	Open Space	2.923
144	139	ACRE	Park	1.161
145	29	ACRE	Homeowner's Assoc. Rec. Area	1.254
145	101	DU	Single Family Detached	107.000
145	102	DU	Condominiums	176.000
145	139	ACRE	Park	2.294
146	29	ACRE	Homeowner's Assoc. Rec. Area	1.075
146	102	DU	Condominiums	292.000
147	36	TSF	Elementary/Middle	70.060
147	101	DU	Single Family Detached	247.000
147	129	TSF	Community Facility	3.873
147	136	STU	ELEMENTARY/MIDDLE - ITAM	600.000
147	137	ACRE	Open Space	2.217
147	139	ACRE	Park	10.600
148	16	TSF	Gas Station	1.610
148	109	TSF	Commercial (EQ)	121.234
148	113	TSF	Restaurant	7.562
148	114	TSF	Fast Food Restaurant	2.113
148	116	SITE	GAS STATION	1.000
148	121	TSF	Office	43.386
149	102	DU	Condominiums	10.000
149	104	DU	Housing B (Mobile Home)	356.000
150	101	DU	Single Family Detached	304.000
150	121	TSF	Office	35.026
150	122	TSF	Medical Office	37.226
150	124	TSF	Warehouse	1.080
150	130	TSF	Church/Synagogue	25.010
150	142	TSF	Child Care Center	5.734
151	101	DU	Single Family Detached	429.000
151	139	ACRE	Park	3.081
152	36	TSF	Elementary/Middle	38.763
152	102	DU	Condominiums	96.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
152	136	STU	ELEMENTARY/MIDDLE - ITAM	551.000
152	139	ACRE	Park	1.804
153	109	TSF	Commercial (EQ)	41.068
153	120	TSF	Bank	9.964
153	121	TSF	Office	5.475
154	27	TSF	Commercial Recreation	0.285
155	121	TSF	Office	3.750
155	124	TSF	Warehouse	139.975
155	125	TSF	Research and Development	31.850
155	140	ACRE	Golf Course	220.000
156	85	TSF	Travel Land	0.000
156	118	TSF	Auto Dealer	0.000
156	121	TSF	Office	612.500
156	124	TSF	Warehouse	0.000
156	125	TSF	Research and Development	392.749
157	27	TSF	Commercial Recreation	20.249
157	121	TSF	Office	203.603
157	124	TSF	Warehouse	0.000
157	125	TSF	Research and Development	6.250
158	43	TSF	Community College	150.001
158	130	TSF	Church/Synagogue	0.000
159	121	TSF	Office	15.000
159	123	TSF	Manufacturing	2.500
159	124	TSF	Warehouse	208.142
159	125	TSF	Research and Development	72.980
159	132	TSF	Government Facility	100.666
160	29	ACRE	Homeowner's Assoc. Rec. Area	1.197
160	101	DU	Single Family Detached	272.000
160	102	DU	Condominiums	780.000
160	103	DU	Apartments	60.000
160	125	TSF	Research and Development	0.000
160	130	TSF	Church/Synagogue	40.684
160	137	ACRE	Open Space	2.961
161	121	TSF	Office	489.376
161	124	TSF	Warehouse	0.000
161	125	TSF	Research and Development	25.000
162	103	DU	Apartments	210.000
163	109	TSF	Commercial (EQ)	0.000
163	121	TSF	Office	649.798
164	16	TSF	Gas Station	2.432

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ITAM TAZ	ITAM Code	Units	Description	Quantity
164	36	TSF	Elementary/Middle	14.326
164	109	TSF	Commercial (EQ)	141.032
164	116	SITE	GAS STATION	1.000
164	120	TSF	Bank	3.635
165	101	DU	Single Family Detached	4.000
165	102	DU	Condominiums	135.000
166	101	DU	Single Family Detached	78.000
166	102	DU	Condominiums	57.000
167	101	DU	Single Family Detached	36.000
167	102	DU	Condominiums	287.000
167	103	DU	Apartments	730.000
167	129	TSF	Community Facility	9.649
167	139	ACRE	Park	2.504
167	142	TSF	Child Care Center	12.660
168	102	DU	Condominiums	210.000
168	139	ACRE	Park	0.667
169	101	DU	Single Family Detached	101.000
169	102	DU	Condominiums	102.000
170	101	DU	Single Family Detached	13.000
170	102	DU	Condominiums	104.000
171	101	DU	Single Family Detached	82.000
172	102	DU	Condominiums	106.000
172	103	DU	Apartments	364.000
172	109	TSF	Commercial (EQ)	0.000
173	103	DU	Apartments	224.000
173	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
174	101	DU	Single Family Detached	151.000
175	101	DU	Single Family Detached	112.000
176	11	TSF	Hotel	61.512
176	34	BEDS	HOSPITAL - ITAM	0.000
176	111	ROOM	HOTEL - ITAM	122.000
176	121	TSF	Office	33.873
176	122	TSF	Medical Office	49.081
176	125	TSF	Research and Development	0.000
176	134	TSF	Hospital	0.000
176	137	ACRE	Open Space	7.400
177	121	TSF	Office	365.042
177	125	TSF	Research and Development	0.000
177	137	ACRE	Open Space	10.100
178	122	TSF	Medical Office	117.559

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ITAM TAZ	ITAM Code	Units	Description	Quantity
178	134	TSF	Hospital	745.263
179	121	TSF	Office	252.000
179	125	TSF	Research and Development	0.000
179	137	ACRE	Open Space	10.900
180	121	TSF	Office	80.900
180	124	TSF	Warehouse	139.418
180	125	TSF	Research and Development	348.500
181	121	TSF	Office	0.000
181	122	TSF	Medical Office	460.000
181	125	TSF	Research and Development	0.000
181	134	TSF	Hospital	848.000
182	121	TSF	Office	241.058
182	124	TSF	Warehouse	0.000
182	125	TSF	Research and Development	0.000
183	121	TSF	Office	173.313
184	121	TSF	Office	101.851
184	124	TSF	Warehouse	0.000
184	125	TSF	Research and Development	115.170
184	137	ACRE	Open Space	10.100
184	161	TSF	Mini Warehouse	0.000
185	121	TSF	Office	129.000
185	124	TSF	Warehouse	0.000
185	125	TSF	Research and Development	189.200
186	121	TSF	Office	261.054
186	124	TSF	Warehouse	252.820
186	125	TSF	Research and Development	186.659
186	137	ACRE	Open Space	18.400
187	127	ACRE	COMMERCIAL RECREATION - ITAM	4.400
187	129	TSF	Community Facility	9.804
187	132	TSF	Government Facility	191.233
187	142	TSF	Child Care Center	11.162
188	121	TSF	Office	61.497
189	102	DU	Condominiums	259.000
189	103	DU	Apartments	1,161.000
189	115	SEAT	CINEMA - ITAM	1,698.000
189	137	ACRE	Open Space	5.744
189	139	ACRE	Park	3.187
190	16	TSF	Gas Station	1.200
190	109	TSF	Commercial (EQ)	308.319
190	113	TSF	Restaurant	18.440

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ITAM TAZ	ITAM Code	Units	Description	Quantity
190	116	SITE	GAS STATION	1.000
191	102	DU	Condominiums	397.000
192	15	TSF	Cinema	42.826
192	16	TSF	Gas Station	1.632
192	109	TSF	Commercial (EQ)	213.150
192	113	TSF	Restaurant	22.413
192	115	SEAT	CINEMA - ITAM	1,698.000
192	116	SITE	GAS STATION	1.000
192	117	SITE	CAR WASH	1.000
193	36	TSF	Elementary/Middle	44.000
193	101	DU	Single Family Detached	576.000
193	103	DU	Apartments	354.000
193	136	STU	ELEMENTARY/MIDDLE - ITAM	552.000
193	139	ACRE	Park	10.002
193	142	TSF	Child Care Center	10.345
194	101	DU	Single Family Detached	317.000
194	103	DU	Apartments	200.000
194	139	ACRE	Park	3.997
195	103	DU	Apartments	426.000
195	129	TSF	Community Facility	0.000
195	139	ACRE	Park	5.117
196	16	TSF	Gas Station	2.070
196	109	TSF	Commercial (EQ)	5.470
196	114	TSF	Fast Food Restaurant	3.408
196	116	SITE	GAS STATION	1.000
196	117	SITE	CAR WASH	1.000
196	119	TSF	Auto Repair	10.338
197	101	DU	Single Family Detached	154.000
197	139	ACRE	Park	2.258
198	36	TSF	Elementary/Middle	45.490
198	101	DU	Single Family Detached	145.000
198	129	TSF	Community Facility	0.000
198	136	STU	ELEMENTARY/MIDDLE - ITAM	969.000
198	139	ACRE	Park	0.120
199	109	TSF	Commercial (EQ)	102.506
200	102	DU	Condominiums	286.000
200	137	ACRE	Open Space	0.903
200	139	ACRE	Park	0.978
201	103	DU	Apartments	513.000
202	101	DU	Single Family Detached	460.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
202	139	ACRE	Park	3.657
203	29	ACRE	Homeowner's Assoc. Rec. Area	2.261
203	101	DU	Single Family Detached	241.000
203	102	DU	Condominiums	123.000
203	139	ACRE	Park	2.549
204	101	DU	Single Family Detached	132.000
204	102	DU	Condominiums	185.000
204	139	ACRE	Park	3.819
205	29	ACRE	Homeowner's Assoc. Rec. Area	0.401
205	101	DU	Single Family Detached	92.000
205	102	DU	Condominiums	257.000
205	139	ACRE	Park	4.651
206	101	DU	Single Family Detached	31.000
206	102	DU	Condominiums	133.000
206	103	DU	Apartments	220.000
206	139	ACRE	Park	3.873
207	36	TSF	Elementary, Middle	56.730
207	101	DU	Single Family Detached	110.000
207	102	DU	Condominiums	64.000
207	136	STU	ELEMENTARY, MIDDLE - ITAM	1,685.000
207	139	ACRE	Park	1.908
208	36	TSF	Elementary, Middle	33.874
208	101	DU	Single Family Detached	131.000
208	102	DU	Condominiums	103.000
208	136	STU	ELEMENTARY, MIDDLE - ITAM	539.000
208	137	ACRE	Open Space	2.546
208	139	ACRE	Park	4.999
209	101	DU	Single Family Detached	57.000
209	102	DU	Condominiums	258.000
209	139	ACRE	Park	1.998
210	101	DU	Single Family Detached	105.000
210	102	DU	Condominiums	138.000
210	113	TSF	Restaurant	12.470
210	121	TSF	Office	23.000
210	139	ACRE	Park	1.999
211	113	TSF	Restaurant	12.667
211	121	TSF	Office	148.208
212	101	DU	Single Family Detached	48.000
212	102	DU	Condominiums	295.000
212	139	ACRE	Park	2.592

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ITAM TAZ	ITAM Code	Units	Description	Quantity
213	35	TSF	High-School	23.098
213	106	DU	Senior Housing	165.000
213	109	TSF	Commercial (EQ)	29.656
213	121	TSF	Office	82.974
213	130	TSF	Church, Synagogue	5.164
213	135	STU	HIGH-SCHOOL - ITAM	113.000
213	142	TSF	Child Care Center	15.389
214	29	ACRE	Homeowner's Assoc. Rec. Area	5.028
214	36	TSF	Elementary, Middle	33.808
214	101	DU	Single Family Detached	181.000
214	102	DU	Condominiums	256.000
214	136	STU	ELEMENTARY, MIDDLE - ITAM	553.000
214	139	ACRE	Park	4.009
215	129	TSF	Community Facility	1.750
216	36	TSF	Elementary, Middle	0.000
216	101	DU	Single Family Detached	0.000
216	102	DU	Condominiums	414.000
216	103	DU	Apartments	375.000
216	136	STU	ELEMENTARY, MIDDLE - ITAM	0.000
216	139	ACRE	Park	4.000
217	101	DU	Single Family Detached	64.000
217	102	DU	Condominiums	356.000
217	139	ACRE	Park	2.041
218	101	DU	Single Family Detached	98.000
218	102	DU	Condominiums	151.000
219	35	TSF	High-School	193.431
219	130	TSF	Church, Synagogue	111.632
219	135	STU	HIGH-SCHOOL - ITAM	2,115.000
219	137	ACRE	Open Space	3.369
220	16	TSF	Gas Station	0.000
220	17	TSF	Car Wash	5.554
220	109	TSF	Commercial (EQ)	182.726
220	114	TSF	Fast Food Restaurant	0.000
220	115	SEATS	CINEMA - ITAM	0.000
220	117	SITE	ITAM Car Wash	1.000
220	120	TSF	Bank	12.418
220	122	TSF	Medical Office	11.174
220	142	TSF	Child Care Center	5.730
221	29	ACRE	Homeowner's Assoc. Rec. Area	5.332
221	101	DU	Single Family Detached	289.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
221	102	DU	Condominiums	210.000
221	139	ACRE	Park	4.003
222	103	DU	Apartments	136.000
223	101	DU	Single Family Detached	51.000
223	102	DU	Condominiums	72.000
224	5	TSF	Convalescent Home	93.857
224	105	BEDS	CONVALESCENT HOME	123.000
224	114	TSF	Fast Food Restaurant	4.008
224	121	TSF	Office	122.952
224	122	TSF	Medical Office	118.100
224	130	TSF	Church, Synagogue	40.236
225	29	ACRE	Homeowner's Assoc. Rec. Area	6.352
225	101	DU	Single Family Detached	270.000
225	102	DU	Condominiums	332.000
225	139	ACRE	Park	2.088
226	36	TSF	Elementary, Middle	24.810
226	106	DU	Senior Housing	116.000
226	109	TSF	Commercial (EQ)	0.976
226	121	TSF	Office	16.015
226	122	TSF	Medical Office	75.898
226	136	STU	ELEMENTARY, MIDDLE - ITAM	138.000
226	161	TSF	Mini Warehouse	117.648
227	36	TSF	Elementary, Middle	52.393
227	101	DU	Single Family Detached	57.000
227	102	DU	Condominiums	268.000
227	136	STU	ELEMENTARY, MIDDLE - ITAM	596.000
227	139	ACRE	Park	4.258
228	17	TSF	Car Wash	5.545
228	103	DU	Apartments	176.000
228	107	DU	Congregate Care	140.000
228	117	SITE	ITAM Car Wash	1.000
228	121	TSF	Office	35.046
228	123	TSF	Manufacturing	0.000
228	124	TSF	Warehouse	7.917
228	130	TSF	Church, Synagogue	141.099
229	129	TSF	Community Facility	23.500
229	132	TSF	Government Facility	7.500
230	101	DU	Single Family Detached	24.000
231	101	DU	Single Family Detached	179.000
231	102	DU	Condominiums	149.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
231	139	ACRE	Park	6.661
232	36	TSF	Elementary, Middle	47.334
232	101	DU	Single Family Detached	235.000
232	102	DU	Condominiums	361.000
232	136	STU	ELEMENTARY, MIDDLE - ITAM	625.000
232	139	ACRE	Park	3.993
233	16	TSF	Gas Station	1.310
233	109	TSF	Commercial (EQ)	108.849
233	113	TSF	Restaurant	6.650
233	114	TSF	Fast Food Restaurant	4.300
233	116	SITE	ITAM Gas Station	1.000
234	36	TSF	Elementary, Middle	62.624
234	101	DU	Single Family Detached	73.000
234	102	DU	Condominiums	176.000
234	136	STU	ELEMENTARY, MIDDLE - ITAM	560.000
235	101	DU	Single Family Detached	168.000
235	102	DU	Condominiums	20.000
235	103	DU	Apartments	320.000
236	102	DU	Condominiums	331.000
236	103	DU	Apartments	258.000
236	139	ACRE	Park	4.003
237	101	DU	Single Family Detached	17.000
237	102	DU	Condominiums	368.000
239	132	TSF	Government Facility	8.827
241	101	DU	Single Family Detached	1.000
241	102	DU	Condominiums	549.000
241	103	DU	Apartments	927.000
241	109	TSF	Commercial (EQ)	145.500
241	114	TSF	Fast Food Restaurant	3.500
241	116	SITE	GAS STATION	1.000
241	129	TSF	Community Facility	3.139
242	103	DU	Apartments	182.000
242	137	ACRE	Open Space	18.000
243	103	DU	Apartments	0.000
243	121	TSF	Office	1,054.000
244	36	TSF	Elementary/Middle	40.000
244	101	DU	Single Family Detached	385.000
244	102	DU	Condominiums	771.000
244	103	DU	Apartments	0.000
244	109	TSF	Commercial (EQ)	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
244	130	TSF	Church/Synagogue	55.000
244	136	STU	ELEMENTARY/MIDDLE - ITAM	700.000
244	137	ACRE	Open Space	33.000
244	139	ACRE	Park	51.500
245	121	TSF	Office	6.000
246	101	DU	Single Family Detached	175.000
251	27	TSF	Commercial Recreation	77.785
251	127	ACRE	COMMERCIAL RECREATION - ITAM	1.677
252	103	DU	Apartments	880.000
252	130	TSF	Church/Synagogue	31.235
252	139	ACRE	Park	3.380
253	127	ACRE	COMMERCIAL RECREATION - ITAM	3.600
253	130	TSF	Church/Synagogue	38.077
254	16	TSF	Gas Station	6.980
254	17	TSF	Car Wash	6.152
254	102	DU	Condominiums	177.000
254	103	DU	Apartments	368.000
254	109	TSF	Commercial (EQ)	0.000
254	116	SITE	GAS STATION	0.000
254	117	SITE	CAR WASH	1.000
254	120	TSF	Bank	7.438
254	126	TSF	Health Club	6.037
254	129	TSF	Community Facility	9.374
254	130	TSF	Church/Synagogue	37.567
254	137	ACRE	Open Space	0.469
254	140	ACRE	Golf Course	83.000
255	102	DU	Condominiums	372.000
255	137	ACRE	Open Space	0.396
256	101	DU	Single Family Detached	0.000
256	102	DU	Condominiums	362.000
256	137	ACRE	Open Space	18.079
256	139	ACRE	Park	2.234
257	101	DU	Single Family Detached	158.000
257	137	ACRE	Open Space	1.076
258	101	DU	Single Family Detached	106.000
259	16	TSF	Gas Station	2.065
259	109	TSF	Commercial (EQ)	48.553
259	114	TSF	Fast Food Restaurant	3.000
259	116	SITE	ITAM - Gas Station	1.000
259	120	TSF	Bank	5.307

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ITAM TAZ	ITAM Code	Units	Description	Quantity
259	121	TSF	Office	11.504
260	36	TSF	Elementary, Middle	71.724
260	136	STU	ELEMENTARY, MIDDLE - ITAM	872.000
261	101	DU	Single Family Detached	133.000
261	102	DU	Condominiums	63.000
261	137	ACRE	Open Space	9.498
261	139	ACRE	Park	7.279
262	101	DU	Single Family Detached	116.000
262	137	ACRE	Open Space	0.265
263	101	DU	Single Family Detached	0.000
263	102	DU	Condominiums	173.000
264	101	DU	Single Family Detached	0.000
264	102	DU	Condominiums	334.000
265	101	DU	Single Family Detached	0.000
265	102	DU	Condominiums	387.000
265	130	TSF	Church, Synagogue	53.730
265	137	ACRE	Open Space	18.619
265	139	ACRE	Park	2.183
266	36	TSF	Elementary, Middle	55.394
266	102	DU	Condominiums	98.000
266	129	TSF	Community Facility	14.524
266	136	STU	ELEMENTARY, MIDDLE - ITAM	551.000
266	139	ACRE	Park	7.200
267	101	DU	Single Family Detached	101.000
267	102	DU	Condominiums	181.000
267	137	ACRE	Open Space	16.102
268	36	TSF	Elementary, Middle	0.000
268	101	DU	Single Family Detached	246.000
268	136	STU	ELEMENTARY, MIDDLE - ITAM	0.000
268	139	ACRE	Park	4.753
269	16	TSF	Gas Station	2.000
269	103	DU	Apartments	296.000
269	109	TSF	Commercial (EQ)	46.778
269	113	TSF	Restaurant	7.000
269	116	SITE	ITAM - Gas Station	1.000
269	121	TSF	Office	12.081
269	122	TSF	Medical Office	6.932
270	102	DU	Condominiums	165.000
270	130	TSF	Church/Synagogue	25.997
270	137	ACRE	Open Space	13.444

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ITAM TAZ	ITAM Code	Units	Description	Quantity
271	140	ACRE	Golf Course	100.000
272	29	ACRE	Homeowner's Assoc. Rec. Area	0.718
272	43	TSF	Community College	209.153
272	101	DU	Single Family Detached	151.000
272	127	ACRE	COMMERCIAL RECREATION - ITAM	0.718
272	137	ACRE	Open Space	0.408
272	140	ACRE	Golf Course	0.000
273	140	ACRE	Golf Course	97.000
274	35	TSF	High-School	159.652
274	103	DU	Apartments	252.000
274	135	STU	HIGH-SCHOOL - ITAM	2,515.000
275	101	DU	Single Family Detached	126.000
275	102	DU	Condominiums	74.000
275	103	DU	Apartments	216.000
276	101	DU	Single Family Detached	135.000
276	102	DU	Condominiums	150.000
277	29	ACRE	Homeowner's Assoc. Rec. Area	0.927
277	101	DU	Single Family Detached	2.000
277	102	DU	Condominiums	188.000
278	101	DU	Single Family Detached	142.000
278	102	DU	Condominiums	114.000
278	137	ACRE	Open Space	0.588
279	36	TSF	Elementary/Middle	38.573
279	101	DU	Single Family Detached	129.000
279	136	STU	ELEMENTARY/MIDDLE - ITAM	300.000
280	101	DU	Single Family Detached	23.000
280	102	DU	Condominiums	152.000
281	101	DU	Single Family Detached	151.000
282	101	DU	Single Family Detached	112.000
282	102	DU	Condominiums	39.000
283	101	DU	Single Family Detached	288.000
283	137	ACRE	Open Space	0.150
283	139	ACRE	Park	1.875
284	29	ACRE	Homeowner's Assoc. Rec. Area	0.514
284	101	DU	Single Family Detached	45.000
284	102	DU	Condominiums	524.000
284	137	ACRE	Open Space	0.399
284	139	ACRE	Park	2.620
285	101	DU	Single Family Detached	72.000
285	102	DU	Condominiums	175.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
285	137	ACRE	Open Space	0.989
286	36	TSF	Elementary/Middle	32.073
286	101	DU	Single Family Detached	167.000
286	136	STU	ELEMENTARY/MIDDLE - ITAM	267.000
286	139	ACRE	Park	3.100
287	101	DU	Single Family Detached	192.000
287	139	ACRE	Park	1.665
288	101	DU	Single Family Detached	151.000
288	129	TSF	Community Facility	19.746
288	139	ACRE	Park	7.600
289	101	DU	Single Family Detached	58.000
289	137	ACRE	Open Space	70.000
289	139	ACRE	Park	0.000
290	100	DU	Estate	201.000
290	101	DU	Single Family Detached	76.000
290	137	ACRE	Open Space	114.000
291	27	TSF	Commercial Recreation	42.605
291	100	DU	Estate	35.000
291	101	DU	Single Family Detached	74.000
291	102	DU	Condominiums	0.000
291	137	ACRE	Open Space	100.000
291	140	ACRE	Golf Course	200.000
292	100	DU	Estate	100.000
292	101	DU	Single Family Detached	83.000
292	102	DU	Condominiums	64.000
292	137	ACRE	Open Space	30.000
293	103	DU	Apartments	1,000.000
294	44	TSF	Utilities (Gas/Water)	84.999
294	123	TSF	Manufacturing	0.000
294	139	ACRE	Park	300.000
295	130	TSF	Church/Synagogue	95.744
295	142	TSF	Child Care Center	12.839
296	103	DU	Apartments	40.000
297	29	ACRE	Homeowner's Assoc. Rec. Area	0.656
297	102	DU	Condominiums	286.000
297	103	DU	Apartments	320.000
297	139	ACRE	Park	5.705
298	139	ACRE	Park	100.700
299	5	TSF	Convalescent Home	0.072
299	29	ACRE	Homeowner's Assoc. Rec. Area	0.423

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ITAM TAZ	ITAM Code	Units	Description	Quantity
299	102	DU	Condominiums	209.000
299	103	DU	Apartments	162.000
299	105	BEDS	Convalescent Home	372.000
299	106	DU	Senior Housing	86.000
299	107	DU	Congregate Care	363.000
300	16	TSF	Gas Station	0.638
300	102	DU	Condominiums	439.000
300	103	DU	Apartments	58.000
300	116	SITE	GAS STATION	1.000
300	129	TSF	Community Facility	9.971
300	139	ACRE	Park	2.142
301	15	TSF	Cinema	23.411
301	36	TSF	Elementary/Middle	13.271
301	103	DU	Apartments	446.000
301	109	TSF	Commercial (EQ)	104.567
301	112	TSF	Bar	5.916
301	113	TSF	Restaurant	12.066
301	114	TSF	Fast Food Restaurant	10.939
301	115	SEAT	CINEMA - ITAM	1,556.000
301	121	TSF	Office	211.284
301	126	TSF	Health Club	19.105
301	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
302	29	ACRE	Homeowner's Assoc. Rec. Area	0.282
302	103	DU	Apartments	221.000
302	106	DU	Senior Housing	160.000
302	109	TSF	Commercial (EQ)	57.592
302	113	TSF	Restaurant	9.283
302	114	TSF	Fast Food Restaurant	1.872
302	120	TSF	Bank	6.600
302	137	ACRE	Open Space	0.000
302	139	ACRE	Park	3.002
303	121	TSF	Office	103.336
303	124	TSF	Warehouse	0.903
303	125	TSF	Research and Development	142.391
304	121	TSF	Office	312.144
304	125	TSF	Research and Development	431.475
305	35	TSF	High-School	134.868
305	36	TSF	Elementary/Middle	111.068
305	126	TSF	Health Club	48.730
305	129	TSF	Community Facility	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
305	130	TSF	Church/Synagogue	83.490
305	135	STU	HIGH-SCHOOL - ITAM	520.000
305	136	STU	ELEMENTARY/MIDDLE - ITAM	1,110.000
305	142	TSF	Child Care Center	27.780
306	101	DU	Single Family Detached	130.000
306	102	DU	Condominiums	5.000
306	129	TSF	Community Facility	120.334
307	103	DU	Apartments	436.000
307	126	TSF	Health Club	35.000
307	130	TSF	Church/Synagogue	424.830
307	142	TSF	Child Care Center	22.000
308	101	DU	Single Family Detached	2.000
308	102	DU	Condominiums	70.000
309	102	DU	Condominiums	0.000
309	103	DU	Apartments	600.000
310	102	DU	Condominiums	325.000
310	136	STU	ELEMENTARY/MIDDLE - ITAM	750.000
310	139	ACRE	Park	20.500
311	101	DU	Single Family Detached	412.000
311	102	DU	Condominiums	199.000
312	101	DU	Single Family Detached	85.000
312	102	DU	Condominiums	99.000
312	103	DU	Apartments	600.000
312	139	ACRE	Park	4.000
314	137	ACRE	Open Space	772.000
315	129	TSF	Community Facility	1.524
315	137	ACRE	Open Space	499.100
315	139	ACRE	Park	14.998
316	137	ACRE	Open Space	754.000
317	137	ACRE	Open Space	257.000
318	103	DU	Apartments	435.000
318	109	TSF	Commercial (EQ)	100.000
318	121	TSF	Office	850.000
318	123	TSF	Manufacturing	0.000
318	137	ACRE	Open Space	202.000
318	138	ACRE	Agriculture	12.500
319	123	TSF	Manufacturing	131.267
319	132	TSF	Government Facility	140.000
320	137	ACRE	Open Space	47.470
321	138	ACRE	Agriculture	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
321	270	DU	TOD Residential	300.000
321	271	TSF	TOD Retail	15.000
322	138	ACRE	Agriculture	0.000
322	270	DU	TOD Residential	345.000
322	271	TSF	TOD Retail	15.000
323	138	ACRE	Agriculture	0.000
323	258	TSF	Research and Development	500.000
324	138	ACRE	Agriculture	0.000
324	251	TSF	Auto Center	102.000
333	121	TSF	Office	0.000
333	124	TSF	Warehouse	0.000
333	212	TSF	High Tech	337.862
334	121	TSF	Office	0.000
334	124	TSF	Warehouse	0.000
334	125	TSF	Research and Development	0.000
334	212	TSF	High Tech	447.836
335	121	TSF	Office	0.000
335	124	TSF	Warehouse	0.000
335	212	TSF	High Tech	436.431
336	121	TSF	Office	0.000
336	123	TSF	Manufacturing	0.000
336	124	TSF	Warehouse	0.000
336	125	TSF	Research and Development	0.000
336	212	TSF	High Tech	494.793
337	121	TSF	Office	0.000
337	124	TSF	Warehouse	0.000
337	125	TSF	Research and Development	0.000
337	187	TSF	Train Station	22.874
337	212	TSF	High Tech	468.403
337	261	Space	Transportation Center	1,651.000
338	109	TSF	Commercial (EQ)	897.741
338	116	SITE	GAS STATION	2.000
338	120	TSF	Bank	4.000
339	121	TSF	Office	0.000
339	124	TSF	Warehouse	0.000
339	125	TSF	Research and Development	0.000
339	212	TSF	High Tech	883.118
340	121	TSF	Office	0.000
340	124	TSF	Warehouse	0.000
340	125	TSF	Research and Development	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
340	212	TSF	High Tech	268.561
341	121	TSF	Office	0.000
341	124	TSF	Warehouse	0.000
341	125	TSF	Research and Development	0.000
341	212	TSF	High Tech	750.105
342	11	TSF	Hotel	37.049
342	109	TSF	Commercial (EQ)	16.136
342	111	ROOM	HOTEL - ITAM	149.000
342	121	TSF	Office	0.000
342	125	TSF	Research and Development	0.000
342	212	TSF	High Tech	345.771
343	121	TSF	Office	0.000
343	124	TSF	Warehouse	0.000
343	212	TSF	High Tech	343.394
344	121	TSF	Office	527.182
345	121	TSF	Office	683.899
346	121	TSF	Office	538.332
346	125	TSF	Research and Development	0.000
347	121	TSF	Office	327.516
348	11	TSF	Hotel	142.357
348	111	ROOM	HOTEL - ITAM	252.000
349	121	TSF	Office	458.830
350	121	TSF	Office	638.830
351	121	TSF	Office	50.000
352	121	TSF	Office	178.226
353	103	DU	Apartments	0.000
353	121	TSF	Office	626.496
353	137	ACRE	Open Space	15.379
353	139	ACRE	Park	0.000
353	142	TSF	Child Care Center	0.000
354	103	DU	Apartments	1,456.000
355	121	TSF	Office	450.412
356	103	DU	Apartments	1,550.000
357	121	TSF	Office	327.634
358	15	TSF	Cinema	0.000
358	109	TSF	Commercial (EQ)	1,550.000
358	113	TSF	Restaurant	0.000
358	115	SEAT	CINEMA - ITAM	0.000
359	121	TSF	Office	451.148
360	109	TSF	Commercial (EQ)	7.200

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ITAM TAZ	ITAM Code	Units	Description	Quantity
360	122	TSF	Medical Office	150.000
361	121	TSF	Office	628.154
362	121	TSF	Office	376.076
363	109	TSF	Commercial (EQ)	139.950
363	118	TSF	Auto Dealer	0.000
363	121	TSF	Office	0.000
363	123	TSF	Manufacturing	0.000
363	124	TSF	Warehouse	0.000
363	125	TSF	Research and Development	448.934
364	16	TSF	Gas Station	0.000
364	109	TSF	Commercial (EQ)	39.100
364	119	TSF	Auto Repair	0.000
364	121	TSF	Office	0.000
364	124	TSF	Warehouse	0.000
364	125	TSF	Research and Development	494.161
364	126	TSF	Health Club	36.442
364	262	TSF	Cultural/Institutional/Exposition	27.750
365	118	TSF	Auto Dealer	0.000
365	121	TSF	Office	0.000
365	123	TSF	Manufacturing	0.000
365	125	TSF	Research and Development	85.000
366	121	TSF	Office	0.000
366	123	TSF	Manufacturing	0.000
366	124	TSF	Warehouse	0.000
366	125	TSF	Research and Development	505.454
366	132	TSF	Government Facility	9.996
367	121	TSF	Office	0.000
367	124	TSF	Warehouse	0.000
367	125	TSF	Research and Development	192.714
368	118	TSF	Auto Dealer	24.781
368	121	TSF	Office	0.000
368	123	TSF	Manufacturing	0.000
368	124	TSF	Warehouse	0.000
368	125	TSF	Research and Development	398.024
369	118	TSF	Auto Dealer	0.000
369	119	TSF	Auto Repair	0.000
369	121	TSF	Office	0.000
369	124	TSF	Warehouse	0.000
369	125	TSF	Research and Development	383.114
370	121	TSF	Office	355.915

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ITAM TAZ	ITAM Code	Units	Description	Quantity
370	124	TSF	Warehouse	0.000
371	121	TSF	Office	0.000
371	124	TSF	Warehouse	0.000
371	125	TSF	Research and Development	149.760
372	121	TSF	Office	0.000
372	124	TSF	Warehouse	0.000
372	125	TSF	Research and Development	261.851
373	118	TSF	Auto Dealer	0.000
373	121	TSF	Office	0.000
373	123	TSF	Manufacturing	0.000
373	124	TSF	Warehouse	0.000
373	125	TSF	Research and Development	313.893
374	121	TSF	Office	0.000
374	123	TSF	Manufacturing	0.000
374	124	TSF	Warehouse	0.000
374	125	TSF	Research and Development	358.095
375	116	SITE	GAS STATION	0.000
375	121	TSF	Office	0.000
375	123	TSF	Manufacturing	0.000
375	124	TSF	Warehouse	0.000
375	125	TSF	Research and Development	581.309
375	130	TSF	Church/Synagogue	0.000
375	161	TSF	Mini Warehouse	0.000
376	109	TSF	Commercial (EQ)	140.250
376	113	TSF	Restaurant	0.000
376	116	SITE	GAS STATION	1.000
376	118	TSF	Auto Dealer	0.000
376	125	TSF	Research and Development	106.353
377	121	TSF	Office	252.273
377	124	TSF	Warehouse	0.000
377	125	TSF	Research and Development	181.993
378	121	TSF	Office	0.000
378	124	TSF	Warehouse	0.000
378	125	TSF	Research and Development	292.649
379	121	TSF	Office	2.688
379	123	TSF	Manufacturing	112.593
379	124	TSF	Warehouse	4.358
379	125	TSF	Research and Development	5.222
379	138	ACRE	Agriculture	8.000
380	180	SG	J. MUSICK FACILITY - ITAM	62,101.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
381	121	TSF	Office	101.527
381	124	TSF	Warehouse	206.402
381	125	TSF	Research and Development	32.740
382	121	TSF	Office	423.122
382	124	TSF	Warehouse	434.412
382	125	TSF	Research and Development	146.159
382	130	TSF	Church/Synagogue	1.704
383	109	TSF	Commercial (EQ)	0.000
383	121	TSF	Office	176.747
383	124	TSF	Warehouse	321.121
384	121	TSF	Office	76.210
384	124	TSF	Warehouse	610.527
384	125	TSF	Research and Development	0.000
385	121	TSF	Office	330.919
385	123	TSF	Manufacturing	7.793
385	124	TSF	Warehouse	683.496
385	125	TSF	Research and Development	368.087
385	129	TSF	Community Facility	2.360
386	121	TSF	Office	226.257
386	123	TSF	Manufacturing	34.986
386	124	TSF	Warehouse	718.046
386	125	TSF	Research and Development	235.785
386	161	TSF	Mini Warehouse	136.032
387	11	TSF	Hotel	67.772
387	109	TSF	Commercial (EQ)	18.815
387	111	ROOM	HOTEL - ITAM	112.000
387	121	TSF	Office	820.592
387	122	TSF	Medical Office	25.000
387	123	TSF	Manufacturing	24.618
387	124	TSF	Warehouse	950.068
387	125	TSF	Research and Development	518.252
388	121	TSF	Office	233.536
388	123	TSF	Manufacturing	1.080
388	124	TSF	Warehouse	536.754
388	125	TSF	Research and Development	0.000
389	121	TSF	Office	472.489
389	123	TSF	Manufacturing	5.544
389	124	TSF	Warehouse	1,216.524
389	125	TSF	Research and Development	38.997
390	109	TSF	Commercial (EQ)	4.708

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ITAM TAZ	ITAM Code	Units	Description	Quantity
390	121	TSF	Office	317.279
390	123	TSF	Manufacturing	21.699
390	124	TSF	Warehouse	455.417
390	125	TSF	Research and Development	21.750
391	121	TSF	Office	44.459
391	124	TSF	Warehouse	71.741
392	121	TSF	Office	82.224
392	124	TSF	Warehouse	85.764
393	109	TSF	Commercial (EQ)	0.000
393	119	TSF	Auto Repair	37.388
393	121	TSF	Office	328.398
393	124	TSF	Warehouse	344.371
393	130	TSF	Church/Synagogue	9.434
393	161	TSF	Mini Warehouse	101.225
394	109	TSF	Commercial (EQ)	54.144
394	118	TSF	Auto Dealer	264.610
394	119	TSF	Auto Repair	205.388
394	121	TSF	Office	129.460
394	124	TSF	Warehouse	183.491
395	238	TSF	Office Mix	206.572
395	239	TSF	Industrial Mix	357.706
396	238	TSF	Office Mix	253.602
396	239	TSF	Industrial Mix	408.746
397	236	TSF	Retail mix	22.109
397	238	TSF	Office Mix	107.291
397	239	TSF	Industrial Mix	243.813
398	236	TSF	Retail mix	12.052
398	238	TSF	Office Mix	81.093
398	239	TSF	Industrial Mix	168.382
399	238	TSF	Office Mix	255.529
399	239	TSF	Industrial Mix	289.499
400	238	TSF	Office Mix	176.669
400	239	TSF	Industrial Mix	551.910
401	238	TSF	Office Mix	178.824
401	239	TSF	Industrial Mix	231.849
402	238	TSF	Office Mix	112.123
402	239	TSF	Industrial Mix	136.185
403	236	TSF	Retail mix	237.693
403	238	TSF	Office Mix	91.261
403	239	TSF	Industrial Mix	18.610

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ITAM TAZ	ITAM Code	Units	Description	Quantity
404	238	TSF	Office Mix	390.178
404	239	TSF	Industrial Mix	156.914
405	238	TSF	Office Mix	195.340
405	239	TSF	Industrial Mix	224.252
406	238	TSF	Office Mix	67.367
406	239	TSF	Industrial Mix	129.081
407	238	TSF	Office Mix	50.517
407	239	TSF	Industrial Mix	117.130
408	236	TSF	Retail mix	0.910
408	238	TSF	Office Mix	203.894
408	239	TSF	Industrial Mix	132.687
409	238	TSF	Office Mix	261.087
409	239	TSF	Industrial Mix	156.347
410	238	TSF	Office Mix	84.594
410	239	TSF	Industrial Mix	143.356
411	235	DU	Multi-family	192.000
411	236	TSF	Retail mix	5.000
411	238	TSF	Office Mix	336.213
411	239	TSF	Industrial Mix	362.318
412	238	TSF	Office Mix	74.634
412	239	TSF	Industrial Mix	120.728
413	238	TSF	Office Mix	230.368
413	239	TSF	Industrial Mix	251.333
414	236	TSF	Retail mix	4.330
414	238	TSF	Office Mix	278.900
414	239	TSF	Industrial Mix	319.852
414	241	ROOM	Hotel-Extended Stay	132.000
415	238	TSF	Office Mix	72.505
415	239	TSF	Industrial Mix	70.180
416	236	TSF	Retail mix	4.000
416	239	TSF	Industrial Mix	211.864
417	238	TSF	Office Mix	252.153
417	239	TSF	Industrial Mix	13.986
418	238	TSF	Office Mix	155.307
418	239	TSF	Industrial Mix	158.835
419	238	TSF	Office Mix	6.731
419	239	TSF	Industrial Mix	69.440
420	238	TSF	Office Mix	165.144
420	239	TSF	Industrial Mix	280.974
421	238	TSF	Office Mix	187.309

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ITAM TAZ	ITAM Code	Units	Description	Quantity
421	239	TSF	Industrial Mix	118.674
422	235	DU	Multi-family	1.000
422	239	TSF	Industrial Mix	253.044
422	240	TSF	Mini Warehouse	64.280
423	238	TSF	Office Mix	528.346
424	239	TSF	Industrial Mix	158.715
425	238	TSF	Office Mix	397.325
426	236	TSF	Retail mix	1.760
426	238	TSF	Office Mix	320.276
426	239	TSF	Industrial Mix	79.691
427	238	TSF	Office Mix	77.041
427	239	TSF	Industrial Mix	59.674
428	236	TSF	Retail mix	1.902
428	238	TSF	Office Mix	103.026
428	239	TSF	Industrial Mix	175.770
429	238	TSF	Office Mix	171.274
429	239	TSF	Industrial Mix	275.893
430	238	TSF	Office Mix	455.361
430	239	TSF	Industrial Mix	166.265
431	236	TSF	Retail mix	1.930
431	238	TSF	Office Mix	147.117
431	239	TSF	Industrial Mix	278.240
432	238	TSF	Office Mix	90.064
432	239	TSF	Industrial Mix	43.919
433	238	TSF	Office Mix	42.470
433	239	TSF	Industrial Mix	157.309
434	238	TSF	Office Mix	140.297
434	239	TSF	Industrial Mix	146.061
435	238	TSF	Office Mix	41.643
435	239	TSF	Industrial Mix	67.700
436	238	TSF	Office Mix	192.847
436	239	TSF	Industrial Mix	75.073
437	236	TSF	Retail mix	0.600
437	238	TSF	Office Mix	168.516
437	239	TSF	Industrial Mix	45.696
438	238	TSF	Office Mix	177.939
438	239	TSF	Industrial Mix	262.960
439	238	TSF	Office Mix	300.646
439	239	TSF	Industrial Mix	384.005
440	238	TSF	Office Mix	38.486

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ITAM TAZ	ITAM Code	Units	Description	Quantity
440	239	TSF	Industrial Mix	192.220
441	236	TSF	Retail mix	30.965
441	238	TSF	Office Mix	134.284
441	239	TSF	Industrial Mix	187.637
442	238	TSF	Office Mix	63.283
442	239	TSF	Industrial Mix	92.070
443	236	TSF	Retail mix	20.562
443	238	TSF	Office Mix	66.785
443	239	TSF	Industrial Mix	6.094
444	238	TSF	Office Mix	42.205
444	239	TSF	Industrial Mix	26.561
445	238	TSF	Office Mix	56.712
445	239	TSF	Industrial Mix	128.372
446	235	DU	Multi-family	280.000
446	238	TSF	Office Mix	127.892
446	239	TSF	Industrial Mix	249.836
447	236	TSF	Retail mix	3.724
447	238	TSF	Office Mix	40.449
447	239	TSF	Industrial Mix	117.983
448	236	TSF	Retail mix	13.900
448	238	TSF	Office Mix	106.519
448	239	TSF	Industrial Mix	30.581
449	238	TSF	Office Mix	95.554
449	239	TSF	Industrial Mix	196.890
450	238	TSF	Office Mix	24.887
450	239	TSF	Industrial Mix	126.562
451	238	TSF	Office Mix	92.560
451	239	TSF	Industrial Mix	2.748
452	236	TSF	Retail mix	4.558
452	238	TSF	Office Mix	264.845
452	239	TSF	Industrial Mix	11.091
453	238	TSF	Office Mix	267.937
453	239	TSF	Industrial Mix	2.024
454	238	TSF	Office Mix	129.400
455	238	TSF	Office Mix	81.987
455	239	TSF	Industrial Mix	112.164
456	236	TSF	Retail mix	86.441
456	238	TSF	Office Mix	366.801
456	239	TSF	Industrial Mix	597.674
457	238	TSF	Office Mix	122.418

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ITAM TAZ	ITAM Code	Units	Description	Quantity
457	239	TSF	Industrial Mix	136.941
458	238	TSF	Office Mix	148.891
458	239	TSF	Industrial Mix	50.841
459	236	TSF	Retail mix	4.880
459	238	TSF	Office Mix	424.093
459	239	TSF	Industrial Mix	42.088
460	238	TSF	Office Mix	196.507
460	239	TSF	Industrial Mix	127.119
461	238	TSF	Office Mix	83.237
461	239	TSF	Industrial Mix	184.693
462	238	TSF	Office Mix	322.185
462	239	TSF	Industrial Mix	340.969
463	238	TSF	Office Mix	52.578
463	239	TSF	Industrial Mix	40.681
464	235	DU	Multi-family	179.000
464	238	TSF	Office Mix	109.613
464	239	TSF	Industrial Mix	67.994
465	238	TSF	Office Mix	66.152
465	239	TSF	Industrial Mix	105.962
466	236	TSF	Retail mix	7.968
466	238	TSF	Office Mix	36.475
466	239	TSF	Industrial Mix	12.800
467	238	TSF	Office Mix	212.570
468	238	TSF	Office Mix	112.408
468	239	TSF	Industrial Mix	176.265
469	238	TSF	Office Mix	149.249
469	239	TSF	Industrial Mix	12.000
470	236	TSF	Retail mix	62.988
470	238	TSF	Office Mix	140.752
470	239	TSF	Industrial Mix	78.386
471	236	TSF	Retail mix	2.669
471	238	TSF	Office Mix	342.281
471	239	TSF	Industrial Mix	134.006
471	240	TSF	Mini Warehouse	101.956
472	238	TSF	Office Mix	29.999
472	239	TSF	Industrial Mix	52.712
473	238	TSF	Office Mix	120.716
473	239	TSF	Industrial Mix	132.188
474	238	TSF	Office Mix	215.058
474	239	TSF	Industrial Mix	353.186

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ITAM TAZ	ITAM Code	Units	Description	Quantity
475	236	TSF	Retail mix	27.134
475	238	TSF	Office Mix	12.322
476	238	TSF	Office Mix	78.306
476	239	TSF	Industrial Mix	89.805
477	238	TSF	Office Mix	144.632
477	239	TSF	Industrial Mix	132.093
478	238	TSF	Office Mix	585.380
479	238	TSF	Office Mix	45.392
479	239	TSF	Industrial Mix	61.819
480	236	TSF	Retail mix	20.602
480	238	TSF	Office Mix	394.897
481	238	TSF	Office Mix	135.056
481	239	TSF	Industrial Mix	327.693
482	238	TSF	Office Mix	294.563
482	239	TSF	Industrial Mix	75.878
483	238	TSF	Office Mix	50.054
483	239	TSF	Industrial Mix	190.763
484	236	TSF	Retail mix	174.126
484	238	TSF	Office Mix	746.810
484	239	TSF	Industrial Mix	58.336
485	235	DU	Multi-family	319.000
485	238	TSF	Office Mix	71.148
485	239	TSF	Industrial Mix	104.249
486	235	DU	Multi-family	541.000
487	236	TSF	Retail mix	4.922
487	237	ROOM	HOTEL - ITAM	293.000
487	238	TSF	Office Mix	381.554
488	236	TSF	Retail mix	6.994
488	238	TSF	Office Mix	1,287.241
488	239	TSF	Industrial Mix	14.116
489	238	TSF	Office Mix	66.261
489	239	TSF	Industrial Mix	46.594
489	240	TSF	Mini Warehouse	100.426
490	235	DU	Multi-family	481.000
490	236	TSF	Retail mix	15.120
490	237	ROOM	HOTEL - ITAM	153.000
490	238	TSF	Office Mix	603.347
491	238	TSF	Office Mix	541.683
491	239	TSF	Industrial Mix	14.778
491	240	TSF	Mini Warehouse	84.046

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ITAM TAZ	ITAM Code	Units	Description	Quantity
491	241	ROOM	Hotel-Extended Stay	170.000
492	238	TSF	Office Mix	84.071
492	239	TSF	Industrial Mix	150.490
493	236	TSF	Retail mix	15.492
493	238	TSF	Office Mix	238.955
494	236	TSF	Retail mix	2.419
494	237	ROOM	HOTEL - ITAM	340.000
494	238	TSF	Office Mix	177.584
495	236	TSF	Retail mix	24.417
495	238	TSF	Office Mix	168.827
495	239	TSF	Industrial Mix	288.464
496	238	TSF	Office Mix	234.312
496	239	TSF	Industrial Mix	107.371
497	235	DU	Multi-family	290.000
497	236	TSF	Retail mix	14.908
497	238	TSF	Office Mix	67.160
497	239	TSF	Industrial Mix	2.336
497	241	ROOM	HOTEL-EXTENDED STAY - ITAM	174.000
498	236	TSF	Retail mix	108.040
498	238	TSF	Office Mix	926.117
499	236	TSF	Retail mix	16.312
499	238	TSF	Office Mix	201.949
499	239	TSF	Industrial Mix	196.156
500	238	TSF	Office Mix	448.222
501	237	ROOM	HOTEL - ITAM	502.000
502	238	TSF	Office Mix	68.640
503	236	TSF	Retail mix	0.188
503	238	TSF	Office Mix	568.939
503	239	TSF	Industrial Mix	8.766
503	240	TSF	Mini Warehouse	34.757
504	236	TSF	Retail mix	0.393
504	238	TSF	Office Mix	862.866
505	237	ROOM	HOTEL - ITAM	526.000
505	239	TSF	Industrial Mix	1.124
506	236	TSF	Retail mix	18.369
506	238	TSF	Office Mix	74.073
507	238	TSF	Office Mix	93.840
508	235	DU	Multi-family	827.000
509	236	TSF	Retail mix	3.267
509	238	TSF	Office Mix	838.199

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509	240	TSF	Mini Warehouse	64.547
510	236	TSF	Retail mix	12.039
510	238	TSF	Office Mix	1,129.961
511	236	TSF	Retail mix	12.011
511	237	ROOM	HOTEL - ITAM	215.000
511	238	TSF	Office Mix	85.899
512	238	TSF	Office Mix	126.048
513	238	TSF	Office Mix	94.006
513	239	TSF	Industrial Mix	1.600
514	236	TSF	Retail mix	32.660
514	238	TSF	Office Mix	79.100
515	235	DU	Multi-family	553.000
515	236	TSF	Retail mix	19.700
515	238	TSF	Office Mix	90.000
516	235	DU	Multi-family	232.000
516	236	TSF	Retail mix	177.419
516	237	ROOM	HOTEL - ITAM	154.000
516	238	TSF	Office Mix	1,432.885
516	239	TSF	Industrial Mix	0.000
517	239	TSF	Industrial Mix	81.647
518	238	TSF	Office Mix	206.446
519	237	ROOM	HOTEL - ITAM	293.000
520	238	TSF	Office Mix	74.633
521	238	TSF	Office Mix	289.746
521	239	TSF	Industrial Mix	63.252
522	236	TSF	Retail mix	30.450
522	238	TSF	Office Mix	797.349
522	239	TSF	Industrial Mix	15.000
523	235	DU	Multi-family	1,776.000
523	236	TSF	Retail mix	172.581
523	237	ROOM	HOTEL - ITAM	154.000
523	238	TSF	Office Mix	2,264.885
524	238	TSF	Office Mix	413.395
525	238	TSF	Office Mix	569.088
525	239	TSF	Industrial Mix	202.253
526	235	DU	Multi-family	377.000
526	236	TSF	Retail mix	3.000
526	238	TSF	Office Mix	65.858
527	235	DU	Multi-family	156.000
528	238	TSF	Office Mix	495.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
528	239	TSF	Industrial Mix	0.000
529	238	TSF	Office Mix	154.661
529	239	TSF	Industrial Mix	108.037
531	238	TSF	Office Mix	229.138
532	235	DU	Multi-family	825.000
532	238	TSF	Office Mix	2.174
532	239	TSF	Industrial Mix	0.100
533	238	TSF	Office Mix	45.289
533	239	TSF	Industrial Mix	1.193
534	236	TSF	Retail mix	8.850
534	238	TSF	Office Mix	466.925
534	239	TSF	Industrial Mix	1.665
535	236	TSF	Retail mix	7.750
535	238	TSF	Office Mix	738.462
536	238	TSF	Office Mix	44.098
536	239	TSF	Industrial Mix	22.824
537	236	TSF	Retail mix	20.962
537	238	TSF	Office Mix	69.724
538	236	TSF	Retail mix	15.772
538	238	TSF	Office Mix	339.810
538	239	TSF	Industrial Mix	12.000
539	238	TSF	Office Mix	86.238
539	239	TSF	Industrial Mix	20.366
540	235	DU	Multi-family	617.000
541	238	TSF	Office Mix	82.105
542	236	TSF	Retail mix	35.635
542	238	TSF	Office Mix	98.570
542	239	TSF	Industrial Mix	0.779
543	236	TSF	Retail mix	8.500
543	238	TSF	Office Mix	134.384
543	239	TSF	Industrial Mix	17.536
544	235	DU	Multi-family	1,809.000
544	236	TSF	Retail mix	11.343
544	238	TSF	Office Mix	523.468
545	236	TSF	Retail mix	16.325
545	238	TSF	Office Mix	133.951
545	239	TSF	Industrial Mix	82.557
546	236	TSF	Retail mix	68.820
546	238	TSF	Office Mix	1,462.817
546	239	TSF	Industrial Mix	18.310

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ITAM TAZ	ITAM Code	Units	Description	Quantity
547	103	DU	Apartments	227.000
548	101	DU	Single Family Detached	202.000
548	142	TSF	Child Care Center	9.783
549	101	DU	Single Family Detached	321.000
550	101	DU	Single Family Detached	38.000
550	102	DU	Condominiums	55.000
551	101	DU	Single Family Detached	166.000
551	102	DU	Condominiums	243.000
551	135	STU	HIGH-SCHOOL - ITAM	311.000
551	136	STU	ELEMENTARY/MIDDLE - ITAM	1,140.000
552	101	DU	Single Family Detached	251.000
552	136	STU	ELEMENTARY/MIDDLE - ITAM	786.000
553	36	TSF	Elementary/Middle	61.154
553	101	DU	Single Family Detached	235.000
553	102	DU	Condominiums	346.000
553	136	STU	ELEMENTARY/MIDDLE - ITAM	786.000
554	101	DU	Single Family Detached	143.000
554	102	DU	Condominiums	167.000
554	103	DU	Apartments	462.000
555	29	ACRE	Homeowner's Assoc. Rec. Area	0.330
555	102	DU	Condominiums	426.000
555	103	DU	Apartments	812.000
556	101	DU	Single Family Detached	150.000
556	102	DU	Condominiums	425.000
557	102	DU	Condominiums	350.000
557	103	DU	Apartments	1,750.000
557	127	ACRE	COMMERCIAL RECREATION - ITAM	0.000
557	181	SG	AMUSEMENT PARK	0.000
558	102	DU	Condominiums	1,600.000
558	103	DU	Apartments	0.000
558	136	STU	ELEMENTARY/MIDDLE - ITAM	700.000
559	108	BEDS	DORM	2,254.000
559	143	PERSON	UCI Staff	325.000
559	144	STU	UCI Students	1,919.000
560	123	TSF	Manufacturing	54.600
560	143	PERSON	UCI Staff	33.000
560	145	TSF	Special Venue	100.000
561	143	PERSON	UCI Staff	720.000
561	145	TSF	Special Venue	160.000
562	143	PERSON	UCI Staff	622.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
562	144	STU	UCI Students	7,102.000
563	108	BEDS	DORM	5,211.000
563	121	TSF	Office	0.000
563	123	TSF	Manufacturing	27.000
563	126	TSF	Health Club	0.000
564	122	TSF	Medical Office	184.000
564	125	TSF	Research and Development	540.000
564	143	PERSON	UCI Staff	2,519.000
564	144	STU	UCI Students	663.000
566	143	PERSON	UCI Staff	1,264.000
566	144	STU	UCI Students	2,890.000
567	108	BEDS	DORM	2,731.000
567	122	TSF	Medical Office	44.000
567	123	TSF	Manufacturing	54.100
567	143	PERSON	UCI Staff	171.000
567	144	STU	UCI Students	1,077.000
568	108	BEDS	DORM	1,583.000
568	143	PERSON	UCI Staff	1,577.000
568	144	STU	UCI Students	11,001.000
569	123	TSF	Manufacturing	20.000
569	143	PERSON	UCI Staff	1,202.000
569	144	STU	UCI Students	4,323.000
570	123	TSF	Manufacturing	40.000
570	129	TSF	Community Facility	159.000
571	143	PERSON	UCI Staff	1,075.000
571	144	STU	UCI Students	720.000
572	143	PERSON	UCI Staff	444.000
572	144	STU	UCI Students	118.000
573	143	PERSON	UCI Staff	1,518.000
573	144	STU	UCI Students	5,233.000
574	101	DU	Single Family Detached	275.000
574	103	DU	Apartments	25.000
574	123	TSF	Manufacturing	8.000
575	101	DU	Single Family Detached	178.000
575	103	DU	Apartments	140.000
575	108	BEDS	DORM	1,196.000
575	123	TSF	Manufacturing	10.000
576	108	BEDS	DORM	1,190.000
576	123	TSF	Manufacturing	38.700
576	125	TSF	Research and Development	507.730

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ITAM TAZ	ITAM Code	Units	Description	Quantity
576	143	PERSON	UCI Staff	104.000
576	144	STU	UCI Students	279.000
577	101	DU	Single Family Detached	48.000
577	103	DU	Apartments	50.000
578	103	DU	Apartments	437.000
578	108	BEDS	DORM	760.000
578	123	TSF	Manufacturing	23.000
579	125	TSF	Research and Development	253.760
580	108	BEDS	DORM	2,712.000
581	125	TSF	Research and Development	623.150
582	137	ACRE	Open Space	37.000
583	101	DU	Single Family Detached	277.000
583	103	DU	Apartments	25.000
584	101	DU	Single Family Detached	233.000
585	137	ACRE	Open Space	38.000
586	263	Acre	Agriculture	168.580
587	122	TSF	Medical Office	272.500
588	257	DU	Transitional Housing	165.000
589	256	DU	Senior Housing	182.000
590	256	DU	Senior Housing	106.000
591	137	ACRE	Open Space	974.000
592	267	Acre	Cemetery	73.000
592	268	TSF	Chapel/Mortuary	50.000
593	253	STU	Elementary School	650.000
593	276	TSF	Exposition Center	708.000
594	273	DU	Residential Golf Village	470.000
595	263	Acre	Agriculture	31.420
596	256	DU	Senior Housing	122.000
597	256	DU	Senior Housing	183.000
598	256	DU	Senior Housing	80.000
599	255	DU	University Residential	60.000
599	256	DU	Senior Housing	127.000
600	252	STU	Education	642.000
600	278	TSF	Institutional \ Educational	119.486
601	252	STU	Education	201.000
601	254	TSF	Retail	150.000
601	258	TSF	R&D	42.500
601	278	TSF	Institutional \ Educational	37.731
602	122	TSF	Medical Office	64.400
602	258	TSF	Research and Development	595.900

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ITAM TAZ	ITAM Code	Units	Description	Quantity
603	252	STU	Education	1,143.000
603	278	TSF	Institutional \ Educational	212.638
604	252	STU	Education	1,502.000
604	278	TSF	Institutional \ Educational	279.718
605	252	STU	Education	4,312.000
605	278	TSF	Institutional \ Educational	803.027
606	137	ACRE	Open Space	0.000
606	264	Acre	Golf Course	59.650
606	273	DU	Residential Golf Village	242.000
607	137	ACRE	Open Space	0.000
607	264	Acre	Golf Course	95.350
607	273	DU	Residential Golf Village	388.000
608	27	TSF	Commercial Recreation	0.000
608	137	ACRE	Open Space	0.000
608	264	Acre	Golf Course	211.000
608	279	HOLE	Golf Course	0.000
609	263	Acre	Agriculture	12.500
610	270	DU	TOD Residential	521.000
610	271	TSF	TOD Retail	45.000
611	270	DU	TOD Residential	114.000
612	263	Acre	Agriculture	0.000
612	270	DU	TOD Residential	50.000
612	272	TSF	TOD Office	75.000
613	263	Acre	Agriculture	0.000
613	270	DU	TOD Residential	170.000
614	263	Acre	Agriculture	33.000
615	258	TSF	Research and Development	80.000
615	263	Acre	Agriculture	0.000
618	101	DU	Single Family Detached	145.000
618	102	DU	Condominiums	252.000
618	103	DU	Apartments	438.000
618	106	DU	Senior Housing	242.000
619	136	STU	ELEMENTARY/MIDDLE - ITAM	550.000
619	280	ACRE	Sports Park	24.100
620	109	TSF	Commercial (EQ)	27.120
620	305	ROOM	Transitional Housing	192.000
621	109	TSF	Commercial (EQ)	103.460
621	121	TSF	Office	144.840
622	109	TSF	Commercial (EQ)	61.820
622	121	TSF	Office	211.310

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ITAM TAZ	ITAM Code	Units	Description	Quantity
622	125	TSF	Research and Development	319.520
622	139	ACRE	Park	94.800
622	280	ACRE	Sports Park	23.000
623	101	DU	Single Family Detached	91.300
623	102	DU	Condominiums	38.500
623	139	ACRE	Park	1.155
624	135	STU	HIGH-SCHOOL - ITAM	1,295.000
625	121	TSF	Office	105.060
625	123	TSF	Manufacturing	137.830
626	135	STU	HIGH-SCHOOL - ITAM	555.000
627	101	DU	Single Family Detached	95.200
627	105	BEDS	Convalescent Home	177.000
627	109	TSF	Commercial (EQ)	88.018
627	121	TSF	Office	91.149
627	139	ACRE	Park	3.315
627	280	ACRE	Sports Park	8.050
629	121	TSF	Office	173.965
629	123	TSF	Manufacturing	122.339
629	125	TSF	Research and Development	95.557
629	139	ACRE	Park	7.070
630	101	DU	Single Family Detached	49.800
630	102	DU	Condominiums	21.000
630	139	ACRE	Park	0.630
631	109	TSF	Commercial (EQ)	18.130
631	121	TSF	Office	584.915
631	123	TSF	Manufacturing	72.121
631	125	TSF	Research and Development	40.953
631	139	ACRE	Park	19.230
631	280	ACRE	Sports Park	4.800
632	109	TSF	Commercial (EQ)	57.060
632	121	TSF	Office	1,383.790
632	280	ACRE	Sports Park	23.000
633	103	DU	Apartments	650.150
633	109	TSF	Commercial (EQ)	71.046
633	111	ROOM	HOTEL - ITAM	125.000
633	121	TSF	Office	499.574
633	139	ACRE	Park	12.230
634	103	DU	Apartments	113.850
634	109	TSF	Commercial (EQ)	10.314
634	121	TSF	Office	25.007

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ITAM TAZ	ITAM Code	Units	Description	Quantity
634	139	ACRE	Park	2.070
635	101	DU	Single Family Detached	40.800
635	105	BEDS	Convalescent Home	31.000
635	109	TSF	Commercial (EQ)	69.342
635	121	TSF	Office	59.131
635	136	STU	ELEMENTARY/MIDDLE - ITAM	180.000
635	139	ACRE	Park	2.175
635	280	ACRE	Sports Park	4.200
636	101	DU	Single Family Detached	109.900
636	102	DU	Condominiums	153.500
636	103	DU	Apartments	192.000
636	136	STU	ELEMENTARY/MIDDLE - ITAM	1,020.000
636	139	ACRE	Park	12.125
636	280	ACRE	Sports Park	4.250
637	102	DU	Condominiums	376.000
638	103	DU	Apartments	38.400
638	109	TSF	Commercial (EQ)	15.200
638	121	TSF	Office	233.312
639	103	DU	Apartments	31.000
639	109	TSF	Commercial (EQ)	105.200
639	111	ROOM	HOTEL - ITAM	375.000
639	115	SEAT	CINEMA - ITAM	1,000.000
639	121	TSF	Office	873.640
639	126	TSF	Health Club	20.000
639	139	ACRE	Park	0.500
640	103	DU	Apartments	189.000
641	101	DU	Single Family Detached	260.000
641	102	DU	Condominiums	162.000
641	139	ACRE	Park	4.500
642	103	DU	Apartments	57.600
642	109	TSF	Commercial (EQ)	22.800
642	121	TSF	Office	349.968
643	121	TSF	Office	55.240
643	280	ACRE	Sports Park	3.200
644	109	TSF	Commercial (EQ)	3.200
644	121	TSF	Office	143.540
645	109	TSF	Commercial (EQ)	28.200
646	109	TSF	Commercial (EQ)	532.140
646	115	SEAT	CINEMA - ITAM	525.000
647	101	DU	Single Family Detached	151.200

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ITAM TAZ	ITAM Code	Units	Description	Quantity
647	103	DU	Apartments	220.800
648	109	TSF	Commercial (EQ)	370.260
648	115	SEAT	CINEMA - ITAM	2,975.000
697	121	TSF	Office	358.928
697	123	TSF	Manufacturing	894.100
697	125	TSF	Research and Development	0.000
698	113	TSF	Restaurant	8.500
698	121	TSF	Office	520.907
698	123	TSF	Manufacturing	1,372.140
698	125	TSF	Research and Development	0.000
699	139	ACRE	Park	0.000
702	139	ACRE	Park	0.000
703	121	TSF	Office	378.824
703	123	TSF	Manufacturing	846.840
703	125	TSF	Research and Development	378.824
703	136	STU	ELEMENTARY/MIDDLE - ITAM	300.000
707	109	TSF	Commercial (EQ)	178.680
707	113	TSF	Restaurant	8.970
707	114	TSF	Fast Food Restaurant	5.880
707	121	TSF	Office	835.050
707	123	TSF	Manufacturing	1,638.460
707	125	TSF	Research and Development	0.000
707	161	TSF	Mini Warehouse	0.000
711	109	TSF	Commercial (EQ)	21.020
711	121	TSF	Office	799.685
711	123	TSF	Manufacturing	1,983.090
711	125	TSF	Research and Development	0.000
711	136	STU	ELEMENTARY/MIDDLE - ITAM	648.000
714	109	TSF	Commercial (EQ)	0.000
714	113	TSF	Restaurant	0.000
714	121	TSF	Office	0.000
715	109	TSF	Commercial (EQ)	0.000
715	113	TSF	Restaurant	0.000
715	121	TSF	Office	0.000
715	122	TSF	Medical Office	0.000
715	123	TSF	Manufacturing	0.000
715	125	TSF	Research and Development	0.000
718	121	TSF	Office	0.000
719	109	TSF	Commercial (EQ)	0.000
719	111	ROOM	HOTEL - ITAM	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
719	113	TSF	Restaurant	0.000
719	121	TSF	Office	0.000
719	126	TSF	Health Club	0.000
719	129	TSF	Community Facility	0.000
720	109	TSF	Commercial (EQ)	0.000
720	111	ROOM	HOTEL - ITAM	0.000
720	113	TSF	Restaurant	0.000
720	121	TSF	Office	0.000
720	126	TSF	Health Club	0.000
721	109	TSF	Commercial (EQ)	0.000
721	113	TSF	Restaurant	0.000
721	114	TSF	Fast Food Restaurant	0.000
721	121	TSF	Office	0.000
721	123	TSF	Manufacturing	0.000
721	125	TSF	Research and Development	0.000
723	121	TSF	Office	0.000
729	139	ACRE	Park	0.000
730	118	TSF	Auto Dealer	0.000
732	103	DU	Apartments	0.000
733	139	ACRE	Park	0.950
734	101	DU	Single Family Detached	168.000
734	102	DU	Condominiums	208.000
734	103	DU	Apartments	736.000
734	109	TSF	Commercial (EQ)	35.000
734	113	TSF	Restaurant	6.350
734	139	ACRE	Park	14.230
736	101	DU	Single Family Detached	0.000
736	139	ACRE	Park	0.000
738	103	DU	Apartments	27.000
738	109	TSF	Commercial (EQ)	110.000
738	139	ACRE	Park	0.000
739	124	TSF	Warehouse	0.000
739	125	TSF	Research and Development	0.000
739	130	TSF	Church/Synagogue	0.000
739	132	TSF	Government Facility	0.000
739	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
742	139	ACRE	Park	0.950
743	102	DU	Condominiums	0.000
744	101	DU	Single Family Detached	0.000
745	101	DU	Single Family Detached	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
745	102	DU	Condominiums	0.000
746	103	DU	Apartments	764.000
748	101	DU	Single Family Detached	400.000
748	139	ACRE	Park	9.000
750	102	DU	Condominiums	0.000
752	102	DU	Condominiums	0.000
753	139	ACRE	Park	0.950
754	101	DU	Single Family Detached	6.000
754	139	ACRE	Park	4.200
755	102	DU	Condominiums	200.000
756	101	DU	Single Family Detached	579.000
756	136	STU	ELEMENTARY/MIDDLE - ITAM	498.000
756	139	ACRE	Park	9.730
757	139	ACRE	Park	0.950
760	102	DU	Condominiums	30.000
760	130	TSF	Church/Synagogue	27.070
762	101	DU	Single Family Detached	0.000
762	102	DU	Condominiums	0.000
762	109	TSF	Commercial (EQ)	0.000
762	139	ACRE	Park	0.000
762	140	ACRE	Golf Course	0.000
764	101	DU	Single Family Detached	118.000
764	102	DU	Condominiums	120.000
764	109	TSF	Commercial (EQ)	96.540
764	121	TSF	Office	12.900
768	101	DU	Single Family Detached	0.000
768	102	DU	Condominiums	0.000
773	139	ACRE	Park	0.950
779	101	DU	Single Family Detached	0.000
781	101	DU	Single Family Detached	0.000
781	139	ACRE	Park	0.000
783	139	ACRE	Park	0.950
785	101	DU	Single Family Detached	0.000
785	102	DU	Condominiums	0.000
785	139	ACRE	Park	0.000
787	101	DU	Single Family Detached	0.000
797	103	DU	Apartments	0.000
797	109	TSF	Commercial (EQ)	0.000
797	121	TSF	Office	0.000
797	130	TSF	Church/Synagogue	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
797	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
797	142	TSF	Child Care Center	0.000
798	103	DU	Apartments	0.000
798	142	TSF	Child Care Center	0.000
801	139	ACRE	Park	0.000
803	102	DU	Condominiums	0.000
803	106	DU	Senior Housing	0.000
803	130	TSF	Church/Synagogue	0.000
817	102	DU	Condominiums	282.000
818	102	DU	Condominiums	0.000
818	103	DU	Apartments	0.000
818	139	ACRE	Park	20.000
819	109	TSF	Commercial (EQ)	141.500
819	113	TSF	Restaurant	20.000
819	114	TSF	Fast Food Restaurant	7.000
819	116	SITE	GAS STATION	1.000
819	120	TSF	Bank	4.000
819	129	TSF	Community Facility	0.000
821	109	TSF	Commercial (EQ)	383.140
821	113	TSF	Restaurant	6.530
821	114	TSF	Fast Food Restaurant	7.160
821	116	SITE	GAS STATION	1.000
821	120	TSF	Bank	8.170
821	121	TSF	Office	0.000
821	126	TSF	Health Club	41.280
823	103	DU	Apartments	533.000
824	102	DU	Condominiums	962.000
824	139	ACRE	Park	6.790
825	121	TSF	Office	228.032
826	101	DU	Single Family Detached	359.000
826	102	DU	Condominiums	375.000
826	139	ACRE	Park	20.500
827	101	DU	Single Family Detached	391.000
827	136	STU	ELEMENTARY/MIDDLE - ITAM	800.000
827	139	ACRE	Park	8.050
828	11	TSF	Hotel	76.359
828	109	TSF	Commercial (EQ)	40.570
828	111	ROOM	HOTEL - ITAM	148.000
828	113	TSF	Restaurant	9.723
828	114	TSF	Fast Food Restaurant	5.695

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ITAM TAZ	ITAM Code	Units	Description	Quantity
828	117	SITE	CAR WASH	1.000
828	132	TSF	Government Facility	1.496
829	121	TSF	Office	336.631
829	125	TSF	Research and Development	382.622
830	121	TSF	Office	540.644
831	121	TSF	Office	200.841
831	125	TSF	Research and Development	514.396
832	121	TSF	Office	93.265
832	125	TSF	Research and Development	188.360
833	121	TSF	Office	207.120
833	125	TSF	Research and Development	207.120
834	121	TSF	Office	175.257
834	125	TSF	Research and Development	360.985
835	121	TSF	Office	470.451
835	125	TSF	Research and Development	128.055
836	125	TSF	Research and Development	521.605
837	125	TSF	Research and Development	247.543
838	125	TSF	Research and Development	380.780
839	124	TSF	Warehouse	213.800
840	125	TSF	Research and Development	224.606
841	109	TSF	Commercial (EQ)	41.541
841	114	TSF	Fast Food Restaurant	4.696
841	120	TSF	Bank	3.459
842	121	TSF	Office	0.000
842	125	TSF	Research and Development	164.044
843	122	TSF	Medical Office	50.381
843	125	TSF	Research and Development	302.900
844	122	TSF	Medical Office	316.381
845	132	TSF	Government Facility	116.520
846	125	TSF	Research and Development	0.000
846	129	TSF	Community Facility	0.000
846	164	SPC	RV Storage	1,000.000
847	122	TSF	Medical Office	42.963
847	125	TSF	Research and Development	37.240
848	161	TSF	Mini Warehouse	96.656
902	101	DU	Single Family Detached	400.000
903	101	DU	Single Family Detached	150.000
903	139	ACRE	Park	4.000
904	101	DU	Single Family Detached	350.000
905	127	ACRE	COMMERCIAL RECREATION - ITAM	20.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
906	101	DU	Single Family Detached	185.000
906	136	STU	ELEMENTARY/MIDDLE - ITAM	800.000
906	139	ACRE	Park	4.000
907	102	DU	Condominiums	523.000
907	103	DU	Apartments	82.000
908	103	DU	Apartments	130.000
908	127	ACRE	COMMERCIAL RECREATION - ITAM	19.000
909	101	DU	Single Family Detached	94.000
910	101	DU	Single Family Detached	72.000
911	102	DU	Condominiums	132.000
912	101	DU	Single Family Detached	350.000
912	111	ROOM	HOTEL - ITAM	100.000
912	140	ACRE	Golf Course	192.000
915	101	DU	Single Family Detached	150.000
916	101	DU	Single Family Detached	200.000
917	258	TSF	Research and Development	460.000
917	263	Acre	Agriculture	0.000
918	258	TSF	Research and Development	185.000
918	263	Acre	Agriculture	0.000
919	258	TSF	Research and Development	375.000
919	263	Acre	Agriculture	0.000
920	263	Acre	Agriculture	57.000
922	263	Acre	Agriculture	0.000
922	265	Acre	Wildlife Corridor	11.200
923	260	TSF	OCTA Facility	53.500
923	261	SPC	Transportation Center	180.000
923	263	Acre	Agriculture	0.000
923	265	Acre	Wildlife Corridor	20.800
924	263	Acre	Agriculture	0.000
924	265	Acre	Wildlife Corridor	13.600
925	261	SPC	Transportation Center	495.000
926	261	SPC	Transportation Center	375.000
927	137	ACRE	Open Space	0.000
927	263	Acre	Agriculture	0.000
927	265	Acre	Wildlife Corridor	189.200
928	137	ACRE	Open Space	0.000
928	263	Acre	Agriculture	0.000
928	265	Acre	Wildlife Corridor	43.200
929	137	ACRE	Open Space	0.000
929	265	Acre	Wildlife Corridor	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
929	266	ACRE	OS Park	64.700
930	137	ACRE	Open Space	0.000
930	266	ACRE	OS Park	67.300
930	277	SPC	Parking (GP)	100.000
931	137	ACRE	Open Space	0.000
931	266	ACRE	OS Park	279.500
931	277	SPC	Parking (GP)	302.000
932	137	ACRE	Open Space	0.000
932	266	ACRE	OS Park	138.900
932	277	SPC	Parking (GP)	3,232.000
932	279	TSF	Museum	407.800
933	27	TSF	Commercial Recreation	0.000
933	137	ACRE	Open Space	0.000
933	269	ACRE	Sports Park	35.000
933	277	SPC	Parking (GP)	1,871.000
933	279	TSF	Museum	60.200
934	260	TSF	OCTA Facility	122.500
935	259	TSF	Institutional Warehouse	0.000
935	260	TSF	OCTA Facility	0.000
935	262	TSF	Cultural Institutional/Exposition	150.000
936	259	TSF	Institutional Warehouse	263.000
936	262	TSF	Cultural Institutional/Exposition	150.000
1237	101	DU	Single Family Detached	122.000
1237	102	DU	Condominiums	120.000
1239	127	ACRE	COMMERCIAL RECREATION - ITAM	45.000
1242	101	DU	Single Family Detached	175.000
1243	101	DU	Single Family Detached	325.000
1244	101	DU	Single Family Detached	200.000
1244	139	ACRE	Park	4.000
1247	101	DU	Single Family Detached	85.000
1247	103	DU	Apartments	125.000
1248	101	DU	Single Family Detached	153.000
1441	101	DU	Single Family Detached	1,072.000
1441	102	DU	Condominiums	210.000
1441	109	TSF	Commercial (EQ)	110.000
1593	101	DU	Single Family Detached	109.000
1593	139	ACRE	Park	4.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
1	101	DU	Single Family Detached	331.000
1	102	DU	Condominiums	322.000
1	139	ACRE	Park	5.800
2	101	DU	Single Family Detached	657.000
2	102	DU	Condominiums	80.000
2	136	STU	ELEMENTARY/MIDDLE - ITAM	700.000
2	139	ACRE	Park	15.900
2	142	TSF	Child Care Center	10.000
3	132	TSF	Government Facility	244.314
4	101	DU	Single Family Detached	270.000
4	102	DU	Condominiums	98.000
4	139	ACRE	Park	6.800
6	101	DU	Single Family Detached	169.000
7	101	DU	Single Family Detached	142.000
9	103	DU	Apartments	500.000
11	109	TSF	Commercial (EQ)	117.000
11	113	TSF	Restaurant	7.500
11	114	TSF	Fast Food Restaurant	7.000
11	116	SITE	GAS STATION	1.000
11	120	TSF	Bank	0.000
15	101	DU	Single Family Detached	500.000
15	102	DU	Condominiums	0.000
15	132	TSF	Government Facility	8.977
15	136	STU	ELEMENTARY/MIDDLE - ITAM	700.000
15	139	ACRE	Park	8.400
16	101	DU	Single Family Detached	240.000
16	102	DU	Condominiums	267.000
16	139	ACRE	Park	2.000
17	35	TSF	High-School	200.000
17	135	STU	HIGH-SCHOOL - ITAM	2,758.000
18	101	DU	Single Family Detached	412.000
18	102	DU	Condominiums	100.000
18	139	ACRE	Park	4.100
23	101	DU	Single Family Detached	104.000
23	102	DU	Condominiums	147.000
24	101	DU	Single Family Detached	447.000
25	101	DU	Single Family Detached	151.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
25	102	DU	Condominiums	190.000
26	101	DU	Single Family Detached	202.000
27	101	DU	Single Family Detached	509.000
27	102	DU	Condominiums	503.000
27	103	DU	Apartments	378.000
27	109	TSF	Commercial (EQ)	85.000
28	101	DU	Single Family Detached	110.000
28	102	DU	Condominiums	218.000
29	101	DU	Single Family Detached	32.000
30	101	DU	Single Family Detached	179.000
30	102	DU	Condominiums	259.000
31	101	DU	Single Family Detached	188.000
31	136	STU	ELEMENTARY/MIDDLE - ITAM	635.000
32	101	DU	Single Family Detached	313.000
33	102	DU	Condominiums	38.000
33	103	DU	Apartments	392.000
33	109	TSF	Commercial (EQ)	6.618
34	103	DU	Apartments	744.000
35	102	DU	Condominiums	0.000
35	103	DU	Apartments	724.000
35	109	TSF	Commercial (EQ)	441.082
36	16	TSF	Gas Station	2.929
36	101	DU	Single Family Detached	2.000
36	109	TSF	Commercial (EQ)	130.255
36	114	TSF	Fast Food Restaurant	2.816
36	116	SITE	GAS STATION	1.000
36	142	TSF	Child Care Center	11.680
37	101	DU	Single Family Detached	82.000
37	102	DU	Condominiums	24.000
38	101	DU	Single Family Detached	548.000
38	102	DU	Condominiums	333.000
39	15	TSF	Cinema	48.346
39	109	TSF	Commercial (EQ)	215.712
39	113	TSF	Restaurant	7.590
39	115	SEAT	CINEMA - ITAM	1,785.000
40	103	DU	Apartments	138.000
40	109	TSF	Commercial (EQ)	126.825
40	113	TSF	Restaurant	7.827
41	102	DU	Condominiums	0.000
41	103	DU	Apartments	756.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
41	125	TSF	Research and Development	47.936
41	161	TSF	Mini Warehouse	106.183
42	121	TSF	Office	319.748
42	125	TSF	Research and Development	354.399
43	101	DU	Single Family Detached	0.000
43	102	DU	Condominiums	0.000
43	103	DU	Apartments	0.000
43	135	STU	HIGH-SCHOOL - ITAM	2,000.000
44	101	DU	Single Family Detached	0.000
44	102	DU	Condominiums	225.000
44	103	DU	Apartments	162.000
44	121	TSF	Office	347.615
44	125	TSF	Research and Development	281.323
44	132	TSF	Government Facility	52.339
44	139	ACRE	Park	10.000
45	102	DU	Condominiums	117.000
46	101	DU	Single Family Detached	215.000
46	102	DU	Condominiums	211.000
47	102	DU	Condominiums	204.000
48	101	DU	Single Family Detached	161.000
49	36	TSF	Elementary/Middle	59.178
49	101	DU	Single Family Detached	196.000
49	129	TSF	Community Facility	1.318
49	136	STU	ELEMENTARY/MIDDLE - ITAM	900.000
50	101	DU	Single Family Detached	483.000
51	101	DU	Single Family Detached	78.000
51	130	TSF	Church/Synagogue	26.794
51	142	TSF	Child Care Center	12.508
52	101	DU	Single Family Detached	152.000
53	101	DU	Single Family Detached	140.000
54	101	DU	Single Family Detached	54.000
55	36	TSF	Elementary/Middle	0.000
55	101	DU	Single Family Detached	543.000
55	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
56	36	TSF	Elementary/Middle	29.589
56	101	DU	Single Family Detached	723.000
56	102	DU	Condominiums	634.000
56	136	STU	ELEMENTARY/MIDDLE - ITAM	900.000
56	139	ACRE	Park	6.000
59	139	ACRE	Park	20.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
61	101	DU	Single Family Detached	356.000
61	102	DU	Condominiums	88.000
62	101	DU	Single Family Detached	403.000
62	102	DU	Condominiums	0.000
62	103	DU	Apartments	520.000
62	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
63	121	TSF	Office	105.000
63	125	TSF	Research and Development	195.000
65	101	DU	Single Family Detached	367.000
65	102	DU	Condominiums	262.000
65	103	DU	Apartments	357.000
66	100	DU	Estate	0.000
68	101	DU	Single Family Detached	699.000
68	102	DU	Condominiums	378.000
70	101	DU	Single Family Detached	380.000
70	102	DU	Condominiums	356.000
70	103	DU	Apartments	221.000
70	136	STU	ELEMENTARY/MIDDLE - ITAM	750.000
70	139	ACRE	Park	10.700
70	142	TSF	Child Care Center	10.000
71	101	DU	Single Family Detached	341.000
71	102	DU	Condominiums	122.000
71	137	ACRE	Open Space	0.585
71	139	ACRE	Park	2.418
72	101	DU	Single Family Detached	128.000
73	101	DU	Single Family Detached	373.000
73	102	DU	Condominiums	3.000
74	101	DU	Single Family Detached	457.000
74	102	DU	Condominiums	3.000
74	139	ACRE	Park	3.913
75	36	TSF	Elementary/Middle	33.694
75	101	DU	Single Family Detached	380.000
75	136	STU	ELEMENTARY/MIDDLE - ITAM	618.000
75	139	ACRE	Park	3.970
76	36	TSF	Elementary/Middle	82.850
76	101	DU	Single Family Detached	233.000
76	102	DU	Condominiums	53.000
76	136	STU	ELEMENTARY/MIDDLE - ITAM	1,379.000
76	137	ACRE	Open Space	0.364
77	102	DU	Condominiums	608.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
78	101	DU	Single Family Detached	297.000
78	102	DU	Condominiums	1.000
78	139	ACRE	Park	1.796
79	101	DU	Single Family Detached	250.000
79	102	DU	Condominiums	5.000
79	129	TSF	Community Facility	7.552
79	139	ACRE	Park	10.800
80	16	TSF	Gas Station	1.000
80	109	TSF	Commercial (EQ)	157.757
80	114	TSF	Fast Food Restaurant	5.863
80	116	SITE	GAS STATION	1.000
80	120	TSF	Bank	9.524
80	121	TSF	Office	54.562
81	36	TSF	Elementary/Middle	35.828
81	101	DU	Single Family Detached	464.000
81	136	STU	ELEMENTARY/MIDDLE - ITAM	552.000
81	139	ACRE	Park	6.007
82	101	DU	Single Family Detached	289.000
82	139	ACRE	Park	0.421
83	101	DU	Single Family Detached	197.000
83	103	DU	Apartments	0.000
84	104	DU	Housing B (Mobile Home)	533.000
84	139	ACRE	Park	3.500
85	16	TSF	Gas Station	5.394
85	102	DU	Condominiums	256.000
85	103	DU	Apartments	289.000
85	116	SITE	GAS STATION	1.000
85	121	TSF	Office	21.500
85	139	ACRE	Park	0.142
86	101	DU	Single Family Detached	309.000
86	139	ACRE	Park	3.155
87	101	DU	Single Family Detached	290.000
87	139	ACRE	Park	5.532
88	36	TSF	Elementary/Middle	34.002
88	101	DU	Single Family Detached	198.000
88	136	STU	ELEMENTARY/MIDDLE - ITAM	601.000
88	139	ACRE	Park	6.132
89	130	TSF	Church/Synagogue	16.558
89	139	ACRE	Park	0.000
89	161	TSF	Mini Warehouse	228.957

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ITAM TAZ	ITAM Code	Units	Description	Quantity
89	164	SPACE	RV Storage	0.000
90	101	DU	Single Family Detached	213.000
90	139	ACRE	Park	2.731
91	109	TSF	Commercial (EQ)	16.620
91	130	TSF	Church/Synagogue	5.280
92	101	DU	Single Family Detached	218.000
92	102	DU	Condominiums	182.000
92	107	DU	Congregate Care	0.000
93	101	DU	Single Family Detached	184.000
93	139	ACRE	Park	3.670
94	101	DU	Single Family Detached	129.000
95	102	DU	Condominiums	348.000
95	103	DU	Apartments	604.000
95	139	ACRE	Park	5.801
96	102	DU	Condominiums	179.000
96	103	DU	Apartments	96.000
96	130	TSF	Church/Synagogue	15.983
97	16	TSF	Gas Station	2.837
97	36	TSF	Elementary/Middle	16.086
97	103	DU	Apartments	0.000
97	109	TSF	Commercial (EQ)	180.000
97	116	SITE	GAS STATION	1.000
97	120	TSF	Bank	3.500
97	121	TSF	Office	255.463
97	129	TSF	Community Facility	0.000
97	130	TSF	Church/Synagogue	54.498
97	136	STU	ELEMENTARY/MIDDLE - ITAM	180.000
98	109	TSF	Commercial (EQ)	0.000
98	121	TSF	Office	348.600
99	101	DU	Single Family Detached	297.000
100	101	DU	Single Family Detached	549.000
100	102	DU	Condominiums	314.000
101	101	DU	Single Family Detached	447.000
101	102	DU	Condominiums	552.000
101	103	DU	Apartments	991.000
101	136	STU	ELEMENTARY/MIDDLE - ITAM	900.000
102	102	DU	Apartments	157.000
102	135	STU	HIGH-SCHOOL - ITAM	1,200.000
103	101	DU	Single Family Detached	512.000
103	102	DU	Condominiums	575.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
103	103	DU	Apartments	540.000
104	121	TSF	Office	70.000
104	125	TSF	Research and Development	130.000
105	102	DU	Condominiums	0.000
105	103	DU	Apartments	695.000
105	109	TSF	Commercial (EQ)	0.000
105	114	TSF	Fast Food Restaurant	0.000
106	101	DU	Single Family Detached	464.000
106	102	DU	Condominiums	264.000
106	129	TSF	Community Facility	8.000
106	136	STU	ELEMENTARY/MIDDLE - ITAM	624.000
106	142	TSF	Child Care Center	17.500
107	102	DU	Condominiums	0.000
107	103	DU	Apartments	402.000
108	101	DU	Single Family Detached	481.000
108	102	DU	Condominiums	84.000
108	103	DU	Apartments	598.000
108	136	STU	ELEMENTARY/MIDDLE - ITAM	900.000
109	136	STU	ELEMENTARY/MIDDLE - ITAM	1,200.000
110	101	DU	Single Family Detached	311.000
111	103	DU	Apartments	617.000
111	153	TSF	OCTA Facility	0.000
112	101	DU	Single Family Detached	534.000
112	139	ACRE	Park	6.790
113	103	DU	Apartments	453.000
114	109	TSF	Commercial (EQ)	178.000
114	113	TSF	Restaurant	7.000
114	114	TSF	Fast Food Restaurant	8.000
114	116	SITE	GAS STATION	1.000
114	120	TSF	Bank	9.000
114	121	TSF	Office	461.968
114	124	TSF	Warehouse	0.000
114	130	TSF	Church/Synagogue	0.000
115	121	TSF	Office	1,200.000
116	121	TSF	Office	9.298
116	124	TSF	Warehouse	24.868
116	125	TSF	Research and Development	1,216.507
116	130	TSF	Church/Synagogue	4.600
116	153	TSF	OCTA Facility	48.389
116	186	SG	OCTD SB MAINT. YARD	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
117	109	TSF	Commercial (EQ)	286.530
118	109	TSF	Commercial (EQ)	0.000
118	121	TSF	Office	382.827
118	123	TSF	Manufacturing	213.542
118	124	TSF	Warehouse	417.301
118	126	TSF	Health Club	41.000
119	109	TSF	Commercial (EQ)	10.000
119	121	TSF	Office	0.000
120	121	TSF	Office	155.272
120	124	TSF	Warehouse	26.656
120	125	TSF	Research and Development	180.000
121	101	DU	Single Family Detached	570.000
122	121	TSF	Office	187.317
122	124	TSF	Warehouse	16.814
122	125	TSF	Research and Development	180.000
123	121	TSF	Office	481.520
123	123	TSF	Manufacturing	78.040
123	124	TSF	Warehouse	12.529
124	103	DU	Apartments	100.000
125	29	ACRE	Homeowner's Assoc. Rec. Area	2.763
125	101	DU	Single Family Detached	475.000
127	103	DU	Apartments	24.000
127	129	TSF	Community Facility	5.897
127	139	ACRE	Park	19.400
128	36	TSF	Elementary/Middle	14.326
128	101	DU	Single Family Detached	425.000
128	139	ACRE	Park	2.600
129	36	TSF	Elementary/Middle	39.950
129	101	DU	Single Family Detached	413.000
129	136	STU	ELEMENTARY/MIDDLE - ITAM	595.000
129	137	ACRE	Open Space	0.300
129	139	ACRE	Park	3.000
130	102	DU	Condominiums	191.000
131	16	TSF	Gas Station	1.543
131	109	TSF	Commercial (EQ)	60.636
131	114	TSF	Fast Food Restaurant	1.585
131	116	SITE	GAS STATION	1.000
131	120	TSF	Bank	4.500
131	121	TSF	Office	5.486
132	102	DU	Condominiums	424.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
132	103	DU	Apartments	444.000
132	139	ACRE	Park	1.580
133	16	TSF	Gas Station	3.491
133	109	TSF	Commercial (EQ)	493.212
133	113	TSF	Restaurant	12.261
133	114	TSF	Fast Food Restaurant	6.688
133	116	SITE	GAS STATION	3.000
133	120	TSF	Bank	3.964
133	121	TSF	Office	7.284
133	141	TSF	Nursery	7.826
134	109	TSF	Commercial (EQ)	235.348
134	113	TSF	Restaurant	35.198
134	114	TSF	Fast Food Restaurant	2.454
134	116	SITE	GAS STATION	1.000
134	120	TSF	Bank	11.995
134	121	TSF	Office	39.843
135	101	DU	Single Family Detached	21.000
135	102	DU	Condominiums	210.000
136	35	TSF	High-School	97.978
136	129	TSF	Community Facility	68.993
136	133	TSF	Library	21.000
136	135	STU	HIGH-SCHOOL - ITAM	2,395.000
136	139	ACRE	Park	27.100
136	142	TSF	Child Care Center	2.880
137	36	TSF	Elementary/Middle	36.604
137	101	DU	Single Family Detached	627.000
137	136	STU	ELEMENTARY/MIDDLE - ITAM	429.000
137	139	ACRE	Park	6.060
138	101	DU	Single Family Detached	510.000
138	139	ACRE	Park	1.511
139	102	DU	Condominiums	187.000
139	139	ACRE	Park	2.137
140	29	ACRE	Homeowner's Assoc. Rec. Area	0.060
140	101	DU	Single Family Detached	112.000
140	102	DU	Condominiums	175.000
140	139	ACRE	Park	1.111
141	36	TSF	Elementary/Middle	44.207
141	101	DU	Single Family Detached	285.000
141	136	STU	ELEMENTARY/MIDDLE - ITAM	715.000
141	139	ACRE	Park	2.915

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ITAM TAZ	ITAM Code	Units	Description	Quantity
142	102	DU	Condominiums	124.000
142	103	DU	Apartments	334.000
142	130	TSF	Church/Synagogue	39.532
143	101	DU	Single Family Detached	364.000
144	36	TSF	Elementary/Middle	35.761
144	101	DU	Single Family Detached	143.000
144	103	DU	Apartments	288.000
144	130	TSF	Church/Synagogue	19.044
144	136	STU	ELEMENTARY/MIDDLE - ITAM	400.000
144	137	ACRE	Open Space	2.923
144	139	ACRE	Park	1.161
145	29	ACRE	Homeowner's Assoc. Rec. Area	1.254
145	101	DU	Single Family Detached	107.000
145	102	DU	Condominiums	176.000
145	139	ACRE	Park	2.294
146	29	ACRE	Homeowner's Assoc. Rec. Area	1.075
146	102	DU	Condominiums	292.000
147	36	TSF	Elementary/Middle	70.060
147	101	DU	Single Family Detached	247.000
147	129	TSF	Community Facility	3.873
147	136	STU	ELEMENTARY/MIDDLE - ITAM	600.000
147	137	ACRE	Open Space	2.217
147	139	ACRE	Park	10.600
148	16	TSF	Gas Station	1.610
148	109	TSF	Commercial (EQ)	121.234
148	113	TSF	Restaurant	7.562
148	114	TSF	Fast Food Restaurant	2.113
148	116	SITE	GAS STATION	1.000
148	121	TSF	Office	43.386
149	102	DU	Condominiums	10.000
149	104	DU	Housing B (Mobile Home)	356.000
150	101	DU	Single Family Detached	304.000
150	121	TSF	Office	35.026
150	122	TSF	Medical Office	37.226
150	124	TSF	Warehouse	1.080
150	130	TSF	Church/Synagogue	25.010
150	142	TSF	Child Care Center	5.734
151	101	DU	Single Family Detached	429.000
151	139	ACRE	Park	3.081
152	36	TSF	Elementary/Middle	38.763

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ITAM TAZ	ITAM Code	Units	Description	Quantity
152	102	DU	Condominiums	96.000
152	136	STU	ELEMENTARY/MIDDLE - ITAM	551.000
152	139	ACRE	Park	1.804
153	109	TSF	Commercial (EQ)	41.068
153	120	TSF	Bank	9.964
153	121	TSF	Office	5.475
154	27	TSF	Commercial Recreation	0.285
155	121	TSF	Office	3.750
155	124	TSF	Warehouse	139.975
155	125	TSF	Research and Development	31.850
155	140	ACRE	Golf Course	220.000
156	85	TSF	Travel Land	0.000
156	118	TSF	Auto Dealer	0.000
156	121	TSF	Office	612.500
156	124	TSF	Warehouse	0.000
156	125	TSF	Research and Development	392.749
157	27	TSF	Commercial Recreation	20.249
157	121	TSF	Office	203.603
157	124	TSF	Warehouse	0.000
157	125	TSF	Research and Development	579.900
158	43	TSF	Community College	150.001
158	130	TSF	Church/Synagogue	80.410
159	121	TSF	Office	15.000
159	123	TSF	Manufacturing	2.500
159	124	TSF	Warehouse	208.142
159	125	TSF	Research and Development	694.101
159	132	TSF	Government Facility	100.666
160	29	ACRE	Homeowner's Assoc. Rec. Area	1.197
160	101	DU	Single Family Detached	272.000
160	102	DU	Condominiums	780.000
160	103	DU	Apartments	60.000
160	125	TSF	Research and Development	23.990
160	130	TSF	Church/Synagogue	40.684
160	137	ACRE	Open Space	2.961
161	121	TSF	Office	489.376
161	124	TSF	Warehouse	0.000
161	125	TSF	Research and Development	25.000
162	103	DU	Apartments	210.000
163	109	TSF	Commercial (EQ)	0.000
163	121	TSF	Office	955.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
164	16	TSF	Gas Station	2.432
164	36	TSF	Elementary/Middle	14.326
164	109	TSF	Commercial (EQ)	141.032
164	116	SITE	GAS STATION	1.000
164	120	TSF	Bank	3.635
165	101	DU	Single Family Detached	4.000
165	102	DU	Condominiums	135.000
166	101	DU	Single Family Detached	78.000
166	102	DU	Condominiums	57.000
167	101	DU	Single Family Detached	36.000
167	102	DU	Condominiums	287.000
167	103	DU	Apartments	730.000
167	129	TSF	Community Facility	9.649
167	139	ACRE	Park	2.504
167	142	TSF	Child Care Center	12.660
168	102	DU	Condominiums	210.000
168	139	ACRE	Park	0.667
169	101	DU	Single Family Detached	101.000
169	102	DU	Condominiums	102.000
170	101	DU	Single Family Detached	13.000
170	102	DU	Condominiums	104.000
171	101	DU	Single Family Detached	82.000
172	102	DU	Condominiums	106.000
172	103	DU	Apartments	364.000
172	109	TSF	Commercial (EQ)	0.000
173	103	DU	Apartments	224.000
174	101	DU	Single Family Detached	151.000
175	101	DU	Single Family Detached	112.000
176	11	TSF	Hotel	61.512
176	34	BEDS	HOSPITAL - ITAM	0.000
176	111	ROOM	HOTEL - ITAM	122.000
176	121	TSF	Office	33.873
176	122	TSF	Medical Office	49.081
176	125	TSF	Research and Development	0.000
176	134	TSF	Hospital	0.000
176	137	ACRE	Open Space	7.400
177	121	TSF	Office	365.042
177	125	TSF	Research and Development	0.000
177	137	ACRE	Open Space	10.100
178	122	TSF	Medical Office	117.559

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ITAM TAZ	ITAM Code	Units	Description	Quantity
178	134	TSF	Hospital	745.263
179	121	TSF	Office	252.000
179	125	TSF	Research and Development	0.000
179	137	ACRE	Open Space	10.900
180	121	TSF	Office	80.900
180	124	TSF	Warehouse	139.418
180	125	TSF	Research and Development	348.500
181	121	TSF	Office	0.000
181	122	TSF	Medical Office	460.000
181	125	TSF	Research and Development	0.000
181	134	TSF	Hospital	848.000
182	121	TSF	Office	241.058
182	124	TSF	Warehouse	0.000
182	125	TSF	Research and Development	0.000
183	121	TSF	Office	173.313
184	121	TSF	Office	101.851
184	124	TSF	Warehouse	0.000
184	125	TSF	Research and Development	115.170
184	137	ACRE	Open Space	10.100
184	161	TSF	Mini Warehouse	0.000
185	121	TSF	Office	129.000
185	124	TSF	Warehouse	0.000
185	125	TSF	Research and Development	189.200
186	121	TSF	Office	261.054
186	124	TSF	Warehouse	252.820
186	125	TSF	Research and Development	186.659
186	137	ACRE	Open Space	18.400
187	127	ACRE	COMMERCIAL RECREATION - ITAM	4.400
187	129	TSF	Community Facility	9.804
187	132	TSF	Government Facility	191.233
187	142	TSF	Child Care Center	11.162
188	121	TSF	Office	61.497
189	102	DU	Condominiums	259.000
189	103	DU	Apartments	1,161.000
189	115	SEAT	CINEMA - ITAM	1,698.000
189	137	ACRE	Open Space	5.744
189	139	ACRE	Park	3.187
190	16	TSF	Gas Station	1.200
190	109	TSF	Commercial (EQ)	315.649
190	113	TSF	Restaurant	18.440

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ITAM TAZ	ITAM Code	Units	Description	Quantity
190	116	SITE	GAS STATION	1.000
191	102	DU	Condominiums	397.000
192	15	TSF	Cinema	42.826
192	16	TSF	Gas Station	1.632
192	109	TSF	Commercial (EQ)	213.150
192	113	TSF	Restaurant	22.413
192	115	SEAT	CINEMA - ITAM	1,698.000
192	116	SITE	GAS STATION	1.000
192	117	SITE	CAR WASH	1.000
193	36	TSF	Elementary/Middle	44.000
193	101	DU	Single Family Detached	576.000
193	103	DU	Apartments	354.000
193	136	STU	ELEMENTARY/MIDDLE - ITAM	552.000
193	139	ACRE	Park	10.002
193	142	TSF	Child Care Center	10.345
194	101	DU	Single Family Detached	317.000
194	103	DU	Apartments	200.000
194	139	ACRE	Park	3.997
195	103	DU	Apartments	426.000
195	129	TSF	Community Facility	0.377
195	139	ACRE	Park	5.117
196	16	TSF	Gas Station	2.070
196	109	TSF	Commercial (EQ)	7.845
196	114	TSF	Fast Food Restaurant	3.408
196	116	SITE	GAS STATION	1.000
196	117	SITE	CAR WASH	1.000
196	119	TSF	Auto Repair	10.338
197	101	DU	Single Family Detached	154.000
197	139	ACRE	Park	2.258
198	36	TSF	Elementary/Middle	45.490
198	101	DU	Single Family Detached	145.000
198	129	TSF	Community Facility	0.377
198	136	STU	ELEMENTARY/MIDDLE - ITAM	969.000
198	139	ACRE	Park	0.120
199	109	TSF	Commercial (EQ)	104.859
200	102	DU	Condominiums	286.000
200	137	ACRE	Open Space	0.903
200	139	ACRE	Park	0.978
201	103	DU	Apartments	513.000
202	101	DU	Single Family Detached	460.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
202	139	ACRE	Park	3.657
203	29	ACRE	Homeowner's Assoc. Rec. Area	2.261
203	101	DU	Single Family Detached	246.000
203	102	DU	Condominiums	123.000
203	139	ACRE	Park	2.549
204	101	DU	Single Family Detached	135.000
204	102	DU	Condominiums	185.000
204	139	ACRE	Park	3.819
205	29	ACRE	Homeowner's Assoc. Rec. Area	0.401
205	101	DU	Single Family Detached	94.000
205	102	DU	Condominiums	257.000
205	139	ACRE	Park	4.651
206	101	DU	Single Family Detached	32.000
206	102	DU	Condominiums	133.000
206	103	DU	Apartments	220.000
206	139	ACRE	Park	3.873
207	36	TSF	Elementary, Middle	56.730
207	101	DU	Single Family Detached	112.000
207	102	DU	Condominiums	64.000
207	136	STU	ELEMENTARY, MIDDLE - ITAM	1,685.000
207	139	ACRE	Park	1.908
208	36	TSF	Elementary, Middle	33.874
208	101	DU	Single Family Detached	134.000
208	102	DU	Condominiums	103.000
208	136	STU	ELEMENTARY, MIDDLE - ITAM	539.000
208	137	ACRE	Open Space	2.546
208	139	ACRE	Park	4.999
209	101	DU	Single Family Detached	58.000
209	102	DU	Condominiums	258.000
209	139	ACRE	Park	1.998
210	101	DU	Single Family Detached	107.000
210	102	DU	Condominiums	138.000
210	113	TSF	Restaurant	12.470
210	121	TSF	Office	23.000
210	139	ACRE	Park	1.999
211	113	TSF	Restaurant	12.667
211	121	TSF	Office	148.208
212	101	DU	Single Family Detached	48.000
212	102	DU	Condominiums	295.000
212	139	ACRE	Park	2.592

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ITAM TAZ	ITAM Code	Units	Description	Quantity
213	35	TSF	High-School	23.098
213	106	DU	Senior Housing	165.000
213	109	TSF	Commercial (EQ)	29.656
213	121	TSF	Office	82.974
213	130	TSF	Church, Synagogue	5.164
213	135	STU	HIGH-SCHOOL - ITAM	113.000
213	142	TSF	Child Care Center	15.389
214	29	ACRE	Homeowner's Assoc. Rec. Area	5.028
214	36	TSF	Elementary, Middle	33.808
214	101	DU	Single Family Detached	185.000
214	102	DU	Condominiums	256.000
214	136	STU	ELEMENTARY, MIDDLE - ITAM	553.000
214	139	ACRE	Park	4.009
215	129	TSF	Community Facility	1.750
216	36	TSF	Elementary, Middle	0.000
216	101	DU	Single Family Detached	0.000
216	102	DU	Condominiums	414.000
216	103	DU	Apartments	375.000
216	136	STU	ELEMENTARY, MIDDLE - ITAM	0.000
216	139	ACRE	Park	4.000
217	101	DU	Single Family Detached	64.000
217	102	DU	Condominiums	356.000
217	139	ACRE	Park	2.041
218	101	DU	Single Family Detached	99.000
218	102	DU	Condominiums	151.000
219	35	TSF	High-School	193.431
219	130	TSF	Church, Synagogue	111.632
219	135	STU	HIGH-SCHOOL - ITAM	2,115.000
219	137	ACRE	Open Space	3.369
220	16	TSF	Gas Station	1.596
220	17	TSF	Car Wash	5.554
220	109	TSF	Commercial (EQ)	182.726
220	114	TSF	Fast Food Restaurant	1.855
220	115	SEATS	CINEMA - ITAM	0.000
220	117	SITE	ITAM Car Wash	1.000
220	120	TSF	Bank	12.418
220	122	TSF	Medical Office	11.174
220	142	TSF	Child Care Center	5.730
221	29	ACRE	Homeowner's Assoc. Rec. Area	5.332
221	101	DU	Single Family Detached	291.000

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221	102	DU	Condominiums	210.000
221	139	ACRE	Park	4.003
222	103	DU	Apartments	136.000
223	101	DU	Single Family Detached	52.000
223	102	DU	Condominiums	72.000
224	5	TSF	Convalescent Home	93.857
224	105	BEDS	CONVALESCENT HOME	123.000
224	114	TSF	Fast Food Restaurant	4.008
224	121	TSF	Office	122.952
224	122	TSF	Medical Office	118.100
224	130	TSF	Church, Synagogue	40.236
225	29	ACRE	Homeowner's Assoc. Rec. Area	6.352
225	101	DU	Single Family Detached	273.000
225	102	DU	Condominiums	332.000
225	139	ACRE	Park	2.088
226	36	TSF	Elementary, Middle	24.810
226	106	DU	Senior Housing	116.000
226	109	TSF	Commercial (EQ)	0.976
226	121	TSF	Office	16.015
226	122	TSF	Medical Office	75.898
226	136	STU	ELEMENTARY, MIDDLE - ITAM	138.000
226	161	TSF	Mini Warehouse	117.648
227	36	TSF	Elementary, Middle	52.393
227	101	DU	Single Family Detached	58.000
227	102	DU	Condominiums	268.000
227	136	STU	ELEMENTARY, MIDDLE - ITAM	596.000
227	139	ACRE	Park	4.258
228	17	TSF	Car Wash	5.545
228	103	DU	Apartments	176.000
228	107	DU	Congregate Care	140.000
228	117	SITE	ITAM Car Wash	1.000
228	121	TSF	Office	35.046
228	123	TSF	Manufacturing	0.000
228	124	TSF	Warehouse	7.917
228	130	TSF	Church, Synagogue	141.099
229	129	TSF	Community Facility	23.500
229	132	TSF	Government Facility	7.500
230	101	DU	Single Family Detached	25.000
231	101	DU	Single Family Detached	182.000
231	102	DU	Condominiums	149.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
231	139	ACRE	Park	6.661
232	36	TSF	Elementary, Middle	47.334
232	101	DU	Single Family Detached	235.000
232	102	DU	Condominiums	361.000
232	136	STU	ELEMENTARY, MIDDLE - ITAM	625.000
232	139	ACRE	Park	3.993
233	16	TSF	Gas Station	1.310
233	109	TSF	Commercial (EQ)	108.849
233	113	TSF	Restaurant	6.650
233	114	TSF	Fast Food Restaurant	4.300
233	116	SITE	ITAM Gas Station	1.000
234	36	TSF	Elementary, Middle	62.624
234	101	DU	Single Family Detached	75.000
234	102	DU	Condominiums	176.000
234	136	STU	ELEMENTARY, MIDDLE - ITAM	560.000
235	101	DU	Single Family Detached	168.000
235	102	DU	Condominiums	20.000
235	103	DU	Apartments	320.000
236	102	DU	Condominiums	331.000
236	103	DU	Apartments	258.000
236	139	ACRE	Park	4.003
237	101	DU	Single Family Detached	17.000
237	102	DU	Condominiums	368.000
239	132	TSF	Government Facility	8.827
241	101	DU	Single Family Detached	1.000
241	102	DU	Condominiums	559.000
241	103	DU	Apartments	927.000
241	109	TSF	Commercial (EQ)	145.500
241	114	TSF	Fast Food Restaurant	3.500
241	116	SITE	GAS STATION	1.000
241	129	TSF	Community Facility	3.139
242	103	DU	Apartments	182.000
242	137	ACRE	Open Space	18.000
243	103	DU	Apartments	0.000
243	121	TSF	Office	1,054.000
244	36	TSF	Elementary/Middle	40.000
244	101	DU	Single Family Detached	385.000
244	102	DU	Condominiums	771.000
244	103	DU	Apartments	0.000
244	109	TSF	Commercial (EQ)	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
244	130	TSF	Church/Synagogue	55.000
244	136	STU	ELEMENTARY/MIDDLE - ITAM	700.000
244	137	ACRE	Open Space	33.000
244	139	ACRE	Park	51.500
245	121	TSF	Office	6.000
246	101	DU	Single Family Detached	175.000
251	27	TSF	Commercial Recreation	77.785
251	127	ACRE	COMMERCIAL RECREATION - ITAM	1.677
252	103	DU	Apartments	880.000
252	130	TSF	Church/Synagogue	31.235
252	139	ACRE	Park	3.380
253	127	ACRE	COMMERCIAL RECREATION - ITAM	3.600
253	130	TSF	Church/Synagogue	38.077
254	16	TSF	Gas Station	6.980
254	17	TSF	Car Wash	6.152
254	102	DU	Condominiums	177.000
254	103	DU	Apartments	368.000
254	109	TSF	Commercial (EQ)	28.672
254	116	SITE	GAS STATION	0.000
254	117	SITE	CAR WASH	1.000
254	120	TSF	Bank	7.438
254	126	TSF	Health Club	6.037
254	129	TSF	Community Facility	9.374
254	130	TSF	Church/Synagogue	37.567
254	137	ACRE	Open Space	0.469
254	140	ACRE	Golf Course	83.000
255	102	DU	Condominiums	372.000
255	137	ACRE	Open Space	0.396
256	101	DU	Single Family Detached	0.000
256	102	DU	Condominiums	362.000
256	137	ACRE	Open Space	18.079
256	139	ACRE	Park	2.234
257	101	DU	Single Family Detached	158.000
257	137	ACRE	Open Space	1.076
258	101	DU	Single Family Detached	106.000
259	16	TSF	Gas Station	2.065
259	109	TSF	Commercial (EQ)	48.553
259	114	TSF	Fast Food Restaurant	3.000
259	116	SITE	ITAM - Gas Station	1.000
259	120	TSF	Bank	5.307

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ITAM TAZ	ITAM Code	Units	Description	Quantity
259	121	TSF	Office	11.504
260	36	TSF	Elementary, Middle	72.435
260	136	STU	ELEMENTARY, MIDDLE - ITAM	872.000
261	101	DU	Single Family Detached	133.000
261	102	DU	Condominiums	63.000
261	137	ACRE	Open Space	9.498
261	139	ACRE	Park	7.279
262	101	DU	Single Family Detached	116.000
262	137	ACRE	Open Space	0.265
263	101	DU	Single Family Detached	0.000
263	102	DU	Condominiums	173.000
264	101	DU	Single Family Detached	0.000
264	102	DU	Condominiums	334.000
265	101	DU	Single Family Detached	0.000
265	102	DU	Condominiums	387.000
265	130	TSF	Church, Synagogue	74.000
265	137	ACRE	Open Space	18.619
265	139	ACRE	Park	2.183
266	36	TSF	Elementary, Middle	56.106
266	102	DU	Condominiums	98.000
266	129	TSF	Community Facility	14.524
266	136	STU	ELEMENTARY, MIDDLE - ITAM	551.000
266	139	ACRE	Park	7.200
267	101	DU	Single Family Detached	101.000
267	102	DU	Condominiums	181.000
267	137	ACRE	Open Space	16.102
268	36	TSF	Elementary, Middle	0.000
268	101	DU	Single Family Detached	246.000
268	136	STU	ELEMENTARY, MIDDLE - ITAM	0.000
268	139	ACRE	Park	4.753
269	16	TSF	Gas Station	2.000
269	103	DU	Apartments	296.000
269	109	TSF	Commercial (EQ)	75.100
269	113	TSF	Restaurant	7.000
269	116	SITE	ITAM - Gas Station	1.000
269	121	TSF	Office	12.081
269	122	TSF	Medical Office	6.932
270	102	DU	Condominiums	165.000
270	130	TSF	Church/Synagogue	25.997
270	137	ACRE	Open Space	13.444

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ITAM TAZ	ITAM Code	Units	Description	Quantity
271	140	ACRE	Golf Course	100.000
272	29	ACRE	Homeowner's Assoc. Rec. Area	0.718
272	43	TSF	Community College	209.153
272	101	DU	Single Family Detached	151.000
272	127	ACRE	COMMERCIAL RECREATION - ITAM	0.718
272	137	ACRE	Open Space	0.408
272	140	ACRE	Golf Course	0.000
273	140	ACRE	Golf Course	97.000
274	35	TSF	High-School	159.652
274	103	DU	Apartments	252.000
274	135	STU	HIGH-SCHOOL - ITAM	2,623.000
275	101	DU	Single Family Detached	126.000
275	102	DU	Condominiums	74.000
275	103	DU	Apartments	216.000
276	101	DU	Single Family Detached	135.000
276	102	DU	Condominiums	150.000
277	29	ACRE	Homeowner's Assoc. Rec. Area	0.927
277	101	DU	Single Family Detached	2.000
277	102	DU	Condominiums	188.000
278	101	DU	Single Family Detached	142.000
278	102	DU	Condominiums	114.000
278	137	ACRE	Open Space	0.588
279	36	TSF	Elementary/Middle	38.573
279	101	DU	Single Family Detached	129.000
279	136	STU	ELEMENTARY/MIDDLE - ITAM	300.000
280	101	DU	Single Family Detached	23.000
280	102	DU	Condominiums	152.000
281	101	DU	Single Family Detached	151.000
282	101	DU	Single Family Detached	112.000
282	102	DU	Condominiums	39.000
283	101	DU	Single Family Detached	288.000
283	137	ACRE	Open Space	0.150
283	139	ACRE	Park	1.875
284	29	ACRE	Homeowner's Assoc. Rec. Area	0.514
284	101	DU	Single Family Detached	45.000
284	102	DU	Condominiums	524.000
284	137	ACRE	Open Space	0.399
284	139	ACRE	Park	2.620
285	101	DU	Single Family Detached	72.000
285	102	DU	Condominiums	175.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
285	137	ACRE	Open Space	0.989
286	36	TSF	Elementary/Middle	32.073
286	101	DU	Single Family Detached	167.000
286	136	STU	ELEMENTARY/MIDDLE - ITAM	267.000
286	139	ACRE	Park	3.100
287	101	DU	Single Family Detached	192.000
287	139	ACRE	Park	1.665
288	101	DU	Single Family Detached	151.000
288	129	TSF	Community Facility	19.746
288	139	ACRE	Park	7.600
289	101	DU	Single Family Detached	58.000
289	137	ACRE	Open Space	70.000
289	139	ACRE	Park	0.000
290	100	DU	Estate	201.000
290	101	DU	Single Family Detached	76.000
290	137	ACRE	Open Space	114.000
291	27	TSF	Commercial Recreation	42.605
291	100	DU	Estate	35.000
291	101	DU	Single Family Detached	74.000
291	102	DU	Condominiums	0.000
291	137	ACRE	Open Space	100.000
291	140	ACRE	Golf Course	200.000
292	100	DU	Estate	100.000
292	101	DU	Single Family Detached	83.000
292	102	DU	Condominiums	64.000
292	137	ACRE	Open Space	30.000
293	103	DU	Apartments	1,000.000
294	44	TSF	Utilities (Gas/Water)	84.999
294	123	TSF	Manufacturing	85.000
294	139	ACRE	Park	300.000
295	130	TSF	Church/Synagogue	95.744
295	142	TSF	Child Care Center	12.839
296	103	DU	Apartments	40.000
297	29	ACRE	Homeowner's Assoc. Rec. Area	0.656
297	102	DU	Condominiums	286.000
297	103	DU	Apartments	320.000
297	139	ACRE	Park	5.705
298	139	ACRE	Park	100.700
299	5	TSF	Convalescent Home	0.072
299	29	ACRE	Homeowner's Assoc. Rec. Area	0.423

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ITAM TAZ	ITAM Code	Units	Description	Quantity
299	102	DU	Condominiums	209.000
299	103	DU	Apartments	162.000
299	105	BEDS	Convalescent Home	372.000
299	106	DU	Senior Housing	86.000
299	107	DU	Congregate Care	363.000
300	16	TSF	Gas Station	0.638
300	102	DU	Condominiums	439.000
300	103	DU	Apartments	58.000
300	116	SITE	GAS STATION	1.000
300	129	TSF	Community Facility	9.971
300	139	ACRE	Park	2.142
301	15	TSF	Cinema	23.411
301	36	TSF	Elementary/Middle	13.271
301	103	DU	Apartments	446.000
301	109	TSF	Commercial (EQ)	373.109
301	112	TSF	Bar	5.916
301	113	TSF	Restaurant	12.066
301	114	TSF	Fast Food Restaurant	10.939
301	115	SEAT	CINEMA - ITAM	1,556.000
301	121	TSF	Office	211.284
301	126	TSF	Health Club	19.105
301	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
302	29	ACRE	Homeowner's Assoc. Rec. Area	0.282
302	103	DU	Apartments	221.000
302	106	DU	Senior Housing	160.000
302	109	TSF	Commercial (EQ)	57.592
302	113	TSF	Restaurant	9.283
302	114	TSF	Fast Food Restaurant	1.872
302	120	TSF	Bank	6.600
302	137	ACRE	Open Space	0.000
302	139	ACRE	Park	3.002
303	121	TSF	Office	650.366
303	124	TSF	Warehouse	0.903
303	125	TSF	Research and Development	568.949
304	121	TSF	Office	312.144
304	125	TSF	Research and Development	431.475
305	35	TSF	High-School	134.868
305	36	TSF	Elementary/Middle	111.068
305	126	TSF	Health Club	48.730
305	129	TSF	Community Facility	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
305	130	TSF	Church/Synagogue	83.490
305	135	STU	HIGH-SCHOOL - ITAM	520.000
305	136	STU	ELEMENTARY/MIDDLE - ITAM	1,110.000
305	142	TSF	Child Care Center	27.780
306	101	DU	Single Family Detached	130.000
306	102	DU	Condominiums	5.000
306	129	TSF	Community Facility	120.334
307	103	DU	Apartments	436.000
307	126	TSF	Health Club	35.000
307	130	TSF	Church/Synagogue	424.830
307	142	TSF	Child Care Center	22.000
308	101	DU	Single Family Detached	2.000
308	102	DU	Condominiums	70.000
309	102	DU	Condominiums	0.000
309	103	DU	Apartments	600.000
310	102	DU	Condominiums	325.000
310	136	STU	ELEMENTARY/MIDDLE - ITAM	750.000
310	139	ACRE	Park	20.500
311	101	DU	Single Family Detached	412.000
311	102	DU	Condominiums	199.000
312	101	DU	Single Family Detached	85.000
312	102	DU	Condominiums	99.000
312	103	DU	Apartments	600.000
312	139	ACRE	Park	4.000
314	137	ACRE	Open Space	772.000
315	129	TSF	Community Facility	1.524
315	137	ACRE	Open Space	499.100
315	139	ACRE	Park	14.998
316	137	ACRE	Open Space	754.000
317	137	ACRE	Open Space	257.000
318	103	DU	Apartments	435.000
318	109	TSF	Commercial (EQ)	100.000
318	121	TSF	Office	850.000
318	123	TSF	Manufacturing	0.000
318	137	ACRE	Open Space	202.000
318	138	ACRE	Agriculture	12.500
319	123	TSF	Manufacturing	131.267
319	132	TSF	Government Facility	140.000
320	137	ACRE	Open Space	47.470
321	138	ACRE	Agriculture	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
321	270	DU	TOD Residential	300.000
321	271	TSF	TOD Retail	15.000
322	138	ACRE	Agriculture	0.000
322	270	DU	TOD Residential	345.000
322	271	TSF	TOD Retail	15.000
323	138	ACRE	Agriculture	0.000
323	258	TSF	Research and Development	500.000
324	138	ACRE	Agriculture	0.000
324	251	TSF	Auto Center	102.000
333	121	TSF	Office	0.000
333	124	TSF	Warehouse	0.000
333	212	TSF	High Tech	337.862
334	121	TSF	Office	0.000
334	124	TSF	Warehouse	0.000
334	125	TSF	Research and Development	0.000
334	212	TSF	High Tech	447.836
335	121	TSF	Office	0.000
335	124	TSF	Warehouse	0.000
335	212	TSF	High Tech	436.431
336	121	TSF	Office	0.000
336	123	TSF	Manufacturing	0.000
336	124	TSF	Warehouse	0.000
336	125	TSF	Research and Development	0.000
336	212	TSF	High Tech	494.793
337	121	TSF	Office	0.000
337	124	TSF	Warehouse	0.000
337	125	TSF	Research and Development	0.000
337	187	TSF	Train Station	22.874
337	212	TSF	High Tech	468.403
337	261	SPACE	Transportation Center	1,651.000
338	109	TSF	Commercial (EQ)	897.741
338	116	SITE	GAS STATION	2.000
338	120	TSF	Bank	4.000
339	121	TSF	Office	0.000
339	124	TSF	Warehouse	0.000
339	125	TSF	Research and Development	0.000
339	212	TSF	High Tech	883.118
340	121	TSF	Office	0.000
340	124	TSF	Warehouse	0.000
340	125	TSF	Research and Development	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
340	212	TSF	High Tech	268.561
341	121	TSF	Office	0.000
341	124	TSF	Warehouse	0.000
341	125	TSF	Research and Development	0.000
341	212	TSF	High Tech	750.105
342	11	TSF	Hotel	37.049
342	109	TSF	Commercial (EQ)	16.136
342	111	ROOM	HOTEL - ITAM	149.000
342	121	TSF	Office	0.000
342	125	TSF	Research and Development	0.000
342	212	TSF	High Tech	345.771
343	121	TSF	Office	0.000
343	124	TSF	Warehouse	0.000
343	212	TSF	High Tech	343.394
344	121	TSF	Office	527.182
345	121	TSF	Office	683.899
346	121	TSF	Office	538.332
346	125	TSF	Research and Development	0.000
347	121	TSF	Office	327.516
348	11	TSF	Hotel	142.357
348	111	ROOM	HOTEL - ITAM	252.000
349	121	TSF	Office	458.830
350	121	TSF	Office	638.830
351	121	TSF	Office	50.000
352	121	TSF	Office	178.226
353	103	DU	Apartments	0.000
353	121	TSF	Office	626.496
353	137	ACRE	Open Space	15.379
353	139	ACRE	Park	0.000
353	142	TSF	Child Care Center	0.000
354	103	DU	Apartments	1,456.000
355	121	TSF	Office	450.412
356	103	DU	Apartments	1,550.000
357	121	TSF	Office	327.634
358	15	TSF	Cinema	0.000
358	109	TSF	Commercial (EQ)	1,550.000
358	113	TSF	Restaurant	0.000
358	115	SEAT	CINEMA - ITAM	0.000
359	121	TSF	Office	451.148
360	109	TSF	Commercial (EQ)	7.200

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ITAM TAZ	ITAM Code	Units	Description	Quantity
360	122	TSF	Medical Office	150.000
361	121	TSF	Office	628.154
362	121	TSF	Office	376.076
363	109	TSF	Commercial (EQ)	139.950
363	118	TSF	Auto Dealer	0.000
363	121	TSF	Office	0.000
363	123	TSF	Manufacturing	0.000
363	124	TSF	Warehouse	0.000
363	125	TSF	Research and Development	448.934
364	16	TSF	Gas Station	0.000
364	109	TSF	Commercial (EQ)	39.100
364	119	TSF	Auto Repair	0.000
364	121	TSF	Office	0.000
364	124	TSF	Warehouse	0.000
364	125	TSF	Research and Development	494.161
364	126	TSF	Health Club	36.442
364	262	TSF	Cultural/Institutional/Exposition	27.750
365	118	TSF	Auto Dealer	0.000
365	121	TSF	Office	0.000
365	123	TSF	Manufacturing	0.000
365	125	TSF	Research and Development	85.000
366	121	TSF	Office	0.000
366	123	TSF	Manufacturing	0.000
366	124	TSF	Warehouse	0.000
366	125	TSF	Research and Development	505.454
366	132	TSF	Government Facility	9.996
367	121	TSF	Office	0.000
367	124	TSF	Warehouse	0.000
367	125	TSF	Research and Development	192.714
368	118	TSF	Auto Dealer	24.781
368	121	TSF	Office	0.000
368	123	TSF	Manufacturing	0.000
368	124	TSF	Warehouse	0.000
368	125	TSF	Research and Development	398.024
369	118	TSF	Auto Dealer	0.000
369	119	TSF	Auto Repair	0.000
369	121	TSF	Office	0.000
369	124	TSF	Warehouse	0.000
369	125	TSF	Research and Development	383.114
370	121	TSF	Office	355.915

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ITAM TAZ	ITAM Code	Units	Description	Quantity
370	124	TSF	Warehouse	0.000
371	121	TSF	Office	0.000
371	124	TSF	Warehouse	0.000
371	125	TSF	Research and Development	149.760
372	121	TSF	Office	0.000
372	124	TSF	Warehouse	0.000
372	125	TSF	Research and Development	261.851
373	118	TSF	Auto Dealer	0.000
373	121	TSF	Office	0.000
373	123	TSF	Manufacturing	0.000
373	124	TSF	Warehouse	0.000
373	125	TSF	Research and Development	313.893
374	121	TSF	Office	0.000
374	123	TSF	Manufacturing	0.000
374	124	TSF	Warehouse	0.000
374	125	TSF	Research and Development	358.095
375	116	SITE	GAS STATION	0.000
375	121	TSF	Office	0.000
375	123	TSF	Manufacturing	0.000
375	124	TSF	Warehouse	0.000
375	125	TSF	Research and Development	581.309
375	130	TSF	Church/Synagogue	0.000
375	161	TSF	Mini Warehouse	0.000
376	109	TSF	Commercial (EQ)	140.250
376	113	TSF	Restaurant	0.000
376	116	SITE	GAS STATION	1.000
376	118	TSF	Auto Dealer	0.000
376	125	TSF	Research and Development	106.353
377	121	TSF	Office	252.273
377	124	TSF	Warehouse	0.000
377	125	TSF	Research and Development	181.993
378	121	TSF	Office	0.000
378	124	TSF	Warehouse	0.000
378	125	TSF	Research and Development	292.649
379	121	TSF	Office	138.571
379	123	TSF	Manufacturing	112.593
379	124	TSF	Warehouse	2.362
379	125	TSF	Research and Development	105.167
379	138	ACRE	Agriculture	8.000
380	180	SG	J. MUSICK FACILITY - ITAM	62,101.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
381	121	TSF	Office	140.805
381	124	TSF	Warehouse	206.402
381	125	TSF	Research and Development	137.907
382	121	TSF	Office	423.122
382	124	TSF	Warehouse	434.412
382	125	TSF	Research and Development	146.159
382	130	TSF	Church/Synagogue	1.704
383	109	TSF	Commercial (EQ)	122.928
383	121	TSF	Office	176.747
383	124	TSF	Warehouse	321.121
384	121	TSF	Office	264.533
384	124	TSF	Warehouse	610.527
384	125	TSF	Research and Development	105.167
385	121	TSF	Office	330.919
385	123	TSF	Manufacturing	7.793
385	124	TSF	Warehouse	683.496
385	125	TSF	Research and Development	368.087
385	129	TSF	Community Facility	2.360
386	121	TSF	Office	226.257
386	123	TSF	Manufacturing	34.986
386	124	TSF	Warehouse	718.046
386	125	TSF	Research and Development	235.785
386	161	TSF	Mini Warehouse	136.032
387	11	TSF	Hotel	67.772
387	109	TSF	Commercial (EQ)	184.566
387	111	ROOM	HOTEL - ITAM	112.000
387	121	TSF	Office	820.592
387	122	TSF	Medical Office	25.000
387	123	TSF	Manufacturing	24.618
387	124	TSF	Warehouse	950.068
387	125	TSF	Research and Development	518.252
388	121	TSF	Office	233.536
388	123	TSF	Manufacturing	1.080
388	124	TSF	Warehouse	536.754
388	125	TSF	Research and Development	105.167
389	121	TSF	Office	472.489
389	123	TSF	Manufacturing	5.544
389	124	TSF	Warehouse	1,216.524
389	125	TSF	Research and Development	144.164
390	109	TSF	Commercial (EQ)	104.708

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ITAM TAZ	ITAM Code	Units	Description	Quantity
390	121	TSF	Office	317.279
390	123	TSF	Manufacturing	21.699
390	124	TSF	Warehouse	455.417
390	125	TSF	Research and Development	21.750
391	121	TSF	Office	44.459
391	124	TSF	Warehouse	71.741
392	121	TSF	Office	82.224
392	124	TSF	Warehouse	85.764
393	109	TSF	Commercial (EQ)	100.000
393	119	TSF	Auto Repair	37.388
393	121	TSF	Office	328.398
393	124	TSF	Warehouse	344.371
393	130	TSF	Church/Synagogue	9.434
393	161	TSF	Mini Warehouse	101.225
394	109	TSF	Commercial (EQ)	54.144
394	118	TSF	Auto Dealer	264.610
394	119	TSF	Auto Repair	205.388
394	121	TSF	Office	129.460
394	124	TSF	Warehouse	183.491
395	238	TSF	Office Mix	206.572
395	239	TSF	Industrial Mix	357.706
396	238	TSF	Office Mix	253.602
396	239	TSF	Industrial Mix	408.746
397	236	TSF	Retail mix	22.109
397	238	TSF	Office Mix	107.291
397	239	TSF	Industrial Mix	243.813
398	236	TSF	Retail mix	12.052
398	238	TSF	Office Mix	81.093
398	239	TSF	Industrial Mix	168.382
399	238	TSF	Office Mix	255.529
399	239	TSF	Industrial Mix	289.499
400	238	TSF	Office Mix	176.669
400	239	TSF	Industrial Mix	551.910
401	238	TSF	Office Mix	178.824
401	239	TSF	Industrial Mix	231.849
402	238	TSF	Office Mix	112.123
402	239	TSF	Industrial Mix	136.185
403	236	TSF	Retail mix	237.693
403	238	TSF	Office Mix	91.261
403	239	TSF	Industrial Mix	18.610

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ITAM TAZ	ITAM Code	Units	Description	Quantity
404	238	TSF	Office Mix	390.178
404	239	TSF	Industrial Mix	156.914
405	238	TSF	Office Mix	195.340
405	239	TSF	Industrial Mix	224.252
406	238	TSF	Office Mix	67.367
406	239	TSF	Industrial Mix	129.081
407	238	TSF	Office Mix	50.517
407	239	TSF	Industrial Mix	117.130
408	236	TSF	Retail mix	0.910
408	238	TSF	Office Mix	203.894
408	239	TSF	Industrial Mix	132.687
409	238	TSF	Office Mix	261.087
409	239	TSF	Industrial Mix	156.347
410	238	TSF	Office Mix	84.594
410	239	TSF	Industrial Mix	143.356
411	235	DU	Multi-family	192.000
411	236	TSF	Retail mix	5.000
411	238	TSF	Office Mix	336.213
411	239	TSF	Industrial Mix	362.318
412	238	TSF	Office Mix	74.634
412	239	TSF	Industrial Mix	120.728
413	238	TSF	Office Mix	230.368
413	239	TSF	Industrial Mix	251.333
414	236	TSF	Retail mix	4.330
414	238	TSF	Office Mix	278.900
414	239	TSF	Industrial Mix	319.852
414	241	ROOM	Hotel-Extended Stay	132.000
415	238	TSF	Office Mix	72.505
415	239	TSF	Industrial Mix	70.180
416	236	TSF	Retail mix	4.000
416	239	TSF	Industrial Mix	211.864
417	238	TSF	Office Mix	252.153
417	239	TSF	Industrial Mix	13.986
418	238	TSF	Office Mix	155.307
418	239	TSF	Industrial Mix	158.835
419	238	TSF	Office Mix	6.731
419	239	TSF	Industrial Mix	69.440
420	238	TSF	Office Mix	165.144
420	239	TSF	Industrial Mix	280.974
421	238	TSF	Office Mix	187.309

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ITAM TAZ	ITAM Code	Units	Description	Quantity
421	239	TSF	Industrial Mix	118.674
422	235	DU	Multi-family	1.000
422	239	TSF	Industrial Mix	253.044
422	240	TSF	Mini Warehouse	64.280
423	238	TSF	Office Mix	528.346
424	239	TSF	Industrial Mix	158.715
425	238	TSF	Office Mix	397.325
426	236	TSF	Retail mix	1.760
426	238	TSF	Office Mix	320.276
426	239	TSF	Industrial Mix	79.691
427	238	TSF	Office Mix	77.041
427	239	TSF	Industrial Mix	59.674
428	236	TSF	Retail mix	1.902
428	238	TSF	Office Mix	103.026
428	239	TSF	Industrial Mix	175.770
429	238	TSF	Office Mix	171.274
429	239	TSF	Industrial Mix	275.893
430	238	TSF	Office Mix	455.361
430	239	TSF	Industrial Mix	166.265
431	236	TSF	Retail mix	1.930
431	238	TSF	Office Mix	147.117
431	239	TSF	Industrial Mix	278.240
432	238	TSF	Office Mix	90.064
432	239	TSF	Industrial Mix	43.919
433	238	TSF	Office Mix	42.470
433	239	TSF	Industrial Mix	157.309
434	238	TSF	Office Mix	140.297
434	239	TSF	Industrial Mix	146.061
435	238	TSF	Office Mix	41.643
435	239	TSF	Industrial Mix	67.700
436	238	TSF	Office Mix	192.847
436	239	TSF	Industrial Mix	75.073
437	236	TSF	Retail mix	0.600
437	238	TSF	Office Mix	168.516
437	239	TSF	Industrial Mix	45.696
438	238	TSF	Office Mix	177.939
438	239	TSF	Industrial Mix	262.960
439	238	TSF	Office Mix	300.646
439	239	TSF	Industrial Mix	384.005
440	238	TSF	Office Mix	38.486

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ITAM TAZ	ITAM Code	Units	Description	Quantity
440	239	TSF	Industrial Mix	192.220
441	236	TSF	Retail mix	30.965
441	238	TSF	Office Mix	134.284
441	239	TSF	Industrial Mix	187.637
442	238	TSF	Office Mix	63.283
442	239	TSF	Industrial Mix	92.070
443	236	TSF	Retail mix	20.562
443	238	TSF	Office Mix	66.785
443	239	TSF	Industrial Mix	6.094
444	238	TSF	Office Mix	42.205
444	239	TSF	Industrial Mix	26.561
445	238	TSF	Office Mix	56.712
445	239	TSF	Industrial Mix	128.372
446	235	DU	Multi-family	280.000
446	238	TSF	Office Mix	127.892
446	239	TSF	Industrial Mix	249.836
447	236	TSF	Retail mix	3.724
447	238	TSF	Office Mix	40.449
447	239	TSF	Industrial Mix	117.983
448	236	TSF	Retail mix	13.900
448	238	TSF	Office Mix	106.519
448	239	TSF	Industrial Mix	30.581
449	238	TSF	Office Mix	95.554
449	239	TSF	Industrial Mix	196.890
450	238	TSF	Office Mix	24.887
450	239	TSF	Industrial Mix	126.562
451	238	TSF	Office Mix	92.560
451	239	TSF	Industrial Mix	2.748
452	236	TSF	Retail mix	4.558
452	238	TSF	Office Mix	264.845
452	239	TSF	Industrial Mix	11.091
453	238	TSF	Office Mix	267.937
453	239	TSF	Industrial Mix	2.024
454	238	TSF	Office Mix	129.400
455	238	TSF	Office Mix	81.987
455	239	TSF	Industrial Mix	112.164
456	236	TSF	Retail mix	86.441
456	238	TSF	Office Mix	366.801
456	239	TSF	Industrial Mix	597.674
457	238	TSF	Office Mix	122.418

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ITAM TAZ	ITAM Code	Units	Description	Quantity
457	239	TSF	Industrial Mix	136.941
458	238	TSF	Office Mix	148.891
458	239	TSF	Industrial Mix	50.841
459	236	TSF	Retail mix	4.880
459	238	TSF	Office Mix	424.093
459	239	TSF	Industrial Mix	42.088
460	238	TSF	Office Mix	196.507
460	239	TSF	Industrial Mix	127.119
461	238	TSF	Office Mix	83.237
461	239	TSF	Industrial Mix	184.693
462	238	TSF	Office Mix	322.185
462	239	TSF	Industrial Mix	340.969
463	238	TSF	Office Mix	52.578
463	239	TSF	Industrial Mix	40.681
464	235	DU	Multi-family	179.000
464	238	TSF	Office Mix	109.613
464	239	TSF	Industrial Mix	67.994
465	238	TSF	Office Mix	66.152
465	239	TSF	Industrial Mix	105.962
466	236	TSF	Retail mix	7.968
466	238	TSF	Office Mix	36.475
466	239	TSF	Industrial Mix	12.800
467	238	TSF	Office Mix	212.570
468	238	TSF	Office Mix	112.408
468	239	TSF	Industrial Mix	176.265
469	238	TSF	Office Mix	149.249
469	239	TSF	Industrial Mix	12.000
470	236	TSF	Retail mix	62.988
470	238	TSF	Office Mix	140.752
470	239	TSF	Industrial Mix	78.386
471	236	TSF	Retail mix	2.669
471	238	TSF	Office Mix	342.281
471	239	TSF	Industrial Mix	134.006
471	240	TSF	Mini Warehouse	101.956
472	238	TSF	Office Mix	29.999
472	239	TSF	Industrial Mix	52.712
473	238	TSF	Office Mix	120.716
473	239	TSF	Industrial Mix	132.188
474	238	TSF	Office Mix	215.058
474	239	TSF	Industrial Mix	353.186

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ITAM TAZ	ITAM Code	Units	Description	Quantity
475	236	TSF	Retail mix	27.134
475	238	TSF	Office Mix	12.322
476	238	TSF	Office Mix	78.306
476	239	TSF	Industrial Mix	89.805
477	238	TSF	Office Mix	144.632
477	239	TSF	Industrial Mix	132.093
478	238	TSF	Office Mix	585.380
479	238	TSF	Office Mix	45.392
479	239	TSF	Industrial Mix	61.819
480	236	TSF	Retail mix	20.602
480	238	TSF	Office Mix	394.897
481	238	TSF	Office Mix	135.056
481	239	TSF	Industrial Mix	327.693
482	238	TSF	Office Mix	294.563
482	239	TSF	Industrial Mix	75.878
483	238	TSF	Office Mix	50.054
483	239	TSF	Industrial Mix	190.763
484	236	TSF	Retail mix	174.126
484	238	TSF	Office Mix	746.810
484	239	TSF	Industrial Mix	58.336
485	235	DU	Multi-family	319.000
485	238	TSF	Office Mix	71.148
485	239	TSF	Industrial Mix	104.249
486	235	DU	Multi-family	541.000
487	236	TSF	Retail mix	4.922
487	237	ROOM	HOTEL - ITAM	293.000
487	238	TSF	Office Mix	381.554
488	236	TSF	Retail mix	6.994
488	238	TSF	Office Mix	1,287.241
488	239	TSF	Industrial Mix	14.116
489	238	TSF	Office Mix	66.261
489	239	TSF	Industrial Mix	46.594
489	240	TSF	Mini Warehouse	100.426
490	235	DU	Multi-family	481.000
490	236	TSF	Retail mix	15.120
490	237	ROOM	HOTEL - ITAM	153.000
490	238	TSF	Office Mix	603.347
491	238	TSF	Office Mix	541.683
491	239	TSF	Industrial Mix	14.778
491	240	TSF	Mini Warehouse	84.046

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ITAM TAZ	ITAM Code	Units	Description	Quantity
491	241	ROOM	Hotel-Extended Stay	170.000
492	238	TSF	Office Mix	84.071
492	239	TSF	Industrial Mix	150.490
493	236	TSF	Retail mix	15.492
493	238	TSF	Office Mix	238.955
494	236	TSF	Retail mix	2.419
494	237	ROOM	HOTEL - ITAM	340.000
494	238	TSF	Office Mix	177.584
495	236	TSF	Retail mix	24.417
495	238	TSF	Office Mix	168.827
495	239	TSF	Industrial Mix	288.464
496	238	TSF	Office Mix	234.312
496	239	TSF	Industrial Mix	107.371
497	235	DU	Multi-family	290.000
497	236	TSF	Retail mix	14.908
497	238	TSF	Office Mix	67.160
497	239	TSF	Industrial Mix	2.336
497	241	ROOM	HOTEL-EXTENDED STAY - ITAM	174.000
498	236	TSF	Retail mix	108.040
498	238	TSF	Office Mix	926.117
499	236	TSF	Retail mix	16.312
499	238	TSF	Office Mix	201.949
499	239	TSF	Industrial Mix	196.156
500	238	TSF	Office Mix	448.222
501	237	ROOM	HOTEL - ITAM	502.000
502	238	TSF	Office Mix	68.640
503	236	TSF	Retail mix	0.188
503	238	TSF	Office Mix	568.939
503	239	TSF	Industrial Mix	8.766
503	240	TSF	Mini Warehouse	34.757
504	236	TSF	Retail mix	0.393
504	238	TSF	Office Mix	862.866
505	237	ROOM	HOTEL - ITAM	526.000
505	239	TSF	Industrial Mix	1.124
506	236	TSF	Retail mix	18.369
506	238	TSF	Office Mix	74.073
507	238	TSF	Office Mix	93.840
508	235	DU	Multi-family	827.000
509	236	TSF	Retail mix	3.267
509	238	TSF	Office Mix	838.199

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ITAM TAZ	ITAM Code	Units	Description	Quantity
509	240	TSF	Mini Warehouse	64.547
510	236	TSF	Retail mix	12.039
510	238	TSF	Office Mix	1,129.961
511	236	TSF	Retail mix	12.011
511	237	ROOM	HOTEL - ITAM	215.000
511	238	TSF	Office Mix	85.899
512	238	TSF	Office Mix	126.048
513	238	TSF	Office Mix	94.006
513	239	TSF	Industrial Mix	1.600
514	236	TSF	Retail mix	32.660
514	238	TSF	Office Mix	79.100
515	235	DU	Multi-family	553.000
515	236	TSF	Retail mix	19.700
515	238	TSF	Office Mix	90.000
516	235	DU	Multi-family	232.000
516	236	TSF	Retail mix	177.419
516	237	ROOM	HOTEL - ITAM	154.000
516	238	TSF	Office Mix	1,432.885
516	239	TSF	Industrial Mix	0.000
517	239	TSF	Industrial Mix	81.647
518	238	TSF	Office Mix	206.446
519	237	ROOM	HOTEL - ITAM	293.000
520	238	TSF	Office Mix	74.633
521	238	TSF	Office Mix	289.746
521	239	TSF	Industrial Mix	63.252
522	236	TSF	Retail mix	30.450
522	238	TSF	Office Mix	797.349
522	239	TSF	Industrial Mix	15.000
523	235	DU	Multi-family	1,776.000
523	236	TSF	Retail mix	172.581
523	237	ROOM	HOTEL - ITAM	154.000
523	238	TSF	Office Mix	2,264.885
524	238	TSF	Office Mix	413.395
525	238	TSF	Office Mix	569.088
525	239	TSF	Industrial Mix	202.253
526	235	DU	Multi-family	377.000
526	236	TSF	Retail mix	3.000
526	238	TSF	Office Mix	65.858
527	235	DU	Multi-family	156.000
528	238	TSF	Office Mix	495.000

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528	239	TSF	Industrial Mix	0.000
529	238	TSF	Office Mix	154.661
529	239	TSF	Industrial Mix	108.037
531	238	TSF	Office Mix	229.138
532	235	DU	Multi-family	825.000
532	238	TSF	Office Mix	2.174
532	239	TSF	Industrial Mix	0.100
533	238	TSF	Office Mix	45.289
533	239	TSF	Industrial Mix	1.193
534	236	TSF	Retail mix	8.850
534	238	TSF	Office Mix	466.925
534	239	TSF	Industrial Mix	1.665
535	236	TSF	Retail mix	7.750
535	238	TSF	Office Mix	738.462
536	238	TSF	Office Mix	44.098
536	239	TSF	Industrial Mix	22.824
537	236	TSF	Retail mix	20.962
537	238	TSF	Office Mix	69.724
538	236	TSF	Retail mix	15.772
538	238	TSF	Office Mix	339.810
538	239	TSF	Industrial Mix	12.000
539	238	TSF	Office Mix	86.238
539	239	TSF	Industrial Mix	20.366
540	235	DU	Multi-family	617.000
541	238	TSF	Office Mix	82.105
542	236	TSF	Retail mix	35.635
542	238	TSF	Office Mix	98.570
542	239	TSF	Industrial Mix	0.779
543	236	TSF	Retail mix	8.500
543	238	TSF	Office Mix	134.384
543	239	TSF	Industrial Mix	17.536
544	235	DU	Multi-family	1,809.000
544	236	TSF	Retail mix	11.343
544	238	TSF	Office Mix	523.468
545	236	TSF	Retail mix	16.325
545	238	TSF	Office Mix	133.951
545	239	TSF	Industrial Mix	82.557
546	236	TSF	Retail mix	68.820
546	238	TSF	Office Mix	1,462.817
546	239	TSF	Industrial Mix	18.310

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ITAM TAZ	ITAM Code	Units	Description	Quantity
547	103	DU	Apartments	227.000
548	101	DU	Single Family Detached	202.000
548	142	TSF	Child Care Center	9.783
549	101	DU	Single Family Detached	321.000
550	101	DU	Single Family Detached	38.000
550	102	DU	Condominiums	55.000
551	101	DU	Single Family Detached	166.000
551	102	DU	Condominiums	243.000
551	135	STU	HIGH-SCHOOL - ITAM	311.000
551	136	STU	ELEMENTARY/MIDDLE - ITAM	1,140.000
552	101	DU	Single Family Detached	251.000
552	136	STU	ELEMENTARY/MIDDLE - ITAM	786.000
553	36	TSF	Elementary/Middle	61.154
553	101	DU	Single Family Detached	235.000
553	102	DU	Condominiums	346.000
553	136	STU	ELEMENTARY/MIDDLE - ITAM	786.000
554	101	DU	Single Family Detached	143.000
554	102	DU	Condominiums	167.000
554	103	DU	Apartments	462.000
555	29	ACRE	Homeowner's Assoc. Rec. Area	0.330
555	102	DU	Condominiums	426.000
555	103	DU	Apartments	812.000
556	101	DU	Single Family Detached	150.000
556	102	DU	Condominiums	425.000
557	102	DU	Condominiums	350.000
557	103	DU	Apartments	1,750.000
557	127	ACRE	COMMERCIAL RECREATION - ITAM	0.000
557	181	SG	AMUSEMENT PARK	0.000
558	102	DU	Condominiums	1,600.000
558	103	DU	Apartments	0.000
558	136	STU	ELEMENTARY/MIDDLE - ITAM	700.000
559	108	BEDS	DORM	2,254.000
559	143	PERSON	UCI Staff	325.000
559	144	STU	UCI Students	1,919.000
560	123	TSF	Manufacturing	54.600
560	143	PERSON	UCI Staff	33.000
560	145	TSF	Special Venue	100.000
561	143	PERSON	UCI Staff	720.000
561	145	TSF	Special Venue	160.000
562	143	PERSON	UCI Staff	622.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
562	144	STU	UCI Students	7,102.000
563	108	BEDS	DORM	5,211.000
563	121	TSF	Office	0.000
563	123	TSF	Manufacturing	27.000
563	126	TSF	Health Club	0.000
564	122	TSF	Medical Office	184.000
564	125	TSF	Research and Development	540.000
564	143	PERSON	UCI Staff	2,519.000
564	144	STU	UCI Students	663.000
566	143	PERSON	UCI Staff	1,264.000
566	144	STU	UCI Students	2,890.000
567	108	BEDS	DORM	2,731.000
567	122	TSF	Medical Office	44.000
567	123	TSF	Manufacturing	54.100
567	143	PERSON	UCI Staff	171.000
567	144	STU	UCI Students	1,077.000
568	108	BEDS	DORM	1,583.000
568	143	PERSON	UCI Staff	1,577.000
568	144	STU	UCI Students	11,001.000
569	123	TSF	Manufacturing	20.000
569	143	PERSON	UCI Staff	1,202.000
569	144	STU	UCI Students	4,323.000
570	123	TSF	Manufacturing	40.000
570	129	TSF	Community Facility	159.000
571	143	PERSON	UCI Staff	1,075.000
571	144	STU	UCI Students	720.000
572	143	PERSON	UCI Staff	444.000
572	144	STU	UCI Students	118.000
573	143	PERSON	UCI Staff	1,518.000
573	144	STU	UCI Students	5,233.000
574	101	DU	Single Family Detached	275.000
574	103	DU	Apartments	25.000
574	123	TSF	Manufacturing	8.000
575	101	DU	Single Family Detached	178.000
575	103	DU	Apartments	140.000
575	108	BEDS	DORM	1,196.000
575	123	TSF	Manufacturing	10.000
576	108	BEDS	DORM	1,190.000
576	123	TSF	Manufacturing	38.700
576	125	TSF	Research and Development	507.730

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ITAM TAZ	ITAM Code	Units	Description	Quantity
576	143	PERSON	UCI Staff	104.000
576	144	STU	UCI Students	279.000
577	101	DU	Single Family Detached	48.000
577	103	DU	Apartments	50.000
578	103	DU	Apartments	437.000
578	108	BEDS	DORM	760.000
578	123	TSF	Manufacturing	23.000
579	125	TSF	Research and Development	253.760
580	108	BEDS	DORM	2,712.000
581	125	TSF	Research and Development	623.150
582	137	ACRE	Open Space	37.000
583	101	DU	Single Family Detached	277.000
583	103	DU	Apartments	25.000
584	101	DU	Single Family Detached	233.000
585	137	ACRE	Open Space	38.000
586	263	Acre	Agriculture	168.580
587	122	TSF	Medical Office	272.500
588	257	DU	Transitional Housing	165.000
589	256	DU	Senior Housing	182.000
590	256	DU	Senior Housing	106.000
591	137	ACRE	Open Space	974.000
592	267	Acre	Cemetery	73.000
592	268	TSF	Chapel/Mortuary	50.000
593	253	STU	Elementary School	650.000
593	276	TSF	Exposition Center	708.000
594	273	DU	Residential Golf Village	470.000
595	263	Acre	Agriculture	31.420
596	256	DU	Senior Housing	122.000
597	256	DU	Senior Housing	183.000
598	256	DU	Senior Housing	80.000
599	255	DU	University Residential	60.000
599	256	DU	Senior Housing	127.000
600	252	STU	Education	642.000
600	278	TSF	Institutional \ Educational	119.486
601	252	STU	Education	201.000
601	254	TSF	Retail	150.000
601	258	TSF	R&D	42.500
601	278	TSF	Institutional \ Educational	37.731
602	122	TSF	Medical Office	64.400
602	258	TSF	Research and Development	595.900

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ITAM TAZ	ITAM Code	Units	Description	Quantity
603	252	STU	Education	1,143.000
603	278	TSF	Institutional \ Educational	212.638
604	252	STU	Education	1,502.000
604	278	TSF	Institutional \ Educational	279.718
605	252	STU	Education	4,312.000
605	278	TSF	Institutional \ Educational	803.027
606	137	ACRE	Open Space	0.000
606	264	Acre	Golf Course	59.650
606	273	DU	Residential Golf Village	242.000
607	137	ACRE	Open Space	0.000
607	264	Acre	Golf Course	95.350
607	273	DU	Residential Golf Village	388.000
608	27	TSF	Commercial Recreation	0.000
608	137	ACRE	Open Space	0.000
608	264	Acre	Golf Course	211.000
608	279	HOLE	Golf Course	0.000
609	263	Acre	Agriculture	12.500
610	270	DU	TOD Residential	521.000
610	271	TSF	TOD Retail	45.000
611	270	DU	TOD Residential	114.000
612	263	Acre	Agriculture	0.000
612	270	DU	TOD Residential	50.000
612	272	TSF	TOD Office	75.000
613	263	Acre	Agriculture	0.000
613	270	DU	TOD Residential	170.000
614	263	Acre	Agriculture	33.000
615	258	TSF	Research and Development	80.000
615	263	Acre	Agriculture	0.000
618	101	DU	Single Family Detached	145.000
618	102	DU	Condominiums	252.000
618	103	DU	Apartments	438.000
618	106	DU	Senior Housing	242.000
619	136	STU	ELEMENTARY/MIDDLE - ITAM	550.000
619	280	ACRE	Sports Park	24.100
620	109	TSF	Commercial (EQ)	27.120
620	305	ROOM	Transitional Housing	192.000
621	109	TSF	Commercial (EQ)	103.460
621	121	TSF	Office	144.840
622	109	TSF	Commercial (EQ)	61.820
622	121	TSF	Office	211.310

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ITAM TAZ	ITAM Code	Units	Description	Quantity
622	125	TSF	Research and Development	319.520
622	139	ACRE	Park	94.800
622	280	ACRE	Sports Park	23.000
623	101	DU	Single Family Detached	91.300
623	102	DU	Condominiums	38.500
623	139	ACRE	Park	1.155
624	135	STU	HIGH-SCHOOL - ITAM	1,295.000
625	121	TSF	Office	105.060
625	123	TSF	Manufacturing	137.830
626	135	STU	HIGH-SCHOOL - ITAM	555.000
627	101	DU	Single Family Detached	95.200
627	105	BEDS	Convalescent Home	177.000
627	109	TSF	Commercial (EQ)	88.018
627	121	TSF	Office	91.149
627	139	ACRE	Park	3.315
627	280	ACRE	Sports Park	8.050
629	121	TSF	Office	173.965
629	123	TSF	Manufacturing	122.339
629	125	TSF	Research and Development	95.557
629	139	ACRE	Park	7.070
630	101	DU	Single Family Detached	49.800
630	102	DU	Condominiums	21.000
630	139	ACRE	Park	0.630
631	109	TSF	Commercial (EQ)	18.130
631	121	TSF	Office	584.915
631	123	TSF	Manufacturing	72.121
631	125	TSF	Research and Development	40.953
631	139	ACRE	Park	19.230
631	280	ACRE	Sports Park	4.800
632	109	TSF	Commercial (EQ)	57.060
632	121	TSF	Office	1,383.790
632	280	ACRE	Sports Park	23.000
633	103	DU	Apartments	650.150
633	109	TSF	Commercial (EQ)	71.046
633	111	ROOM	HOTEL - ITAM	125.000
633	121	TSF	Office	499.574
633	139	ACRE	Park	12.230
634	103	DU	Apartments	113.850
634	109	TSF	Commercial (EQ)	10.314
634	121	TSF	Office	25.007

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ITAM TAZ	ITAM Code	Units	Description	Quantity
634	139	ACRE	Park	2.070
635	101	DU	Single Family Detached	40.800
635	105	BEDS	Convalescent Home	31.000
635	109	TSF	Commercial (EQ)	69.342
635	121	TSF	Office	59.131
635	136	STU	ELEMENTARY/MIDDLE - ITAM	180.000
635	139	ACRE	Park	2.175
635	280	ACRE	Sports Park	4.200
636	101	DU	Single Family Detached	109.900
636	102	DU	Condominiums	153.500
636	103	DU	Apartments	192.000
636	136	STU	ELEMENTARY/MIDDLE - ITAM	1,020.000
636	139	ACRE	Park	12.125
636	280	ACRE	Sports Park	4.250
637	102	DU	Condominiums	376.000
638	103	DU	Apartments	38.400
638	109	TSF	Commercial (EQ)	15.200
638	121	TSF	Office	233.312
639	103	DU	Apartments	31.000
639	109	TSF	Commercial (EQ)	105.200
639	111	ROOM	HOTEL - ITAM	375.000
639	115	SEAT	CINEMA - ITAM	1,000.000
639	121	TSF	Office	873.640
639	126	TSF	Health Club	20.000
639	139	ACRE	Park	0.500
640	103	DU	Apartments	189.000
641	101	DU	Single Family Detached	260.000
641	102	DU	Condominiums	162.000
641	139	ACRE	Park	4.500
642	103	DU	Apartments	57.600
642	109	TSF	Commercial (EQ)	22.800
642	121	TSF	Office	349.968
643	121	TSF	Office	55.240
643	280	ACRE	Sports Park	3.200
644	109	TSF	Commercial (EQ)	3.200
644	121	TSF	Office	143.540
645	109	TSF	Commercial (EQ)	28.200
646	109	TSF	Commercial (EQ)	532.140
646	115	SEAT	CINEMA - ITAM	525.000
647	101	DU	Single Family Detached	151.200

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ITAM TAZ	ITAM Code	Units	Description	Quantity
647	103	DU	Apartments	220.800
648	109	TSF	Commercial (EQ)	370.260
648	115	SEAT	CINEMA - ITAM	2,975.000
697	121	TSF	Office	358.928
697	123	TSF	Manufacturing	894.100
697	125	TSF	Research and Development	0.000
698	113	TSF	Restaurant	8.500
698	121	TSF	Office	520.907
698	123	TSF	Manufacturing	1,372.140
698	125	TSF	Research and Development	0.000
699	139	ACRE	Park	0.000
702	139	ACRE	Park	0.000
703	121	TSF	Office	378.824
703	123	TSF	Manufacturing	846.840
703	125	TSF	Research and Development	378.824
703	136	STU	ELEMENTARY/MIDDLE - ITAM	300.000
707	109	TSF	Commercial (EQ)	178.680
707	113	TSF	Restaurant	8.970
707	114	TSF	Fast Food Restaurant	5.880
707	121	TSF	Office	835.050
707	123	TSF	Manufacturing	2,128.460
707	125	TSF	Research and Development	0.000
707	161	TSF	Mini Warehouse	0.000
711	109	TSF	Commercial (EQ)	21.020
711	121	TSF	Office	799.685
711	123	TSF	Manufacturing	1,983.090
711	125	TSF	Research and Development	0.000
711	136	STU	ELEMENTARY/MIDDLE - ITAM	648.000
714	109	TSF	Commercial (EQ)	0.000
714	113	TSF	Restaurant	0.000
714	121	TSF	Office	0.000
715	109	TSF	Commercial (EQ)	0.000
715	113	TSF	Restaurant	0.000
715	121	TSF	Office	0.000
715	122	TSF	Medical Office	0.000
715	123	TSF	Manufacturing	0.000
715	125	TSF	Research and Development	0.000
718	121	TSF	Office	0.000
719	109	TSF	Commercial (EQ)	0.000
719	111	ROOM	HOTEL - ITAM	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
719	113	TSF	Restaurant	0.000
719	121	TSF	Office	0.000
719	126	TSF	Health Club	0.000
719	129	TSF	Community Facility	0.000
720	109	TSF	Commercial (EQ)	0.000
720	111	ROOM	HOTEL - ITAM	0.000
720	113	TSF	Restaurant	0.000
720	121	TSF	Office	0.000
720	126	TSF	Health Club	0.000
721	109	TSF	Commercial (EQ)	0.000
721	113	TSF	Restaurant	0.000
721	114	TSF	Fast Food Restaurant	0.000
721	121	TSF	Office	0.000
721	123	TSF	Manufacturing	0.000
721	125	TSF	Research and Development	0.000
723	121	TSF	Office	0.000
729	139	ACRE	Park	0.000
730	118	TSF	Auto Dealer	0.000
732	103	DU	Apartments	0.000
733	139	ACRE	Park	0.950
734	101	DU	Single Family Detached	168.000
734	102	DU	Condominiums	208.000
734	103	DU	Apartments	736.000
734	109	TSF	Commercial (EQ)	35.000
734	113	TSF	Restaurant	6.350
734	139	ACRE	Park	14.230
736	101	DU	Single Family Detached	0.000
736	139	ACRE	Park	0.000
738	103	DU	Apartments	27.000
738	109	TSF	Commercial (EQ)	110.000
738	139	ACRE	Park	0.000
739	124	TSF	Warehouse	0.000
739	125	TSF	Research and Development	0.000
739	130	TSF	Church/Synagogue	0.000
739	132	TSF	Government Facility	0.000
739	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
742	139	ACRE	Park	0.950
743	102	DU	Condominiums	0.000
744	101	DU	Single Family Detached	0.000
745	101	DU	Single Family Detached	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
745	102	DU	Condominiums	0.000
746	103	DU	Apartments	764.000
748	101	DU	Single Family Detached	400.000
748	139	ACRE	Park	9.000
750	102	DU	Condominiums	0.000
752	102	DU	Condominiums	0.000
753	139	ACRE	Park	0.950
754	101	DU	Single Family Detached	6.000
754	139	ACRE	Park	4.200
755	102	DU	Condominiums	200.000
756	101	DU	Single Family Detached	579.000
756	136	STU	ELEMENTARY/MIDDLE - ITAM	498.000
756	139	ACRE	Park	9.730
757	139	ACRE	Park	0.950
760	102	DU	Condominiums	30.000
760	130	TSF	Church/Synagogue	27.070
762	101	DU	Single Family Detached	0.000
762	102	DU	Condominiums	0.000
762	109	TSF	Commercial (EQ)	0.000
762	139	ACRE	Park	0.000
762	140	ACRE	Golf Course	0.000
764	101	DU	Single Family Detached	118.000
764	102	DU	Condominiums	120.000
764	109	TSF	Commercial (EQ)	96.540
764	121	TSF	Office	12.900
768	101	DU	Single Family Detached	0.000
768	102	DU	Condominiums	0.000
773	139	ACRE	Park	0.950
779	101	DU	Single Family Detached	0.000
781	101	DU	Single Family Detached	0.000
781	139	ACRE	Park	0.000
783	139	ACRE	Park	0.950
785	101	DU	Single Family Detached	0.000
785	102	DU	Condominiums	0.000
785	139	ACRE	Park	0.000
787	101	DU	Single Family Detached	0.000
797	103	DU	Apartments	0.000
797	109	TSF	Commercial (EQ)	0.000
797	121	TSF	Office	0.000
797	130	TSF	Church/Synagogue	0.000

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ITAM TAZ	ITAM Code	Units	Description	Quantity
797	136	STU	ELEMENTARY/MIDDLE - ITAM	0.000
797	142	TSF	Child Care Center	0.000
798	103	DU	Apartments	0.000
798	142	TSF	Child Care Center	0.000
801	139	ACRE	Park	0.000
803	102	DU	Condominiums	0.000
803	106	DU	Senior Housing	0.000
803	130	TSF	Church/Synagogue	0.000
817	102	DU	Condominiums	282.000
818	102	DU	Condominiums	0.000
818	103	DU	Apartments	0.000
818	139	ACRE	Park	20.000
819	109	TSF	Commercial (EQ)	143.000
819	113	TSF	Restaurant	20.000
819	114	TSF	Fast Food Restaurant	7.000
819	116	SITE	GAS STATION	1.000
819	120	TSF	Bank	4.000
819	129	TSF	Community Facility	0.000
821	109	TSF	Commercial (EQ)	385.860
821	113	TSF	Restaurant	6.530
821	114	TSF	Fast Food Restaurant	7.160
821	116	SITE	GAS STATION	1.000
821	120	TSF	Bank	8.170
821	121	TSF	Office	0.000
821	126	TSF	Health Club	41.280
823	103	DU	Apartments	533.000
824	102	DU	Condominiums	962.000
824	139	ACRE	Park	6.790
825	121	TSF	Office	228.032
826	101	DU	Single Family Detached	359.000
826	102	DU	Condominiums	375.000
826	139	ACRE	Park	20.500
827	101	DU	Single Family Detached	391.000
827	136	STU	ELEMENTARY/MIDDLE - ITAM	800.000
827	139	ACRE	Park	8.050
828	11	TSF	Hotel	76.359
828	109	TSF	Commercial (EQ)	40.570
828	111	ROOM	HOTEL - ITAM	148.000
828	113	TSF	Restaurant	9.723
828	114	TSF	Fast Food Restaurant	5.695

Analysis Year:**P2030 Baseline****Reference Number:**

RunId:

ITAM 8.4-10

Build Date: 5/23/2010

Land Use:

P2030 Baseline

Build Time:

Network:

P2030Base_012110.HNT

Modeler: Other

ITAM TAZ	ITAM Code	Units	Description	Quantity
828	117	SITE	CAR WASH	1.000
828	132	TSF	Government Facility	1.496
829	121	TSF	Office	336.631
829	125	TSF	Research and Development	382.622
830	121	TSF	Office	540.644
831	121	TSF	Office	200.841
831	125	TSF	Research and Development	514.396
832	121	TSF	Office	93.265
832	125	TSF	Research and Development	188.360
833	121	TSF	Office	207.120
833	125	TSF	Research and Development	207.120
834	121	TSF	Office	175.257
834	125	TSF	Research and Development	360.985
835	121	TSF	Office	470.451
835	125	TSF	Research and Development	128.055
836	125	TSF	Research and Development	521.605
837	125	TSF	Research and Development	247.543
838	125	TSF	Research and Development	380.780
839	124	TSF	Warehouse	213.800
840	125	TSF	Research and Development	224.606
841	109	TSF	Commercial (EQ)	41.541
841	114	TSF	Fast Food Restaurant	4.696
841	120	TSF	Bank	3.459
842	121	TSF	Office	0.000
842	125	TSF	Research and Development	164.044
843	122	TSF	Medical Office	50.381
843	125	TSF	Research and Development	302.900
844	122	TSF	Medical Office	316.381
845	132	TSF	Government Facility	116.520
846	125	TSF	Research and Development	387.000
846	129	TSF	Community Facility	350.370
846	164	SPC	RV Storage	0.000
847	122	TSF	Medical Office	42.963
847	125	TSF	Research and Development	37.240
848	161	TSF	Mini Warehouse	96.656
902	101	DU	Single Family Detached	400.000
903	101	DU	Single Family Detached	150.000
903	139	ACRE	Park	4.000
904	101	DU	Single Family Detached	350.000
905	127	ACRE	COMMERCIAL RECREATION - ITAM	20.000

Analysis Year:**P2030 Baseline****Reference Number:**

RunId:

ITAM 8.4-10

Build Date: 5/23/2010

Land Use:

P2030 Baseline

Build Time:

Network:

P2030Base_012110.HNT

Modeler: Other

ITAM TAZ	ITAM Code	Units	Description	Quantity
906	101	DU	Single Family Detached	185.000
906	136	STU	ELEMENTARY/MIDDLE - ITAM	800.000
906	139	ACRE	Park	4.000
907	102	DU	Condominiums	523.000
907	103	DU	Apartments	82.000
908	103	DU	Apartments	130.000
908	127	ACRE	COMMERCIAL RECREATION - ITAM	19.000
909	101	DU	Single Family Detached	94.000
910	101	DU	Single Family Detached	72.000
911	102	DU	Condominiums	132.000
912	101	DU	Single Family Detached	350.000
912	111	ROOM	HOTEL - ITAM	100.000
912	140	ACRE	Golf Course	192.000
915	101	DU	Single Family Detached	150.000
916	101	DU	Single Family Detached	200.000
917	258	TSF	Research and Development	460.000
917	263	Acre	Agriculture	0.000
918	258	TSF	Research and Development	185.000
918	263	Acre	Agriculture	0.000
919	258	TSF	Research and Development	375.000
919	263	Acre	Agriculture	0.000
920	263	Acre	Agriculture	57.000
922	263	Acre	Agriculture	0.000
922	265	Acre	Wildlife Corridor	11.200
923	260	TSF	OCTA Facility	53.500
923	261	SPC	Transportation Center	180.000
923	263	Acre	Agriculture	0.000
923	265	Acre	Wildlife Corridor	20.800
924	263	Acre	Agriculture	0.000
924	265	Acre	Wildlife Corridor	13.600
925	261	SPC	Transportation Center	495.000
926	261	SPC	Transportation Center	375.000
927	137	ACRE	Open Space	0.000
927	263	Acre	Agriculture	0.000
927	265	Acre	Wildlife Corridor	189.200
928	137	ACRE	Open Space	0.000
928	263	Acre	Agriculture	0.000
928	265	Acre	Wildlife Corridor	43.200
929	137	ACRE	Open Space	0.000
929	265	Acre	Wildlife Corridor	0.000

Analysis Year:**P2030 Baseline****Reference Number:**

RunId:

ITAM 8.4-10

Build Date: 5/23/2010

Land Use:

P2030 Baseline

Build Time:

Network:

P2030Base_012110.HNT

Modeler: Other

ITAM TAZ	ITAM Code	Units	Description	Quantity
929	266	ACRE	OS Park	64.700
930	137	ACRE	Open Space	0.000
930	266	ACRE	OS Park	67.300
930	277	SPC	Parking (GP)	100.000
931	137	ACRE	Open Space	0.000
931	266	ACRE	OS Park	279.500
931	277	SPC	Parking (GP)	302.000
932	137	ACRE	Open Space	0.000
932	266	ACRE	OS Park	138.900
932	277	SPC	Parking (GP)	3,232.000
932	279	TSF	Museum	407.800
933	27	TSF	Commercial Recreation	26.000
933	137	ACRE	Open Space	0.000
933	269	ACRE	Sports Park	165.000
933	277	SPC	Parking (GP)	1,871.000
933	279	TSF	Museum	60.200
934	260	TSF	OCTA Facility	122.500
935	259	TSF	Institutional Warehouse	0.000
935	260	TSF	OCTA Facility	0.000
935	262	TSF	Cultural Institutional/Exposition	150.000
936	259	TSF	Institutional Warehouse	263.000
936	262	TSF	Cultural Institutional/Exposition	150.000
1237	101	DU	Single Family Detached	122.000
1237	102	DU	Condominiums	120.000
1239	127	ACRE	COMMERCIAL RECREATION - ITAM	45.000
1242	101	DU	Single Family Detached	175.000
1243	101	DU	Single Family Detached	325.000
1244	101	DU	Single Family Detached	200.000
1244	139	ACRE	Park	4.000
1247	101	DU	Single Family Detached	85.000
1247	103	DU	Apartments	125.000
1248	101	DU	Single Family Detached	153.000
1441	101	DU	Single Family Detached	1,072.000
1441	102	DU	Condominiums	210.000
1441	109	TSF	Commercial (EQ)	110.000
1593	101	DU	Single Family Detached	109.000
1593	139	ACRE	Park	4.000

Appendix B Intersection ICU Worksheets

Year 2015

341 . Alton Pkwy. at Barranca Pkwy./Muirlands Bl.

2015 ITAM 8.4-10 (041310)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	5	.00	23	.01
NBT	3	5100	903	.18	1143	.22*
NBR	f		146		476	
SBL	2	3400	83	.02	105	.03*
SBT	3	5100	1401	.27*	1041	.20
SBR	f		832		446	
EBL	2	3400	380	.11*	886	.26*
EBT	2	3400	151	.04	509	.15
EBR	d	1700	12	.01	8	.00
WBL	2	3400	317	.09	191	.06
WBT	2	3400	412	.15*	281	.11*
WBR	0	0	88		101	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .58 .67

385 . Lake Forest Dr. at ICD

2015 ITAM 8.4-10 (041310)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	30	.01	60	.02
NBT	3	5100	171	.03*	334	.07*
NBR	1	1700	38	.02	66	.04
SBL	2	3400	461	.14*	488	.14*
SBT	3	5100	360	.07	170	.03
SBR	f		168		243	
EBL	2	3400	129	.04*	235	.07
EBT	3	5100	634	.12	1446	.28*
EBR	d	1700	57	.03	69	.04
WBL	2	3400	84	.02	102	.03*
WBT	3	5100	1225	.24*	757	.15
WBR	1	1700	271	.16	491	.29
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .50 .57

389 . Ridge Route at Moulton Pkwy.

2015 ITAM 8.4-10 (041310)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	84	.05*	128	.08
NBT	2	3400	173	.05	171	.05*
NBR	1	1700	72	.04	192	.11
SBL	2	3400	103	.03	195	.06*
SBT	2	3400	142	.04*	113	.03
SBR	1	1700	55	.03	42	.02
EBL	2	3400	23	.01*	69	.02
EBT	3	5100	768	.15	2213	.43*
EBR	1	1700	116	.07	55	.03
WBL	2	3400	132	.04	131	.04*
WBT	4	6800	2116	.31*	960	.14
WBR	1	1700	154	.09	110	.06
Right Turn Adjustment					NBR	.03*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .46 .66

391 . Santa Maria Av. at Moulton Pkwy.

2015 ITAM 8.4-10 (041310)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1.5		203	.06*	159	.05*
NBT	0	5100	0		0	
NBR	1.5		286	{.00}	241	{.03}
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	804	.18	2316	.49*
EBR	0	0	104		164	
WBL	1	1700	246	.14	247	.15*
WBT	3	5100	2157	.42*	1054	.21
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .53 .74

421 . Los Alisos Bl. at Trabuco Rd.

2015 ITAM 8.4-10 (041310)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	234 .14*	213 .13*		
NBT	3	5100	274 .05	734 .14		
NBR	d	1700	93 .05	332 .20		
SBL	1	1700	102 .06	110 .06		
SBT	3	5100	1257 .25*	622 .12*		
SBR	d	1700	281 .17	88 .05		
EBL	1	1700	124 .07*	340 .20		
EBT	2	3400	456 .13	857 .25*		
EBR	d	1700	230 .14	93 .05		
WBL	1	1700	228 .13	201 .12*		
WBT	2	3400	780 .23*	516 .15		
WBR	d	1700	33 .02	53 .03		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.74	.67		

427 . Moulton Pkwy. at Glenwood Dr./Indian Creek

2015 ITAM 8.4-10 (041310)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	182 .05	214 .06*		
NBT	3	5100	1758 .34*	972 .19		
NBR	d	1700	15 .01	35 .02		
SBL	1	1700	16 .01*	42 .02		
SBT	3	5100	712 .14	1672 .33*		
SBR	1	1700	338 .20	512 .30		
EBL	1,5		622	307		
EBT	0,5	3400	6 .18*	11 .09*		
EBR	1	1700	168 .10	233 .14		
WBL	0	0	0	0		
WBT	1	1700	0 .00*	0 .00*		
WBR	d	1700	0 .00	0 .00		
Clearance Interval				.05*		.05*
Note: Assumes E/W Split Phasing						
TOTAL CAPACITY UTILIZATION			.58	.53		

429 . Moulton Pkwy. at Laguna Hills Dr.

2015 ITAM 8.4-10 (041310)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	332 .10	212 .06*		
NBT	4	6800	1146 .17*	676 .10		
NBR	1	1700	146 .09	161 .09		
SBL	2	3400	241 .07*	175 .05		
SBT	3	5100	454 .09	1205 .24*		
SBR	1	1700	296 .17	509 .30		
EBL	2	3400	387 .11*	246 .07*		
EBT	3	5100	753 .15	785 .15		
EBR	f		93	169		
WBL	1	1700	63 .04	188 .11		
WBT	2	3400	702 .21*	842 .25*		
WBR	1	1700	87 .05	159 .09		
Right Turn Adjustment				SBR	.01*	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.61	.68		

Year 2030

341 . Alton Pkwy. at Barranca Pkwy./Muirlands Bl.

2030 ITAM 8.4-10 (041310)

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	4	.00	18	.01
NBT	3	5100	1005	.20	1090	.21*
NBR	f		111		346	
SBL	2	3400	108	.03	164	.05*
SBT	3	5100	1269	.25*	996	.20
SBR	f		1099		760	
EBL	2	3400	604	.18*	1117	.33*
EBT	2	3400	164	.05	490	.14
EBR	d	1700	9	.01	5	.00
WBL	2	3400	195	.06	99	.03
WBT	2	3400	369	.14*	261	.11*
WBR	0	0	114		114	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .62 .75

385 . Lake Forest Dr. at ICD

2030 ITAM 8.4-10 (041310)

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	41	.01	116	.03
NBT	3	5100	266	.05*	689	.14*
NBR	1	1700	235	.14	363	.21
SBL	2	3400	390	.11*	481	.14*
SBT	3	5100	484	.09	276	.05
SBR	f		32		84	
EBL	2	3400	30	.01	87	.03
EBT	3	5100	585	.11*	1439	.28*
EBR	d	1700	83	.05	113	.07
WBL	2	3400	633	.19*	485	.14*
WBT	3	5100	1297	.25	773	.15
WBR	1	1700	324	.19	532	.31
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .51 .75

389 . Ridge Route at Moulton Pkwy.

2030 ITAM 8.4-10 (041310)

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	105	.06*	171	.10*
NBT	2	3400	168	.05	160	.05
NBR	1	1700	67	.04	163	.10
SBL	2	3400	130	.04	264	.08
SBT	2	3400	175	.05*	149	.04*
SBR	1	1700	92	.05	89	.05
EBL	2	3400	25	.01*	83	.02
EBT	3	5100	793	.16	2423	.48*
EBR	1	1700	118	.07	59	.03
WBL	2	3400	127	.04	112	.03*
WBT	4	6800	2763	.41*	1330	.20
WBR	1	1700	157	.09	107	.06
Right Turn Adjustment					NBR	.02*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .58 .72

391 . Santa Maria Av. at Moulton Pkwy.

2030 ITAM 8.4-10 (041310)

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1.5		259	.08*	208	.06*
NBT	0	5100	0		0	
NBR	1.5		290	{.00}	243	{.03}
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	830	.18	2537	.53*
EBR	0	0	102		189	
WBL	1	1700	238	.14	251	.15*
WBT	3	5100	2751	.54*	1322	.26
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .67 .79

421 . Los Alisos Bl. at Trabuco Rd.

2030 ITAM 8.4-10 (041310)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	242 .14*	195 .11*		
NBT	3	5100	344 .07	733 .14		
NBR	d	1700	103 .06	374 .22		
SBL	1	1700	111 .07	132 .08		
SBT	3	5100	1245 .24*	690 .14*		
SBR	d	1700	284 .17	86 .05		
EBL	1	1700	138 .08*	326 .19		
EBT	2	3400	445 .13	924 .27*		
EBR	d	1700	207 .12	92 .05		
WBL	1	1700	252 .15	238 .14*		
WBT	2	3400	883 .26*	539 .16		
WBR	d	1700	46 .03	60 .04		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.77		.71

427 . Moulton Pkwy. at Glenwood Dr./Indian Creek

2030 ITAM 8.4-10 (041310)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	268 .08	237 .07*		
NBT	3	5100	2587 .51*	1334 .26		
NBR	d	1700	15 .01	35 .02		
SBL	1	1700	16 .01*	42 .02		
SBT	3	5100	1022 .20	2414 .47*		
SBR	1	1700	294 .17	446 .26		
EBL	1.5		519	272		
EBT	0.5	3400	6 .15*	11 .08*		
EBR	1	1700	230 .14	277 .16		
WBL	0	0	0	0		
WBT	1	1700	0 .00*	0 .00*		
WBR	d	1700	0 .00	0 .00		
Right Turn Adjustment				EBR	.03*	
Clearance Interval				.05*		.05*
Note: Assumes E/W Split Phasing						
TOTAL CAPACITY UTILIZATION				.72		.70

429 . Moulton Pkwy. at Laguna Hills Dr.

2030 ITAM 8.4-10 (041310)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	358 .11	217 .06*		
NBT	4	6800	1858 .27*	899 .13		
NBR	1	1700	167 .10	145 .09		
SBL	2	3400	345 .10*	220 .06		
SBT	3	5100	614 .12	1734 .34*		
SBR	d	1700	399 .23	724 .43		
EBL	2	3400	597 .18*	382 .11*		
EBT	3	5100	819 .16	825 .16		
EBR	f		95	204		
WBL	1	1700	71 .04	192 .11		
WBT	2	3400	783 .23*	849 .25*		
WBR	1	1700	146 .09	209 .12		
Right Turn Adjustment				SBR	.01*	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.83		.82

Post- 2030

341 . Alton Pkwy. at Barranca Pkwy./Muirlands Bl.

P-2030 ITAM 8.4-10 (041310)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	4	.00	16	.01
NBT	3	5100	1046	.21*	990	.19*
NBR	f		113		328	
SBL	2	3400	101	.03*	182	.05*
SBT	3	5100	1108	.22	1079	.21
SBR	f		1002		802	
EBL	2	3400	649	.19*	1071	.32*
EBT	2	3400	172	.05	490	.14
EBR	d	1700	8	.00	5	.00
WBL	2	3400	187	.06	106	.03
WBT	2	3400	370	.14*	272	.12*
WBR	0	0	120		119	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .62 .73

385 . Lake Forest Dr. at ICD

P-2030 ITAM 8.4-10 (041310)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	43	.01	87	.03
NBT	3	5100	257	.05*	548	.11*
NBR	1	1700	103	.06	101	.06
SBL	2	3400	334	.10*	383	.11*
SBT	3	5100	473	.09	293	.06
SBR	f		65		183	
EBL	2	3400	56	.02*	205	.06
EBT	3	5100	493	.10	1176	.23*
EBR	d	1700	80	.05	123	.07
WBL	2	3400	247	.07	204	.06*
WBT	3	5100	1062	.21*	659	.13
WBR	1	1700	246	.14	477	.28
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .43 .56

389 . Ridge Route at Moulton Pkwy.

P-2030 ITAM 8.4-10 (041310)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	46	.03*	123	.07
NBT	2	3400	162	.05	292	.09*
NBR	1	1700	114	.07	465	.27
SBL	2	3400	232	.07	447	.13*
SBT	2	3400	402	.12*	227	.07
SBR	1	1700	42	.02	38	.02
EBL	2	3400	12	.00	44	.01
EBT	4	6800	660	.12	1963	.29*
EBR	0	0	126		43	
WBL	2	3400	508	.15	299	.09*
WBT	4	6800	2209	.32*	997	.15
WBR	1	1700	277	.16	203	.12
Right Turn Adjustment					NBR	.11*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .52 .76

391 . Santa Maria Av. at Moulton Pkwy.

P-2030 ITAM 8.4-10 (041310)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1.5		100	.03*	103	{.03}*
NBT	0	5100	0		0	{.03}
NBR	1.5		268		223	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	872	.18	2657	.54*
EBR	0	0	38		85	
WBL	1	1700	214	.13	205	.12*
WBT	4	6800	2867	.42*	1367	.20
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .50 .74

421 . Los Alisos Bl. at Trabuco Rd.

P-2030 ITAM 8.4-10 (041310)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	241	.07*	202	.06
NBT	3	5100	356	.09	720	.21*
NBR	0	0	103		349	
SBL	1	1700	111	.07	131	.08*
SBT	3	5100	1246	.24*	692	.14
SBR	d	1700	284	.17	95	.06
EBL	1	1700	142	.08*	341	.20
EBT	2	3400	442	.13	920	.27*
EBR	d	1700	205	.12	92	.05
WBL	1	1700	245	.14	226	.13*
WBT	2	3400	859	.25*	563	.17
WBR	d	1700	46	.03	60	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.69		.74

427 . Moulton Pkwy. at Glenwood Dr./Indian Creek

P-2030 ITAM 8.4-10 (041310)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	263	.08	239	.07*
NBT	3	5100	2550	.50*	1368	.27
NBR	d	1700	15	.01	35	.02
SBL	1	1700	16	.01*	42	.02
SBT	3	5100	1001	.20	2299	.45*
SBR	1	1700	337	.20	465	.27
EBL	1.5		550		292	
EBT	0.5	3400	6	.16*	11	.09*
EBR	1	1700	209	.12	267	.16
WBL	0	0	0		0	
WBT	1	1700	0	.00*	0	.00*
WBR	d	1700	0	.00	0	.00
Right Turn Adjustment					EBR	.02*
Clearance Interval				.05*		.05*
Note: Assumes E/W Split Phasing						
TOTAL CAPACITY UTILIZATION				.72		.68

429 . Moulton Pkwy. at Laguna Hills Dr.

P-2030 ITAM 8.4-10 (041310)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	372	.11	231	.07*
NBT	4	6800	1792	.26*	900	.13
NBR	1	1700	172	.10	149	.09
SBL	2	3400	338	.10*	202	.06
SBT	3	5100	589	.12	1647	.32*
SBR	d	1700	393	.23	689	.41
EBL	2	3400	585	.17*	397	.12*
EBT	3	5100	860	.17	879	.17
EBR	1	1700	98	.06	224	.13
WBL	1	1700	73	.04	211	.12
WBT	2	3400	825	.24*	932	.27*
WBR	1	1700	143	.08	216	.13
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.82		.83

Appendix C Intersection ICU Worksheets with Great Park EIR Mitigation

Year 2030

341 . Alton Pkwy. at Barranca Pkwy./Muirlands Bl.

2030 WITH EIR MITIGATION						
Construct WB right turn lane						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	4	.00	18	.01
NBT	3	5100	1005	.20	1090	.21*
NBR	f		111		346	
SBL	2	3400	108	.03	164	.05*
SBT	3	5100	1269	.25*	996	.20
SBR	f		1099		760	
EBL	2	3400	604	.18*	1117	.33*
EBT	2	3400	164	.05	490	.14
EBR	d	1700	9	.01	5	.00
WBL	2	3400	195	.06	99	.03
WBT	2	3400	369	.11*	261	.08*
WBR	1	1700	114	.07	114	.07
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.59		.72

385 . Lake Forest Dr. at ICD

2030 WITH EIR MITIGATION						
Restripe EB defacto RL into shared RT/T						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	41	.01	116	.03
NBT	3	5100	266	.05*	689	.14*
NBR	1	1700	235	.14	363	.21
SBL	2	3400	390	.11*	481	.14*
SBT	3	5100	484	.09	276	.05
SBR	f		32		84	
EBL	2	3400	30	.01	87	.03
EBT	3.5	6800	585	.10*	1439	.23*
EBR	0.5		83		113	
WBL	2	3400	633	.19*	485	.14*
WBT	3	5100	1297	.25	773	.15
WBR	1	1700	324	.19	532	.31
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.50		.70

391 . Santa Maria Av. at Moulton Pkwy.

2030 WITH EIR MITIGATION						
Construct EBR						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1.5		259	.08*	208	.06*
NBT	0	5100	0		0	
NBR	1.5		290	{.00}	243	{.03}
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	830	.16	2537	.50*
EBR	1	1700	102	.06	189	.11
WBL	1	1700	238	.14	251	.15*
WBT	3	5100	2751	.54*	1322	.26
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.67		.76

421 . Los Alisos Bl. at Trabuco Rd.

2030 WITH EIR MITIGATION						
Construct 2nd NBL						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	242	.07*	195	.06
NBT	3	5100	344	.07	733	.14*
NBR	d	1700	103	.06	374	.22
SBL	1	1700	111	.07	132	.08*
SBT	3	5100	1245	.24*	690	.14
SBR	d	1700	284	.17	86	.05
EBL	1	1700	138	.08*	326	.19
EBT	2	3400	445	.13	924	.27*
EBR	d	1700	207	.12	92	.05
WBL	1	1700	252	.15	238	.14*
WBT	2	3400	883	.26*	539	.16
WBR	d	1700	46	.03	60	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.70		.68

Post- 2030

389 . Ridge Route at Moulton Pkwy.

P-2030 WITH EIR MITIGATION						
Convert NBT into NBR						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	46	.03	123	.07
NBT	1	1700	162	.10*	292	.17*
NBR	2	3400	114	.03	465	.14
SBL	2	3400	232	.07*	447	.13*
SBT	2	3400	402	.12	227	.07
SBR	1	1700	42	.02	38	.02
EBL	2	3400	12	.00	44	.01
EBT	4	6800	660	.12	1963	.29*
EBR	0	0	126		43	
WBL	2	3400	508	.15	299	.09*
WBT	4	6800	2209	.32*	997	.15
WBR	1	1700	277	.16	203	.12
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.54		.73	

391 . Santa Maria Av. at Moulton Pkwy.

P-2030 WITH EIR MITIGATION						
Construct 2nd NBL						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2.5		100	.02*	103	{.03}*
NBT	0	6800	0		0	{.03}
NBR	1.5		268		223	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	872	.18	2657	.54*
EBR	0	0	38		85	
WBL	1	1700	214	.13	205	.12*
WBT	4	6800	2867	.42*	1367	.20
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.49		.74	

391 . Santa Maria Av. at Moulton Pkwy.

P-2030 WITH EIR MITIGATION						
Construct 2nd NBL and 4th EBT						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2.5		100	.02*	103	{.03}*
NBT	0	6800	0		0	{.03}
NBR	1.5		268		223	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	4	6800	872	.13	2657	.40*
EBR	0	0	38		85	
WBL	1	1700	214	.13	205	.12*
WBT	4	6800	2867	.42*	1367	.20
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.49		.60	

427 . Moulton Pkwy. at Glenwood Dr./Indian Creek

P-2030 WITH EIR MITIGATION						
Add 4th NBT						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	263	.08	239	.07*
NBT	4	6800	2550	.38*	1368	.20
NBR	d	1700	15	.01	35	.02
SBL	1	1700	16	.01*	42	.02
SBT	3	5100	1001	.20	2299	.45*
SBR	1	1700	337	.20	465	.27
EBL	1.5		550		292	
EBT	0.5	3400	6	.16*	11	.09*
EBR	1	1700	209	.12	267	.16
WBL	0	0	0		0	
WBT	1	1700	0	.00*	0	.00*
WBR	d	1700	0	.00	0	.00
Right Turn Adjustment					EBR	.02*
Clearance Interval				.05*		.05*
Note: Assumes E/W Split Phasing						
TOTAL CAPACITY UTILIZATION			.60		.68	

429 . Moulton Pkwy. at Laguna Hills Dr.

P-2030 WITH EIR MITIGATION						
Construct 3rd EBL						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	372	.11	231	.07*
NBT	4	6800	1792	.26*	900	.13
NBR	1	1700	172	.10	149	.09
SBL	2	3400	338	.10*	202	.06
SBT	3	5100	589	.12	1647	.32*
SBR	d	1700	393	.23	689	.41
EBL	3	5100	585	.11*	397	.08*
EBT	3	5100	860	.17	879	.17
EBR	1	1700	98	.06	224	.13
WBL	1	1700	73	.04	211	.12
WBT	2	3400	825	.24*	932	.27*
WBR	1	1700	143	.08	216	.13
Right Turn Adjustment					SBR	.03*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.76		.82

429 . Moulton Pkwy. at Laguna Hills Dr.

P-2030 WITH EIR MITIGATION						
Alt: Convert SB RL into SBT						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	372	.11	231	.07*
NBT	4	6800	1792	.26*	900	.13
NBR	1	1700	172	.10	149	.09
SBL	2	3400	338	.10*	202	.06
SBT	4	6800	589	.12	1647	.32*
SBR	0	0	393	.23	689	.41
EBL	2	3400	585	.17*	397	.12*
EBT	3	5100	860	.17	879	.17
EBR	1	1700	98	.06	224	.13
WBL	1	1700	73	.04	211	.12
WBT	2	3400	825	.24*	932	.27*
WBR	1	1700	143	.08	216	.13
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.82		.83

429. Moulton Pkwy. at Laguna Hills Dr.

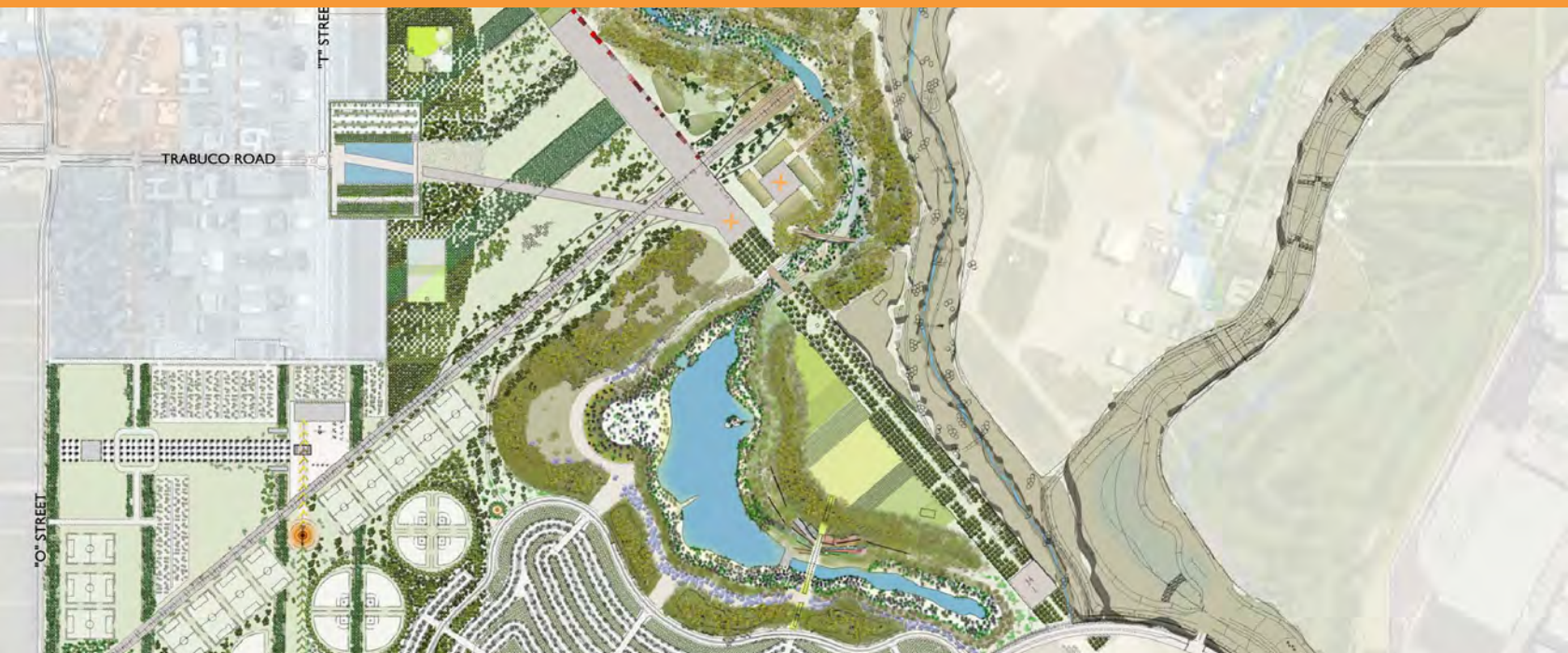
P-2030 WITH EIR MITIGATION						
Construct 3rd WBT; WBR Overlap						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	372	.11	231	.07*
NBT	4	6800	1792	.26*	900	.13
NBR	1	1700	172	.10	149	.09
SBL	2	3400	338	.10*	202	.06
SBT	3	5100	589	.12	1647	.32*
SBR	d	1700	393	.23	689	.41
EBL	2	3400	585	.17*	397	.12*
EBT	3	5100	860	.17	879	.17
EBR	1	1700	98	.06	224	.13
WBL	1	1700	73	.04	211	.12
WBT	3	5100	825	.16*	932	.18*
WBR	1	1700	143	.08	216	.13
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for WBR						
TOTAL CAPACITY UTILIZATION				.74		.74

ADDENDUM NO. 8

Orange County Great Park Master Plan

Minor Modification to the Master Plan and Park Design Review for the Western Sector Park Development Plan

SCH #2002101020



Prepared by:
City of Irvine
Community Development Department
1 Civic Center Plaza
Irvine, CA 92606

Contact:
David R. Law, Senior Planner



ADDENDUM NO. 8

**ORANGE COUNTY GREAT PARK
MASTER PLAN**

**MINOR MODIFICATION TO THE MASTER PLAN AND PARK DESIGN REVIEW FOR THE
WESTERN SECTOR PARK DEVELOPMENT PLAN**

SCH #2002101020

OCTOBER 2011

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1. EIR Addendum Summary

1.1 PURPOSE AND SCOPE

This Initial Study/Addendum provides the basis for augmenting the previously certified Final Environmental Impact Report (State Clearinghouse Number 2002101020) for the Orange County Great Park (OCGP) and serves as the California Environmental Quality Act (CEQA) documentation for the:

- Park Design Review and Approval of the “Western Sector Park Development Plan” (00522145-PPD)
- Minor Modification to OCGP Master Plan (00524784-PMP)
- Adoption of this Addendum No. 8

The requested modification and park design review does not propose any changes to approved and environmentally-reviewed development intensities within the OCGP Master Plan area. This Addendum has been prepared pursuant to the provisions of CEQA (Public Resources Code Sections 21000 et seq.), the State CEQA Guidelines, and the City of Irvine Local Guidelines for Implementing CEQA (Local CEQA Guidelines).

1.2 ENVIRONMENTAL PROCEDURES

Pursuant to CEQA, the State CEQA Guidelines, and the Local CEQA Guidelines, this Initial Study/Addendum focuses on the proposed minor modification to the OCGP Master Plan, and on the Park Design Review for the “Western Sector Park Development Plan” (Project) to determine if the Project would cause a change in the environmental impact conclusions of the Orange County Great Park Final Environmental Impact Report (OCGP FEIR), and if any change in circumstances or new information that would substantially change the conclusions of the OCGP FEIR.

Pursuant to Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines, when an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for the project unless the lead agency determines, on the basis of substantial evidence, that one or more of the following conditions are met:

- (1) Substantial changes are proposed in the project that will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;*
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or*

1. EIR Addendum Summary

- (3) *New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, suggests any of the following:*
- a) *The project would have one or more significant effects not discussed in the previous EIR or negative declaration.*
 - b) *Significant effects previously examined would be substantially more severe than identified in the previous EIR.*
 - c) *Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives.*
 - d) *Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.*

Section 15164 of the State CEQA Guidelines states that an Addendum to an EIR shall be prepared “if some changes or additions are necessary, but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR has occurred.” This Initial Study/Addendum reviews the changes proposed by the Project and any changes to the existing conditions that have occurred since the OCGP FEIR was last augmented by the Heritage Fields SEIR. It also reviews any new information of substantial importance that was not known and could not have been known with exercise of reasonable diligence at the time that the OCGP FEIR was certified. It further examines whether, as a result of any changes or any new information, a subsequent or supplemental EIR may be required. This examination includes an analysis of the provisions of Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines and their applicability to the proposed Project. This Initial Study/Addendum relies on the attached Environmental Analysis, which addresses environmental checklist issues on a section-by-section basis.

The City of Irvine Environmental Checklist Form has been completed by the City and included in Section 3, *Environmental Checklist*. The Environmental Checklist Form is marked with the findings of the Community Development Director as to the environmental effects of the proposed Project in comparison with the findings of the OCGP FEIR. The checklist has been prepared pursuant to Section 15168(c)(4) of CEQA, which states that “where the subsequent activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR.”

Using that approach, the City of Irvine, the Lead Agency, determined that an Addendum to the previously approved OCGP FEIR is the appropriate environmental clearance for the Project.

1.3 PREVIOUS ENVIRONMENTAL DOCUMENTATION

The OCGP FEIR was certified by the City of Irvine in May 2003. The project analyzed in the OCGP Program EIR consisted of the following actions: 1) Annexation, General Plan Amendment, Pre-Zoning

1. EIR Addendum Summary

(prior to annexation), and Zoning of the unincorporated portion of Planning Area 51; 2) Annexation of the unincorporated portion of Planning Area 35 (Irvine Ranch Water District Parcel); 3) General Plan Amendment and Zone Change for Planning Area 30; and 4) Approval of the form of a Development Agreement vesting approval of overlay uses and intensities in consideration for dedication of land for public purposes and for developing and funding certain infrastructure improvements and maintenance of the public uses by the purchaser/developer and subsequent landowners and funding for specific park, roadways, and other circulation facilities and infrastructure. Together, these actions establish the policy and legislative structure to guide the development of the former MCAS El Toro property.

The OCGP FEIR mitigation measures are provided in the adopted Mitigation Monitoring and Reporting Program included in Appendix A. The table includes:

- Mitigation Measure number and a description of the action;
- Timing for implementation;
- Approving authority and reviewing agency(s), if any; and
- Method of compliance

Addendum No. 1, approved by the City on May 18, 2006, augmented the OCGP FEIR to address the potential for environmental issues associated with the implementation of the OCGP Redevelopment Project Area Plan.

Addendum No. 2 was approved by the City Council on October 24, 2006. It analyzed the potential for environmental issues associated with adjustments to the boundary between the public and private areas of the OCGP; revisions to Zoning Code text and figures related to Planning Areas 30 and 51; the creation of a mixed-use zoning category called the Lifelong Learning District (LLD) within Planning Area 51; and technical changes to the General Plan, as described in Section 2.3 of the Addendum No. 2.

Addendum No. 3, approved by the City Planning Commission on May 17, 2007, addressed the potential for environmental issues associated with a proposal for approval of Vesting Tentative Tract Map No. 17008 (Master Subdivision Map).

Addendum No. 4 was approved by the City Planning Commission on August 2, 2007. It analyzed the development of the Orange County Great Park (Great Park Master Plan), which provides a conceptual design for the future buildout of the 1,145-acre park with passive and active features.

Addendum No. 5, approved by City Council on July 22, 2008, analyzed changes to figures in the General Plan to reflect the Bake Parkway/Marine Way intersection relocation and the Rockfield Boulevard reconfiguration in the southern portion of Planning Area 30; and amendments to the Orange County Transportation Authority's Master Plan of Arterial Highways; the City-Heritage Fields Development Agreement; and related changes to the City's General Plan and Zoning Ordinance.

Addendum No. 6 was approved by the Planning Commission on October 16, 2008 and analyzed the potential for environmental issues associated with requested entitlements: amended Vesting Tentative Tract Map No. 17008, Vesting Tentative Tract Map No. 17283, Modification to OCGP Streetscape Design

1. EIR Addendum Summary

Guidelines, Master Landscape and Trails Plan, and Master Plan for Non-Residential Development within the Lifelong Learning District.

Addendum No. 7 to the 2003 OCGP EIR, approved by the City of Irvine on June 29, 2010, was prepared in connection with revisions to the North Irvine Transportation Mitigation (“NITM”) Program. The update removed planned traffic improvements at seven intersections from the list of traffic mitigation measures in the OCGP FEIR.

The OCGP FEIR, as augmented by Addenda 1 through 7 (collectively, Addenda) and all of the associated technical documents, reports and analyses are on file and can be reviewed at the City of Irvine, Community Development Department, at One Civic Center Plaza, Irvine, California 92623.

1.4 ENVIRONMENTAL SETTING

The Orange County Great Park (which is found within City of Irvine Planning Areas 30 and 51) is located in the central portion of Orange County, approximately 45 miles southeast of Los Angeles. The project area is generally bounded by the Woodbury residential development to the west, future Portola Springs residential development to the north (under construction), Irvine Spectrum to the south, and the City of Lake Forest to the east. Other nearby local jurisdictions include the Cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo, and Tustin.

The Irvine Station, a major multimodal transit center linking Orange County Transportation Authority (OCTA) bus, Metrolink commuter rail, and Amtrak rail services, is adjacent to the Southern California Regional Rail Authority (SCRRA) Metrolink tracks, which bisect the project area and separate Planning Areas 30 and 51. The existing facilities and uses within the project site include recreational vehicle storage and agricultural and nursery operations. The OCGP FEIR also describes interim activities that might occur on the site, including short-term use of the land or existing buildings on-site. Currently, there are offices on site occupied by the Great Park Corporation (GPC). Other tenants include Second Harvest Food Bank, Families Forward, Legacy, Orange County Great Park Balloon Preview Park, and Tierra Verde Industries.

2. Project Description

2.1 PROJECT LOCATION

The Orange County Great Park (OCGP), located within City of Irvine Planning Areas 30 and 51, is northeast of the freeway junction at Interstate 5 (I-5) and Interstate 405 (I-405), within the City of Irvine. The proposed minor modification to the OCGP Master Plan and Park Design Review actions (Project) are focused on the Western Sector Park Development Plan area, which is located at the southwestern corner of the OCGP, bordered on the north by the property owned by Heritage Fields El Toro, LLC; on the south by Marine Way; and to the west by “O” Street. Figure 2-1 depicts the Project location in a regional context and Figure 2-2 shows its local context.

Major roadways bordering the Project are Sand Canyon Avenue to the northwest, Portola Parkway and Irvine Boulevard to the north, and Bake Parkway to the southeast. An aerial photograph of the Project site and surrounding area is shown on Figure 2-3. The Irvine Station is adjacent to the SCRRRA Metrolink tracks, which traverse the site and separate Planning Areas 30 and 51. Surrounding the site are residential and nonresidential uses under construction to the north and west, open space to the northeast, and nonresidential and mixed land uses to the east and southeast within the City of Lake Forest and City of Irvine.

2.2 PROJECT CHARACTERISTICS

2.2.1 Project Background

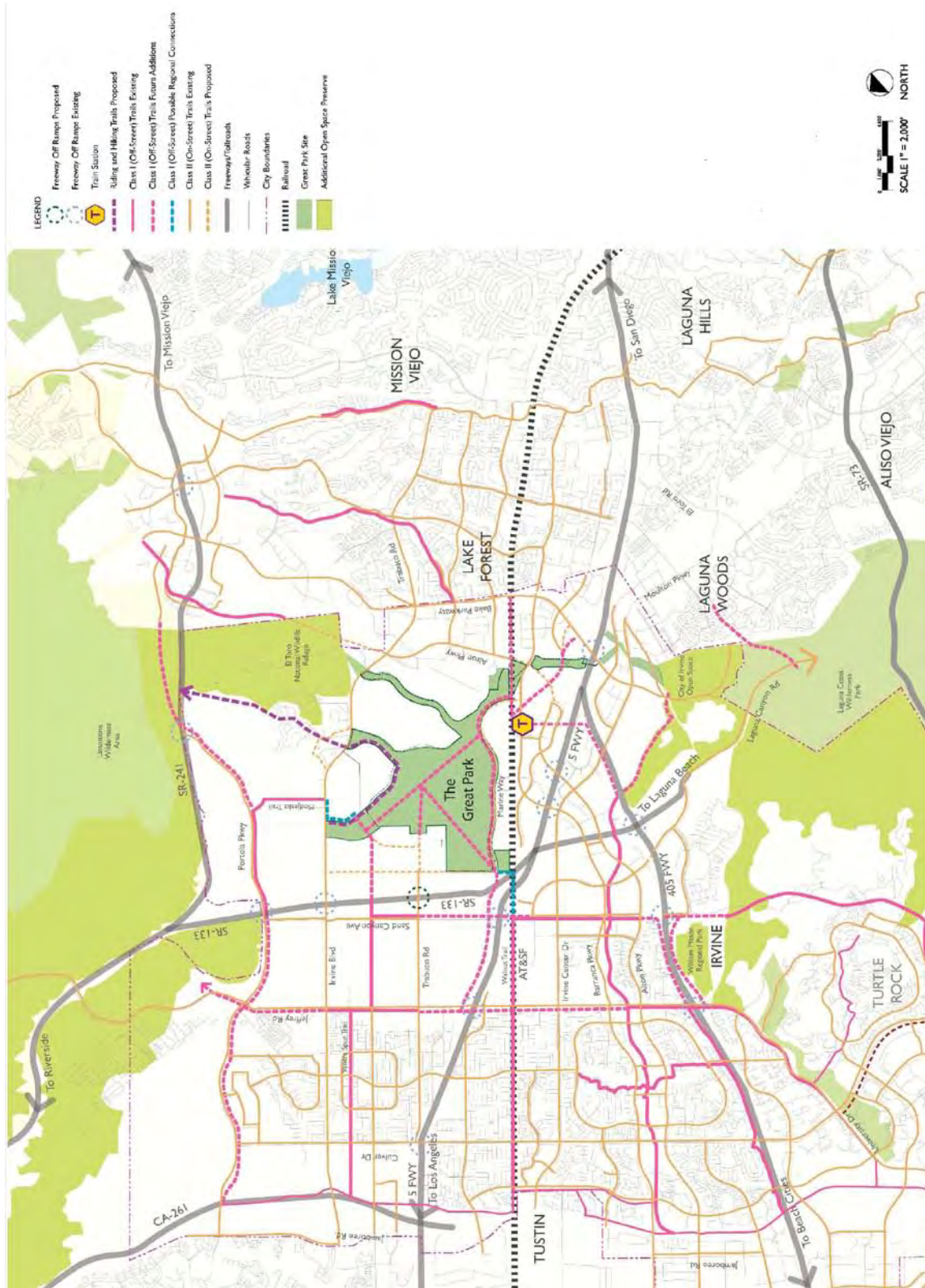
On May 27, 2003, the City Council certified a Final Environmental Impact Report (OCGP FEIR) and adopted a general plan amendment (GPA) and zone change (ZC) to implement the development of the OCGP. To develop at the maximum intensities allowed in the Overlay Plan shown in the General Plan and Zoning Code, the land use entitlements required that the property owner enter into a development agreement with the City, which required, among other things, the dedication of land and the development or funding of certain infrastructure improvements.

In July 2005, Heritage Fields LLC, the predecessor of Heritage Fields, purchased all four bid parcels through a US Department of Navy/General Services Agency online auction process. Subsequent to the land purchase, the Orange County Great Park Corporation (GPC) and Heritage Fields initiated their respective master design and development processes. To facilitate additional design options, both the GPC and Heritage Fields requested and the City initiated an amendment to the General Plan and the Zoning Code to reconfigure the property boundaries between the two entities. Heritage Fields requested the creation of a new mixed-use zoning district called the 8.1/8.1A Lifelong Learning District. Heritage Fields also proposed clarifications to the zoning text within Planning Areas 30 and 51. These revisions were analyzed in Addendum No. 2 dated September 2006, and were approved as the “Revised Overlay Plan” (Overlay Plan) by the City Council on October 24, 2006.

2. Project Description



Figure 2-1
Regional Location



Source: WRNSSTUDIO

Figure 2-2
Local Vicinity Map

2. Project Description

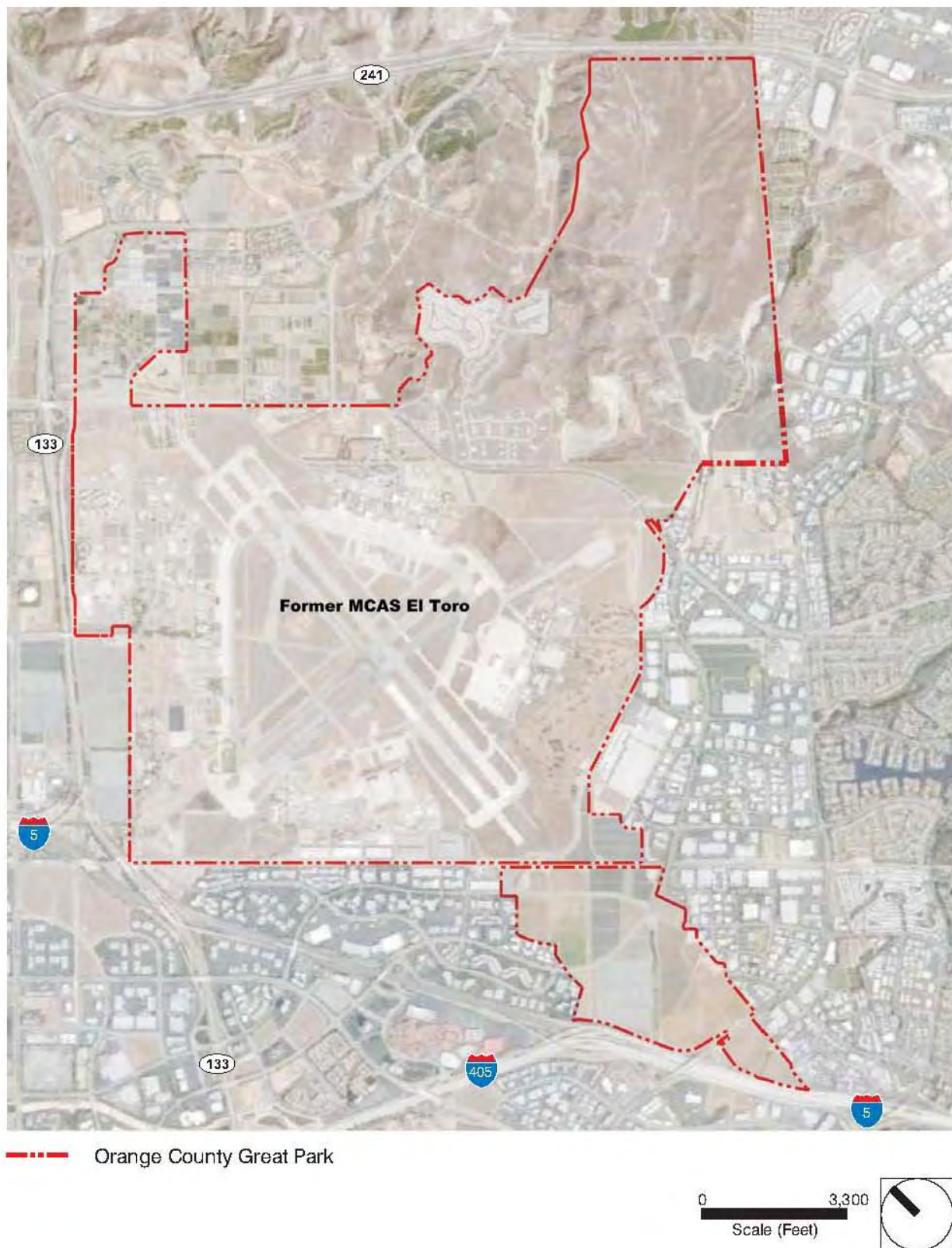


Figure 2-3
Aerial Photograph

On June 28, 2006 Heritage Fields filed an application for approval of Vesting Tentative Tract Map No. 17008 (Master Subdivision Map). The Master Subdivision Map was approved by the Planning Commission on May 17, 2007. CEQA compliance for the Master Subdivision Map was accomplished via Addendum No. 3 approved on May 17, 2007.

In 2007, the GPC sought approval of a conceptual master plan for the development of the Orange County Great Park (Great Park Master Plan). The Great Park Master Plan was approved by the Planning Commission on August 2, 2007. The CEQA compliance for the Great Park Master Plan was established via Addendum No. 4 dated July 2007 and approved on August 2, 2007.

During preliminary consideration of the conceptual design of Marine Way, the California Department of Transportation (Caltrans) expressed concerns regarding the location of Marine Way and its relationship to the Bake Parkway freeway on-ramp. It was recognized that the revised alignment required an amendment to the General Plan, the zoning code, and the Orange County Transportation Authority's Master Plan of Arterial Highways. Addendum No. 5 provided that CEQA review and compliance for those entitlement actions. Addendum No. 5 also examined the amendments to the City-Heritage Fields Development Agreement and related changes to the City's General Plan and Zoning Ordinance. Addendum No. 5 was approved on July 22, 2008.

In 2008, Addendum No. 6 was prepared analyzing the potential environmental issues associated with the following requested entitlements: amended Vesting Tentative Tract Map (VTTM) No. 17008; VTTM No. 17283; Modification to OCGP Streetscape Design Guidelines; Master Landscape and Trails Plan (MLTP); and Master Plan for Non-Residential Development within the Lifelong Learning District. Addendum No. 6 was approved on October 16, 2008 by the Planning Commission.

In 2010, Addendum No. 7 was prepared in connection with revisions to the North Irvine Transportation Mitigation (NITM) Program, which removed planned traffic improvements at seven intersections from the list of traffic mitigation measures in the OCGP FEIR. Addendum No. 7 also removed the finding of a significant impact (and associated mitigation obligations) at one ramp (SR-241 at Lake Forest Drive). Addendum No. 7 was approved on June 29, 2010.

In 2011, Heritage Fields sought from the City a series of general plan amendments, zone changes, subdivision map approvals, and other entitlements associated with the private development of a portion of the Heritage Fields-owned property within Planning Areas 30 and 51 ("Modified Project"). A Supplement to the OCGP FEIR (SEIR) was prepared in connection with those entitlement applications. The SEIR was approved and certified by the Irvine City Council on August 30, 2011. The cumulative development assumptions utilized in the SEIR include the Project under analysis in this Addendum.

2.2.2 Project Components

This Addendum (Addendum No. 8) addresses the potential for environmental impacts associated with the requested Orange County Great Park Master Plan Minor Modification and the Park Design Review associated with the implementation of the "Western Sector Park Development Plan". The project components include the following requested actions:

2. Project Description

Minor Modification to OCGP Master Plan

The OCGP Master Plan covers approximately 1,145.3 acres at the former El Toro Marine Corps Air Station. The minor modification portion of the Project consists mainly of changes to the proposed buildings within the Western Sector Park Development Plan site. Buildings that are no longer part of the OCGP Master Plan include the previously proposed Air Museum and the Concessions / Retail at the Sports Park. Those buildings have been replaced by the proposed Artist in Residency Facility, the proposed Community Ice Facility, and the proposed Nature Education Garden. In addition, Hangar 244 replaces the existing Air Museum Hangar. The overall square footage of the buildings within the OCGP Master Plan remains the same since the size of the three Civic / Museums within the OCGP Master Plan have been reduced to accommodate the additional square footages of the new buildings within the Western Sector Park Development Plan (see Table 2-1 and Figure 2-4).

Table 2-1. Proposed Building Area Modifications

Buildings	Approved Master Plan – 2007 (SF)	Master Plan MINOR Modification – 2011 (SF)
Field House	26,000	26,000
Main Maintenance	37,500	37,500
Botanic Garden Maintenance	7,200	7,200
Upper Canyon Maintenance	7,200	7,200
Pump House	4,400	4,400
Library	39,000	39,000
Botanic Garden Building	13,900	13,900
Tea House	800	800
Air Museum (Proposed)	60,000	0
Concessions / Retail at Sports Park (Existing)	13,060	0
Civic / Museum 1	81,000	60,000
Civic / Museum 2	108,400	82,000
Civic / Museum 3	85,000	52,695
Artist in Residence Facility*	0	12,800
Hangar 244 (Replaces Existing Air Museum Hangar)*	10,540	10,370
Community Ice Facility*	0	117,635
Nature Education Center (Existing)*	0	22,500
TOTAL	494,000	494,000
* Occurs within the Western Sector Park Development Plan Area		

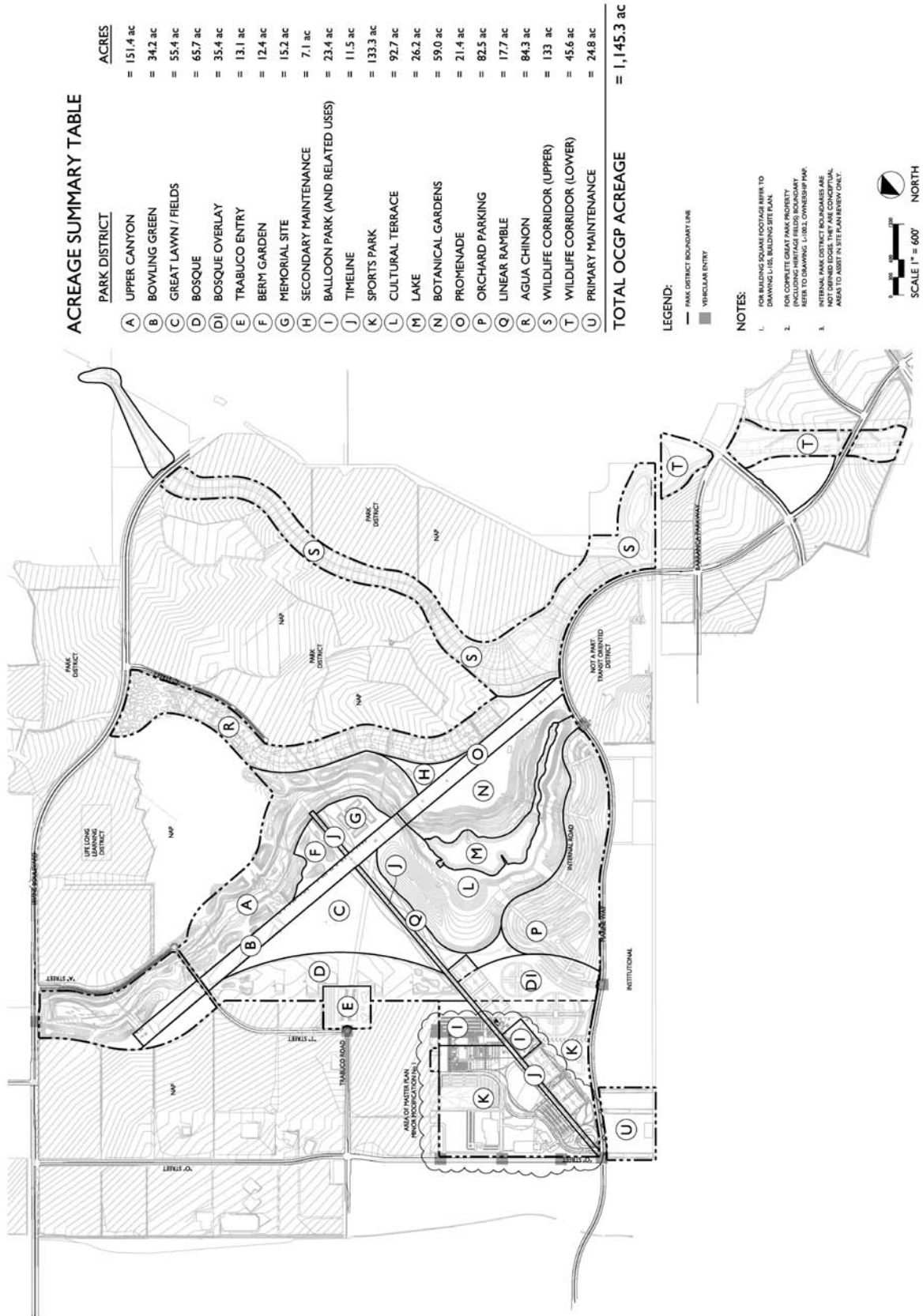


Figure 2-4
Great Park Master Plan Minor Modification

2. Project Description

Park Design Review for the “Western Sector Park Development Plan”

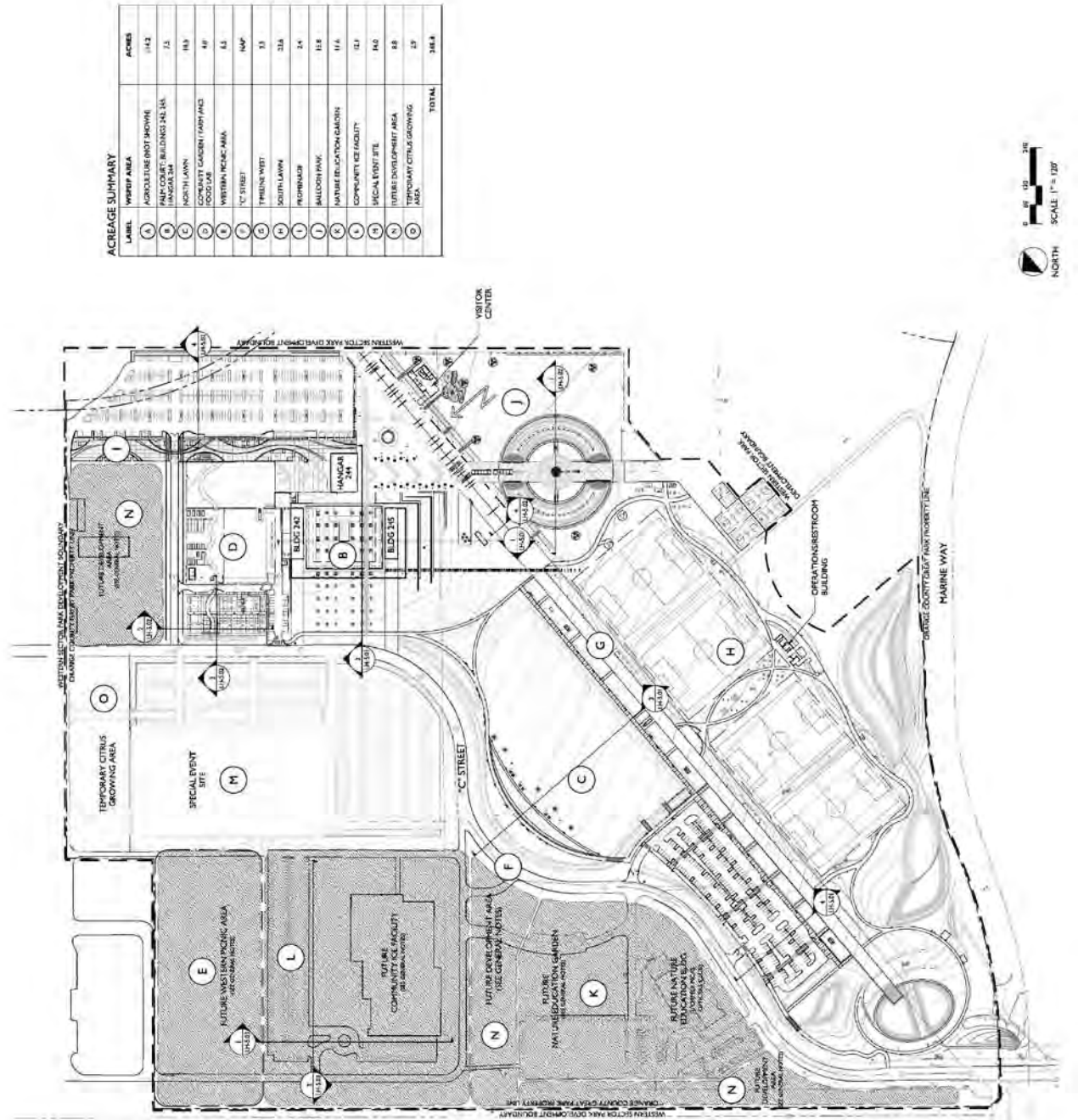
The Park Design for the Western Sector Park Development Plan area consists of approximately 245 acres and is located in the southwestern portion of the OCGP Master Plan. The Western Sector Park Development Plan site is bordered on the north by property owned by Heritage Fields El Toro, LLC; on the south by Marine Way; and to the west by future “O” Street. Similar to the approved OCGP Master Plan from 2007, the Park Design for the Western Sector Park Development Plan contains a Sports Park, a Balloon Park (and related uses) and a portion of the Timeline circulation corridor. These uses, in addition to others, are depicted on Figure 2-5.

The majority of the Western Sector Park Development Plan site is devoted to the Sports Park, which will also include the North and South Lawns. The program of the Sports Park consists of 12 soccer fields with an outdoor stadium; 4 little league baseball fields; 5 softball fields; 4 acres of multi-use fields; 12 tennis courts; 2 handball courts; 15 basketball courts; a public skate park; outdoor eating area; palm parade outdoor area; passive recreational area; picnic groves with tables; youth and children's play areas; outdoor chess; rock climbing; and a community garden. Buildings within the Sports Park include a 26,000 square foot Field House that may include a gymnasium, sports park office, equipment storage, and similar recreation-related uses; an “Artist in Residence” facility; a Community Ice facility with ice rinks; and an existing Nature Education Center. Restrooms, parking, and bicycle/pedestrian trails would also be provided for community use.

A Balloon Park, which features a tethered helium balloon which ascends passengers up to a height of 500 feet, a carousel, a visitor center, shade structures, display space, and other landscape terraforms is located southeast of the timeline. In addition, the existing Hangar 244 will continue to function as a multi-purpose space.

The Timeline Central and Timeline West is a circulation corridor that traverses the site in a southwest-northeast direction. It connects the Balloon Park to the rest of the improved areas and includes bicycle and pedestrian trails.

Other Project components include a special event site that can host festivals as well as corporate events; a community garden / farm and food lab for gardeners to grow produce as well as educate people on food and health; and a promenade for park visitors.



2. Project Description

2.3 DISCRETIONARY APPROVALS

Implementation of the Project includes the following discretionary actions to be undertaken by the City:

- Park Design Review and Approval of the “Western Sector Park Development Plan” (00522145-PPD)
- Approval of Minor Modification to OCGP Master Plan (00524784-PMP)
- Adoption of this Addendum No. 8

The OCGP FEIR lists additional discretionary actions to be taken by the City and other public agencies at or as part of the completion of the project (OCGP FEIR pages 3-29 and 3-30). The actions and responsible public agencies include, but are not necessarily limited to, these approvals:

- Master plans and subdivisions for development (City)
- Community facilities districts or other assessment districts (City)
- Actions to improve interim use activities (City and DoN)
- Transfer of parcels within Planning Area 51 (DoN)
- Clean Water Act section 404 permits (U.S. Army Corps of Engineers)
- Endangered Species Act compliance (U.S. Fish and Wildlife Service)
- Clean Water Act section 401 and National Pollutant Discharge Elimination System (NPDES) permits (Regional Water Quality Control Board)
- California Fish and Game Code 1602 permits (California Department of Fish and Game)
- Revisions to the Orange County Master Plan of Arterial Highways (Orange County Transportation Authority)

The City of Irvine Environmental Information Form and Environmental Checklist Form have been completed by the City and are included on the following pages. The Environmental Checklist Form is marked with the findings of the Community Development Department as to the environmental effects of the proposed changes to the project in comparison with the findings of the certified OCGP FEIR.

As explained above, this comparative analysis has been undertaken, pursuant to the provisions of the California Environmental Quality Act (CEQA), to provide the City with the factual basis for determining whether any changes in the project, any changes in the circumstances, or any new information requires additional environmental review or preparation of a subsequent or supplemental EIR. The basis for each of the findings listed in the attached Environmental Checklist Form in Section 3 is explained in Section 4 of the Addendum.

3. Environmental Checklist

3.1 CITY OF IRVINE INITIAL STUDY AND ENVIRONMENTAL EVALUATION

The City of Irvine Environmental Information Form and Environmental Checklist Form have been completed by the City and are included on the following pages. The Environmental Checklist Form is marked with the findings of the Community Development Department as to the environmental effects of the proposed OCGP Master Plan Minor Modification in comparison with the findings of the certified OCGP FEIR and Addenda.

As explained above, this comparative analysis has been undertaken, pursuant to the provisions of CEQA, to provide the City with the factual basis for determining whether any changes in the project, any changes in the circumstances under which the project is undertaken, or any new information requires additional environmental review or preparation of a subsequent or supplemental EIR. The basis for each of the findings listed in the attached Environmental Checklist Form is explained in Section 4 of the Addendum.

1. Project Title:

Orange County Great Park Master Plan Minor Modification

2. Lead Agency Name and Address:

City of Irvine Community Development Department One Civic Center Plaza Irvine,
California 92623

3. Contact Person and Phone Number:

David R. Law, Senior Planner (949) 724-6314

4. Project Location:

The project area is bordered on the north by the Heritage Fields, LLC property; on the south by Marine Way and to the west by future "O" Street.

5. Project Sponsor's Name and Address:

City of Irvine Community Development One Civic Center Plaza Irvine, California 92623

6. General Plan Designation:

Orange County Great Park (OCGP)

7. Zoning:

1.9 Orange County Great Park

8. Description of Project

See Section 1.6.2, *Project Components*

3. Environmental Checklist

9. Surrounding Land Uses and Setting (Briefly describe the project's surroundings):

The proposed Project area (which consists of City of Irvine Planning Area 51) is located in the central portion of Orange County, approximately 45 miles southeast of Los Angeles. The project area is generally bounded by Irvine Spectrum to the south, the City of Lake Forest to the east, the Woodbury residential community to the west, and the future Portola Springs residential development to the north.

The Project area is bordered on the north by the Heritage Fields, LLC property; on the south by Marine Way and to the west by future "O" Street.

10. Other Public Agencies Whose Approval Is Required (e.g., permits, financing approval, or participation agreement):

N/A

3. *Environmental Checklist*

3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|--|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

3.3 DETERMINATION

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☒ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further beyond an Addendum to the earlier EIR is required.


David R. Law, Senior Planner

10/11/11
Date

3. Environmental Checklist

3.4 EVALUATION OF ENVIRONMENTAL IMPACTS

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 1 5063(c) (3) (D). In this case, a brief discussion should identify the following:
 - a) **Earlier Analysis Used.** Identify and state where they are available for review.
 - b) **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) **Mitigation Measures.** For effects that are “Less Than Significant With Mitigation Incorporated,” describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

3. Environmental Checklist

- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significant.

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
I. AESTHETICS: Would the project:						
a) Have a substantial adverse effect on a scenic vista?					X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway or local scenic expressway, scenic highway, or eligible scenic highway?					X	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?					X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?					X	
II. AGRICULTURE AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Mode (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:						
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the					X	

3. *Environmental Checklist*

	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
ENVIRONMENTAL ISSUES						
Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?						
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?						X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?						X
d) Result in the loss of forest land or conversion of forest land to non-forest use?						X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?					X	
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:						
a) Conflict with or obstruct implementation of the applicable air quality plan?						X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?					X	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?					X	

3. Environmental Checklist

	Subsequent or Supplemental EIR				Addendum to EIR	
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ENVIRONMENTAL ISSUES						
d) Expose sensitive receptors to substantial pollutant concentrations?					X	
e) Create objectionable odors affecting a substantial number of people?						X
IV. BIOLOGICAL RESOURCES: Would the project:						
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?					X	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?					X	
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?					X	
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?					X	
e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?					X	
f) Conflict with the provisions of an adopted Habitat Conservation Plan,						X

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	Subsequent or Supplemental EIR				Addendum to EIR	
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ENVIRONMENTAL ISSUES						
Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?						
V. CULTURAL RESOURCES: Would the project:						
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the CEQA Guidelines?						X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the CEQA Guidelines?					X	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?					X	
d) Disturb any human remains, including those interred outside of formal cemeteries?					X	
VI. GEOLOGY AND SOILS: Would the project:						
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:						
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.						X
ii) Strong seismic ground shaking?					X	
iii) Seismic-related ground failure, including liquefaction?						X
iv) Landslides?					X	
b) Result in substantial soil erosion or the loss of topsoil?					X	
c) Be located on a geologic unit or soil that is unstable, or that would become						X

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ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?						
d) Be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?					X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?						X
VII. GREENHOUSE GAS EMISSIONS: Would the project:						
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?						*
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?						*
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:						
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?					X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?						X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter-mile of an existing or proposed school?						X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to					X	

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	Subsequent or Supplemental EIR				Addendum to EIR	
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ENVIRONMENTAL ISSUES						
Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?						
e) For a project located within an airport land use plan, would the project result in a safety hazard for people residing or working in the project area?						X
f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?						X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?						X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?					X	
IX. HYDROLOGY AND WATER QUALITY: Would the project:						
a) Violate any water quality standards or waste discharge requirements?					X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?						X
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner which would result in					X	

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ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
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substantial erosion or siltation on-site or off-site?						
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?					X	
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of pollutant runoff?					X	
f) Otherwise substantially degrade water quality?					X	
g) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?					X	
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?					X	
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?						X
j) Inundation by seiche or mudflow?						X
X. LAND USE AND PLANNING: Would the project						
a) Physically divide an established community?						X
b) Conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding					X	

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ENVIRONMENTAL ISSUES						
or mitigating an environmental effect?						
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?						X
XI. MINERAL RESOURCES: Would the project:						
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?						X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use?						X
XII. NOISE: Would the project result in:						
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?					X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?					X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?					X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?					X	
e) For a project located within an airport land use plan, would the project expose people residing or working in the project area to excessive noise levels?						X
f) For a project within the vicinity of a private airstrip, heliport or helistop, would the project expose people residing or working in the project area						X

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	Subsequent or Supplemental EIR				Addendum to EIR	
ENVIRONMENTAL ISSUES	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
to excessive noise levels?						
XIII. POPULATION AND HOUSING: Would the project:						
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure)?					X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?						X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?						X
XIV. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:						
a) Fire protection?					X	
b) Police protection?					X	
c) Schools?					X	
d) Parks?					X	
e) Other public facilities?					X	
XV. RECREATION: Would the project:						
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?					X	
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?					X	
XVI. TRANSPORTATION/TRAFFIC: Would the project:						
a) Conflict with an applicable plan,					X	

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ENVIRONMENTAL ISSUES						
ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?						
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?					X	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or change in location that results in substantial safety risks?						X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?						X
e) Result in inadequate emergency access?					X	
f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus stops/routes, bicycle lanes, sidewalks, etc.)?						X
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:						
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?					X	
b) Require or result in the construction of new water or					X	

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ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
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wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?						
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?					X	
d) Have sufficient water supplies available to serve the project (including large scale developments as defined by Public Resources Code Section 21151.9 and described in Question No. 20 of the Environmental Checklist) from existing entitlements and resources, or are new or expanded entitlements needed?					X	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?					X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?					X	
g) Comply with Federal, State, and local statutes and regulations related to solid waste?					X	
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE						
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or					X	

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	Subsequent or Supplemental EIR				Addendum to EIR	
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ENVIRONMENTAL ISSUES						
eliminate important examples of the major periods of California history or prehistory?						
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)					X	
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?					X	

* The Environmental Checklist questions above related to greenhouse gas emissions are not answered because GHG emissions was not an issue identified and analyzed in the May 2003 certified Final Environmental Impact Report (FEIR) for a general plan amendment (GPA) and zone change (ZC) to implement the development of the Orange County Great Park. At the time of the FEIR certification, GHG emissions has been recognized as an environmental issue since the 1970s when the United States Congress enacted the National Climate Program Act (92 Stat.601, 1978) which required the President to establish a program to assist in understanding and responding to natural and human-induced climate processes, and since the 1980s when the Intergovernmental Panel on Climate Change (IPCC) was formed to assess scientific information related to climate change. Thus, issues related to climate change were known, or could have been known, at the time of the certification of the FEIR.

When an EIR has been certified for a project, no subsequent environmental document needs to be prepared by the lead agency (City of Irvine) unless there is a substantial evidence that one or more of the following has occurred:

1. Substantial changes are proposed in the project involving new significant environmental effects or a substantial increase in the severity of previously significant effects;

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2. Substantial changes occur with response to the project due to involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
3. New information of substantial importance, which was unknown or could not have been known with the exercise of reasonable diligence at the time the previous EIR was adopted shows any of the following:
 - a. The project will have one or more significant effects not discussed in the previous EIR;
 - b. Significant effects previously examined will be substantially more severe than shown in the previous EIR.
 - c. Mitigation measures or alternatives previously found to be infeasible would be feasible, and would substantially reduce one or more significance effects of the project, but the project proponents declined to adopt the mitigation measure or alternative; or
 - d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents declined to adopt the mitigation measure or alternative.

In this case, the proposed project does not meet the Section 15162 criteria for preparing a subsequent environmental document and no analysis of GHG emissions is required based on the following supporting information:

1. As documented throughout this Initial Study, the OCGP Master Plan Minor Modification and the Park Design does not include substantial changes proposed in or with respect to the proposed project that involve new significant environmental impacts or a substantial increase in the severity of previously identified significant effects. As for GHG emissions, the issue was not considered potentially significant in 2003 and the GHG emissions associated with the OCGP Master Plan Minor Modification and the Park Design have not increased beyond those expected with the 2003 approved project, because the development allowed by the OCGP Master Plan Minor Modification and the Park Design has not increased over that allowed by the 2003 approved project.
2. GHG emissions has been recognized as an environmental issue for at least three decades and the approved project contribution to GHG emissions is not new information that was unknown or could not have been known with the exercise of reasonable diligence at the time the EIR was certified in 2003.
3. A GHG analysis that analyzed the projected emissions for both the public and private development in Planning Areas 30 and 51 was prepared in connection with the Supplement to the OCGP FEIR (SEIR) that was circulated for public review on June 2, 2011. That analysis concludes that the emissions per service population falls below the 4.8 Mtons per service population threshold proposed by South Coast Air Quality Management District and utilized as a threshold of significance by the City in the SEIR.

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4. Discussion of Checklist and Mitigation Measures

This section is intended to provide evidence to substantiate the conclusions set forth in the Environmental Checklist. The section will briefly summarize the conclusions of the Orange County Great Park FEIR, as updated by the prior Addenda and the SEIR (collectively, "OCGP FEIR"), and then discuss whether the proposed Project is consistent with the findings contained in the OCGP FEIR.

4.1 AESTHETICS

4.1.1 Environmental Setting

The OCGP FEIR addressed in detail the potential visual impacts associated with the development of the former MCAS El Toro. The OCGP FEIR discussed the project's visual setting associated with its location adjacent to various arterial and state and federal highways. None of these roadways is designated County or State scenic highways; however, Sand Canyon Avenue is designated as a highway with rural/natural character. The City's General Plan also designates I-5 as an urban character Scenic Highway.

Generally, views of the former military base are from the surrounding highways. From these highways, a variety of land uses, structures, and facilities of differing ages, sizes, and architectural styles can be viewed. Although agricultural areas are adjacent to and within the base, the predominant views are associated with the military use of the base, including runways, aprons, hangars, warehouses, barracks housing, recreational facilities, single-family housing, offices, and commercial structures.

The proposed Project site is developed with aircraft hangar (Hangar 244), Kids Rock interpretive playground, Great Park Carousel, Great Park Balloon, Visitors Center, warehouse buildings, storage areas, and paved areas for parking and circulation. The majority of the site has little topographic relief, with a slight slope (1.5 to 2.5 percent) to the west and southwest.

4.1.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR discussed the potential aesthetic effects associated with development of the site under the adopted Overlay Plan and found that future development of Planning Areas 51 and 30 would introduce new sources of light within the project area. These sources include street lighting along planned roadways and various forms of exterior lighting, including security lighting, parking lots, educational facilities, institutional and commercial developments, and lighting associated with athletic fields. The OCGP FEIR concluded that significant light impacts would occur if proposed light sources were directed into or located near existing or planned residential uses, which are sensitive to light intrusion during nighttime hours, but that, with the mitigation ultimately adopted by the City, these potential impacts would be less than significant. The OCGP FEIR and addenda further concluded that the proposed mitigation measures for the project would reduce potentially significant light impacts to less than significant levels.

4. Discussion of Checklist and Mitigation Measures

No other significant or potentially significant aesthetic impacts were identified in the OCGP FEIR. Those other thresholds primarily concern visual aesthetic impacts and include such evaluated factors as viewshed obstruction or impairment, landform alteration, and the degradation of valued or unique scenic resources or features.

4.1.3 Impacts Associated with the OCGP Master Plan Minor Modification and the Park Design Review

Similar to the approved OCGP Master Plan from 2007, the Project contains a Sports Park, an Aircraft Museum and portion of the Timeline Central and Timeline West circulation corridor; however, the components within the Project site have been modified for the Project. Modification of the OCGP Master Plan consists mainly of changes to the buildings proposed within the Project site. The previously proposed Air Museum, the Air Museum Hangar, and the Concessions/Retail at the Sports Park are now replaced with Hangar 244 and proposed uses such as an Artist in Residency Facility, a Community Ice Facility, and a Nature Education Garden. However, the overall square footage (494,000 square feet) of the buildings would remain the same as the size of the three Civic/Museums within the OCGP Master Plan would be reduced to accommodate the additional square footages of the new buildings.

There are no scenic routes, scenic resources, or unique geologic or topographic features within the Project site.

The Project would not introduce additional new light sources or highly reflective building materials that would result in new sources of potential glare beyond those already considered by the OCGP FEIR, because it includes the same land uses and intensity and physical area for future development as the adopted Overlay Plan. No other significant or potentially significant aesthetic impacts besides new sources of lighting are anticipated.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major changes to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the project will have one more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

4. Discussion of Checklist and Mitigation Measures

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the approved OCGP FEIR.

4.1.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR identified mitigation measures A1 and A2, which, if implemented, would reduce the effects of development under the adopted Overlay Plan to a less than significant level. Those mitigation measures were modified in the SEIR, to make them consistent with the adopted conditions of approval. The proposed revisions do not result in any new significant impacts.

- A1** Prior to issuance of building permits, lighting plans and signage plans for residential or non-residential new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent residential areas occurs.
- A2** Prior to the issuance of building permits for residential and non-residential development, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.

4.2 AGRICULTURE AND FORESTRY RESOURCES

4.2.1 Environmental Setting

The OCGP FEIR identified approximately 659 acres of designated Prime Farmland, 70 acres of designated Unique Farmland, and 99 acres of designated Farmland of Statewide Importance (as defined below). The Orange County Board of Supervisors has not designated any farmland as being of Local Importance. The northwestern portion of the Project is designated as Prime Farmland; however no portion is currently within agricultural production. No agricultural land within the Project area is currently covered by Williamson Act contracts.

The OCGP FEIR described the Farmland Mapping and Monitoring Program (FMMP Program) of the California Department of Conservation Division of Land Resources Protection classifications of agricultural lands present within the project area as follows:

4. *Discussion of Checklist and Mitigation Measures*

- **Prime Farmland:** Land which has the best combination of physical and chemical features able to sustain long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for production of irrigated supply needed to produce sustained high yields. Land must have been used for production of irrigated crops at some time during the previous two map updates.
- **Farmland of Statewide Importance:** Similar to Prime Farmland, except this land has minor shortcomings such as greater slopes or less ability to store soil moisture than Prime Farmland. This land has minor shortcomings, such as greater slopes or less ability to store soil moisture than Prime Farmland. Land must have been used for production of irrigated crops at some time during the previous two map updates.
- **Unique Farmland:** Lesser quality soils used for the production of the state's leading crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climate zones in California. This land is used for the production of specific high economic value crops such as oranges, olives, avocados, rice, grapes, or cut flowers. Land must have been cropped at some time during the two previous maps updates.
- **Farmland of Local Importance:** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

City of Irvine Policies and Programs

The Project site was designated for a variety of urban uses in the City of Irvine General Plan. The Project encourages agriculture as an interim land use prior to development of the land. The City of Irvine General Plan Objective L-10, as amended in 2002 and presented in the OCGP FEIR, includes the following policies to "encourage the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development".

4.2.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR determined the Overlay Plan would preserve in perpetuity 303 acres¹ of land for agricultural use, of which 251 acres are classified as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. The locations of the 303 acres of permanent agricultural land are listed below, and the Farmlands Map is shown below (Figure 4.2-1) and can be found in the OCGP FEIR as Figure 5.8-1.

- **PA 30:** 13 acres within Planning Area Zone (PAZ) 26; and
- **PA 51:** 90 acres within PAZ 4; 200 acres within PAZ 1.

The Overlay Plan also resulted in the permanent loss of 802 acres of designated farmland comprised of 651 acres of Prime Farmland, 63 acres of Unique Farmland, and 88 acres of Farmland of Statewide Importance. This impact was considered significant and unavoidable in the OCGP FEIR.

¹ There is a typographical error within the OCGP FEIR: Table 1-2 on page 1-8 and Table 3-4 on pages 3-12 and 3-13 identify the total agricultural land as 303 acres; however on page 5.8-10 the agricultural use acreage is noted as 307.

4. Discussion of Checklist and Mitigation Measures

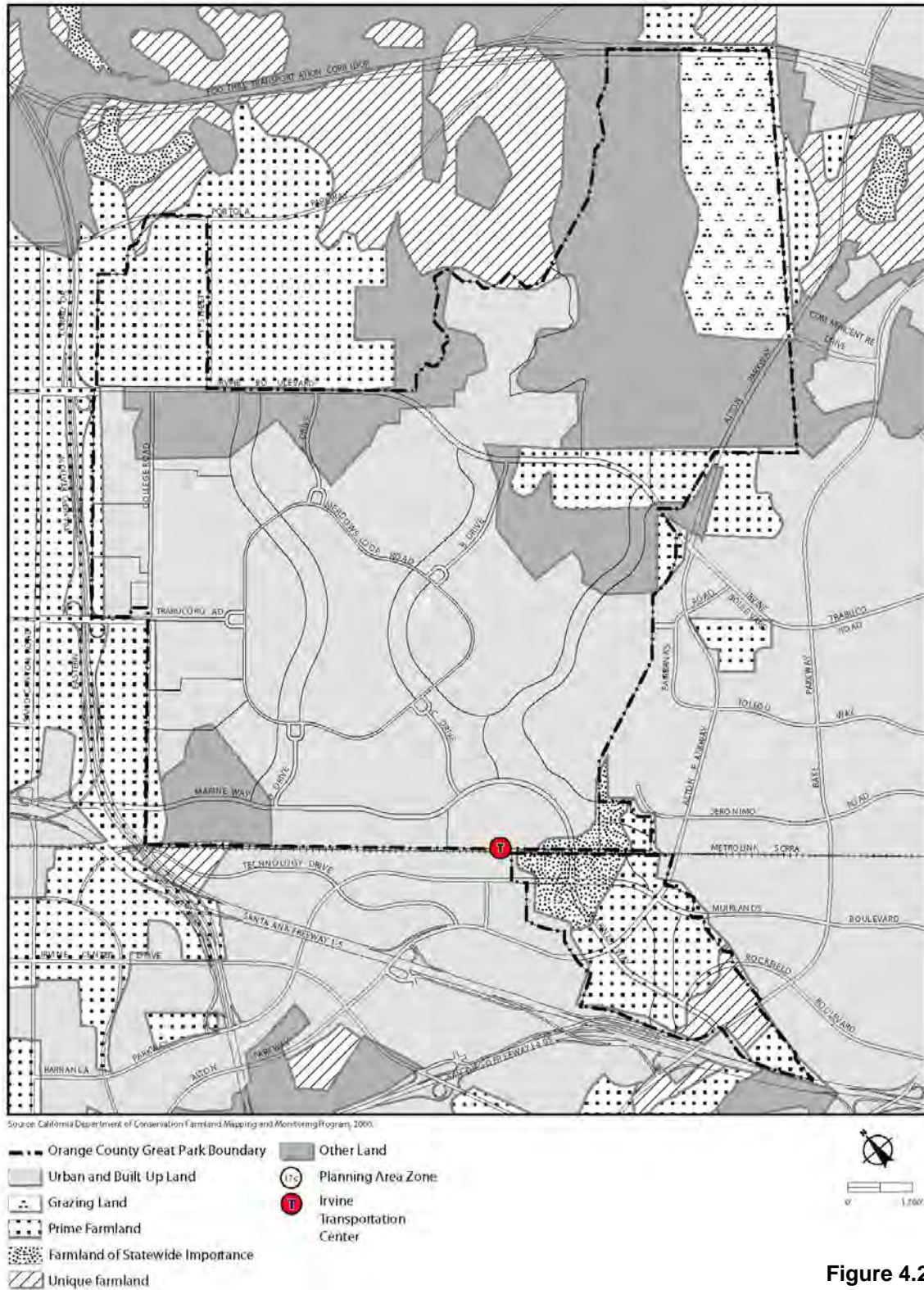


Figure 4.2-1
OCGP Agricultural Resources
 (Figure 5.8-1 in OCGP FEIR)

4. *Discussion of Checklist and Mitigation Measures*

It was determined the Overlay Plan resulted in a significant impact associated with the conversion of agricultural land to nonagricultural use. The OCGP FEIR noted the context of agricultural production in Orange County, including development pressures that have contributed to the decrease in agricultural production in the County over time, which suggested that conversion of agricultural land to urban uses would occur with or without the development of the OCGP.

Addendum No. 5 determined that the removal of 173 acres in PAZ 1 would not result in new significant impacts to agricultural resources (Section 4.2.3 of Addendum No. 5). Despite the Prime Farmland designation, none of the soils in PAZ 1 are currently used for agricultural production. In addition, existing regulatory programs, namely the City of Irvine General Plan Objective L-10 and establishment of the Irvine Agricultural Legacy Program, address and mitigate the loss of agricultural land. Since certification of the OCGP FEIR, an additional 508 acres within PAZ 1 has been designated “Exclusive Agriculture” and added to the Agricultural Legacy Program. As a result, overall acreage enrolled within the Agricultural Legacy Program is greater than that assumed in the certified OCGP FEIR.

4.2.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

The Project consists mainly of changes to the proposed buildings within the Project site. The Project will affect the same proportion of the designated farmland as articulated in the OCGP FEIR and Addenda. Consequently, it has no additional impact, beyond that previously studied and disclosed, on agricultural resources. Since the overall square footage of the buildings within the OCGP Master Plan remains the same, the Project and the associated actions would not increase allowable intensities or areas planned for development. It would not result in conflicts with agricultural zoning, convert farmland to non-farmland uses, result in a loss of forest land, or create any new impacts to agriculture and forest resources beyond those evaluated in the OCGP FEIR and Addenda.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the Project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

4. Discussion of Checklist and Mitigation Measures

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the Project, but the Project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the Project or additional mitigation measures that would substantially reduce one or more of the significant effects on agriculture and forest resources identified in and considered by the approved OCGP FEIR.

4.2.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

Mitigation Measures AG1 through AG3 will be implemented in conjunction with master plan review and subsequent development permits.

AG1 In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operators, City of Irvine Standard Discretionary Case Condition B.4 and City of Irvine Subdivision Condition 3.4 regarding disclosure statements shall be amended to include the following for subdivisions proposed adjacent to existing agricultural operations:

Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:

- Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.

AG2 Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.

AG3 Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operation and adjacent urban uses.

4. Discussion of Checklist and Mitigation Measures

4.3 AIR QUALITY

4.3.1 Environmental Setting

The OCGP FEIR describes the air quality conditions regarding the following regulated pollutants: ozone (O₃), carbon monoxide (CO), suspended particulate matter (PM₁₀), nitrogen oxides (NO_x), sulfur dioxide (SO₂), lead, and reactive organic gases (ROG).

The proposed Project site is located in the Orange County portion of the South Coast Air Basin. Table 4.3-1 shows the pollutants and associated attainment status for the South Coast Air Basin. Orange County is designated as a federal and state non-attainment area for O₃, PM₁₀, and PM_{2.5}, maintenance for CO, and an attainment area for SO₂, NO₂, and lead.

Table 4.3-1. Attainment Status for the Orange County Portion of the South Coast Air Basin

Pollutant	Attainment Status	
	Federal	State
O ₃ – 1-Hour	--	Non-attainment
O ₃ – 8-hour	Nonattainment (Extreme)	Non-attainment
PM ₁₀	Nonattainment (Serious)	Non-attainment
PM _{2.5}	Nonattainment	Non-attainment
CO	Attainment/Maintenance	Attainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment
Lead	Attainment	Attainment

Sources: EPA 2010; ARB 2010.

4.3.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR identifies significant air quality impacts associated with construction and operation of the Overlay Plan. The OCGP FEIR describes the construction air impacts after mitigation as significant and unavoidable. Addenda No. 3 and 4 included an analysis to determine the projected emissions associated with more recent, precise and refined information regarding the Overlay Plan and OCGP Conceptual Master Plan. The Addenda determined that earthmoving activities would be consistent with the emissions inventory assumed in the certified OCGP FEIR and within the scope of the original air quality analysis.

The analysis was conducted using URBEMIS 2007 Version 9.2, which was in accordance with SCAQMD's recommendations for preparation of air quality analyses at the time the document was developed. The emission estimates from Addendum No. 4 are provided in Table 4.3-2.

4. Discussion of Checklist and Mitigation Measures

Table 4.3-2. Comparison of Daily Construction Emissions for OCGP Construction Activities

Emission Totals, lbs./day [tons per day]					
Emissions Inventory	CO	NOx	PM ₁₀	VOC	SOx
OCGP FEIR	280	840	1440	4660c	40
OCGP Site Grading	174	343	663	37	<1
SCAQMD Significance Threshold	550	100	150	75	150
Over (Under)	(376)	243	513	(38)	(149)
Significant for OCGP FEIR?	No	Yes	Yes	Yes	No
Significant for OCGP Equipment Mix?	No	Yes	Yes	No	No
Source: PCR Services Corporation 2007.					

As shown in Table 4.3-2 above and as Addendum No. 4 concluded, no new significant impacts and no substantial increase in the severity of previously identified impacts would occur as a result of implementation of the OCGP.

The site grading and demolition would most likely occur in a phased approach, over the course of numerous years. A technical consultant (PCR) also conducted an analysis for Addendum No. 4 to determine whether the construction emissions inventory for a maximum worst case day (consisting of concurrent grading of the OCGP Master Plan along with site grading activities for Heritage Fields, the Agua Chionon, and the wildlife corridor and runway demolition activities) is consistent with the emissions inventory presented in the OCGP FEIR and is within the scope of the original air quality impact assessment.

The emissions from the concurrent construction activities are presented in Table 4.3-3. Concurrent grading and demolition activities estimated for Addendum No. 4 resulted in a slight decrease in equipment exhaust emissions and fugitive dust PM₁₀ emissions, as compared to those levels estimated for the OCGP FEIR.

Table 4.3-3. Comparison of Daily Construction Emissions for Concurrent OCGP Construction Activities

Emission Totals, lbs./day [tons per day]					
Emissions Inventory	CO	NOx	PM ₁₀	VOC	SOx
Certified EIR	280	840	1440	4660c	40
OCGP Site Grading	174	343	663	37	<1
Heritage Fields Site Grading	171	332	663	37	<1
Runway Demolition	66	165	76	17	<1
Total	411	839	1402	91	<1
SCAQMD Significance Threshold	550	100	150	75	150
Over (Under)	(139)	739	1252	16	(149)

4. *Discussion of Checklist and Mitigation Measures*

Emission Totals, lbs./day [tons per day]					
Emissions Inventory	CO	NOx	PM10	VOC	SOx
Significant for OCGP	No	Yes	Yes	Yes	No
Significant for concurrent activities?	No	Yes	Yes	Yes	No

Source: PCR Services Corporation 2007.

Among the various sources of a project's operational emissions, those attributable to mobile sources (i.e. vehicular traffic) comprise the largest proportion of emissions. Mobile source emissions are a function of both the number and trip length characteristics of vehicle trips directly and indirectly associated with the project under consideration. Operational emissions for project area and mobile sources were estimated at above the significance thresholds for ROG, NOX, CO, and PM10, and are described in the OCGP FEIR and Addenda as significant and unavoidable after mitigation. In addition, the OCGP FEIR included the results of the CO "hotspots" analysis, in which no intersections in the traffic study area were expected to result in one-hour or eight-hour CO concentrations above the state standard of 20 parts per million (ppm) for one-hour concentrations and 9 ppm for eight-hour concentrations.

No other construction- and operations-related significant air quality impacts were identified in the OCGP FEIR. As part of the certification of the OCGP FEIR, Findings of Fact and a Statement of Overriding Considerations were adopted for environmental effects, including air quality that could not be mitigated below the thresholds of significance.

4.3.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

Regional Construction Impacts

The OCGP Master Plan is comprised of approximately 1,145.3 acres, of which approximately 245.4 acres are the "Western Sector Park Development Plan" and is located in the southwestern portion of the OCGP Master Plan. The Project components within the site have been modified for the OCGP Master Plan. However, the overall square footage of the buildings within the OCGP Master Plan remains the same since the size of the three Civic/Museums within the OCGP Master Plan have been reduced to accommodate the additional square footages of the new buildings within the Western Sector Park Development Plan.

Construction activities associated with the proposed Project would have a short-term impact on air quality. The analytical assumptions concerning construction, development phasing, and operations of the adopted OCGP Master Plan remain consistent with all prior assumptions, since there is no change in overall square footage or development within the Project area.

Consequently, the Project would not increase the maximum daily air pollutant emissions generated during construction and demolition activities. The OCGP FEIR concluded that air pollutant emissions associated with construction and demolition activities of the Overlay Plan were considered a significant and unavoidable impact. The construction air emissions associated with the Project are anticipated to be similar to those addressed in the OCGP FEIR, and therefore would not result in any new significant impacts.

4. Discussion of Checklist and Mitigation Measures

Regional Operation Impacts

Operation of the Project would result in long-term regional emissions of ROG, NO_x, and PM₁₀ associated with area sources, such as natural gas emissions, landscaping, applications of architectural coatings, in addition to operational vehicle-exhaust emissions. Regional area- and mobile-source emissions of ROG, NO_x, and PM₁₀ were modeled using the URBEMIS 2007 Version 9.2.4 computer program. URBEMIS accounts for area-source emissions from the use of natural gas, wood stoves, fireplaces, landscape maintenance equipment, and consumer products. The model also considers mobile source emissions associated with vehicle trip generation.

Regional area- and mobile-source emissions were modeled based on proposed land use types and sizes as indicated in the Project Description and the change in trip generation from the Orange County Great Park Trip Generation and Parking Demand Analysis (LSA, August 2011). According to the traffic data used to prepare this Addendum, full build-out of the Great Park Master Plan would result in a total of 13,537 vehicle trips on a typical weekday and 19,083 vehicle trips on the weekend. The reason that weekend conditions are not considered in the environmental analysis is that weekday capacities are based on a.m. and p.m. peak hour factors. These weekday a.m. and p.m. peak period factors are the result of a high percent of work trips that occur during these peak hours, coupled with low vehicle occupancy. This condition would be characteristic of the Great Park study area, where a significant number of weekday work trips travel to and from the various commercial office and industrial uses within the study area. The pronounced a.m. and p.m. peak hour conditions used to derive weekday daily capacities do not occur during the weekend.

Table 4.3-4. Summary of Modeled Long-Term Operational Emissions

Source	Emissions (lb/day)				
	ROG	NO _x	CO	PM ₁₀	PM _{2.5}
Approved Master Plan	151.10	72.62	664.39	225.89	43.87
Master Plan Minor Modifications	149.54	70.72	654.66	221.18	42.97
Net Change	(1.56)	(1.90)	(9.73)	(4.71)	(0.90)
Source: AECOM 2011					

As shown in Table 4.3-4, the modifications to the Master Plan would decrease the maximum daily air pollutant emissions generated during operational activities compared to the approved Master Plan. The OCGP FEIR concluded that air pollutant emissions associated with operational activities of the Overlay Plan were considered a significant and unavoidable impact. The operational air emissions associated with the Project are anticipated to be less than those addressed in the OCGP FEIR, and therefore would not adversely contribute to the impacts otherwise caused by the project analyzed in the OCGP FEIR.

Consistency Determination with the Air Quality Management Plan

The OCGP FEIR included a consistency evaluation with the SCAQMD's Air Quality Management Plan (AQMP). The consistency evaluation concluded development of the adopted Overlay Plan would have a negligible impact on the overall air quality within the South Coast Air Basin. The Project would not result in new activities or new land uses that would change the consistency evaluation in the OCGP FEIR.

4. *Discussion of Checklist and Mitigation Measures*

Localized Construction Impacts

As stated previously, the Project would not increase the maximum daily air pollutant emissions generated during construction activities. However, the OCGP FEIR identified significant localized air quality impacts based on the extent and schedule of construction activities, primarily from particulate matter (PM₁₀ and PM_{2.5}) emissions associated with fugitive dust. The OCGP FEIR concluded that air pollutant emissions were considered a significant unavoidable adverse impact. The construction air emissions associated with the Project are anticipated to be less than those addressed in the OCGP FEIR, and therefore would not adversely contribute to the impacts otherwise caused by the project analyzed in the OCGP FEIR.

Localized Operational Impacts

The OCGP FEIR did not identify significant localized air quality impacts for either mobile sources or stationary sources. Because the Project would not result in an increase of the number of units or permitted square footage of buildings on-site, the Project would not increase the concentrations of stationary-source air pollutant emissions generated during operational activities.

Odors

The OCGP FEIR identified that development of Planning Areas 30 and 51 would not handle large amounts of solid waste, chemicals associated with heavy industry, or other uses that would generate objectionable odors and that no significant odor impacts would occur. The Project would not result in new activities or new land uses that would change the odor evaluation in the OCGP FEIR and Addenda.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was approved, augmented, and/or updated, indicating that the Project would have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that; 1) mitigation measures or alternatives previously found not to be feasible would

4. Discussion of Checklist and Mitigation Measures

in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or 2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the Project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the Project or additional mitigation measures that would substantially reduce one or more of the significant air quality effects identified in and considered by the certified OCGP FEIR.

4.3.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR identified mitigation measures AQ1 through AQ5, which reduce the air quality effects of construction and operations of development under the adopted Plan. However, as noted above, the OCGP FEIR found that short-term and long-term air quality impacts would remain significant and unavoidable. The measures are applicable to future development under the Project. However, the mitigation measures were modified in the SEIR to account for the latest improvements in emission control technologies and updated SCAQMD recommendations for reducing air pollutant emissions.

AQ1 Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors; etc.; shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.

AQ2 Prior to the commencement of construction activities required to demolish and/or remove existing DON structure, including, runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plans shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Utilize off-road construction equipment that conforms to Tier 3 of the United States Environmental Protection Agency, or higher emissions standards for construction equipment over 50 horsepower that are commercially available. The construction contractor shall be made aware of this requirement prior to the start of construction activities. Use of commercially available Tier 3 or higher off-road equipment, which is:
 - Year 2006 or newer construction equipment for engines rated equal to 175 horsepower (hp and greater);
 - Year 2007 and newer construction equipment for engines rated equal to 100 hp but less than 175 hp; and
 - Year 2008 and newer construction equipment for engines rated equal to or greater than 50 hp but less than 100 hp.

4. *Discussion of Checklist and Mitigation Measures*

- The use of such equipment shall be stated on all grading plans. The construction contractor shall maintain a list of all operating equipment in use on the project site. The construction equipment list shall state the makes, models, and numbers of construction equipment on-site.
- Water exposed soils at least three times daily and maintain equipment and vehicle engines in good condition and in proper tune.
 - Wash off trucks leaving the site.
 - Replace ground cover on construction sites when it is determined that the site will be undisturbed for lengthy periods.
 - Reduce speeds on unpaved roads to less than 15 miles per hour.
 - Halt all grading and excavation operations when wind speeds exceed 25 miles per hour.
 - Suspend all emission generating activities during smog alerts.
 - Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible.
 - Properly maintain diesel-powered on-site mobile equipment.
 - Prohibit nonessential idling of construction equipment to five minutes or less in compliance with California Air Resources Board's Rule 2449.
 - Sweep streets with SCAQMD Rule 1186 compliant PM₁₀-efficient vacuum units at the end of the day if substantial visible soil material is carried over to the adjacent streets.
 - Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible.
 - Use of low-VOC asphalt.
 - Maintain a minimum 24-inch freeboard on trucks hauling dirt, sand, soil, or other loose materials and tarp materials with a fabric cover or other suitable means. Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic.
 - Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible.
 - Reroute construction trucks away from congested streets, whenever feasible.
 - Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible.
 - Use coatings and solvents with a volatile organic compound (VOC) content lower than required under SCAQMD Rule 1113 (i.e., Super Compliant Paints). All architectural coatings shall be applied either by (1) using a high-volume, low-pressure spray method operated at an air pressure between 0.1 and 10 pounds per square inch gauge to achieve a 65 percent application efficiency; or (2) manual application using a paintbrush, hand-roller, trowel, spatula, dauber, rag, or sponge, to achieve a 100 percent applicant efficiency. The construction contractor shall also use precoated/natural colored building, where feasible. Use of low-VOC paints and spray method shall be included as a note on architectural building plans.

AQ3 Prior to the issuance of building permits for any future development, the applicant shall submit, and the Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

4. Discussion of Checklist and Mitigation Measures

- Utilize built-in energy-efficient appliances to reduce energy consumption and emissions.
- Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions.
- Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible.
- Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning.
- Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible.
- Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods.
- Centralize space heating and cooling for multiple-family dwelling units and commercial space.
- Orient buildings north/south for reducing energy-related combustion emissions.
- Use solar energy, when feasible.
- Use high rating insulation in walls and ceilings.

AQ4 Prior to the issuance of building permits, future sales information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find employment nearby.

AQ5 Prior to the issuance of building permits, the applicant shall demonstrate to the satisfaction of the Director of Community Development that future employment generating non-residential development shall include measures to reduce vehicle trips including: the promotion of carpool incentives and alternative work schedules, easy access to public transit systems, trail linkages between uses, low-emissions vehicle fleets, and the provision of on-site facilities such as banking and food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.

4.4 BIOLOGICAL RESOURCES

4.4.1 Environmental Setting

The OCGP FEIR describes the biological resources within Planning Areas 30 and 51, including a 995-acre parcel of land in the easternmost portion of Planning Area 51 retained in federal ownership and designated as both "habitat reserve" and a part of the Orange County Central-Coastal Sub-region Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP). The areas outside the habitat reserve were described as: 1) providing minimal native or undisturbed habitat, and, 2) consisting of agricultural, ornamental, and domestic landscapes.

The OCGP FEIR identifies nine vegetative communities within the project site, including Venturan-Diegan sage scrub, southern cactus scrub, chaparral, woodland, riparian scrub, grassland, open water, agriculture, and predominately disturbed or developed areas. Several sensitive plant species and a large number of mature trees also were identified as potentially occurring within the project site. The sensitive plant species potentially occurring in Planning Areas 30 and 51 include the southern tarplant, Palmer's grappling hook, many-stemmed dudleya, Coulter's Matilija poppy, Catalina mariposa lily, and intermediate

4. Discussion of Checklist and Mitigation Measures

mariposa lily. The OCGP FEIR also notes the Coulter's saltbush, Laguna Beach dudleya, San Fernando Valley spineflower, and the Lewis's evening-primrose as having a moderate potential for occurrence. Species with a low potential for occurrence include the Los Angeles sunflower, south coast saltscale, Santa Monica Mountains dudleya, heart-leafed pitcher sage, coast wooly-heads, slender-horned spineflower, Santa Barbara morning glory, tecate cypress, and salt spring checkerbloom.

The OCGP FEIR documents an observation made of one sensitive wildlife species, a burrowing owl. This individual, observed during the protocol focus studies for a nearby development proposal, was outside the habitat reserve at the southwest end of Planning Areas 30 and 51 along Serrano Creek. Forty other sensitive wildlife species or species of local concern were identified as having a potential to occur on the site.

The OCGP FEIR also describes the Wildlife Corridor Concept Plan that would be incorporated into the eastern portion of the project site (Refer to pp. 5.9-9 through 5.9-14 of the OCGP FEIR) and explains the guidelines pursuant to which the ultimate corridor will be designed and constructed. The subject guidelines are primarily concerned with the creation and re-vegetation of wildlife habitats that would flourish in the proposed areas and serve as protective cover for target wildlife species that will presumably utilize the proposed corridor. A preliminary design concept for the creation and/or re-vegetation of the proposed route has also been prepared which is consistent with the guidelines described below (Draft Irvine Wildlife Corridor Master Plan, November 2002). The draft recommends a series of actions to improve the environmental quality for wildlife:

- Creation (establishes historical ecosystems on lands that did not previously support that ecosystem or on severely altered sites)
- Revegetation
- Reduce the amount of noise pollution and urban influence.
- Remove and restore the unnecessary developed (paved) areas within the corridor right-of-way.
- Create a protective habitat along the entire length of the corridor.
- Apply minimum height/width requirements based on the specific wildlife species.

OCGP FEIR Mitigation Measure BIO3, which continues to apply to this Addendum, ensures that the City of Irvine will continue to work with State and federal agencies to implement the revegetation/restoration plan necessary to create a viable wildlife corridor within the project area. The City has already engaged in this process as is demonstrated through the preparation of the Irvine Wildlife Corridor Master Plan, which is independent of this project.

4.4.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR concludes that implementation of the overall project could result in the occurrence of the following potentially significant effects:

- The southern tarplant, a federal species of concern, might be adversely affected by the overall OCGP Master Plan project development.

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- Although very limited in aerial extent and highly disturbed, isolated riparian habitat remnants that could be adversely impacted by the OCGP Master Plan project implementation.

The Project site contains a large number of trees, many of them mature, representing a wide range of species. The OCGP project implementation may result in damage and destruction to the trees. A significant impact related to conflicts with the City of Irvine's Urban Forestry Ordinance could occur.

4.4.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

The Project encompasses the same land area proposed for park development as depicted in the OCGP FEIR. Therefore, the OCGP FEIR adequately describes the nature and severity of the environmental effects of OCGP Master Plan and its current minor modification and the Park Design Review associated with the "Western Sector Park Development Plan", the subject of this Addendum, on biological resources.

OCGP FEIR Mitigation Measure (MM) BIO1 stated that prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. MM BIO1 also stated that prior to approval of a subdivision map for development within, or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement or, if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG). Mitigation Measure BIO1 would continue to apply to this proposed Project (see Mitigation Measure BIO1, below).

The OCGP FEIR also stated that prior to approval of a subdivision map for each project area, a jurisdictional wetland delineation shall be performed for all areas within the Master Plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a Wetland Mitigation Plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). For wetlands impacted on-site replacement, recreation (i.e., within the proposed wildlife corridor), and/or re-vegetation is deemed acceptable by the appropriate jurisdictional agencies. Accordingly, Mitigation Measure BIO2 below would also continue to apply to the proposed Project.

The OCGP FEIR required that several focus surveys be conducted on Planning Areas 30 and 51 for sensitive plant and wildlife species prior to development. PCR Services prepared a *Biological Resources Assessment for Lennar Heritage Fields, Orange County, California* in November of 2005 and an updated assessment was prepared in June of 2006.² This biological resources assessment complies with mitigation measures BIO1, requiring a focus survey for the southern tarplant, mountain plover, and burrowing owl, and BIO2 requiring a wetlands delineation to be prepared for all areas within the Master Plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The subject study

² This report is available for review at the City of Irvine.

4. Discussion of Checklist and Mitigation Measures

and each of its constituent focused technical studies cover a land area of approximately 3,700 acres and includes the OCGP Master Plan.

Jurisdictional Wetlands and “Waters of the U.S.”

A Jurisdictional Delineation for the site has been performed (*Investigation of Jurisdictional Wetlands and Waters of the U.S. Lennar Heritage Fields*, June 2006 PCR). The property supports six intermittent drainage systems and a variety of associated ephemeral tributaries. Five of the drainages have their headwaters in undeveloped areas of the Lomas de Santiago Foothills to the north. San Diego Creek originates in an eastern portion of the watershed that is occupied by substantial residential and commercial development. Disturbances such as channelization of large stretches of the drainages and dumping of debris and trash into portions of drainages have significantly altered several waterways and obscured many drainage features. Other disturbances on site include vegetation clearing to create roads and structures, agricultural runoff, and invasion by exotic species. Current and historic land uses associated with the establishment of MCAS El Toro (military structures, roads, agriculture, and residential development) have significantly changed the overall drainage patterns within the San Diego watershed. The cumulative impact to each wash or creek has resulted in habitat and water quality impairment within the San Diego Creek watershed.

These impacts include increased sediment and debris transport due to concrete-lined stream channels, increased flow velocities and scouring, increased bank erosion, increases in the presence of non-native plant species, and an overall reduction in the amount and the quality of the riparian habitat within the watershed. Alternatively, the disturbances have increased the amount of jurisdictional areas due to the creation of freshwater marsh habitat resulting from impoundment of storm water runoff within and adjacent to drainages. In total, the site contains 31,102.11 linear feet of jurisdictional streambed that includes 22.02 acres of U.S. Army Corps of Engineers (USACE) jurisdictional “Waters of the U.S.,” and, of which, 1.66-acres meet the three parameter definition of a jurisdictional wetland. CDFG jurisdictional streambed and associated riparian habitat total 38.61 acres.

Sensitive Biological Resources

There are numerous plant and wildlife species present, or potentially present within the study area that have received special recognition by federal, State, or local resource conservation agencies and organizations. Their status is principally due to the species decline or limited population size, usually resulting from habitat loss. Protected sensitive species are those species identified by either State or federal resource management agencies, or both, as threatened or endangered under provisions of the California and Federal Endangered Species Acts, respectively.

Sensitive species that occur or could potentially occur within the study area are based on one or more of the following:

- The direct observation of the species within the study area during one of the biological surveys.
- A record reported in the California Natural Diversity Database (CNDDB).
- The study area is within a known distribution of a species and contains appropriate habitat.

4. *Discussion of Checklist and Mitigation Measures*

Sensitive Plant Communities

The study area is dominated by highly disturbed habitat types and only small areas of native vegetation exist. A total of 9.7 acres of southern willow scrub occurs in scattered patches throughout the study area. Southern willow scrub is a high priority inventory community in the CNDDDB. This community is considered sensitive because it has experienced a sharp decline in California and because it has the ability to support a number of sensitive bird species such as least Bell's vireo and southwestern willow flycatcher.

Sensitive Plant Species

Sensitive plants include those that are either candidates or are currently listed by the CDFG and USFWS and those that are considered sensitive by the California Native Plant Society (CNPS). Several sensitive plant species were reported in the CNDDDB from the surrounding region. In accordance with the mitigation measures of the OCGP FEIR, focused surveys for southern tarplant were conducted on June 3 and June 8, 2005. No species were found. The highly disturbed character of the site and reduced presence of habitat capable of supporting sensitive plant species make it highly unlikely that any listed plant species will occur on the site.

Sensitive Wildlife Species

Forty-nine sensitive wildlife species were reported in the CNDDDB as occurring with the USGS 7.5-minute El Toro quadrangle map and the eight surrounding maps. Habitat suitability assessments for these species were conducted concurrently with the site investigation throughout the 2005 fieldwork. The intent of the habitat assessment was to evaluate habitat for its ability to support sensitive species and ascertain which sensitive species are likely to be present within the study area based on expected habitat use, geographic range, and information collected in the vicinity of the study area.

The OCGP Master Plan is not within a proposed or listed critical habitat area. Six sensitive wildlife species were observed within the study area during initial field investigations: northern harrier (*Circus cyaneus*), merlin (*Falco columbarius*), Cooper's hawk (*Accipiter cooperii*), California horned lark (*Eremophila alpestris actia*), cactus wren (*Campylorhynchus brunneicapillus*), and loggerhead shrike (*Lanius ludovicianus*). Three of these species (northern harrier, merlin, and Cooper's hawk) were also observed during wintering bird surveys. In addition, the golden eagle (*Aquila chrysaetos*), burrowing owl (*Athene cunicularia*), and ferruginous hawk (*Buteo regalis*) were observed utilizing the site during these subsequent wintering bird surveys. Surveys for mountain plover (*Charadrius montanus*), in accordance with the OCGP FEIR mitigation measures, were conducted during the wintering bird surveys as a part of Addendum No. 3. No they were observed on site during those field investigations.

In a follow-up report ³on wintering birds dated October 30, 2006 with surveys conducted between October 2005 and March 2006, PCR Services searched the site for activity. No burrowing owls were observed until February 2006. Although the project site is open, its vegetation becomes dense and over two feet tall in most areas. A single owl occupied a burrow during the late winter but abandoned the area as the vegetation surrounding the burrow became three feet high and very dense. There was no indication that

³ This report is available for review at the City of Irvine.

4. Discussion of Checklist and Mitigation Measures

breeding activity had been initiated. Because the habitat became unsuitable as a natural result of not being mowed, PCR Services determined that no mitigation would be required.

Summary of the Biological Status of the Site

The OCGP FEIR required that focus surveys be conducted on the project site for several sensitive plant and wildlife species prior to development. The required surveys were carried out during 2005 and 2006. No species of endangered plants or wildlife were recorded on site during these investigations, conducted by PCR Services. The sensitive plant community of willow scrub extant on site is heavily disturbed and fragmented. As such, PCR Services did not recommend attempting to preserve any of the remnant stands or streambeds as they currently exist. It was also determined that the presence of several sensitive species would be addressed through mitigation designed to avoid disturbance of nesting avian species. PCR Services' findings did not indicate a need to consult formally with the USFWS.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor will there be a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the Project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant biological effects identified in and considered by the certified OCGP FEIR.

4. Discussion of Checklist and Mitigation Measures

4.4.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

Mitigation measures BIO1 through BIO4 will be implemented in conjunction with master plan review and subsequent development permits.

- BIO1** Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. Prior to approval of a subdivision map for development within or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).
- BIO2** Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, recreation (i.e., within the proposed wildlife corridor), and/or re-vegetation as deemed acceptable by the appropriate jurisdictional agencies.
- BIO3** The City shall continue to work with State and federal agencies during the implementation of the proposed project to implement the revegetation/restoration plan for the wildlife corridor. Measures such as sight and sound barriers, including artificial sound walls and natural diversions (e.g., hedges and tree lines) shall be incorporated into corridor design to ensure the viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the Final FEIR.
- BIO4** Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered "Significant Trees" under the City of Irvine's Urban Forestry Ordinance (UFO) (Sections 5-7-401 et al.) and the UFO shall apply to all trees included in this inventory.

4. Discussion of Checklist and Mitigation Measures

4.5 CULTURAL RESOURCES

4.5.1 Environmental Setting

Archaeological and Historical Resources

This discussion of cultural resources includes archaeological and historical resources. The OCGP FEIR presented information pertaining to the regional setting of former MCAS EI Toro from both a prehistoric and historic perspective. The OCGP FEIR reported the presence of ten prehistoric archaeological sites and eight isolated prehistoric artifacts that have been recorded in the northeastern habitat preserve portions of PA 51. These sites are generally on the ridges between Borrego Canyon Wash and the Agua Chinon Wash.

The former MCAS EI Toro was surveyed to determine whether any of the structures would be eligible for the National Register. Generally, a structure that has achieved significance in the past 50 years is not considered eligible for the National Register unless it is of exceptional importance. The evaluation was expanded to include eligibility under the Legacy Cold War Project (Public Law No. 101-511, Section 8120). Portions of PA 30 and 51 (the former MCAS EI Toro) were established during WWII, and no structure earlier than this period is at the former MCAS EI Toro. Therefore, the historical significance of any structures at the former military base would be as part of the Cold War Legacy. Surveys conducted by the US Army Corps of Engineers and the Department of the Navy in conjunction with the base's closure concluded there were no structures eligible for designation as Cold War Legacy or for inclusion in the National Register of Historic Places.

Paleontological Resources

The OCGP FEIR reported that a majority of Planning Areas 30 and 51 is on the Tustin Plain, a coastal alluvial plain. Alluvium from the Late Pleistocene to Holocene Epochs immediately underlies the majority of the project area, including the part occupying the coastal plain and washes in the eastern portion of PA 51. The Pleistocene Alluvium formation is widespread and believed to extend to depths of 1,000 feet in PA 30. A significant deposit of Pleistocene terrestrial vertebrates was recovered during excavation of a flood control basin four miles from PA 30; thus, it is possible that similar beds underlie PA 30 (OCGP FEIR 5.10-2).

The eastern portion of PA 51 is in the western foothills of the northern Santa Ana Mountains. The hills and ridges in the eastern part of PA 51 are composed of older, underlying marine and non marine rock units of early Oligocene to late Pleistocene (23 million to 2 million years ago). In order of decreasing geologic age, these latter rock units include the undifferentiated Sespe and Vaqueros Formations, Topanga and Monterey Formations, Oso Member of the Capistrano Formation, Niguel Formation, and Non marine Terrace Deposits. Non marine Terrace Deposits also underlie the terraces at the south corner of PA 51.

The northwestern corner of PA 51 contains a small portion of the Santa Ana Mountains foothills, which were separated from the main formation by erosion. This small portion is composed of undifferentiated late Cretaceous (135 million years ago) Marine Williams Formation. The rock units underlying portions of PA 51 have previously yielded important fossil remains at recorded fossil sites on and near the site. There

4. Discussion of Checklist and Mitigation Measures

are three recorded fossil sites in PA 51. These sites occur in undifferentiated Sespe and Vaqueros Formations and in the Topanga Formation. Fossil types include marine invertebrates and vertebrates, continental vertebrates, land plants, and land mammals. The three recorded fossil sites lie within the proposed habitat preserve portion of PA 51.

4.5.2 Impacts Identified in the OCGP FEIR and Addenda

Archaeological and Historical Resources

The OCGP FEIR determined that development according to the adopted Overlay Plan would not cause a substantial adverse change in the significance of any historical structure. The consequence of grading activities associated with future development, however, could potentially result in a substantial adverse change in the significance of an archaeological resource. The OCGP FEIR also stated that grading activities could uncover previously unknown human remains, including those interred outside formal cemeteries.

Although the entire project area was the subject of previous cultural resources investigations as part of the Base Realignment and Closure process, it was later determined that an updated survey and report was necessary to supplement the previous work. PCR Services performed an additional Phase I and II cultural resources investigation, the results of which can be found in the *Cultural Resources Update and Review, Heritage Fields/The Great Park, City of Irvine, Orange County, California* report dated September 2006.

Paleontological Resources

The OCGP FEIR stated that earthmoving operations associated with grading and trenching have the greatest potential to impact buried paleontological resources in the moderately to highly sensitive areas in the coastal plain and washes, northeastern, northwestern, and southern portions of Planning Area 51. The OCGP FEIR considered the potential impact associated with earthmoving operations as a significant impact for which mitigation was necessary.

4.5.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

The Project encompasses the same land area proposed for park development as depicted in the OCGP FEIR. Therefore, the OCGP FEIR adequately describes the nature and severity of the environmental effects of OCGP Master Plan and its current minor modification and the Park Design Review associated with the “Western Sector Park Development Plan”, the subject of this Addendum, on cultural resources.

Archaeological and Historical Resources

The OCGP Master Plan and the proposed minor modification and the Park Design Review associated with the “Western Sector Park Development Plan” reflect a development program that is consistent with the General Plan Land Use and Zoning designations for Planning Area 51. Further, the extent of earth movement activities required to facilitate development of the Great Park, as depicted in the OCGP Master Plan, is projected to be essentially the same as that assessed and presented in the OCGP FEIR. Given

4. Discussion of Checklist and Mitigation Measures

the foregoing, the discussion of impacts on archaeological and historical resources attributable to the Great Park portion of the overall OCGP project disclosed in the OCGP FEIR remains valid.

As with the project's component of the Revised Overlay Plan in the OCGP FEIR, the OCGP Master Plan as currently proposed would still not cause a substantial adverse change in the significance of any historical structure, but grading associated with future development could still potentially result in a substantial adverse change in the significance of an archaeological resource, or uncover previously unknown human remains. As such, the cultural resources mitigation measures developed for the OCGP FEIR remains applicable to, and sufficient to mitigate impacts of, future development pursuant to the OCGP Master Plan.

Paleontological Resources

The OCGP Master Plan and the proposed minor modification and the Park Design Review associated with the "Western Sector Park Development Plan" reflect a development program that is consistent with the General Plan Land Use and Zoning designations for Planning Area 51. Further, the extent of earth movement activities required to facilitate development of the Great Park, as depicted in the OCGP Master Plan is projected to be essentially the same as that assessed and presented in the OCGP FEIR. Given the foregoing, the discussion of potential impacts on paleontological resources attributable to the Great Park portion of the overall OCGP Project disclosed in the OCGP FEIR remains valid. As such, the paleontological mitigation measure developed for the OCGP FEIR remains applicable to, and sufficient to mitigate impacts of, future development pursuant to the OCGP Master Plan.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved,

4. Discussion of Checklist and Mitigation Measures

augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant biological effects identified in and considered by the certified OCGP FEIR.

4.5.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

Cultural Resources

The OCGP FEIR identified mitigation measures CULT1 through CULT4 which, if fulfilled, would reduce the effects of development under the adopted Plan to a level less than significant.

CULT1 Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PAs 51 and 30. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

CULT2 Monitoring of excavation and grading activities associated with future development in PAs 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure CULT1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and an assessment of their importance under CEQA and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.

CULT3 Prior to the issuance of grading permits and/or building permits for any future development in PAs 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City of Irvine to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.

4. Discussion of Checklist and Mitigation Measures

CULT4 Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City of Irvine to address the accidental discovery or recognition of any human remains. The program shall include the following:

There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- The county coroner must be contacted to determine that no investigation of the cause of death is required, and

If the coroner determines the remains to be Native American:

- The coroner shall contact the Native American Heritage Commission within 24 hours.
- The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
- The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for the means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
- Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
 - The Native American heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
 - The descendant identified fails to make a recommendation; or
 - The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage commission fails to provide measures acceptable to the landowner.

Compliance with this measure shall be verified by the Community Development Department.

Paleontological Resources

The OCGP FEIR identified mitigation measure P1, which, if fulfilled, would reduce the effects of development under the adopted Overlay Plan to a level less than significant.

P1 Prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. (A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval.

4. Discussion of Checklist and Mitigation Measures

These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.

When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossil specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screening-washing operation on-site.

Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.

4.6 GEOLOGY AND SOILS

4.6.1 Environmental Setting

The OCGP FEIR describes the topography of the OCGP as nearly flat and gently sloping down to the west to southwest with elevations ranging from 450 feet above mean sea level (msl) to 200 feet above msl. The Project is located in Planning Area 51 (PA 51), which includes some slopes of the Santa Ana foothills which reach elevations of 750 feet above msl. Alluvial soils of six major soil associations consisting predominantly of varying sands, silts, and clayey silty sands are present within PA 51. The foothill portions of the Project area are underlain by sedimentary bedrock units, mantled by only a thin soil cover.

The OCGP FEIR identified the primary potential seismic hazard in the area as ground motion. Seismic Response Area (SRA) designations are used by the City to assess the geologic and seismic risk associated with potential development. A majority of PA 51 is within SRA-2 (denser soils/deeper groundwater) and is considered suitable for development.

No known active faults crossing or projecting into the Project area were identified; however, the Project site is within the seismically active southern California region and two active faults, Whittier-Elsinore Fault and Newport-Inglewood Fault, are located within 14 miles of the site.

4.6.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR disclosed the potential for future development of the OCGP area to result in the exposure of people or structures to strong ground shaking in the event of a major earthquake along anyone of the active faults in the region. The OCGP FEIR noted that new construction would be required to adhere to current seismic safety building codes which address seismic concerns. Existing buildings within current PA 51 do not meet current seismic codes; therefore, the temporary or permanent reuse of the existing buildings and the associated exposure of people or structures to potential substantial adverse effects due to strong seismic-related ground shaking were considered significant impacts.

4. Discussion of Checklist and Mitigation Measures

Because of the documented landslides in the northeastern Santa Ana foothills area of the Site, the OCGP FEIR analysis concluded that the OCGP project would result in a significant impact associated with landslides in the affected area of Planning Area 51 east of Irvine Boulevard, where future development of habitable structures could occur under the adopted Overlay Plan. The OCGP FEIR also concluded future development has the potential to result in soil erosion or the loss of topsoils and risk to life and property with the presence of expansive soils, and that these impacts are considered significant.

4.6.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

The Project includes the same land uses and development areas as the adopted Overlay Plan and does not provide additional development intensity. Impacts related to seismic hazards, landslides, expansive soils, and loss of topsoil or soil erosion are not intensified by the Project; therefore the conclusions drawn in the OCGP FEIR adequately describe the environmental effects of the Project relative to soils, geologic hazards, and seismic safety, as well as the severity of the impacts.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the Project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the Project, but the Project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the Project or additional mitigation measures that would substantially reduce one or more of the significant geological effects identified in and considered by the approved OCGP FEIR.

4. Discussion of Checklist and Mitigation Measures

4.6.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR identified four mitigation measures (GS1 through GS4) to reduce the effects of the adopted Overlay Plan on soils, geologic hazards and seismic safety.

GS1 Prior to issuance of a building permit, the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.

GS2 Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.

1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be conducted. The purpose of the subsurface evaluation is to:
 - a. Further evaluate the subsurface conditions in the area of the proposed structures.
 - b. Provide specific data on potential geologic and geotechnical hazards.
 - c. Provide information pertaining to the engineering characteristics of earth materials in the project area.

From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural section, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:

- Seismic Ground Shaking - Measures to prevent risk of loss, injury or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.
- Erosion or Loss of Topsoil - Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances.
- Where Expansive Soils Exist - Measures for the design of foundation, slabs, flatwork and other improvements subject to drainage from expansive soils.

Compliance with this measure shall be verified by the Community Development Department.

GS3 Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of any existing structure if a building permit is not issued, a seismic

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evaluation of the structure including recommendations for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.

- GS4** Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

4.7 GREENHOUSE GAS EMISSIONS

Please see Section 3.4 for an explanation of GHG topic.

4.8 HAZARDS AND HAZARDOUS MATERIALS

4.8.1 Environmental Setting

Hazardous Materials and Hazardous Wastes

The OCGP FEIR discussed an environmental baseline survey (EBS) that was conducted for the project area. Information was used from the Base Realignment and Closure Business Plan for Marine Corps Air Station (MCAS) EI Toro dated May 2002; the EBS dated 1995; and an update to the EBS-April 2003 Draft Final EBS. The 2003 EBS identified "76 potential release locations, all of which require further evaluation for potential releases to the environment and subsequent remediation, if required" (Refer to OCGP FEIR p.5.5-5).

Regarding the Installation Restoration Program (IRP), the OCGP FEIR summarized the status of each IRP site based on the information available at the time the EIR was prepared. Ten IRP sites were identified as requiring "No Further Action," including sites 4, 6, 7, 9, 10, 13, 14, 15, 19, 20, 21, 22 and 25. The IRP sites identified as "Action Required" included sites 1, 2, 3, anomaly 3, 5, 8, 11, 12, 16, 17, 18 (plume), and 24 (Refer to OCGP FEIR pp. 5.5-6 through 5.5-9).

Of the 404 underground storage tanks (USTs) identified, 357 had been remediated and received findings of "no further action" at the time the OCGP FEIR was prepared. Of the 39 aboveground storage tanks (ASTs) on the property, 36 had been remediated and received findings of "no further action".

Evaluation and remediation of previously identified IRP sites within the project site continues with the resulting changes in the condition of the property largely anticipated in the OCGP FEIR. Subsequent to certification of the OCGP FEIR, the DON completed environmental related findings that support the suitability to transfer (FOST) real property made available through the Base Realignment and Closure

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process and to support of the lease of areas not yet suitable for transfer.⁴ Please see Figure 4.8-1 for Installation Restoration Program (IRP) Locations.

The areas suitable for lease encompass locations of concern identified in the 1995 and 2003 EBS, and in the OCGP FEIR, where future evaluation and/or actions are ongoing or required. These areas were identified as "carve-outs" in the DON documentation.⁵

Progress relative to conveyance of the carve-outs includes DON transfer of approximately eight acres of the project site to Heritage Fields and the Great Park Corporation on March 22, 2006. At the time of the initial land sale, these properties (carve-outs) were retained by the DON in order to complete environmental cleanup, and have since been approved by the regulatory agencies for transfer (FOST #2). The following sites were included in this transfer:

- **Carve-out parcel III-J** consists of approximately 0.2 acre in the central portion of former MCAS El Toro. It contains one building-Building No. 860-and 1 location of concern.
- **Carve-out parcel III-Q (portion)** consists of approximately 5 acres in the eastern portion of the former MCAS El Toro. It is an abandoned jet fuel (JP-5) pipeline.
- **Carve-out parcel III-S** consists of approximately 1 .3 acres in the southeastern portion of former MCAS El Toro. It contains 6 buildings (347, 377, 447, 448, 566, and 726) and 13 locations of concern.
- **Carve-out parcel III-T** consists of approximately 0.5 acre in the southeastern portion of former MCAS El Toro. It contains 1 building-Building No. 761-and 4 locations of concern. The facility was a former aircraft wash rack.
- **Carve-out parcel III-C** consists of approximately 1 acre in the western portion of the former MCAS El Toro. It contains 1 building-Building No. 240-and 7 locations of concern. This site was a former ordnance storage facility.

Emergency Plans

The OCGP FEIR described the former MCAS El Toro site (Planning Areas 30 and 51) as a potential emergency response staging area because of its capacity for processing and storing large quantities of cargo. The Orange County Emergency Plan, which incorporates the statewide standardized emergency management system (SEMS), guides multijurisdictional response to emergency conditions. No substantial change to the description of the setting regarding emergency plans has occurred that would alter the analysis and conclusions of the OCGP FEIR on emergency plans and response.

⁴ U.S. Department of the Navy, 2004. *Final Finding of Suitability to Transfer, Parcel IV and Portions of Parcels I, II, and III, Former Marine Corps Air Station, El Taro, California, July 2004; Final Finding of Suitability to Lease for Carve-outs Within Parcels I, II, and III, Former Marine Corps Air Station, El Taro, California, July 2004.*

⁵ U.S. Department of the Navy, 2004a. *Final Finding of Suitability to Lease for Carve-outs within Parcels I, II, and III, Former Marine Corps Air Station, El Taro, California, July 2004.*

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Wild Land Fires

The OCGP FEIR identified high fire hazard areas within open space, undeveloped land northeast of and adjacent to Planning Area 51. The City has no construction records of existing buildings and structures on the property. No substantial change to the description of the setting relative to wild land fires has occurred that would alter the analysis and conclusions of the OCGP FEIR regarding wild land fires.

4.8.2 Impacts Identified in the OCGP FEIR and Addenda

Hazardous Materials and Wastes

The OCGP FEIR identified no significant impacts associated with the No Further Action IRP sites, which are listed in Table 4.8-1. Table 4.8-2 identifies each Action Required IRP site and its location relative to the adopted Overlay Plan. The OCGP FEIR disclosed the following environmental consequences of the adopted Overlay Plan as significant impacts:

- Construction activities involving demolition and possible substantial remodeling of existing structures in the project area as the project area develops could result in the disturbance of structures and soils containing asbestos-containing building materials (ACM) and lead-based paint.
- IRP site 24 is located in the 6.1 Institutional and 1.9 Orange County Great Park zoning districts. The site may be conveyed with temporary restrictions on use that are not appropriate for transportation facility use. This is considered a significant impact.
- Future uses of IRP site 3 may be potentially constrained by the implementation of institutional controls.
- IRP site 16 (Crash Crew Pit No.2) is located in the 1.9 Orange County Great Park zoning district. The site may be conveyed with temporary restrictions on use that are not appropriate for recreational land uses.

Table 4.8-1. No Further Action IRP Sites and Zoning

IRP Site	IRP Designation	Adopted Overlay Plan Zoning District
4	Ferrocene Spill Area	8.1 Trails and Transit Oriented District
6	Drop Tank Drainage Area No. 1	8.1 Trails and Transit Oriented District
9	Crash Crew Pit No. 1	1.9 Orange County Great Park
10	Petroleum Disposal Area	1.9 Orange County Great Park
13	Oil Change Area	1.9 Orange County Great Park
15	Suspended Fuel Tanks	1.9 Orange County Great Park
19	Air Craft Expeditionary Refueling	8.1 Trails and Transit Oriented District
20	Hobby Shop	8.1 Trails and Transit Oriented District
21	Materials Management Group	6.1 Institutional
22	Tactical Air Fuel Dispensing System	1.9 Orange County Great Park

Source: OCGP FEIR, Table 5.5-3, p. 5.5-21; SEMA Associates (June 7, 2006) (rev June 2008).

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Table 4.8-2. Action Required IRP Sites and Zoning

IRP Site	IRP Designation	Adopted Overlay Plan Zoning District
1	EOD Range	1.4 Preservation
2	Magazine Road Landfill	1.4 Preservation
3	Original Landfill	8.1 Trails and Transit Oriented District
5	Perimeter Road Landfill	1.9 Orange County Great Park
7	Drop Tank Drainage Area No. 2	1.9 Orange County Great Park
8	DRMO Storage Yard	6.1 Institutional/ 3.2 Transit Oriented Development
11	Transformer Storage Area	1.9 Orange County Great Park
12	Sludge Drying Beds	6.1 Institutional
14	Battery Acid Disposal Area	1.9 Orange County Great Park
16	Crash Crew Pit No. 2	1.9 Orange County Great Park
17	Communications Station Landfill	1.4 Preservation
24	VOC Source Area	6.1 Institutional/ 1.9 Orange County Great Park/ 3.2 Transit Oriented Development
<i>Source: OCGP FEIR, Table 5.5-4, p. 5.5-22; SEMA Associates (June 7, 2006) (rev June 2008).</i>		

Emergency Plans

The OCGP FEIR determined the Overlay Plan would not be expected to interfere with emergency response and evacuation plans on the basis that other sites within Orange County are already designated as emergency staging areas and portions of the OCGP would remain available to non-aviation emergency response equipment. Accordingly, the OCGP FEIR concluded that the adopted Overlay Plan would not result in a significant impact related to emergency response and evacuation plans.

Wild Land Fires

The OCGP FEIR concluded that the Habitat Reserve, Wildlife Corridor, and Recreational areas in the northeastern portion of Planning Area 51 would be exposed to the highest level of fire risk from wildland fires under the adopted Overlay Plan, and that reuse of existing buildings require inspection for conformance to fire life safety code requirements. The OCGP FEIR identified the wild land fire impacts as potentially significant.

4.8.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

The Project encompasses the same land area proposed for park development as depicted in the OCGP FEIR. Therefore, the OCGP FEIR adequately describes the nature and severity of the environmental effects of OCGP Master Plan and its current minor modification and the Park Design Review associated with the “Western Sector Park Development Plan”, the subject of this Addendum, on hazardous materials and wastes.

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Hazardous Materials and Wastes

In July 2004, two reports were completed under the auspices of the DON for the property. The Finding of Suitability to Transfer (FOST) documented the environmental condition of the property and the appropriateness of its conveyance. The FOST concluded that 2,798 acres are suitable for transfer by deed for residential purposes and that the parcels can be used with acceptable risk to human health and the environment, and without interference with the environmental restoration process. The companion report, the Finding of Suitability for Lease (FOSL) documents the suitability for lease of 41 carve-out areas totaling approximately 921 acres (refer to the FOSL p. 2-2). The carve-outs are locations within the Property where the potential or known release or disposal of hazardous substances or petroleum products has occurred. Based on the information provided in the FOSL, carve-outs have been deemed suitable for lease subject to specified conditions, notifications, and restrictions set forth in the FOSL and the terms of the leases. Use of these sites has been determined by the DON to be appropriate, subject to use restrictions in the leases, with acceptable risk to human health and the environment and without interference with the environmental restoration process. Overall, the proposed Master Plan Minor Modification and the Park Design Review would not change the OCGP FEIR conclusions; with mitigation measures HH1, HH2, HH5, and HH6, the Project would result in less than significant impacts related to hazardous materials and wastes. No new or modified mitigations measures are required.

Emergency Plans

Like the Overlay Plan, the proposed implementation of the OCGP Master Plan would not be expected to interfere with emergency response and evacuation plans on the base since other sites within Orange County are already designated emergency staging areas and portions of the OCGP would remain available to emergency response equipment. Accordingly, the proposed OCGP Master Plan Minor Modification and the Park Design Review would not change the OCGP FEIR conclusions; the Project would not result in a significant impact related to emergency response and evacuation plans.

Wild Land Fires

Under the OCGP Master Plan the Habitat Reserve, Wildlife Corridor, and recreational areas in the northeastern portion of Planning Area 51 would be exposed to the highest level of fire risk from wildland fires and would require inspection for conformance to fire life safety code requirements.

As the potential significant wildland fire impacts of the OCGP Master Plan are similar to those disclosed in the OCGP FEIR, the OCGP Master Plan Minor Modification and the Park Design Review would not substantially change the findings and conclusions of the OCGP FEIR regarding wild land fires.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

4. *Discussion of Checklist and Mitigation Measures*

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant biological effects identified in and considered by the certified OCGP FEIR.

4.8.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR identified six mitigation measures to reduce the effects of the adopted Overlay Plan on public health and safety—specifically, environmental effects associated with hazardous materials and waste, emergency response, and wild land fires—to a level less than significant. However, the mitigation measures were modified and new measures were adopted in the SEIR. An explanation for the new mitigation measures is set forth below.

The certified OCGP FEIR's Mitigation Measure HH1 was updated because much of the abatement it required has been completed. In addition, many of its requirements are triggered upon the transfer of the property from the Navy to the City of Irvine, and that transfer has already occurred for a substantial portion of the property associated with the Modified Project. The new Mitigation Measure HH1 is provided below:

HH1 For any remaining structures known to contain asbestos-containing materials ("ACMs") that will be renovated and/or demolished, Heritage Fields shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.

Prior to occupancy, renovation or demolition of any remaining structures constructed before October 1988, and in which the presence of ACMs is unknown, an asbestos survey shall be

4. *Discussion of Checklist and Mitigation Measures*

conducted by Heritage Fields. This requirement can be waived if an architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building materials, and to the best of their knowledge, no ACMs were used as a building materials, if the asbestos survey identifies ACMs, the applicant shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.

Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.

Any renovation and/or lead-based paint ("LBP") abatement activities on residential units at former MCAS El Toro, shall be conducted in accordance with all applicable federal, state and local regulatory requirements.

The certified OCGP FEIR's Mitigation Measure HH2 required updating because its requirements were triggered upon the transfer of the property from the Navy to the City of Irvine, and that transfer has already occurred for a substantial portion of the property associated with the Modified Project. In addition, since the certified OCGP FEIR was prepared, FOSTs 4, 5 and 6 have been issued and each of them specifies in detail the nature of the restrictions and institutional controls that must be implemented. The new Mitigation Measure HH2 is provided below:

- HH2** The portions of the Proposed Project Site located on the active Installation Restoration Program ("IRP") Sites listed in Table 4.8-2, *Action Required IRP Sites and Zoning – Modified Project*, of the DSEIR for the Modified Project shall be used only in accordance with the requirements of the applicable Final Finding of Suitability for Transfer or Finding of Suitability to Lease, including in strict compliance with all lease restrictions (such as restrictions against soil or groundwater disturbance without approval from the Department of the Navy and regulators) and all institutional controls (such as restrictions against disturbing the integrity of physical remedial components like caps or groundwater treatment systems and other restrictions imposed by the Department of the Navy).
- HH3** The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wild land fire hazards will be subject to OCFA Guidelines for "Development Within and Exclusion from Very High Fire Severity Zones" and "Fuel Modification Plans and Maintenance." Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the proposed project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.
- HH4** Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required

4. *Discussion of Checklist and Mitigation Measures*

for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.

HH5 Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event that unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the Department of Navy ("DON") shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director of Community Development of the City of Irvine in a timely manner. Additionally, said Protocol Plan shall be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities.

HH6 The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells on the former MCAS El Toro in a geographic information systems database ("GIS"). The City will review all permit applications on the former air station for monitoring well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to monitoring wells will be limited to authorized personnel.

4.9 HYDROLOGY AND WATER QUALITY

4.9.1 Environmental Setting

The OCGP FEIR describes the project site as within the San Diego Creek watershed, which includes the San Diego Creek, Peters Canyon Channel, and the tributaries to these water courses. The major drainage channels that traverse the site (PA 51) are the Marshburn Channel, Bee Canyon Channel, Agua Chinon Channel, and Borrego Canyon Channel. Serrano Creek and Upper San Diego Creek Channel traverse PA 30 in the southern tip of the project site, south of the existing SCRRA Metrolink railroad tracks.

San Diego Creek and Upper Newport Bay are listed as impaired water bodies under Section 303(d) of the Clean Water Act. Accordingly, Total Maximum Daily Load (TMDL) for pollutants that have impaired these water bodies has been established and was included in the OCGP FEIR (OCGP FEIR Table 5.7-2). The OCGP FEIR also noted that the County of Orange and the City of Irvine hold a Nationwide Pollution Discharge Elimination System (NPDES) permit for the storm drain systems, and that the State has issued a NPDES general permit relating to construction activities on sites over five acres in the area. Lastly, the flood control improvements associated with the SR-133 toll road were noted in the OCGP FEIR as having reduced the 100-year flood zone north and west of the property.

4. Discussion of Checklist and Mitigation Measures

4.9.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR identified several significant impacts on hydrology and water quality associated with future development under the adopted Overlay Plan before mitigation. First, grading and excavation activities required for future development could result in the exposure of bare soils to both wind- and water-related erosion and associated significant water quality impacts (specifically, a violation of water quality standards or waste discharge requirements). Compliance with City grading and water quality regulations-including the NPDES discharge permitting requirements and preparation of a Storm Water Pollution Prevention Plan (SWPPP) and a Water Quality Management Plan (WQMP)-are the primary means of controlling the potential impacts of grading and excavation activities. These City requirements, which are described in mitigation measures H/WQ1 and H/WQ2, will reduce the impact to a less-than significant level.

According to the OCGP FEIR, the existing drainage patterns and stream courses would not be substantially altered by future development under the adopted Overlay Plan. In addition, the potential for inundation is reduced by improvements to upstream flood-control facilities. Without project-related flood-control facilities, the rate or amount of surface runoff due to new development would result in flooding on- and off-site, depending on the nature of the specific development. Although this impact was identified as significant, the effect of increased runoff would be reduced to a less-than-significant level through preparation and implementation of hydraulic studies and recommendations for the specific development and the construction of flood-control improvements commensurate with the specific development (Mitigation Measure H/WQ3).

The impact analysis for the Overlay Plan assumed development of the land use patterns created by the zoning designations for the Overlay Plan area and a backbone storm drain system. The storm drain system took into consideration and included improvements identified in the San Diego Creek Flood Control Master Plan. The drainage plan for the Overlay Plan area included improvements to the major drainages, including Marshburn Channel, Bee Canyon Channel, Agua Chinon Channel, and the Borrego Channel, Wildlife Corridor and Serrano Creek, and San Diego Creek, as described in the OCGP FEIR and addenda.

While conceptually defined in the OCGP FEIR, the foregoing area-wide drainage and flood control facility system has since been undergoing increasingly more definitive design engineering refinement. The latest formal expression of these system enhancements is memorialized in the following documents: Master Plan of Drainage, Fuscoe Engineering February 23, 2007,⁶ Orange County Great Park - Hydrology/Hydraulic Report, Fuscoe Engineering June 12, 2007 (collectively, Fuscoe Reports); Planning Area 51 and Planning Area 30 Bee Canyon, Agua Chinon, Borrego, Serrano and Upper San Diego Creek Update, RBF Consulting February 27, 2008, and Planning Area 51 Marshburn Watershed Update, RBF Consulting March 14, 2008 (collectively, RBF Reports). These reports merely refine the drainage control system components described in the OCGP FEIR. The on-site channels will continue to drain the project site under existing conditions. Additional backbone storm drain facilities will be designed to accommodate the changes in the land use surface runoff within the Great Park Neighborhoods development. The post development hydrology was analyzed per the Orange County Hydrology Manual for a 100-year peak storm design event.

⁶ This report was submitted to the City of Irvine as a part of the Master Subdivision Map application.

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OCGP FEIR Mitigation Measure H/WQ3 states that prior to approval of the first tentative tract or parcel map in the project area, detailed hydrologic and hydraulic analysis shall be conducted. Studies and analyses shall be prepared in accordance with Orange County Flood Control District (OCFCD) methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. In compliance with the mitigation measure, the Fuscoe Reports, and RBF Reports were prepared. The primary focus of these reports was to evaluate the proposed drainage concept for the Great Park Neighborhoods development with respect to surface water hydrology.

4.9.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

The OCGP Master Plan Minor Modification and the Park Design Review encompass the same land area proposed for park development as depicted in the OCGP FEIR. The total square footage of buildings has not been increased with this minor modification. Therefore, the OCGP FEIR adequately describes the nature and severity of the environmental effects of OCGP Master Plan and its current minor modification, the subject of this Addendum, on hydrology and water quality.

However, just as the area-wide and off-site drainage and flood control system facility components have undergone continued design engineering refinement, so has the concurrent refinement of on-site drainage and flood control systems.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not

4. Discussion of Checklist and Mitigation Measures

to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant effects on hydrology and/or water quality identified in and considered by the certified OCGP FEIR.

4.9.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR identified four mitigation measures to reduce the effects of the project on hydrology and water quality. All of the mitigation measures are applicable to implementation of the Project and would be carried forward to future development of the project site. Implementation of measures H/WQ 1 through H/WQ 4 (listed below) would reduce project impacts to a less than significant level. However, the mitigation measures were modified in the SEIR to read as follows.

H/WQ1 Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City of Irvine adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area ... and residential construction sites that result in the disturbance of five acres or more ... shall be required to develop and implement BMPs ... to control erosion and siltation and contaminated runoff from the construction sites." Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of one acre or more.

The City's standard conditions of approval indicate that a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.

Additionally, prior to the issuance of a grading permit, project applicants must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, lessee, etc.), and shall reference the location(s) of structural BMPs.

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Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOI) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the Director of Community Development of any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

H/WQ2 Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TMDL) Implementation Plan adopted for this watershed.

H/WQ3 Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrologic and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

H/WQ4 Prior to issuance of a building permit for any unit within the 100-year floodplain, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.

After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process.

4. Discussion of Checklist and Mitigation Measures

4.10 LAND USE AND PLANNING

4.10.1 Environmental Setting

The OCGP FEIR described the existing and former land uses in Planning Areas 30 and 51, and other areas adjoining and surrounding these planning areas. Subsequent to the City's approval of the General Plan Amendment and Zone Change for the Overlay Plan, DON initiated an auction process for the sale of the former MCAS El Toro property. To facilitate the transfer, the property was divided and presented to prospective buyers as four distinct parcels. Interested parties were invited to bid on one or more of the parcels. In 2005, Heritage Fields, El Toro, LLC successfully purchased all four parcels from the DON (3,671 acres), and entered into a Development Agreement with the City of Irvine on July 12, 2005. The Development Agreement sets forth the terms and conditions of subsequent development and implementation of the Great Park, including dedication in fee of 1,096 acres of the property for development of the Great Park Master Plan.

Consistent with a provision in the Zoning Code, there are interim uses that reuse existing buildings on-site in Planning Area 51. These uses include offices occupied by the Great Park Corporation (GPC). Other tenants include Second Harvest Food Bank and Families Forward. A few parcels, such as Tierra Verde Industries, have been leased and are operating on an interim basis.

4.10.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR identified no significant impact to established communities. There were no residents living within the Planning Areas 30 and 51 at the time the OCGP FEIR was prepared and there has been no change in this regard; there are no residents living within the OCGP project site. The OCGP FEIR analyzed certain amendments to the City's General Plan that were adopted on May 27, 2003, as part of the City's adoption of the Overlay Plan. The adopted Overlay Plan was determined to be consistent with each element of the General Plan, as summarized below.

Land Use Element: The goal of the Land Use Element is to "promote land use patterns that maintain safe residential neighborhoods, bolster economic prosperity, preserve open space, and enhance the overall quality of life in Irvine." The "OCGP, Orange County Great Park" land use category was created to reflect the types, intensity, and density of uses and activities contemplated in the OCGP and was determined to be consistent with the goal of the Land Use Element.

Circulation Element: The Circulation Element's goal is to "provide a balanced transportation system." Adoption of the Overlay Plan included the following modifications to the General Plan Circulation Element:

- Policy B-1 (c) was changed to include the following provision:
"In conjunction with individual subdivision map level traffic studies for development proposed in the Overlay Plan area, a LOS [level of service] 'E' would be considered acceptable for application to intersections impacted in Planning Areas 13, 30, 31, 32, 34, 35, and 39."
- Figure B-1 (Master Plan of Arterial Highways) and Figure B-2 (Operational Characteristics) were amended to reflect the alignment of roadways within the OCGP, including:

4. *Discussion of Checklist and Mitigation Measures*

- Marine Way is aligned to join the Bake Parkway northbound exit ramp from Interstate 5 and terminate at Sand Canyon Avenue at Interstate 5.
- Trabuco Road terminates at proposed Meadows Loop Road.
- Rockfield Boulevard is realigned to terminate at Marine Way.
- On-site circulation includes a new commuter highway/collector (Y Street [Ridge Valley]).
- Research Parkway is renamed College Road and modified to extend from Irvine Boulevard to Marine Way.
- Figure B-3 (Public Transit) was amended to reflect the alignment of roadways within the OCGP.
- Figure B-4 (Trails Network) was amended to reflect the alignment of roadways within the OCGP.

Housing Element: The goal of the Housing Element is to "provide for safe and decent housing for all economic segments of the community." The adopted Overlay Plan would add up to 3,625 new dwelling units and carry forward all adopted policies and objectives of the Housing Element; specifically, the residential development component would explore opportunities for maintenance of the housing stock and help the City meet its Regional Housing Needs Assessment through year 2025.

Conservation and Open Space Element: The goal of this element is to "maintain and preserve the environmental systems as a major feature in the City." This goal would be achieved through the implementation of Objectives L-1 through L-12 and corresponding policies. Objective L-10 encourages "the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development." The adopted Overlay Plan includes 1,096 acres of Great Park recreational land, 290 acres of permanent agricultural land, and 974 acres of Habitat Preserve.

Cultural Resources: The goal of the Cultural Resources Element is to "ensure the proper disposition of historical, archaeological, and paleontological resources to minimize adverse impacts, and to develop an increased understanding and appreciation for the community's historic and prehistoric heritage, and that of the region." The OCGP FEIR identified the flatland area of the property as a low paleontological sensitivity zone and the hillside areas north of Irvine Boulevard as a high paleontological sensitivity zone. No objective of this element was amended by the adopted Overlay Plan and all of the objectives and implementing policies were to be implemented as part of the adopted Overlay Plan.

Noise Element: The Noise Element's goal is to "contribute to a healthy and safe environment by minimizing noise impacts." The adopted Overlay Plan would not affect the mobile noise, stationary noise, and noise abatement objectives and implementing policies of the Noise Element.

Public Facilities and Services Element: The goal of this element is to "provide a full range of necessary public facilities and services that are convenient to users, economical, reinforce City and community identity, and reflect the participation of citizens." The facilities and services described in the Urban Service Plan for the adopted Overlay Plan were formulated through a public participatory process and found to implement the goal and adopted objectives and related policies of this element.

Integrated Waste Management Element: This element seeks to "encourage solid waste reduction and provide for the efficient recycling and disposal of refuse and solid waste material without deteriorating the environment." The OCGP FEIR disclosed that the Overlay Plan would not affect the adopted objectives and implementing policies regarding solid waste, waste, wastewater, and solid waste facility siting

4. Discussion of Checklist and Mitigation Measures

requirements; rather, it would provide the opportunity to better respond to the City's solid waste reduction requirements and other provisions of the element by broadening the range of design options.

Growth Management Element: The goal of the Growth Management Element is to "ensure that growth and development are integrally planned with, and phased concurrently with, the City of Irvine's ability to provide an adequate circulation system and public facilities." When the OCGP FEIR was certified, it was disclosed that though the project made changes to the *Master Plan of Arterial Highways*, the project would not change any of the objectives or implementing policies of the Growth Management Element.

Parks and Recreation Element: The goal of the Parks and Recreation Element is to "provide park and recreation opportunities at a level that maximizes available funds and enables residents of all ages to utilize their leisure time in a rewarding, relaxing, and creative manner." The OCGP FEIR reported that there would be no change to the objectives or implementing policies of this element.

Seismic Element: The goal of the Seismic Element is to "minimize the loss of life, disruption of goods and services, and the destruction of property associated with an earthquake." Five Seismic Response Area (SRA) designations are used to describe the magnitude and types of potential seismic hazards present within the City, and to provide policy guidance. The OCGP FEIR reported that the majority of the El Toro property was in category SRA-2 and that no objectives or implementing policies would be changed as a result of the project.

Safety Element: The goal of the Safety Element is to "minimize the danger to life and property from manmade and natural hazards, including fire hazards, flood hazards, non-seismic geologic hazards and air hazards." The OCGP FEIR disclosed the need for fuel modification to mitigate potential wildland fire hazards and drainage improvements to lessen flood hazards associated with implementation of the adopted Overlay Plan, and concluded no objectives or implementing policies would be changed as a result of the adopted Overlay Plan.

4.10.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

The Project is consistent with the land uses approved in concert with the certification and updates to the OCGP FEIR. The Project would implement approved development, and therefore would not affect the goals, objectives or policies, or the facilities and services described in any of the General Plan Elements. No changes or new impacts would occur. In addition, the Project does not contain elements that would alter the findings, conclusions and mitigation measures since all Project development remains within the previously established project boundaries. The following analysis discussed the Project in consideration of each General Plan Element:

Circulation Element: The goal of the Circulation Element is "to provide a balanced transportation system." The Project would not alter the planned network of arterials and connections to roadways in the surrounding area; nor would they materially change the riding and hiking trails and trail linkages; pedestrian and bicycle circulation; and transit, air transportation, and telecommunication opportunities.

Housing Element: The goal of the Housing Element is to "provide for safe and decent housing for all economic segments of the community." The Project would not permit new residential units or increase allowable development intensity.

4. *Discussion of Checklist and Mitigation Measures*

Cultural Resources: The Project would not affect the adopted goals, objectives, and policies of this element. Development would be required to comply with this element's requirements and to implement mitigation measures found in the OCGP FEIR. With implementation of OCGP FEIR measures P1 and CULT1 through CULT4, the impacts of new development on paleontological and cultural resources would be less than significant. Furthermore, the proper disposition of such resources, if any are encountered prior to or during construction would be ensured; and through the information recovered, the community's understanding and appreciation for its historic and prehistoric heritage would have been enhanced.

Noise Element: The Project would not affect the goal of this element – “to contribute to a healthy and safe environment by minimizing noise impacts” – or the mobile noise, stationary noise, and noise abatement objectives and implementing policies of the element.

Public Facilities and Services Element: The Project would not affect facilities or services described in the Urban Service Plan for the adopted Overlay Plan. As no substantive change in the Urban Service Plan is necessary, and that plan was a principle means of demonstrating consistency with the Public Facilities and Services Element, the Project also is consistent with this element of the General Plan. Additionally, development would be required to implement the element's objectives and policies to ensure that a full range of necessary public facilities and services that are convenient to users are provided.

Integrated Waste Management Element: This element seeks to “encourage solid waste reduction and provide for the efficient recycling and disposal of refuse and solid waste material without deteriorating the environment.” The Project would not affect the adopted objectives and implementing policies regarding solid waste, waste, wastewater, and solid waste facility siting requirements.

Growth Management Element: The goal of the Growth Management Element is to “ensure that growth and development are integrally planned with, and phased concurrently with, the City of Irvine's ability to provide an adequate circulation system and public facilities.” When the OCGP FEIR was certified, it disclosed that though it included changes to the Master Plan of Arterial Highways, the OCGP project would not change any of the objectives or implementing policies of the Growth Management Element. The Project likewise would not alter any of the objectives or implementing policies because it would remain consistent with the development phasing already a part of the overall development plan.

Parks and Recreation Element: The goal of the Parks and Recreation Element is to “provide park and recreation opportunities at a level that maximizes available funds and enables residents of all ages to utilize their leisure time in a rewarding, relaxing, and creative manner.” The OCGP FEIR reported there would be no changes to the objectives or implementing policies of the Element. Furthermore, through the Great Park Development Agreement, Heritage Fields has dedicated 1,096 acres: 367 acres for the park, 165 acres for the sports park, 229 acres for the drainage corridor, 179 acres for the wildlife corridor, and 156 acres for the exposition center south.

Conservation and Open Space Element: The goal of this element is to “maintain and preserve the environmental systems as a major feature in the City.” This goal would continue to be achieved through the implementation of objectives L-1 through L-12 and corresponding policies. Objective L-10 encourages “the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development.” The Project would not alter any of the objectives or implementing policies.

4. Discussion of Checklist and Mitigation Measures

Seismic Element: The goal of the Seismic Element is to “minimize the loss of life, disruption of goods and services, and the destruction of property associated with an earthquake.” Five Seismic Response Area (SRA) designations are used to describe the magnitude and types of potential seismic hazards present within the City, and provide policy guidance. The OCGP FEIR reported that the majority of the El Toro property was in category SRA-2. The OCGP FEIR reported that no objectives or implementing policies would be changed as a result of the OCGP project. Likewise, the Project would not alter that finding/conclusion because all Project development remains within the previously established boundaries.

Safety Element: The goal of the Safety Element is to “minimize the danger to life and property from manmade and natural hazards, including fire hazards, flood hazards, non-seismic geologic hazards, and air hazards.” The OCGP FEIR disclosed the need for fuel modification to mitigate potential wildland fire hazards and drainage improvements to lessen flood hazards associated with implementation of the project, and concluded no objectives or implementing policies would be changed as a result of the adopted Overlay Plan. Likewise, the Project would not alter any of the objectives or implementing policies.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. Since the OCGP FEIR did not identify any significant land use impacts, there is no need for further alternatives to the project or the imposition of mitigation measure requirements.

4. Discussion of Checklist and Mitigation Measures

4.10.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR identified no significant land use impacts; therefore no mitigation measures were proposed.

4.11 NOISE

4.11.1 Environmental Setting

The OCGP FEIR described mobile noise sources from nearby freeways, roadways, rail facilities, and vehicle use at adjacent commercial businesses, light industrial facilities, and agricultural lands as the dominate noise source in the project area. Stationary sources of noise included temporary and intermittent noise from construction activities and agricultural operations, noise associated with the industrial/business parks to the east and the business park and entertainment uses to the south.

The OCGP FEIR presented the results of a noise survey, in which noise measurements were conducted at nine locations. Ambient noise levels at the four surveyed representative residential locations ranged from 58 dBA to 65 dBA CNEL (Refer to OCGP FEIR p. 5.4-18, Figure 5.4-6, and Table 5.4-7). The audible noise sources included local traffic, distant traffic, birds, aircraft, and human voices, all of which were characterized as typical of suburban areas.

4.11.2 Impacts Identified in the OCGP FEIR and Addenda

The OCGP FEIR concluded that development of the Overlay Plan would not result in any significant noise effects. The noise assessment considered a worst-case condition of simultaneous demolition and construction activities with the combined sound level of 20 pieces of large mobile equipment operating at a distance of 5,000 feet; 5 concrete breakers operating at a distance of 6,000 feet; and 2 crusher plants operating at a distance of 10,000 feet from the nearest off-project area residential location. The distances represented the closest possible location of the construction equipment to the nearest off-project area residences during a heavy construction period. The nearest off-site residential uses (sensitive noise source) were located approximately 4,000 feet from the property boundary. Under this scenario, the analysis estimated sound levels of approximately 56 dBA at the nearest off-site residential location. (Refer to OCGP FEIR, p. 5.4-24 and Table 5.4-8.)

As buildout of the project site was assumed to occur over time (years 2007–2025), construction-related noise impacts on residential areas within the project site were also estimated. Using the same construction equipment assumptions and a distance of 600 feet from the nearest residential area, the combined effect of the equipment was estimated at a sound level of 70 dBA at the nearest on-site residential locations during a heavy construction period. While the City of Irvine Noise Ordinance does not specify a limit on construction noise levels, it stipulates the days and hours during which construction activities may occur and when construction would not be allowed unless a temporary waiver is requested and granted; specifically, construction is allowed Monday through Friday between 7:00 a.m. and 7:00 p.m., and on Saturdays between 9:00 a.m. and 6:00 p.m.; no construction is allowed outside those hours, on Sundays, or on federal holidays. (Refer to OCGP FEIR, p. 5.4-31.)

4. Discussion of Checklist and Mitigation Measures

4.11.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR noise assessment considered a worst-case condition of simultaneous demolition and construction activities. The worst-case assumptions described for the adopted Overlay Plan remain reasonable assumptions for the Project; no new information about future demolition and construction has become available that would increase the number of pieces of equipment to be operated simultaneously.

Construction Noise

Construction activities associated with the proposed Project would have a short-term impact on ambient noise levels in the Project vicinity. The OCGP Master Plan Minor Modification and the Park Design Review would not allow any additional development intensity (i.e., building square footage) beyond what is allowed by the adopted Overlay Plan, and therefore would not result in an increase in construction noise levels. In addition, the analytical assumptions concerning construction, development phasing, and operations of the adopted Overlay Plan remain appropriate for the Project. Consequently, the Project would not increase the noise levels generated during construction activities. Therefore, the construction noise levels associated with this component of the Project are anticipated to be similar to those addressed in the OCGP FEIR and Addenda and would not result in any new significant impacts.

Construction Vibration

The OCGP FEIR identified that nuisance vibration from construction activities associated with the adopted Overlay Plan would result in noticeable vibration levels. However, because vibration from construction activities would be temporary, nuisance vibration would be less than significant. The Project would not generate significantly higher levels of vibration. Therefore, the construction vibration levels associated with the Project are anticipated to be similar to those addressed in the OCGP FEIR and Addenda and would not result in any new significant impacts.

Operation

Current information regarding the noise impacts within the Project site were previously evaluated in the OCGP FEIR. The OCGP FEIR concluded that noise associated with land uses would not be significant with use of acoustical design features (e.g., sound insulating construction, perimeter barrier walls, acoustical equipment enclosures, and operational restrictions) incorporated to comply with the local regulations. The OCGP Master Plan Minor Modification and the Park Design Review would not result in land use changes that would increase project-related stationary or mobile source noise generated by the project. Therefore, noise levels associated with the Project are anticipated to be similar to those addressed in the OCGP FEIR and would not result in any new significant impacts.

Traffic Noise

The Environmental Noise Assessment prepared for the OCGP FEIR identified a traffic noise screening analysis threshold of 1.5 dBA for all project-related traffic noise level increases where the resulting noise levels would be in excess of 65 dBA, and required further analysis where that screening threshold was met within residential and other sensitive areas. Although changes in noise levels of 3 dBA are considered "barely perceptible," and changes of 5 dBA are considered "clearly noticeable," the OCGP

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FEIR used this 1.5 dBA noise level screening threshold to be conservative. The OCGP FEIR concluded that the development within Planning Areas 30 and 51 would cause no significant impact on account of traffic noise.

Traffic volumes have been predicted for on-site roadways within the Western Sector Park Development based on the minor modification to the Great Park Master Plan consisting mainly of changes to the proposed buildings. Two traffic analyses were conducted by a technical consultant (LSA Associates) for the minor modifications to the Master Plan and the Western Sector Park Development Plan-Phase 1 (LSA, August 2011). The August 2011 traffic analysis concluded that minor modification to the Great Park Master Plan would generate an additional 600 daily trips on a typical weekend day on all roadways in the study area. Project-generated, operation-related noise from roadway traffic on roadways was modeled. Inputs and assumptions applied to traffic noise predictions are shown in Appendix C.

Based on the traffic noise modeling, traffic noise level increases for on-site Project roadways would range from 0 dBA to 6 dBA. The OCGP Master Plan Minor Modification and the Park Design Review would not, however, result in traffic noise level changes that would increase project-related traffic noise generated by the Project or result in traffic noise levels that exceed 65 dBA at noise sensitive receptors. The land uses along these specific roadway segments are not considered noise sensitive. Therefore, noise levels associated with the Project are anticipated to be similar to those addressed in the OCGP FEIR and would not result in any new significant impacts.

Airport Noise

The former MCAS El Toro operations have ceased and no public airport, public use airport, or airport land use plan exists in the Project vicinity.

Land Use Compatibility

The minor modification would consist of changes to proposed buildings within the project. Buildings that would be no longer part of the OCGP Master Plan Minor Modification and the Park Design Review include the Air Museum, Air Museum Hangar, and Concessions / Retail at the Sports Park. These buildings would be replaced by an Artist in Residency Facility, Hangar 244, Community Ice Facility, and Nature Education Garden. The overall square footage of the buildings within the OCGP Master Plan Minor Modification and the Park Design Review would remain the same because the size of the three Civic / Museums within the OCGP Master Plan would also be reduced to accommodate the additional square footages of the new buildings. Specific to the Artist in Residency Facility, these studios would be used as work-places for artists but would not be used as residences. In addition, normal activities would occur during business hours. For these reasons, studios at the Artist in Residency Facility are not considered noise-sensitive receptors.

Although the Project would result in changes to buildings in the Master Plan Development, overall land use types and activities would remain substantially similar to the adopted Overlay Plan. Because the OCGP FEIR and Addenda did not identify any significant impacts related to land use compatibility, the proposed Project is also compatible with the Irvine General Plan and zoning code for noise and vibration compatibility.

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Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include an major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was approved, augmented, and/or updated, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Initial Study/Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant noise effects identified in and considered by the certified OCGP FEIR.

4.11.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR identified no significant noise impacts; therefore no mitigation measures were proposed and none is required for the proposed project.

4.12 POPULATION AND HOUSING

4.12.1 Environmental Setting

The OCGP FEIR discussed the caretaker status of the MCAS El Toro base following its closure. At the time the OCGP FEIR was prepared, there was a limited number of military and civilian staff working on the base; however, currently, there are no residents living on the former base. Consequently, there were 4,380 vacant group quarters units and 1,209 residential dwelling units. The OCGP FEIR examined

4. *Discussion of Checklist and Mitigation Measures*

demographics in the context of the existing and projected population of the Orange County region and the City of Irvine. Population and housing information was developed based on the 2000 United States Bureau of Census population, household, and employment census information. The most recent Census was conducted in 2010 ("2010 Census") and this data is used, when available, for analysis in this section. The areas surrounding the former base and the Orange County subregion are considered jobs-rich and housing-poor. The Southern California Association of Governments (SCAG) seeks to encourage housing growth over job growth in the Orange County subregion. At the same time, Southern California has been profoundly impacted by the current recession and housing crises, indicative of a higher unemployment rate and a distressed housing market. Despite the recent fluctuations in the job and housing markets, SCAG continues its efforts to improve the jobs-to-housing ratio in Orange County.

The OCGP FEIR reported that the ratio of jobs to housing in the area has environmental implications related to transportation and air quality. Thus, a major focus of the regional planning efforts has been to improve the ratio of jobs to housing in all affected subregions in order to reduce the vehicular trips, costly infrastructure improvements, and resultant air emissions.

4.12.2 Impacts Identified in the OCGP FEIR and Addenda

As noted above, the area surrounding the former MCAS El Toro and the Orange County subregion are considered jobs-rich and housing-poor. SCAG seeks to improve the jobs-to-housing ratio in the Orange County subregion. The OCGP FEIR reported that regional projections are dynamic and, as a compilation of local land use projections, reflect changing community views on the location and the types of growth desired. The Orange County Council of Governments (OCCOG) adopted the Orange County Projections 2010 report (OCP-2010), which provides projections of anticipated growth for Orange County in terms of population, housing and employment based on detailed information about growth trends, development and local land use provided by Orange County jurisdictions and public agencies; infrastructure, utility and service providers; and the private sector. OCP-2010 accounts for projects in progress, including the 1,269 density bonus units. According to the OCP-2010, forecast growth rates for population, dwelling units, and employment in Irvine over the 2008-2035 period are all higher than the corresponding rates for the entire Orange County area, as shown in Table 4.12-1.

Table 4.12-1. OCP-2010 Projections for Orange County and the City of Irvine, 2008-2035

	2008	2010	2020	2035	Change, 2010-2035	
					Total	Percent
Orange County						
Population	3,123,058	3,182,061	3,430,505	3,582,266	400,205	12.6%
Dwelling Units	1,035,005	1,045,959	1,100,260	1,174,912	128,953	12.3%
Employment	1,624,061	1,510,928	1,646,437	1,799,477	288,549	19.1%
City of Irvine						
Population	210,761	223,024	271,340	309,977	86,953	39.0%
Dwelling Units	78,955	83,103	100,572	117,427	34,324	41.3%
Employment	223,480	203,831	236,641	286,492	82,661	40.6%
Source: OCGP DSEIR, Table 5.8-3, p. 5.8-3; Center for Demographic Research, Cal State Fullerton. "2010 Orange County Projections", released January 27, 2011.						

4. Discussion of Checklist and Mitigation Measures

According to OCP-2000, as of June 2000, Orange County had approximately 1.5 million jobs. According to OCP-2010, that number was projected to increase to approximately 1.51 million by 2010. OCP-2010 projects that jobs in Orange County will grow by 288,549 between 2010 and 2035, which amounts to an average of 11,542 jobs per year (a 19.1 percent increase in jobs over the 25-year period).

Although implementation of the Overlay Plan would not have exceeded the OCP-2010 employment projections, its impact on employment was considered significant because the Orange County subregion is anticipated to become increasingly jobs-rich over the next 20 years and the Overlay Plan-related employment would exacerbate the subregional jobs/housing imbalance. As discussed in the OCGP FEIR, the Overlay Plan is expected to result in:

- An increase of up to 9,000 residents
- A provision of 3,625 dwelling units
- An approximate increase of 16,510 jobs
- An on-site jobs-housing ratio of 4.55

The increase in population would not substantially exceed projections contained for the site in OCP-2010. The increase in jobs, however, would contribute to worsening Orange County's jobs/housing ratio imbalance and is therefore considered a significant impact. The OCGP FEIR identified less than significant impacts for population and housing, and a significant and unavoidable impact for employment.

In 2008, the City granted 1,269 density bonus residential units to Heritage Fields pursuant to state law. Consequently, the Overlay Plan now includes a total of 4,894 residential units, and a total of 12,462 residents, based on estimates of persons per household in the City's General Plan. The Overlay Plan, including the 1,269 density bonus units, was included in the City's data for OCP-2010, which will in turn be used by SCAG to establish regional growth forecasts. Therefore, the population, housing and employment growth created by the Overlay Plan is consistent with OCP-2010 regional planning projections, and will be consistent with anticipated forecasts forthcoming from SCAG. OCP-2010 estimates a jobs-housing balance of 2.45 in Irvine in 2010 and 2.44 in 2035, as shown in Table 4.12-2. The Overlay Plan would contribute to making the community more jobs-housing balanced over time.

Table 4.12-2. OCP-2010 Jobs to Housing Ratio for Orange County and the City of Irvine, 2008-2035

	2008	2010	2020	2035
Orange County				
Dwelling Units	1,035,005	1,045,959	1,100,260	1,174,912
Employment	1,624,061	1,510,928	1,646,437	1,799,477
<i>Jobs-Housing Ratio</i>	<i>1.57</i>	<i>1.44</i>	<i>1.50</i>	<i>1.53</i>
City of Irvine				
Dwelling Units	78,955	83,103	100,572	117,427
Employment	223,480	203,831	236,641	286,492
<i>Jobs-Housing Ratio</i>	<i>2.83</i>	<i>2.45</i>	<i>2.35</i>	<i>2.44</i>
<i>Source: OCGP DSEIR, Table 5.8-7, p. 5.8-8; Center for Demographic Research, Cal State Fullerton. "2010 Orange County Projections", released January 27, 2011.</i>				

4. Discussion of Checklist and Mitigation Measures

The 16,510 new jobs contemplated in the Certified EIR will still be generated under the Overlay Plan. Therefore, the Overlay Plan, which includes 4,894 residential units, would have an on-site jobs-housing ratio of 3.37, which is substantially improved from the 4.55 ratio associated with the 3,625 units analyzed in the Certified EIR. However, since the 3.37 jobs-housing ratio is still greater than Irvine's existing jobs-housing ratio of 2.45, the Overlay Plan's significant impact to the jobs-housing balance remains.

4.12.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

The Project would not alter the population, housing, and employment information contained in the OCGP FEIR. The Project would not introduce new levels of development that would improve the ratio of jobs to housing beyond that already analyzed in the OCGP FEIR. The Project's impacts would be the same as those identified in the OCGP FEIR, less than significant for population and housing, and significant and unavoidable for employment.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the Project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the Project, but the Project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the Project or additional mitigation measures that would substantially reduce one or more of the significant effects on population and housing identified in and considered by the approved OCGP FEIR.

4. Discussion of Checklist and Mitigation Measures

4.12.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR identified a significant impact associated with the jobs/housing ratio. The OCGP FEIR also stated that no mitigation is available to rectify conflicts between the numerical objectives of regional planning documents including the jobs/housing ratio. This finding remains applicable to the OCGP Master Plan Minor Modification including the park design review.

4.13 PUBLIC SERVICES

4.13.1 Environmental Setting

Law Enforcement

At the time of the certification of the OCGP FEIR, law enforcement was provided by the Orange County Sheriff through a contract with the Department of the Navy (DON) in Planning Area 51. Subsequent to the annexation of the property not within the City limits, the City of Irvine Police Department has assumed law enforcement responsibility within Planning Area 51. The Irvine Police Department is headquartered at the Irvine Civic Center Complex and also has a satellite facility in the Irvine Spectrum Entertainment Complex. The OCGP FEIR concluded that the police facilities were adequate to handle the personnel and equipment that were employed and utilized by the department. The OCGP FEIR also stated that the Irvine Police Department was researching the expansion of their facilities, although the specific details of constructing a substation were not known.

Fire and Emergency Medical Services

At the time of the certification of the OCGP FEIR, primary fire protection to Planning Area 51 was provided by Orange County Fire Authority (OCFA) under contract to the County of Orange on an interim basis. Subsequent to the annexation of the property, OCFA has continued to provide fire protection service to the project area. The OCGP FEIR stated that OCFA was planning two additional fire stations in the general vicinity to serve Planning Area 51. OCFA also has in place an agreement with the Irvine Company as part of the Northern Sphere Area that should provide adequate service to all areas surrounding the project.

Parks and Recreation

A portion of the OCGP is currently operating on an interim basis with recreation facilities that are open to the public. The proposed park design plans will formalize these interim uses as well as conceptually approve others. In addition, many public facilities are located within five miles of the OCGP including neighborhood and community parks, recreational trails, and open space.

There are approximately 506 acres of neighborhood and community parks and recreational trails in the City of Irvine's public park system, including one aquatic complex containing three competition size pools. William R. Mason Regional Park, a County of Orange facility, and numerous private parks and recreation facilities are also available throughout Irvine that provide additional recreational opportunities for the City's residents.

4. Discussion of Checklist and Mitigation Measures

The City of Irvine, through its Conservation and Open Space Element has established an open space program comprehensively aggregating open space, adjoining other regional open space, and promoting conservation and passive recreational opportunities (e.g. Bommer Canyon, Shady Canyon and Limestone Canyon).

At the time of the certification of the OCGP FEIR, Department of the Navy (DON), acting in a caretaker's role, offered public access to a variety of existing recreational facilities including the existing Marine Memorial Golf Course and equestrian stables. Currently, these facilities remain closed and are under demolition and preparation for future development.

School Services

Planning Area 51 is within the school service boundaries of the Irvine Unified School District (IUSD) and the Saddleback Valley Unified School District (SVUSD). Prior to the closure of the base, an IUSD elementary school with a 600-student capacity was operating on the former base property.

4.13.2 Impacts Identified in the OCGP FEIR and Addenda

Law Enforcement

The OCGP FEIR discussed the law enforcement needs of Planning Area 51 and stated that following annexation, the Irvine Police Department would provide law enforcement for the entire project area. The OCGP FEIR also analyzed the number of police officers, police supervisors and support staff, as well as the number of vehicles, equipment, and services. The OCGP FEIR stated that police protection for the park area would be funded through the use of a special park assessment. As stated in the OCGP FEIR, the general impacts associated with construction and operation of public facilities were analyzed in the OCGP FEIR as part of the planned land uses which also included the construction of a new Police substation.

Fire and Emergency Medical Services

Subsequent to annexation of the property, Planning Area 51 would continue to be served by OCFA. The OCGP FEIR stated that it was likely that additional fire services infrastructure would be required to support the proposed project. OCFA had not provided the detailed calculations of the extent of new services. The OCGP FEIR stated that the final determination of fire station needs and locations would be made at a future date when more information is known about risk, layout, and types of occupancy. The specific environmental impact of constructing the new fire facilities to serve the project could not be determined at the General Plan level of analysis as specific site plans and locations had not been prepared. However, the general impacts associated with the construction and operation of public facilities were addressed within the OCGP FEIR. A temporary fire station is currently located a short distance from the main entrance to the OCGP.

Parks and Recreation

As discussed in detail in OCGP FEIR, the parkland acreage under the project would greatly exceed the existing City of Irvine's standards, and would provide a regional open space amenity for the benefit of

4. Discussion of Checklist and Mitigation Measures

Orange County. The OCGP FEIR calculated a total of 45.1 acres of parkland required for the proposed development. A portion of that acreage would be in neighborhood parks.

The community park requirement for the future Great Park Neighborhoods development has been addressed through the Development Agreement between the City and Heritage Fields (Recorded on July 12, 2005) and reflected in the amended and Restated Development Agreement (December 2010). Conveyance of the OCGP to the City satisfied any requirement imposed on the developer for the dedication or development of community parks as required by the City's General Plan and Municipal Ordinance. The neighborhood park requirements for the future Great Park Neighborhoods development would be met within the Great Park Neighborhoods development, outside the OCGP. Details of specific park locations, ownership, sizes, and improvements would be presented to the Community Services Commission as a part of the Park Plan for the new residential developments. Since the OCGP Master Plan does not create a demand for parks and recreation but is itself a park and recreation amenity, no new impacts on parks and recreation are anticipated. This is consistent with the findings of the OCGP FEIR.

School Services

The OCGP FEIR discussed in detail the proposed project, the related student generation, and the required school facilities. Based on an initial analysis, the IUSD estimated the need for one 13-acre K-8 site as well as funding for expansion and modernization of existing middle and high school facilities by project buildout.

4.13.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

Law Enforcement

The Project does not change the intensity or type of the land uses and therefore, the demand on law enforcement is within the envelope of analysis presented in the OCGP FEIR.

Fire and Emergency Medical Services

Since the Project does not change the intensity or type of land uses, the demand on fire protection is consistent with the analysis presented in the OCGP FEIR.

Parks and Recreation

The Project does not propose changes to the land use intensity and type. Therefore, the demand and potential impact on parks and recreation remains consistent with the analysis contained in the OCGP FEIR.

School Services

The Project does not propose changes to the land use intensity and type. Therefore, the demand and potential impact on school services remains consistent with the analysis contained in the OCGP FEIR.

4. *Discussion of Checklist and Mitigation Measures*

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated and addenda were approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant public services-related effects identified in and considered by the certified OCGP FEIR.

4.13.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR determined the mitigation measures identified in other sections of the OCGP FEIR (Sections 5.1-5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of facilities for police, fire protection, park and recreation, and education services.

4.14 RECREATION

Issues related to Recreation are discussed above under Section 4.13, *Public Services*.

4. Discussion of Checklist and Mitigation Measures

4.15 TRANSPORTATION/TRAFFIC

4.15.1 Environmental Setting

The OCGP FEIR describes the traffic and circulation conditions of a study area that encompassed 145 existing intersection analysis sites (2007) and an additional 11 future sites (Post 2025) in the City of Irvine, and portions of 7 adjacent jurisdictions including the Cities of Lake Forest, Mission Viejo, Laguna Hills, Laguna Woods, Aliso Viejo, Laguna Beach, and unincorporated areas of Orange County. Figure 4-4, OCGP FEIR – Traffic Impact Study Area depicts the study area covered by the traffic study contained in the OCGP FEIR.

The OCGP FEIR used the City of Irvine Traffic Performance Criteria, which establishes level of service (LOS) “A” to “D” as the peak-hour minimum acceptable service level. In its adoption of the Overlay Plan, the City General Plan Policy B-1(C), which identified LOS E as acceptable for application to intersections in Planning Areas 13, 31, 32, 34, 35 and 39, was changed to include the effects of future development in Planning Areas 30 and 51 on the intersections in those Planning Areas.

The City’s performance criteria also includes a standard of 0.02—roadway volume to capacity (V/C) ratio or the intersection capacity utilization (ICU)—to identify significant project impacts and associated need for improvements at both roadways and intersections.

4.15.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR concluded that the adopted Overlay Plan would cause an increase in traffic which would be substantial in relation to the existing traffic load and capacity of the street system—that is, a substantial increase in either the number of vehicle trips, the V/C on roadways, or congestion at intersections—in the year 2007, year 2025, and post-2025 scenarios (OCGP FEIR page 5.2-66):

Year 2007

- I-5 Freeway at Alton Parkway—southbound off-ramp (A.M.)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (A.M.)

Year 2025

- University Drive from the I-405 Freeway to Michelson Drive (A.M.)
- I-5 Freeway from Sand Canyon Avenue to Jeffrey Road—northbound (P.M.)
- I-5 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-405 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-5 Freeway at Jeffrey Road—southbound on-ramp (A.M.)
- I-5 Freeway at Sand Canyon Avenue—northbound on-ramp (P.M.)
- I-5 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-5 Freeway at Alton Parkway—southbound off-ramp (A.M.)
- I-5 Freeway at Bake Parkway—southbound off-ramp (A.M.)
- I-405 Freeway at Sand Canyon Avenue—northbound direct on-ramp (P.M.)

4. *Discussion of Checklist and Mitigation Measures*

- I-405 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (A.M.)
- SR-241 Tollway at Lake Forest Drive—southbound off-ramp (A.M.)
- SR-133 Freeway at Barranca Parkway—northbound direct on-ramp (P.M.)

Post-2025

- I-5 Freeway from Sand Canyon Avenue to Jeffrey Road—northbound (P.M.)
- I-5 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-405 Freeway from Jeffrey Road to Sand Canyon Avenue—southbound (A.M.)
- I-5 Freeway at Jeffrey Road—southbound on-ramp (A.M.)
- I-5 Freeway at Jeffrey Road—northbound off-ramp (P.M.)
- I-5 Freeway at Sand Canyon Avenue—northbound on-ramp (P.M.)
- I-5 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-5 Freeway at Alton Parkway—southbound off-ramp (A.M.)
- I-5 Freeway at Bake Parkway—southbound off-ramp (A.M.)
- I-5 Freeway at El Toro Road—southbound off-ramp (P.M.)
- I-405 Freeway at Sand Canyon Avenue—northbound direct on-ramp (A.M. /P.M.)
- I-405 Freeway at Sand Canyon Avenue—southbound off-ramp (A.M.)
- I-405 Freeway at Irvine Center Drive—southbound off-ramp (A.M.)

Intersections

For the list of impacted intersections by analysis year, please refer to the following OCGP FEIR tables:

- Table 5.2-12 for year 2007
- Table 5.2-13 for year 2025
- Table 5.2-15 for post 2025

Freeway/Tollway Locations

The OCGP FEIR concluded that the adopted Overlay Plan would exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways in the 2007 and 2025 scenarios. The Overlay Plan will impact the following:

Year 2025

- I-5 from Sand Canyon Avenue to Jeffrey Road – northbound (PM)
- I-5 from Jeffrey Road to Sand Canyon Avenue – southbound (AM)
- I-405 from Jeffrey Road to Sand Canyon Avenue – southbound (AM)

4. Discussion of Checklist and Mitigation Measures

Intersections

Year 2007

- El Toro Road/Avenida de la Carlota

Year 2025

- El Toro Road/Avenida de la Carlota

4.15.3 Impacts Analyzed in the OCGP FEIR and Addenda

The OCGP FEIR utilized trip thresholds (also known as “trip caps”) for each of the planning areas within the Great Park area. The trip cap is based on socioeconomic data average daily trip generation for the approved Orange County Great Park plan (the Overlay Plan area), which includes the Heritage Fields development. The traffic impacts of the 2006 GPA/ZC project were analyzed in Addendum No. 2 by distributing project-related traffic over existing and future traffic conditions. The three future conditions (year 2010, year 2025 and post-2025) are based on the existing circulation system plus fully funded intersection improvements that were planned to be in place in each future time frame and the land use and development growth that is projected in each future time frame. In each case, project impacts were identified by comparing traffic conditions with and without the 2006 GPA/ZC project.

The circulation system performance criteria applied in the analysis were the criteria approved in the 2003 North Irvine Transportation Model (NITM) Program Nexus Study. The performance criteria were also consistent with the criteria adopted by the jurisdictions that are within the project study area. The criteria include components for arterial roadways, intersections, freeway/tollway ramps, and freeway/tollway mainline segments.

The results of the year 2010, year 2025 and post-2025 analysis indicated that the proposed 2006 GPA/ZC project was not forecast to significantly impact any roadway segment based on the second level of analysis (the City’s peak hour link capacity analysis methodology), intersection, freeway/tollway ramp, or any freeway/tollway mainline segment.

Subsequently, as addressed in Addendum No. 3, a Traffic Study (Appendix C of Addendum No. 3) for the Master Subdivision Map was prepared by Austin-Foust Associates, Inc. to address the transportation impacts for the “project,” i.e. backbone infrastructure with no new land use development in an interim year timeframe consistent with the TTM scope of work of the North Irvine Transportation Mitigation (NITM) Program Ordinance. The Traffic Study analyzed the impacts of the Master Subdivision Map (MSM) application based on Year 2010 traffic conditions in the traffic analysis study area.

That project was presented in Figure 4-2 to Addendum No. 3, and included Marine Way from Sand Canyon Avenue to Bake Parkway, Trabuco Road from the SR-133 to “O” Street, and the extension of Rockfield Boulevard to Marine Way as four-lane primary arterials, Ridge Valley (formerly “Y” Street) from Portola Parkway to Irvine Boulevard and “O” Street (formerly College Road) as four-lane secondary arterials between Irvine Boulevard and Trabuco Road, Trabuco Road east of “O” Street, “A” Street, “B”

4. Discussion of Checklist and Mitigation Measures

Street, “C” Street and “D” Street as two-lane local road ways. The mid-block lanes were shown in Figure 4-3 to Addendum No. 3. It should be noted that the project included the construction of two lanes on “O” Street between Trabuco Road and Marine Way. Two additional lanes would be built by the owner of the adjacent property (west side of “O” Street) when that property is developed.

An Internal Circulation Analysis (Appendix D to Addendum No. 3) for the Master Subdivision Map in the Overlay Plan area was prepared by Austin-Foust Associates, Inc. to analyze the access and internal circulation for the Heritage Fields project. The project traffic loaded directly onto the surrounding arterial system at several locations. These include access to Irvine Boulevard via Ridge Valley; “O” Street (formerly College Road), “A” Street and “B” Street to Sand Canyon Avenue via Trabuco Road and Marine Way (and indirectly via Irvine Boulevard); and to Alton Parkway, Barranca Parkway, and Bake Parkway via Marine Way. Project access to the SR-133 is provided directly via a planned interchange at Trabuco Road and indirectly via “O” Street to the Irvine Boulevard interchange.

The intersections shown in Figure 4-5 in Addendum No. 3 were analyzed using intersection capacity utilization (ICU) values to determine level of service (LOS). The results of this analysis showed that all intersections operate at an acceptable level of service under Post-2025 buildout conditions. The intersections were then analyzed for signalization needs. Traffic signal warrants based on peak hour volumes (as adopted by the Federal Highway Administration and Caltrans) were used to determine the need for signalization. The results of this analysis were illustrated in the Figure 4-4 in Addendum No. 3. Based on the application of the warrants, it was determined that traffic signals should be installed at all of the analyzed intersections except for the intersections of “C” Street and “D” Street at Marine Way.

Recommended on-site traffic-control measures included one-way stop signs, signals, and roundabouts. Left-turn pocket lengths for project access intersections with exclusive left-turn lanes were estimated using the County of Orange Environmental Management Agency (EMA) Highway Design Manual. The estimated left-turn storage length requirements for the analyzed intersections were based on peak hour volumes.

Right-turn lanes were proposed to be provided for select project access locations on site where additional intersection capacity is needed. The length of the right-turn lane is a function of the adjacent through-traffic queue and LOS at the intersection. A minimum length of 250 feet plus a 120-foot transition would be provided at these locations. Right-turn deceleration lanes are provided along the periphery of the project site and along major roadways within the project site where higher speeds prevail (i.e., Irvine Boulevard, Trabuco Road, and on Marine Way with the exception of locations within the TOD District). The right-turn deceleration lane would be a minimum of 150 feet with a 120-foot transition, in order to provide a safe transition from the through lane to the right-turn lane.

Addendum No. 4 analyzed the impacts of the proposed OCGP Master Plan. Since the proposed land uses within the OCGP Master Plan were consistent with those analyzed in the OCGP FEIR and the updated traffic study for the Revised Overlay Plan, no additional traffic analysis was found to be necessary(for Addendum 4) and no new significant impacts related to traffic were anticipated.

Addendum No. 5 analyzed the impacts associated with realignment of the Marine Way/Bake Parkway intersection and concluded that the project would not produce or substantially worsen significant impacts identified in the OCGP FEIR. Consistent with the conclusions in the OCGP FEIR, traffic and circulation

4. Discussion of Checklist and Mitigation Measures

impacts associated with the project would be less than significant, as the future development would implement all applicable laws and regulations to reduce impacts on traffic and circulation. However, the following project design features would need to be implemented as part of the project:

Bake Parkway/I-5 Northbound Ramp

The General Plan approved Bake Parkway at Marine Way intersection provides direct access from the Bake Parkway at the I-5 northbound ramps intersection onto Marine Way. The proposed Bake Parkway at Marine Way intersection is relocated north (east) of the General Plan approved Bake Parkway at Marine Way intersection on Bake Parkway. The relocation of the Bake Parkway at Marine Way intersection includes project design features along Bake Parkway. Specifically, Bake Parkway is proposed to be widened north (east) of the existing I-5 bridge to provide four through lanes to Rockfield Boulevard while southbound (westbound) Bake Parkway from Rockfield Boulevard would be widened to provide four through lanes which reduces to three through lanes at the I-5 NB on-ramp. In addition, the proposed Bake Parkway at Marine Way relocation is also accompanied by improvements at the I-5 northbound off-ramp. The I-5 northbound off-ramp at Bake Parkway would be widened to provide one left-turn lane and three right-turn lanes. The project design features at this location needed for Year 2030 and Post-2030 operations, tied to the construction of the Bake Parkway and Marine Way intersection would provide acceptable levels of service at this intersection.

Sand Canyon/I-5 Northbound Ramp

The proposed relocation of the Bake Parkway/Marine Way intersection resulted in the need for restriping at the eastbound approach or the southbound approach of the Sand Canyon/I-5 Northbound Ramp intersection under Post-2030 conditions. As part of the project design features, the southbound approach at this intersection would be restriped to provide two left-turn lanes, four through lanes, and one right-turn lane. The restriping improvement provides an improved operational condition.

Addendum No. 6 analyzed the potential impacts of Vesting Tentative Tract Map 17283 (VTTM 17283) for a portion of the Lifelong Learning District (LLD) of the Heritage Fields site located in Planning Area (PA) 51 in the City of Irvine. The purpose of the study was to provide traffic analysis data for the VTTM 17283 application for this development for the year 2012 horizon. The study presented data that was the basis of design for key on-site project roadways in support of the VTTM 17283 application. The study also identified the location, timing and prioritization of NITM improvements related to potential impacts caused by traffic from the project.

The results of the year 2012 analysis indicated that the project is forecast to result in the need for improvements at two freeway ramps within the NITM study area based on peak hour intersection and ramp performance criteria. The ramp locations requiring improvements are:

- I-405 at Sand Canyon - NB Direct On-Ramp (Convert the HOV lane to a second metered mixed flow lane)
- I-405 at Sand Canyon - SB Off-Ramp (Add a second drop lane from I-405 to the off ramp)

4. Discussion of Checklist and Mitigation Measures

The proposed improvements would bring the ramp locations to an acceptable level of service. These improvements have been previously identified as mitigation requirements in the underlying EIR and are included in the NITM Program. The development of VTTM 17283 requires the advancement of these NITM improvements from 2025 to 2012 in the NITM Program. The NITM Program allocates a fair share portion of the improvement costs at these freeway ramp locations to this development. Therefore the projects participation in the NITM Program fulfills the project's mitigation requirement at these ramp locations.

Addendum No. 7 analyzed potential impacts associated with the removal of certain NITM Improvements from the OCGP FEIR that were determined to no longer be necessary. Based on the findings of the NITM Five-Year Review Traffic Study and subsequent analysis utilizing ITAM 8.4-10, it was determined that previously proposed traffic mitigation strategies were not required for seven intersections and one ramp since they operate at an acceptable LOS under all interim year and build-out conditions. In addition, improvements above and beyond the baseline conditions for these locations were not warranted based on forecast future traffic activity. These intersections include: Alton Parkway & Barranca Parkway; Ridge Route Drive & Moulton Parkway; Santa Maria Drive & Moulton Parkway; Los Alisos Boulevard & Trabuco Road; Moulton Parkway & Glenwood Drive/Indian Creek Lane; Moulton Parkway & Laguna Hills Drive; Lake Forest & Irvine Center Drive; and SR-241 Southbound Off-ramp at Lake Forest Drive.

The SEIR analyzed the potential impacts of the 2nd Amended VTTM 17008, Amended TTM 17283, TTM 17202, TTM 17364, TTM 17366 and TTM 17368 within the Heritage Fields site located in Planning Areas (PA) 51 and 30 in the City of Irvine. The purpose of the comprehensive and tract map-level NITM traffic studies was to identify the location, timing and prioritization of applicable NITM improvements and any necessary project-related improvements that address potential impacts caused by project traffic.

The results of the analyses indicated the need for the following NITM improvements:

- Alton & Technology (2030): Westbound Technology restripe to include 2.5 left turn lanes, 1.5 through lanes, and a defacto right turn lane.
- El Toro & Jeronimo (2030): Add second southbound El Toro left turn lane.
- Alicia & Muirlands (2015): Add second southbound Alicia left turn lane.
- I-5 Southbound off-ramp to Sand Canyon (Post-2030): Add a second drop lane from the I-5 to the off-ramp.
- I-5 Southbound off-ramp to Alton (Post-2030): Add a second auxiliary lane from the I-5 to the off-ramp.
- I-5 Southbound off-ramp to El Toro (2030): Add a second drop lane from the I-5 to the off-ramp.

Additional improvements needed to address traffic impacts caused by the project include:

- Jeffrey & Roosevelt (2030): Restripe eastbound Roosevelt approach to provide a shared through/right turn lane.
- Bake & Portola (Post-2030): Restripe the northbound Bake approach to provide a shared through/left lane (which currently exists as a through lane) and modify the traffic signal for a north/south split phase signal operation. Alternatively, restripe the northbound approach to provide dual left turn lanes in combination with a single through lane and single right turn lane, and modify signal operation to include northbound right turn overlap.

4. Discussion of Checklist and Mitigation Measures

- Lake Forest & Portola (2030, fair-share): Conversion of the northbound Lake Forest approach from de-facto right-turn to dedicated right-turn, and modification of the traffic signal to include right turn overlap phase.

Mitigation measures approved as part of the SEIR include:

TRAN1 Prior to the approval of any final map (other than a financing and conveyance map) allocating building intensity within Planning Areas 30 and 51, and prior to issuances of any building permits for permanent improvements within Planning Areas 30 and 51, the landowner or subsequent project applicant shall either (i) apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs, to reduce traffic, air quality and noise impacts or (ii) develop and implement a similar transportation management plan containing the elements and meeting the criteria described below as approved by the Director of Public Works:

Transportation Management Plan (TMP)

The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for Planning Areas 30 and 51. This document summarizes the key elements of the TMP.

A. Introduction

The purpose of this document is to provide an outline for a comprehensive TMP for the Planning Areas 30 and 51 ("Great Park TMP"). This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.

The applicant may elect to annex Planning Area 51 and a portion of Planning Area 30 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.

In the event that the applicant elects not to annex into Spectrumotion, a TMP similar to that provided by Spectrumotion will be developed and implemented. This document sets forth the components of the TMP should it be necessary.

4. *Discussion of Checklist and Mitigation Measures*

B. Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

New Hire Orientation: Inform newly hired employees of commuting services available to them.

Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services (i.e., OCTA buses, Metrolink, Amtrak, etc.).

Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.

On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.

Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.

Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.

Website: Maintain a website with all of their program information available.

Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.

Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.

Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.

C. Transportation Management Plan Implementation

As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Planning Areas 30 and 51. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.

TRAN2 Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of any building permits within the base property, the City of Irvine shall request a cooperative study with OCTA and other affected jurisdictions to amend the Orange County Master Plan of Arterial Highways (MPAH). Marine Way, Trabuco Road from the SR-133 toll way to "O" Street (formerly College Road), and Ridge Valley (formerly Y Street) should be included on the MPAH.

4. Discussion of Checklist and Mitigation Measures

TRAN3 Prior to issuance of the first building permit for dwelling units or non-residential square footage, a Fee Reallocation Study shall be completed to recalculate the NITM Fees, reflecting any fair share allocation modifications. The landowner or subsequent property owner shall submit the Fee Reallocation Study under a separate cover to be approved by the Director of Public Works in consultation with the NITM Advisory Committee.

TRAN4 Prior to approval of the last final map for the Modified Project (or any portion thereof in the event that the final map is approved in multiple phases), the landowner or subsequent property owner shall pay the costs of the following mitigation in an amount to be mutually agreed upon between the landowner or subsequent property owner and the City and reflective of the costs of the mitigation at the time of payment:

- 286 Jeffrey Road & Roosevelt: Restripe the eastbound approach to provide a shared through/right turn lane.
- 361 Bake Parkway & Portola Parkway: Restripe the northbound approach to provide a share through/left lane (which currently exists as a through lane) and modify the traffic signal for a north/south split phase signal operation. Alternatively, restripe the northbound approach to provide dual left-turn lanes in combination with a single through lane and single right-turn lane, and modify signal operation to include northbound right-turn overlap phase.
- 374 Lake Forest & Portola Parkway (Pending Projects analysis impact): Convert the existing northbound approach from de-facto right-turn to a dedicated right-turn, and modify the existing traffic signal operation to include right-turn overlap phase.

4.15.4 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

Two traffic studies were completed by LSA in August 2011. The studies analyzed the proposed OCGP Western Sector Development Plan located in Planning Area 51 in the City of Irvine. The Master Plan Minor Modification and Park Design Review fall within the scope of the Western Sector Park Development Plan.

Master Plan Modification Parking Demand and Trip Generation

The Master Plan Modification Parking Demand and Trip Generation analysis, dated August 2011, is an update to the June 2007 report also prepared by LSA. The report provides a summary of trip and parking generation estimated from the revised Great Park Master Plan conceptual design (Minor Modification). The report includes a summary trip and parking generation for build-out of the park, for both weekday and weekend days, as well as an estimation of parking demand by time of day. The tables and assumptions used therein are described in detail within Appendix D of this Addendum.

The results of the August 2011 parking and traffic generation analysis indicate that 2,804 parking spaces would be necessary to accommodate the park visitors on a weekday and 3,842 spaces would be required on a weekend. The conceptual Great Park design includes regular day-to-day parking for 5,505 vehicles. This supply of parking will be more than sufficient to accommodate the parking demand for the entire park at any given time on a typical weekday or weekend.

4. Discussion of Checklist and Mitigation Measures

The August 2011 analysis also found that the maximum daily trip generation of the park modification would be 13,537 trips on a typical weekday. This is below the 19,083 weekday trips calculated in the OCGP FEIR, and therefore no changes to the impact analysis occur.

According to the traffic data used to prepare this Addendum, full build-out of the Great Park Master Plan would result in a total of 19,030, which is below the EIR maximum; however, the EIR traffic analysis is not based on weekend conditions. The weekend trip analysis was conducted for the parking demand calculations and was not included in the original OCGP Final EIR. Weekend conditions are not considered in the environmental analysis because weekday capacities are based on a.m. and p.m. peak hour factors. These weekday a.m. and p.m. peak period factors are the result of a high percent of work trips that occur during these peak hours, coupled with low vehicle occupancy. This condition would be characteristic of the Great Park study area on a typical weekday where a significant number of weekday work trips travel to and from the various commercial office and industrial uses within the study; however, the pronounced a.m. and p.m. peak hour conditions used to derive weekday daily capacities do not occur during the weekend. Please refer to the Land Use Section 4.10 of this document for a description of various OCGP land uses.

Western Sector Development Plan

The Western Sector Development Plan analysis, dated August 2011, identifies potential impacts of the Western Sector Development Plan Project in the study area based on Existing (2008) and Future Year (2015) traffic conditions using the Irvine Transportation Analysis Model (ITAM 8.4).

The Great Park Western Sector Park Development Plan Trip Generation is presented in Table 4.15-1. As presented in the table, the majority of the trip generation rates were based on the Trip Generation Rates developed in the Orange County Great Park Trip Generation and Parking Demand Analysis prepared by LSA Associates, Inc., dated June 18, 2007 and updated in August 2011. The trip generation is also consistent with the previously prepared Great Park Interim Use Permit Traffic Studies including the Preview Park Update for Hangar 244 Traffic and Parking Study (October 21, 2009), the Agricultural IUP Traffic Study (March 27, 2010) and the Western Sector Park Development Plan IUP Traffic and Parking Analysis (April 12, 2010). The trip generation assumptions for the Ice Rink are from the Rinks in Westminster (Appendix L of the Traffic Report).

As presented in the August 2011 traffic study, the proposed Western Sector Development Plan Project would generate approximately 4,635 daily trips, which is significantly below the 19,083 daily trips approved as part of the Great Park EIR. The AM peak hour is forecast at 184 and the PM peak hour at 659.

4. Discussion of Checklist and Mitigation Measures

Table 4.15-1. Great Park Western Sector Development Plan Trip Generation

Traffic Analysis Zone	Use	Size	Units	Trips Generation	
				Daily Auto Trip Generation Rate per Units	Average Daily Trips
931	A. Agriculture	114.0	acres	2.00	228
933	E. Western Picnic Area	6.8	acres	13.71	93
	K. NEG Building (0.5 acres)	22,500	sf	18.90	425
	L. Ice Rink – Sheets of Ice	3	sheets	240.00	720
	Total TAZ 993				1,238
991	C. North Lawn (Passive Recreation)	18.5	acre	13.71	254
	G. Timeline Central & Timeline West	5.1	acres	4.57	23
	H. South Lawn (Soccer Fields)	4.0	fields	140	560
	Total TAZ 991				837
992	B. Palm Court Open Space	5.8	acres	4.57	27
	Palm Court Hardscape (1.2 Acres)	52,300	sf	18.90	988
	Hangar 244	10,370	sf	18.90	196
	Buildings 242 Exhibition Space	6,400	sf	18.90	121
	Buildings 245-Artists	6,400	sf	18.90	121
	B. Total Palm Court, Hangar 244 and Buildings 242 and 245 ^B				1,453
	D. Farm and Food Lab (2.7 acres)	75	persons	0.80	60
	Community Gardens (1.3 acres)	99	plots	1	99
	D. Total Farm and Food Lab / Community Gardens ^D				159
	I. Promenade	2.4	acres	4.57	11
	J. Existing Balloon, Tent and Misc. Uses.				660
	Total TAZ 992				2,283
Total Great Park Western Sector Park Development Plan					4,586
AM/PM Peak Period/Hour		Peak Period		Peak Hour	
		Number	% of ADT	Number	% of ADT
AM Peak Period/Hour	AM Inbound	259	5.6%	158	3.4%
	AM Outbound	60	1.3%	26	0.6%
	AM Total	319	6.9%	184	4.0%
	PM Inbound	844	18.4%	253	5.5%
	PM Outbound	1,044	22.8%	377	8.2%
	PM Total	1,888	41.2%	630	13.7%

Notes:

- A. Based on Agricultural use per ITAM which is 2.0 trips per acre.
- B. The Palm Court Open Space, Hardscape and Buildings 242 and 245 were based on proposed Great Park Program, Western Sector Park Development Plan Phase I IUP Traffic and Parking Analysis, April 12, 2010. The Hangar 244 trip generation from the Preview Park Update for Hangar 244 Traffic and Parking Study, October 21, 2009.
- C. Based on Western Sector Park Development Plan Phase 1 IUP Traffic and Parking Analysis dated April 12, 2010.
- D. The Farm and Food Lab/Community Gardens trip generation from the Western Sector Park Development Plan Phase 1 IUP Traffic and Parking Analysis, April 12, 2010.
- E. Based on Western Sector Park Development Plan Phase 1 IUP Traffic and Parking Analysis dated April 12, 2010.
- F. C Street: Not a Trip Generator
- G. Great Park Trip Generation and Parking Analysis, August 2007. This trip generation based on ITE rate for Regional Park rate of 4.57 trips per acre per net acre.

4. *Discussion of Checklist and Mitigation Measures*

- H. Great Park Trip Generation and Parking Analysis, August 2007. Area contains three soccer fields and four basketball courts. Trip generation rate based on 35 vehicles per game, 2 games per weekday.
- I. Great Park Trip Generation and Parking Analysis, August 2007. This trip generation based on ITE rate for Regional Park rate of 4.57 trips per acre per net acre.
- J. The daily trip generation for the balloon ride and support uses is based on the highest count day over three weekdays along C Street, north of Marine Way.
- K. The Nature Education Gardens building and maintenance/nursery area are based on the Exhibition Space from the Great Park Trip Generation and Parking Analysis, August 2007.
- L. Irvine Ice Rink daily and peak hour generation based on traffic count and study of the Rinks in Westminster.

The following summarizes the alternatives that were evaluated and included in the August 2011 traffic study. Please note, the August 2011 Traffic Study was initiated prior to submittal of the recently approved Five Point Great Park Neighborhood (GPN) project and SEIR. Alternatives 3A and 4A are not listed below due to the fact that they were associated with the prior Lifelong Learning District and are no longer relevant to the analysis contained in this document.

Alternative 1	Existing Conditions
Alternative 2	Existing plus Western Sector Park Development Plan
Alternative 3B	2015 with Existing Roadway Network and Land Use
Alternative 4B	2015 with Existing Roadway Network and Land Use plus Western Sector Park Development Plan
Alternative 4C	2015 With Existing Roadway Network and Land Use plus Western Sector Park Development Plan plus TVI at 3000 tons per day
Alternative 5A	2015 With Existing Roadway Network and Land Use plus Western Sector Park Development Plan with additional access via Trabuco Road and "C" Street

Alternative 1: Existing Daily Traffic Volumes and Levels of Service

The Existing AM and PM peak hour intersection ICU level of service analysis without the Project is presented in Table 4.15-2. This ICU analysis is based on recent peak hour intersection turn movement counts collected within the past year. These counts and ICU calculation sheets are presented in Appendix B of the Traffic Report (Appendix D of this document). It should also be noted that intersections within the study area but in the City of Lake Forest utilized traffic data from LFTAM.

Based on the Existing Conditions ICU level of service analysis, there are no intersections that exceed the acceptable level of service threshold during the AM or PM peak hour. The addition of the proposed Project does not result in any intersections failing the City's level of service standards. The unsignalized intersection of Marine Way and "C" Street resulted in levels of service within the acceptable thresholds established by the City of Irvine.

Alternative 2: Existing Plus Western Sector Park Development Plan

The second alternative adds the proposed Great Park Western Sector Park Development Plan development traffic to the existing daily and peak hour traffic counts. The forecast additional traffic from the Project is based on the ITAM 8.4 Base Year traffic model. The model changes included the traffic analysis zone splits and network adjustments described in Section IV, plus the addition of Great Park Development Plan daily trips. With a total project increase of 4,586 trips, no significant impacts are anticipated.

4. Discussion of Checklist and Mitigation Measures

The forecast Western Sector Park Development Plan Trip Distribution percentages with the existing network is presented in Figure VI-1 of the August 2011 LSA Traffic Report (Appendix D of this Addendum). The forecast existing plus Western Sector Park Development Plan daily traffic volumes and the resulting daily volume to capacity ratios are presented in Figure VI-2 and Figure VI-3 of the August 2011 LSA Traffic Report respectively. When comparing these forecasts with the Existing daily traffic volumes and volume to capacity ratios presented above, the differences are negligible. The ten links identified to exceed the acceptable level of service (LOS) threshold in the Existing condition also exceed acceptable LOS in the Existing Plus Project condition.

The peak hour link volume to capacity ratio analysis for these ten deficient links is presented in Table VI-1 of the August 2011 LSA Traffic Report. All links which exceed the daily volume to capacity thresholds resulted in acceptable peak hour volume to capacity ratios.

Figure VI-4 of the August 2011 LSA Traffic Report presents the Alternative 2 peak hour intersection turn movements for key intersections within close proximity to the Project. The peak hour intersection level of service analysis is presented in Table 4.15-3. This table represents the Existing and the Existing plus Western Sector Park Development Plan ICUs and LOS for comparison. As can be seen, the differences are negligible and the addition of the Project does not create any impacts.

Table 4.15-2. Existing Peak Hour Intersection Levels of Service

ID	Intersection	Max LOS	ICU/Delay ¹		LOS	
			AM	(PM)	AM	(PM)
282	Jeffrey Rd. & Portola Pkwy.	D	0.32	(0.34)	A	(A)
283	Jeffrey Rd. & Irvine Bl.	D	0.42	(0.69)	A	(B)
284	Jeffrey Rd. & Bryan Av.	D	0.39	(0.34)	A	(A)
285	Jeffrey Rd. & Trabuco Rd.	D	0.38	(0.47)	A	(A)
287	Jeffrey Rd. & I-5 NB Ramps	D	0.37	(0.59)	A	(A)
288	Jeffrey Rd. & Walnut Av./I-5 SB Ramps	D	0.58	(0.56)	A	(A)
289	Jeffrey Rd. & ICD	D	0.46	(0.65)	A	(B)
290	Jeffrey Rd. & Barranca Pkwy.	D	0.64	(0.61)	B	(B)
291	Jeffrey Rd. & Alton Pkwy.	D	0.79	(0.78)	C	(C)
293	Jeffrey Rd. & I-405 NB Ramps	D	0.68	(0.73)	B	(C)
294	University Dr. & I-405 SB Ramps	D	0.54	(0.52)	A	(A)
300	Sand Canyon Av. & Portola Pkwy.	D	0.20	(0.25)	A	(A)
301	Sand Canyon Av. & Irvine Bl.	D	0.44	(0.36)	A	(A)
302	Sand Canyon Av. & Trabuco Pkwy.	D	0.35	(0.37)	A	(A)
303	Sand Canyon Av. & I-5 NB Ramps	E	0.70	(0.56)	B	(A)
304	Sand Canyon Av. & Marine Wy.	D	0.53	(0.60)	A	(A)
305	Sand Canyon Av. & I-5 SB Ramps	E	0.67	(0.62)	B	(B)
306	Sand Canyon Av. & Oak Cyn./Laguna Cyn. Rd.	D	0.55	(0.54)	A	(A)
307	Sand Canyon Av. & ICD	D	0.38	(0.39)	A	(A)
309	Sand Canyon Av. & Barranca Pkwy.	D	0.40	(0.38)	A	(A)
310	Sand Canyon Av. & Alton Pkwy.	D	0.58	(0.59)	A	(A)
311	Sand Canyon Av. & I-405 NB Ramps	D	0.51	(0.39)	A	(A)
312	Sand Canyon Av. & I-405 SB Ramps	D	0.68	(0.49)	B	(A)
313	Laguna Canyon Rd. & ICD	E	0.19	(0.24)	A	(A)
314	Laguna Canyon Rd. & Barranca Pkwy.	E	0.26	(0.25)	A	(A)
315	Laguna Canyon Rd. & Alton Pkwy.	E	0.40	(0.36)	A	(A)
316	SR-133 SB Ramps & Irvine Bl.	D	0.37	(0.42)	A	(A)
317	SR-133 NB Ramps & Irvine Bl.	D	0.43	(0.43)	A	(A)

4. Discussion of Checklist and Mitigation Measures

ID	Intersection	Max LOS	ICU/Delay ¹		LOS	
			AM	(PM)	AM	(PM)
318	Banting & Barranca Pkwy.	E	0.49	(0.47)	A	(A)
319	Banting & Alton Pkwy.	E	0.48	(0.40)	A	(A)
321	Laguna Canyon Rd. & Old Laguna Cyn. Rd.	D	0.80	(0.84)	C	(D)
327	Barranca Pkwy. & Technology	E	0.45	(0.59)	A	(A)
328	Barranca Pkwy. & I-5 HOV Ramp	E	0.45	(0.41)	A	(A)
329	Barranca Pkwy. & ICD	E	0.48	(0.49)	A	(A)
330	Barranca Pkwy. & Pacifica	E	0.48	(0.64)	A	(B)
338	Alton Pkwy. & Irvine Bl.	E	0.38	(0.41)	A	(A)
339	Alton Pkwy. & Toledo Wy.	D	0.36	(0.32)	A	(A)
340	Alton Pkwy. & Jeronimo Rd.	D	0.38	(0.34)	A	(A)
341	Alton Pkwy. & Barranca Pkwy./Muirlands Bl.	D	0.44	(0.45)	A	(A)
343	Alton Pkwy. & Ada	E	0.41	(0.40)	A	(A)
344	Alton Pkwy. & Technology Dr. W.	E	0.42	(0.56)	A	(A)
345	Alton Pkwy. & I-5 NB Ramps	E	0.64	(0.38)	B	(A)
346	Alton Pkwy. & Enterprise	E	0.58	(0.52)	A	(A)
348	Alton Pkwy. & ICD	D	0.56	(0.51)	A	(A)
350	Alton Pkwy. & Pacifica	D	0.43	(0.31)	A	(A)
357	Enterprise Dr. & Fortune Dr./I-405 NB Ramps	E	0.37	(0.65)	A	(B)
358	ICD & Enterprise Dr.	E	0.55	(0.48)	A	(A)
359	ICD & I-405 SB Ramps	E	0.50	(0.51)	A	(A)
362	Bake Pkwy. & Irvine Bl.	E	0.75	(0.75)	C	(C)
363	Bake Pkwy. & Toledo Wy.	D	0.77	(0.63)	C	(B)
364	Bake Pkwy. & Jeronimo Rd.	D	0.85	(0.71)	D	(C)
365	Bake Pkwy. & Muirlands Bl.	D	0.59	(0.66)	A	(B)
366	Bake Pkwy. & Rockfield Bl.	D	0.55	(0.73)	A	(C)
367	Bake Pkwy. & I-5 NB Ramps	E	0.86	(0.60)	D	(A)
368	Bake Pkwy. & I-5 SB Ramps	E	0.63	(0.74)	B	(C)
372	Bake Pkwy. & ICD	E	0.32	(0.39)	A	(A)
409	Bake Pkwy. & Commercentre Dr.	D	0.57	(0.69)	A	(B)
444	Sand Canyon Av. & Burt Rd.	D	0.70	(0.67)	B	(B)
555	Bake Pkwy. & Rancho Pkwy. S	D	0.68	(0.67)	B	(B)
556	Ridge Valley & Portola Pkwy.	D	0.25	(0.16)	A	(A)
560	C St. & Marine Wy. (3-Way Stop)	D	7.20	(7.50)	A	(A)
572	Modjeska & Irvine Bl.	D	0.30	(0.40)	A	(A)

Table 4.15-3. Alternative 2 – Existing Plus Project Peak Hour Intersection Level of Service Analysis

ID	Intersection	Max LOS	Alternative 1				Alternative 2			
			ICU/Delay ¹		LOS		ICU/Delay ¹		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
282	Jeffrey Rd. & Portola Pkwy.	D	0.32	(0.34)	A	(A)	0.32	(0.34)	A	(A)
283	Jeffrey Rd. & Irvine Bl.	D	0.42	(0.69)	A	(B)	0.42	(0.69)	A	(B)
284	Jeffrey Rd. & Bryan Av.	D	0.39	(0.34)	A	(A)	0.39	(0.40)	A	(A)
285	Jeffrey Rd. & Trabuco Rd.	D	0.38	(0.47)	A	(A)	0.38	(0.47)	A	(A)
287	Jeffrey Rd. & I-5 NB Ramps	D	0.37	(0.59)	A	(A)	0.37	(0.59)	A	(A)
288	Jeffrey Rd. & Walnut Av./I-5 SB Ramps	D	0.58	(0.56)	A	(A)	0.58	(0.70)	A	(B)
289	Jeffrey Rd. & ICD	D	0.46	(0.65)	A	(B)	0.46	(0.65)	A	(B)
290	Jeffrey Rd. & Barranca Pkwy.	D	0.64	(0.61)	B	(B)	0.65	(0.61)	B	(B)
291	Jeffrey Rd. & Alton Pkwy.	D	0.79	(0.78)	C	(C)	0.80	(0.78)	C	(C)

4. Discussion of Checklist and Mitigation Measures

ID	Intersection	Max LOS	Alternative 1				Alternative 2			
			ICU/Delay ¹		LOS		ICU/Delay ¹		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
293	Jeffrey Rd. & I-405 NB Ramps	D	0.68	(0.73)	B	(C)	0.68	(0.73)	B	(C)
294	University Dr. & I-405 SB Ramps	D	0.54	(0.52)	A	(A)	0.54	(0.52)	A	(A)
300	Sand Canyon. Av. & Portola Pkwy.	D	0.20	(0.25)	A	(A)	0.23	(0.28)	A	(A)
301	Sand Canyon. Av. & Irvine Bl.	D	0.44	(0.36)	A	(A)	0.44	(0.37)	A	(A)
302	Sand Canyon. Av. & Trabuco Pkwy.	D	0.35	(0.37)	A	(A)	0.36	(0.39)	A	(A)
303	Sand Canyon. Av. & I-5 NB Ramps	E	0.70	(0.56)	B	(A)	0.74	(0.59)	C	(A)
304	Sand Canyon. Av. & Marine Wy.	D	0.53	(0.60)	A	(A)	0.53	(0.76)	A	(C)
305	Sand Canyon. Av. & I-5 SB Ramps	E	0.67	(0.62)	B	(B)	0.67	(0.66)	B	(B)
306	Sand Canyon. Av. & Oak Cyn./Laguna Cyn. Rd.	D	0.55	(0.54)	A	(A)	0.56	(0.54)	A	(A)
307	Sand Canyon. Av. & ICD	D	0.38	(0.39)	A	(A)	0.39	(0.41)	A	(A)
309	Sand Canyon. Av. & Barranca Pkwy.	D	0.40	(0.38)	A	(A)	0.40	(0.38)	A	(A)
310	Sand Canyon. Av. & Alton Pkwy.	D	0.58	(0.59)	A	(A)	0.58	(0.59)	A	(A)
311	Sand Canyon. Av. & I-405 NB Ramps	D	0.51	(0.39)	A	(A)	0.51	(0.39)	A	(A)
312	Sand Canyon. Av. & I-405 SB Ramps	D	0.68	(0.49)	B	(A)	0.69	(0.53)	B	(A)
313	Laguna Canyon Rd. & ICD	E	0.19	(0.24)	A	(A)	0.19	(0.24)	A	(A)
314	Laguna Canyon Rd. & Barranca Pkwy.	E	0.26	(0.25)	A	(A)	0.26	(0.25)	A	(A)
315	Laguna Canyon Rd. & Alton Pkwy.	E	0.40	(0.36)	A	(A)	0.41	(0.36)	A	(A)
316	SR-133 SB Ramps & Irvine Bl.	D	0.37	(0.42)	A	(A)	0.37	(0.42)	A	(A)
317	SR-133 NB Ramps & Irvine Bl.	D	0.43	(0.43)	A	(A)	0.43	(0.43)	A	(A)
318	Banting & Barranca Pkwy.	E	0.49	(0.47)	A	(A)	0.51	(0.47)	A	(A)
319	Banting & Alton Pkwy.	E	0.48	(0.40)	A	(A)	0.48	(0.40)	A	(A)
321	Laguna Canyon Rd. & Old Laguna Cyn. Rd.	D	0.80	(0.84)	C	(D)	0.80	(0.84)	C	(D)
327	Barranca Pkwy. & Technology	E	0.45	(0.59)	A	(A)	0.45	(0.59)	A	(A)
328	Barranca Pkwy. & I-5 HOV Ramp	E	0.45	(0.41)	A	(A)	0.45	(0.42)	A	(A)
329	Barranca Pkwy. & ICD	E	0.48	(0.49)	A	(A)	0.48	(0.49)	A	(A)
330	Barranca Pkwy. & Pacifica	E	0.48	(0.64)	A	(B)	0.48	(0.64)	A	(B)
338	Alton Pkwy. & Irvine Bl.	E	0.38	(0.41)	A	(A)	0.39	(0.42)	A	(A)
339	Alton Pkwy. & Toledo Wy.	D	0.36	(0.32)	A	(A)	0.36	(0.32)	A	(A)
340	Alton Pkwy. & Jeronimo Rd.	D	0.38	(0.34)	A	(A)	0.38	(0.34)	A	(A)
341	Alton Pkwy. & Barranca Pkwy./Muirlands Bl.	D	0.44	(0.45)	A	(A)	0.44	(0.45)	A	(A)
343	Alton Pkwy. & Ada	E	0.41	(0.40)	A	(A)	0.41	(0.41)	A	(A)
344	Alton Pkwy. & Technology	E	0.42	(0.56)	A	(A)	0.42	(0.57)	A	(A)

4. Discussion of Checklist and Mitigation Measures

ID	Intersection	Max LOS	Alternative 1				Alternative 2			
			ICU/Delay ¹		LOS		ICU/Delay ¹		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
	Dr. W.									
345	Alton Pkwy. & I-5 NB Ramps	E	0.64	(0.38)	B	(A)	0.64	(0.38)	B	(A)
346	Alton Pkwy. & Enterprise	E	0.58	(0.52)	A	(A)	0.58	(0.52)	A	(A)
348	Alton Pkwy. & ICD	D	0.56	(0.51)	A	(A)	0.56	(0.51)	A	(A)
350	Alton Pkwy. & Pacifica	D	0.43	(0.31)	A	(A)	0.43	(0.31)	A	(A)
357	Enterprise Dr. & Fortune Dr./I-405 NB Ramps	E	0.37	(0.65)	A	(B)	0.37	(0.65)	A	(B)
358	ICD & Enterprise Dr.	E	0.55	(0.48)	A	(A)	0.56	(0.48)	A	(A)
359	ICD & I-405 SB Ramps	E	0.50	(0.51)	A	(A)	0.50	(0.51)	A	(A)
362	Bake Pkwy. & Irvine Bl.	E	0.75	(0.75)	C	(C)	0.75	(0.76)	C	(C)
363	Bake Pkwy. & Toledo Wy.	D	0.77	(0.63)	C	(B)	0.77	(0.63)	C	(B)
364	Bake Pkwy. & Jeronimo Rd.	D	0.85	(0.71)	D	(C)	0.86	(0.73)	D	(C)
365	Bake Pkwy. & Muirlands Bl.	D	0.59	(0.66)	A	(B)	0.59	(0.66)	A	(B)
366	Bake Pkwy. & Rockfield Bl.	D	0.55	(0.73)	A	(C)	0.55	(0.73)	A	(C)
367	Bake Pkwy. & I-5 NB Ramps	E	0.86	(0.60)	D	(A)	0.86	(0.60)	D	(A)
368	Bake Pkwy. & I-5 SB Ramps	E	0.63	(0.74)	B	(C)	0.63	(0.76)	B	(C)
372	Bake Pkwy. & ICD	E	0.32	(0.39)	A	(A)	0.32	(0.39)	A	(A)
409	Bake Pkwy. & Commercentre Dr.	D	0.57	(0.69)	A	(B)	0.57	(0.69)	A	(B)
444	Sand Canyon Av. & Burt Rd.	D	0.70	(0.67)	B	(B)	0.70	(0.69)	B	(B)
555	Bake Pkwy. & Rancho Pkwy. S	D	0.68	(0.67)	B	(B)	0.68	(0.67)	B	(B)
556	Ridge Valley & Portola Pkwy.	D	0.25	(0.16)	A	(A)	0.25	(0.17)	A	(A)
560	C St. & Marine Wy. (3-Way Stop)	D	7.20	(7.50)	A	(A)	8.20	(16.00)	A	(B)
572	Modjeska & Irvine Bl.	D	0.30	(0.40)	A	(A)	0.41	(0.40)	A	(A)
Note: ¹ ICU is reported for signalized intersection. Delay is reported for unsignalized intersections.										

Alternative 3B: 2015 with Existing Roadway Network and Land Use

This alternative is the ITAM 8.4 2015 baseline land use and roadway alternative assuming existing land uses and roadway network within the Great Park Neighborhoods Lifelong Learning District and assuming the land uses within the Great Park Western Sector Park Development area is limited to existing uses and does not include the proposed development.

This alternative does not include "O" Street between Irvine Boulevard and Marine Way and other Great Park Neighborhoods Lifelong Learning District roadway improvements. Therefore, all traffic from the Great Park Western Sector Park Development Plan area must traverse through the existing intersection of Marine Way and "C" Street/Perimeter Road. This is consistent with the existing roadway network.

The forecast Alternative 3B daily traffic volumes and the resulting daily volume to capacity ratios are presented in Figure VI-12 and Figure VI-13 of the August 2011 LSA Traffic Report respectively.

4. Discussion of Checklist and Mitigation Measures

There are 41 links in which daily volumes exceed the acceptable daily volume to capacity level of service threshold.

The peak hour link volume to capacity ratio analysis is presented in Table VI-7 of the August 2011 LSA Traffic Report. All links which exceed the daily volume to capacity thresholds resulted in acceptable peak hour volume to capacity ratios; therefore no link impacts were identified.

Figure VI-14 of the August 2011 LSA Traffic Report presents the Alternative 3B peak hour intersection turn movements for key intersections within close proximity to the Project. The peak hour intersection level of service analysis is presented in Table 4.15-4. All intersections result in acceptable AM and PM peak hour intersection level of service for all intersections.

**Table 4.15-4. Alternative 3B - 2015 Baseline
Peak Hour Intersection Level of Service Analysis**

ID	Intersection	Max LOS	ICU/Delay ¹		LOS	
			AM	(PM)	AM	(PM)
282	Jeffrey Rd. & Portola Pkwy.	D	0.50	(0.50)	A	(A)
283	Jeffrey Rd. & Irvine Bl.	D	0.66	(0.86)	B	(D)
284	Jeffrey Rd. & Bryan Av.	D	0.65	(0.56)	B	(A)
285	Jeffrey Rd. & Trabuco Rd.	D	0.66	(0.71)	B	(C)
287	Jeffrey Rd. & I-5 NB Ramps	D	0.56	(0.78)	A	(C)
288	Jeffrey Rd. & Walnut Av./I-5 SB Ramps	D	0.71	(0.67)	C	(B)
289	Jeffrey Rd. & ICD	D	0.59	(0.79)	A	(C)
290	Jeffrey Rd. & Barranca Pkwy.	D	0.82	(0.72)	D	(C)
291	Jeffrey Rd. & Alton Pkwy.	D	0.86	(0.82)	D	(D)
293	Jeffrey Rd. & I-405 NB Ramps	D	0.77	(0.83)	C	(D)
294	University Dr. & I-405 SB Ramps	D	0.63	(0.61)	B	(B)
300	Sand Canyon. Av. & Portola Pkwy.	D	0.38	(0.47)	A	(A)
301	Sand Canyon. Av. & Irvine Bl.	D	0.68	(0.56)	B	(A)
302	Sand Canyon. Av. & Trabuco Pkwy.	D	0.60	(0.58)	A	(A)
303	Sand Canyon. Av. & I-5 NB Ramps	E	0.60	(0.70)	A	(B)
304	Sand Canyon. Av. & Marine Wy.	D	0.51	(0.72)	A	(C)
305	Sand Canyon. Av. & I-5 SB Ramps	E	0.72	(0.61)	C	(B)
306	Sand Canyon. Av. & Oak Cyn./Laguna Cyn. Rd.	D	0.62	(0.82)	B	(D)
307	Sand Canyon. Av. & ICD	D	0.55	(0.58)	A	(A)
309	Sand Canyon. Av. & Barranca Pkwy.	D	0.57	(0.52)	A	(A)
310	Sand Canyon. Av. & Alton Pkwy.	D	0.75	(0.71)	C	(C)
311	Sand Canyon. Av. & I-405 NB Ramps	D	0.65	(0.48)	B	(A)
312	Sand Canyon. Av. & I-405 SB Ramps	D	0.85	(0.63)	D	(B)
313	Laguna Canyon Rd. & ICD	E	0.27	(0.34)	A	(A)
314	Laguna Canyon Rd. & Barranca Pkwy.	E	0.36	(0.34)	A	(A)
315	Laguna Canyon Rd. & Alton Pkwy.	E	0.55	(0.49)	A	(A)
316	SR-133 SB Ramps & Irvine Bl.	D	0.47	(0.52)	A	(A)
317	SR-133 NB Ramps & Irvine Bl.	D	0.49	(0.53)	A	(A)
318	Banting & Barranca Pkwy.	E	0.66	(0.59)	B	(A)
319	Banting & Alton Pkwy.	E	0.59	(0.52)	A	(A)
321	Laguna Canyon Rd. & Old Laguna Cyn. Rd.	D	0.65	(0.66)	B	(B)
327	Barranca Pkwy. & Technology	E	0.50	(0.60)	A	(A)
328	Barranca Pkwy. & I-5 HOV Ramp	E	0.48	(0.43)	A	(A)
329	Barranca Pkwy. & ICD	E	0.57	(0.58)	A	(A)

4. Discussion of Checklist and Mitigation Measures

ID	Intersection	Max LOS	ICU/Delay ¹		LOS	
			AM	(PM)	AM	(PM)
330	Barranca Pkwy. & Pacifica	E	0.49	(0.71)	A	(C)
338	Alton Pkwy. & Irvine Bl.	E	0.85	(0.81)	D	(D)
339	Alton Pkwy. & Toledo Wy.	D	0.63	(0.54)	B	(A)
340	Alton Pkwy. & Jeronimo Rd.	D	0.61	(0.53)	B	(A)
341	Alton Pkwy. & Barranca Pkwy./Muirlands Bl.	D	0.57	(0.68)	A	(B)
343	Alton Pkwy. & Ada	E	0.45	(0.43)	A	(A)
344	Alton Pkwy. & Technology Dr. W.	E	0.45	(0.63)	A	(B)
345	Alton Pkwy. & I-5 NB Ramps	E	0.69	(0.46)	B	(A)
346	Alton Pkwy. & Enterprise	E	0.60	(0.67)	A	(B)
348	Alton Pkwy. & ICD	D	0.58	(0.64)	A	(B)
350	Alton Pkwy. & Pacifica	D	0.67	(0.52)	B	(A)
357	Enterprise Dr. & Fortune Dr./I-405 NB Ramps	E	0.45	(0.73)	A	(C)
358	ICD & Enterprise Dr.	E	0.72	(0.66)	C	(B)
359	ICD & I-405 SB Ramps	E	0.67	(0.74)	B	(C)
362	Bake Pkwy. & Irvine Bl.	E	0.73	(0.80)	C	(C)
363	Bake Pkwy. & Toledo Wy.	D	0.84	(0.65)	D	(B)
364	Bake Pkwy. & Jeronimo Rd.	D	0.77	(0.74)	C	(C)
365	Bake Pkwy. & Muirlands Bl.	D	0.64	(0.69)	B	(B)
366	Bake Pkwy. & Rockfield Bl.	D	0.59	(0.84)	A	(D)
367	Bake Pkwy. & I-5 NB Ramps	E	0.89	(0.66)	D	(B)
368	Bake Pkwy. & I-5 SB Ramps	E	0.70	(0.85)	B	(D)
372	Bake Pkwy. & ICD	E	0.38	(0.48)	A	(A)
409	Bake Pkwy. & Commercentre Dr.	D	0.61	(0.72)	B	(C)
444	Sand Canyon Av. & Burt Rd.	D	0.76	(0.58)	C	(A)
481	Laguna Canyon Rd. & Technology Dr.	E	0.39	(0.33)	A	(A)
514	Alton Pkwy. & Rancho Pkwy.	D	0.71	(0.58)	C	(A)
518	Alton Pkwy. & Commercentre	D	0.51	(0.64)	A	(B)
555	Bake Pkwy. & Rancho Pkwy. S	D	0.64	(0.68)	B	(B)
556	Ridge Valley & Portola Pkwy.	D	0.70	(0.44)	B	(A)
560	C St. & Marine Way (3-way stop)	D	8.20	(9.20)	A	(A)
567	Marine Wy. & Alton Pkwy.	E	0.41	(0.40)	A	(A)
572	Modjeska & Irvine Bl.	D	0.47	(0.58)	A	(A)
Note: ¹ ICU is reported for signalized intersection. Delay is reported for unsignalized intersections.						

Alternative 4B: 2015 with Existing Roadway Network and Land Use plus Western Sector Park Development Plan

This alternative is the ITAM 8.4 2015 baseline land use and roadway alternative assuming existing land uses and roadway network within the Great Park Neighborhoods Lifelong Learning District with the addition of the Great Park Western Sector Park Development Plan proposed land uses.

Consistent with Alternative 3B, this alternative does not include "O" Street between Irvine Boulevard and Marine Way. Therefore all traffic from the Great Park Western Sector Park Development Plan must traverse through the existing intersection of Marine Way and "C" Street/Perimeter Road and the existing on-site roadway network.

The Project trip distribution is presented in Figure VI-15 of the August 2011 LSA Traffic Report. The forecast Alternative 4B daily traffic volumes and the resulting daily volume to capacity ratios are

4. Discussion of Checklist and Mitigation Measures

presented in Figure VI-16 and Figure VI-17 of the August 2011 LSA Traffic Report respectively. When comparing these forecasts with Alternative 3B: 2015 With Existing Roadway Network and Land Use, the same 41 links that exceed the daily volume to capacity ratio result.

The peak hour link volume to capacity ratio analysis is presented in Table VI-9 of the August 2011 LSA Traffic Report. All links which exceed the daily volume to capacity thresholds resulted in acceptable peak hour volume to capacity ratios; therefore no link impacts were identified.

Figure VI-18 of the August 2011 LSA Traffic Report presents the Alternative 4B peak hour intersection turn movements for key intersections within close proximity to the Project. The peak hour intersection level of service analysis is presented in Table 4.15-5. This table presents both Alternative 3B, the 2015 Baseline with Existing Roadway Network and Land Use and Alternative 4B which adds the Great Park Western Sector Park Development Plan. All intersections would result in acceptable levels of service for the AM and PM peak hours. The Project does not add any additional impact at this intersection.

**Table 4.15-5. Alternative 4B - 2015 Baseline Plus Project
Peak Hour Intersection Level of Service Analysis**

ID	Intersection	Max LOS	Alternative 3B				Alternative 4B			
			ICU/Delay ¹		LOS		ICU/Delay ¹		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
282	Jeffrey Rd. & Portola Pkwy.	D	0.50	(0.50)	A	(A)	0.50	(0.50)	A	(A)
283	Jeffrey Rd. & Irvine Bl.	D	0.66	(0.86)	B	(D)	0.65	(0.87)	B	(D)
284	Jeffrey Rd. & Bryan Av.	D	0.65	(0.56)	B	(A)	0.65	(0.55)	B	(A)
285	Jeffrey Rd. & Trabuco Rd.	D	0.66	(0.71)	B	(C)	0.65	(0.70)	B	(B)
287	Jeffrey Rd. & I-5 NB Ramps	D	0.56	(0.78)	A	(C)	0.56	(0.78)	A	(C)
288	Jeffrey Rd. & Walnut Av./I-5 SB Ramps	D	0.71	(0.67)	C	(B)	0.71	(0.67)	C	(B)
289	Jeffrey Rd. & ICD	D	0.59	(0.79)	A	(C)	0.59	(0.79)	A	(C)
290	Jeffrey Rd. & Barranca Pkwy.	D	0.82	(0.72)	D	(C)	0.82	(0.73)	D	(C)
291	Jeffrey Rd. & Alton Pkwy.	D	0.86	(0.82)	D	(D)	0.86	(0.83)	D	(D)
293	Jeffrey Rd. & I-405 NB Ramps	D	0.77	(0.83)	C	(D)	0.78	(0.83)	C	(D)
294	University Dr. & I-405 SB Ramps	D	0.63	(0.61)	B	(B)	0.63	(0.61)	B	(B)
300	Sand Canyon. Av. & Portola Pkwy.	D	0.38	(0.47)	A	(A)	0.37	(0.46)	A	(A)
301	Sand Canyon. Av. & Irvine Bl.	D	0.68	(0.56)	B	(A)	0.68	(0.55)	B	(A)
302	Sand Canyon. Av. & Trabuco Pkwy.	D	0.60	(0.58)	A	(A)	0.60	(0.59)	A	(A)
303	Sand Canyon. Av. & I-5 NB Ramps	E	0.60	(0.70)	A	(B)	0.62	(0.72)	B	(C)
304	Sand Canyon. Av. & Marine Wy.	D	0.51	(0.72)	A	(C)	0.50	(0.82)	A	(D)
305	Sand Canyon. Av. & I-5 SB Ramps	E	0.72	(0.61)	C	(B)	0.72	(0.63)	C	(B)
306	Sand Canyon. Av. &	D	0.62	(0.82)	B	(D)	0.62	(0.82)	B	(D)

4. Discussion of Checklist and Mitigation Measures

ID	Intersection	Max LOS	Alternative 3B				Alternative 4B			
			ICU/Delay ¹		LOS		ICU/Delay ¹		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
	Oak Cyn./Laguna Cyn. Rd.									
307	Sand Canyon. Av. & ICD	D	0.55	(0.58)	A	(A)	0.55	(0.59)	A	(A)
309	Sand Canyon. Av. & Barranca Pkwy.	D	0.57	(0.52)	A	(A)	0.57	(0.52)	A	(A)
310	Sand Canyon. Av. & Alton Pkwy.	D	0.75	(0.71)	C	(C)	0.75	(0.71)	C	(C)
311	Sand Canyon. Av. & I-405 NB Ramps	D	0.65	(0.48)	B	(A)	0.65	(0.48)	B	(A)
312	Sand Canyon. Av. & I-405 SB Ramps	D	0.85	(0.63)	D	(B)	0.85	(0.63)	D	(B)
313	Laguna Canyon Rd. & ICD	E	0.27	(0.34)	A	(A)	0.26	(0.35)	A	(A)
314	Laguna Canyon Rd. & Barranca Pkwy.	E	0.36	(0.34)	A	(A)	0.36	(0.34)	A	(A)
315	Laguna Canyon Rd. & Alton Pkwy.	E	0.55	(0.49)	A	(A)	0.55	(0.49)	A	(A)
316	SR-133 SB Ramps & Irvine Bl.	D	0.47	(0.52)	A	(A)	0.47	(0.52)	A	(A)
317	SR-133 NB Ramps & Irvine Bl.	D	0.49	(0.53)	A	(A)	0.49	(0.53)	A	(A)
318	Banting & Barranca Pkwy.	E	0.66	(0.59)	B	(A)	0.66	(0.61)	B	(A)
319	Banting & Alton Pkwy.	E	0.59	(0.52)	A	(A)	0.59	(0.52)	A	(A)
321	Laguna Canyon Rd. & Old Laguna Cyn. Rd.	D	0.65	(0.66)	B	(B)	0.65	(0.66)	B	(B)
327	Barranca Pkwy. & Technology	E	0.50	(0.60)	A	(A)	0.49	(0.61)	A	(B)
328	Barranca Pkwy. & I-5 HOV Ramp	E	0.48	(0.43)	A	(A)	0.48	(0.43)	A	(A)
329	Barranca Pkwy. & ICD	E	0.57	(0.58)	A	(A)	0.56	(0.58)	A	(A)
330	Barranca Pkwy. & Pacifica	E	0.49	(0.71)	A	(C)	0.49	(0.72)	A	(C)
338	Alton Pkwy. & Irvine Bl.	E	0.85	(0.81)	D	(D)	0.85	(0.82)	D	(D)
339	Alton Pkwy. & Toledo Wy.	D	0.63	(0.54)	B	(A)	0.63	(0.55)	B	(A)
340	Alton Pkwy. & Jeronimo Rd.	D	0.61	(0.53)	B	(A)	0.61	(0.53)	B	(A)
341	Alton Pkwy. & Barranca Pkwy./Muirlands Bl.	D	0.57	(0.68)	A	(B)	0.56	(0.68)	A	(B)
343	Alton Pkwy. & Ada	E	0.45	(0.43)	A	(A)	0.45	(0.43)	A	(A)
344	Alton Pkwy. & Technology Dr. W.	E	0.45	(0.63)	A	(B)	0.45	(0.64)	A	(B)
345	Alton Pkwy. & I-5 NB Ramps	E	0.69	(0.46)	B	(A)	0.69	(0.46)	B	(A)
346	Alton Pkwy. & Enterprise	E	0.60	(0.67)	A	(B)	0.61	(0.67)	B	(B)
348	Alton Pkwy. & ICD	D	0.58	(0.64)	A	(B)	0.58	(0.64)	A	(B)
350	Alton Pkwy. & Pacifica	D	0.67	(0.52)	B	(A)	0.67	(0.52)	B	(A)
357	Enterprise Dr. & Fortune Dr./I-405 NB Ramps	E	0.45	(0.73)	A	(C)	0.45	(0.73)	A	(C)
358	ICD & Enterprise Dr.	E	0.72	(0.66)	C	(B)	0.72	(0.66)	C	(B)
359	ICD & I-405 SB Ramps	E	0.67	(0.74)	B	(C)	0.66	(0.75)	B	(C)
362	Bake Pkwy. & Irvine Bl.	E	0.73	(0.80)	C	(C)	0.74	(0.79)	C	(C)
363	Bake Pkwy. & Toledo	D	0.84	(0.65)	D	(B)	0.84	(0.64)	D	(B)

4. Discussion of Checklist and Mitigation Measures

ID	Intersection	Max LOS	Alternative 3B				Alternative 4B			
			ICU/Delay ¹		LOS		ICU/Delay ¹		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
	Wy.									
364	Bake Pkwy. & Jeronimo Rd.	D	0.77	(0.74)	C	(C)	0.76	(0.74)	C	(C)
365	Bake Pkwy. & Muirlands Bl.	D	0.64	(0.69)	B	(B)	0.63	(0.69)	B	(B)
366	Bake Pkwy. & Rockfield Bl.	D	0.59	(0.84)	A	(D)	0.58	(0.84)	A	(D)
367	Bake Pkwy. & I-5 NB Ramps	E	0.89	(0.66)	D	(B)	0.89	(0.67)	D	(B)
368	Bake Pkwy. & I-5 SB Ramps	E	0.70	(0.85)	B	(D)	0.70	(0.85)	B	(D)
372	Bake Pkwy. & ICD	E	0.38	(0.48)	A	(A)	0.38	(0.48)	A	(A)
409	Bake Pkwy. & Commercentre Dr.	D	0.61	(0.72)	B	(C)	0.61	(0.72)	B	(C)
444	Sand Canyon Av. & Burt Rd.	D	0.76	(0.58)	C	(A)	0.76	(0.58)	C	(A)
481	Laguna Canyon Rd. & Technology Dr.	E	0.39	(0.33)	A	(A)	0.38	(0.34)	A	(A)
514	Alton Pkwy. & Rancho Pkwy.	D	0.71	(0.58)	C	(A)	0.71	(0.59)	C	(A)
518	Alton Pkwy. & Commercentre	D	0.51	(0.64)	A	(B)	0.51	(0.64)	A	(B)
555	Bake Pkwy. & Rancho Pkwy. S	D	0.64	(0.68)	B	(B)	0.64	(0.68)	B	(B)
556	Ridge Valley & Portola Pkwy.	D	0.70	(0.44)	B	(A)	0.70	(0.45)	B	(A)
560	C St. & Marine Way (3-way stop)	D	8.20	(9.20)	A	(A)	8.70	(17.70)	A	(C)
567	Marine Wy. & Alton Pkwy.	E	0.41	(0.40)	A	(A)	0.41	(0.41)	A	(A)
572	Modjeska & Irvine Bl.	D	0.47	(0.58)	A	(A)	0.47	(0.58)	A	(A)
Note:										
¹ ICU is reported for signalized intersection. Delay is reported for unsignalized intersections.										

Alternative 4C: 2015 With Existing Roadway Network and Land Use plus Western Sector Park Development Plan Plus TVI at 3,000 Tons Per Day

Tierra Verde Industries (TVI), a composting and materials recovery facility located along Marine Way, south and east of the Marine Way and "C" Street/Perimeter Road intersection is proposing to expand its existing facility. Their request for increase is to 3,000 tons per day.

Based on current daily traffic counts, TVI generates 1,556 daily trips. The expansion to 3,000 tons per day would equate to 3,423 total trips or an increase of 1,867 daily trips. The TVI expansion would also generate 138 AM and 152 PM peak hour trips.

These additional 1,867 daily trips were added to the 2015 With Existing Roadway Network and Land Use plus the Western Sector Park Development Plan.

The forecast Alternative 4C daily traffic volumes and the resulting daily volume to capacity ratios are presented in Figure VI-19 and Figure VI-20 of the August 2011 LSA Traffic Report respectively. When

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comparing these forecasts with Alternative 4B: 2015 Existing Roadway Network and Land Use plus the Great Park Western Sector Park Development Plan, the addition of the TVI development adds two additional links along Irvine Boulevard (43 instead of 41) to those links that exceed the daily volume to capacity ratio.

The peak hour link volume to capacity ratio analysis is presented in Table VI-11 of the August 2011 LSA Traffic Report. All 43 links which exceed the daily volume to capacity thresholds resulted in acceptable peak hour volume to capacity ratios.

The peak hour intersection turn movements for key intersections within proximity of the Project are presented in Figure VI-21. The peak hour intersection level of service analysis is presented in Table 4.15-6. This table presents both Alternative 4B, the 2015 With Existing Roadway Network and Land Use with the Great Park Western Sector Park Development Plan and Alternative 4C which adds the future traffic from the proposed TVI development. There were no intersections that resulted in unacceptable levels of service for Alternative 4B without the expanded TVI. However with the addition of TVI the intersection of Marine Way and "C" Street/Perimeter Road was found to have peak hour intersection delay during the PM peak hour. With signalization, this intersection would operate at acceptable levels of service with the additional TVI traffic.

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Table 4.15-6. Alternative 4C - 2015 Baseline Plus Project and TVI Intersection Level of Service Analysis

ID	Intersection	Max LOS	Alternative 3B				Alternative 4B				Alternative 4C			
			ICU/Delay ¹		LOS		ICU/Delay ¹		LOS		ICU/Delay ¹		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
282	Jeffrey Rd. & Portola Pkwy.	D	0.50	(0.50)	A	(A)	0.50	(0.50)	A	(A)	0.50	(0.49)	A	(A)
283	Jeffrey Rd. & Irvine Bl.	D	0.66	(0.86)	B	(D)	0.65	(0.87)	B	(D)	0.66	(0.86)	B	(D)
284	Jeffrey Rd. & Bryan Av.	D	0.65	(0.56)	B	(A)	0.65	(0.55)	B	(A)	0.64	(0.55)	B	(A)
285	Jeffrey Rd. & Trabuco Rd.	D	0.66	(0.71)	B	(C)	0.65	(0.70)	B	(B)	0.65	(0.70)	B	(B)
287	Jeffrey Rd. & I-5 NB Ramps	D	0.56	(0.78)	A	(C)	0.56	(0.78)	A	(C)	0.56	(0.78)	A	(C)
288	Jeffrey Rd. & Walnut Av./I-5 SB Ramps	D	0.71	(0.67)	C	(B)	0.71	(0.67)	C	(B)	0.71	(0.66)	C	(B)
289	Jeffrey Rd. & ICD	D	0.59	(0.79)	A	(C)	0.59	(0.79)	A	(C)	0.59	(0.79)	A	(C)
290	Jeffrey Rd. & Barranca Pkwy.	D	0.82	(0.72)	D	(C)	0.82	(0.73)	D	(C)	0.82	(0.72)	D	(C)
291	Jeffrey Rd. & Alton Pkwy.	D	0.86	(0.82)	D	(D)	0.86	(0.83)	D	(D)	0.86	(0.82)	D	(D)
293	Jeffrey Rd. & I-405 NB Ramps	D	0.77	(0.83)	C	(D)	0.78	(0.83)	C	(D)	0.77	(0.83)	C	(D)
294	University Dr. & I-405 SB Ramps	D	0.63	(0.61)	B	(B)	0.63	(0.61)	B	(B)	0.63	(0.61)	B	(B)
300	Sand Canyon. Av. & Portola Pkwy.	D	0.38	(0.47)	A	(A)	0.37	(0.46)	A	(A)	0.37	(0.47)	A	(A)
301	Sand Canyon. Av. & Irvine Bl.	D	0.68	(0.56)	B	(A)	0.68	(0.55)	B	(A)	0.69	(0.55)	B	(A)
302	Sand Canyon. Av. & Trabuco Pkwy.	D	0.60	(0.58)	A	(A)	0.60	(0.59)	A	(A)	0.61	(0.59)	B	(A)
303	Sand Canyon. Av. & I-5 NB Ramps	E	0.60	(0.70)	A	(B)	0.62	(0.72)	B	(C)	0.63	(0.72)	B	(C)
304	Sand Canyon. Av. & Marine Wy.	D	0.51	(0.72)	A	(C)	0.50	(0.82)	A	(D)	0.51	(0.86)	A	(D)
305	Sand Canyon. Av. & I-5 SB Ramps	E	0.72	(0.61)	C	(B)	0.72	(0.63)	C	(B)	0.72	(0.64)	C	(B)
306	Sand Canyon. Av. & Oak Cyn./Laguna Cyn. Rd.	D	0.62	(0.82)	B	(D)	0.62	(0.82)	B	(D)	0.62	(0.82)	B	(D)
307	Sand Canyon. Av. & ICD	D	0.55	(0.58)	A	(A)	0.55	(0.59)	A	(A)	0.55	(0.60)	A	(A)
309	Sand Canyon. Av. &	D	0.57	(0.52)	A	(A)	0.57	(0.52)	A	(A)	0.56	(0.52)	A	(A)

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ID	Intersection	Max LOS	Alternative 3B				Alternative 4B				Alternative 4C			
			ICU/Delay ¹		LOS		ICU/Delay ¹		LOS		ICU/Delay ¹		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
	Barranca Pkwy.													
310	Sand Canyon. Av. & Alton Pkwy.	D	0.75	(0.71)	C	(C)	0.75	(0.71)	C	(C)	0.74	(0.71)	C	(C)
311	Sand Canyon. Av. & I-405 NB Ramps	D	0.65	(0.48)	B	(A)	0.65	(0.48)	B	(A)	0.65	(0.49)	B	(A)
312	Sand Canyon. Av. & I-405 SB Ramps	D	0.85	(0.63)	D	(B)	0.85	(0.63)	D	(B)	0.85	(0.64)	D	(B)
313	Laguna Canyon Rd. & ICD	E	0.27	(0.34)	A	(A)	0.26	(0.35)	A	(A)	0.27	(0.35)	A	(A)
314	Laguna Canyon Rd. & Barranca Pkwy.	E	0.36	(0.34)	A	(A)	0.36	(0.34)	A	(A)	0.35	(0.34)	A	(A)
315	Laguna Canyon Rd. & Alton Pkwy.	E	0.55	(0.49)	A	(A)	0.55	(0.49)	A	(A)	0.55	(0.49)	A	(A)
316	SR-133 SB Ramps & Irvine Bl.	D	0.47	(0.52)	A	(A)	0.47	(0.52)	A	(A)	0.47	(0.52)	A	(A)
317	SR-133 NB Ramps & Irvine Bl.	D	0.49	(0.53)	A	(A)	0.49	(0.53)	A	(A)	0.49	(0.53)	A	(A)
318	Banting & Barranca Pkwy.	E	0.66	(0.59)	B	(A)	0.66	(0.61)	B	(A)	0.66	(0.61)	B	(B)
319	Banting & Alton Pkwy.	E	0.59	(0.52)	A	(A)	0.59	(0.52)	A	(A)	0.58	(0.52)	A	(A)
321	Laguna Canyon Rd. & Old Laguna Cyn. Rd.	D	0.65	(0.66)	B	(B)	0.65	(0.66)	B	(B)	0.65	(0.66)	B	(B)
327	Barranca Pkwy. & Technology	E	0.50	(0.60)	A	(A)	0.49	(0.61)	A	(B)	0.49	(0.61)	A	(B)
328	Barranca Pkwy. & I-5 HOV Ramp	E	0.48	(0.43)	A	(A)	0.48	(0.43)	A	(A)	0.48	(0.44)	A	(A)
329	Barranca Pkwy. & ICD	E	0.57	(0.58)	A	(A)	0.56	(0.58)	A	(A)	0.56	(0.58)	A	(A)
330	Barranca Pkwy. & Pacifica	E	0.49	(0.71)	A	(C)	0.49	(0.72)	A	(C)	0.49	(0.72)	A	(C)
338	Alton Pkwy. & Irvine Bl.	E	0.85	(0.81)	D	(D)	0.85	(0.82)	D	(D)	0.86	(0.82)	D	(D)
339	Alton Pkwy. & Toledo Wy.	D	0.63	(0.54)	B	(A)	0.63	(0.55)	B	(A)	0.64	(0.55)	B	(A)
340	Alton Pkwy. & Jeronimo Rd.	D	0.61	(0.53)	B	(A)	0.61	(0.53)	B	(A)	0.61	(0.53)	B	(A)
341	Alton Pkwy. & Barranca Pkwy./Muirlands Bl.	D	0.57	(0.68)	A	(B)	0.56	(0.68)	A	(B)	0.56	(0.68)	A	(B)
343	Alton Pkwy. & Ada	E	0.45	(0.43)	A	(A)	0.45	(0.43)	A	(A)	0.46	(0.43)	A	(A)
344	Alton Pkwy. &	E	0.45	(0.63)	A	(B)	0.45	(0.64)	A	(B)	0.46	(0.63)	A	(B)

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ID	Intersection	Max LOS	Alternative 3B				Alternative 4B				Alternative 4C			
			ICU/Delay ¹		LOS		ICU/Delay ¹		LOS		ICU/Delay ¹		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
	Technology Dr. W.													
345	Alton Pkwy. & I-5 NB Ramps	E	0.69	(0.46)	B	(A)	0.69	(0.46)	B	(A)	0.69	(0.46)	B	(A)
346	Alton Pkwy. & Enterprise	E	0.60	(0.67)	A	(B)	0.61	(0.67)	B	(B)	0.60	(0.67)	A	(B)
348	Alton Pkwy. & ICD	D	0.58	(0.64)	A	(B)	0.58	(0.64)	A	(B)	0.58	(0.64)	A	(B)
350	Alton Pkwy. & Pacifica	D	0.67	(0.52)	B	(A)	0.67	(0.52)	B	(A)	0.67	(0.52)	B	(A)
357	Enterprise Dr. & Fortune Dr./I-405 NB Ramps	E	0.45	(0.73)	A	(C)	0.45	(0.73)	A	(C)	0.45	(0.73)	A	(C)
358	ICD & Enterprise Dr.	E	0.72	(0.66)	C	(B)	0.72	(0.66)	C	(B)	0.72	(0.66)	C	(B)
359	ICD & I-405 SB Ramps	E	0.67	(0.74)	B	(C)	0.66	(0.75)	B	(C)	0.67	(0.74)	B	(C)
362	Bake Pkwy. & Irvine Bl.	E	0.73	(0.80)	C	(C)	0.74	(0.79)	C	(C)	0.73	(0.80)	C	(C)
363	Bake Pkwy. & Toledo Wy.	D	0.84	(0.65)	D	(B)	0.84	(0.64)	D	(B)	0.84	(0.64)	D	(B)
364	Bake Pkwy. & Jeronimo Rd.	D	0.77	(0.74)	C	(C)	0.76	(0.74)	C	(C)	0.76	(0.73)	C	(C)
365	Bake Pkwy. & Muirlands Bl.	D	0.64	(0.69)	B	(B)	0.63	(0.69)	B	(B)	0.64	(0.69)	B	(B)
366	Bake Pkwy. & Rockfield Bl.	D	0.59	(0.84)	A	(D)	0.58	(0.84)	A	(D)	0.58	(0.83)	A	(D)
367	Bake Pkwy. & I-5 NB Ramps	E	0.89	(0.66)	D	(B)	0.89	(0.67)	D	(B)	0.89	(0.67)	D	(B)
368	Bake Pkwy. & I-5 SB Ramps	E	0.70	(0.85)	B	(D)	0.70	(0.85)	B	(D)	0.70	(0.85)	B	(D)
372	Bake Pkwy. & ICD	E	0.38	(0.48)	A	(A)	0.38	(0.48)	A	(A)	0.37	(0.48)	A	(A)
409	Bake Pkwy. & Commercentre Dr.	D	0.61	(0.72)	B	(C)	0.61	(0.72)	B	(C)	0.61	(0.72)	B	(C)
444	Sand Canyon Av. & Burt Rd.	D	0.76	(0.58)	C	(A)	0.76	(0.58)	C	(A)	0.76	(0.58)	C	(A)
481	Laguna Canyon Rd. & Technology Dr.	E	0.39	(0.33)	A	(A)	0.38	(0.34)	A	(A)	0.39	(0.34)	A	(A)
514	Alton Pkwy. & Rancho Pkwy.	D	0.71	(0.58)	C	(A)	0.71	(0.59)	C	(A)	0.71	(0.59)	C	(A)
518	Alton Pkwy. & Commercentre	D	0.51	(0.64)	A	(B)	0.51	(0.64)	A	(B)	0.51	(0.64)	A	(B)
555	Bake Pkwy. & Rancho Pkwy. S	D	0.64	(0.68)	B	(B)	0.64	(0.68)	B	(B)	0.64	(0.68)	B	(B)
556	Ridge Valley & Portola Pkwy.	D	0.70	(0.44)	B	(A)	0.70	(0.45)	B	(A)	0.70	(0.45)	B	(A)

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ID	Intersection	Max LOS	Alternative 3B				Alternative 4B				Alternative 4C			
			ICU/Delay ¹		LOS		ICU/Delay ¹		LOS		ICU/Delay ¹		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
560	C St. & Marine Way (3-way stop)	D	8.20	(9.20)	A	(A)	8.70	(17.70)	A	(C)	10.00	(25.90)	A	(D)
560	C St. & Marine Way (Signalized)	D	n/a								0.28	(0.55)	A	(A)
567	Marine Wy. & Alton Pkwy.	E	0.41	(0.40)	A	(A)	0.41	(0.41)	A	(A)	0.41	(0.41)	A	(A)
572	Modjeska & Irvine Bl.	D	0.47	(0.58)	A	(A)	0.47	(0.58)	A	(A)	0.46	(0.58)	A	(A)
Note: ¹ ICU is reported for signalized intersection. Delay is reported for unsignalized intersections.														

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Alternative 5A: 2015 With Existing Roadway Network and Land Use Plus Western Sector Park Development Plan With Additional Access Via Trabuco Road and “C” Street

All 2015 Baseline alternatives identified in this addendum require all Western Sector Park Development Plan traffic to travel through the Marine Way and “C” Street/Perimeter Road intersection. In this alternative, “C” Street continues north of the Western Sector Park Development Plan property line and continues until it intersects with Trabuco Road thereby allowing utilization of Trabuco Road as an access point for traffic to and from the Western Sector Park Development.

The Project trip distribution is presented in Figure VI-22. Based on the ITAM Traffic Model, 30 percent of the Great Park Western Sector Park Development Plan traffic would divert north to the new Trabuco connection, depending on AM or PM peak hour and inbound versus outbound.

The forecast Alternative 5A daily traffic volumes and the resulting daily volume to capacity ratios are presented in Figure VI-23 and Figure VI-24 of the August 2011 LSA Traffic Report respectively. When comparing these forecasts with Alternative 4B: 2015 Baseline With Existing Network and Land Use Plus the Great Park Western Sector Park Development Plan without the northerly connection, there are no changes to the number of links where the daily volume to capacity ratio exceeds the daily level of service threshold.

The peak hour link volume to capacity ratio analysis is presented in Table VI-13 of the August 2011 LSA Traffic Report. All links which exceed the daily volume to capacity thresholds resulted in acceptable peak hour volume to capacity ratios.

Figure VI-25 of the August 2011 LSA Traffic Report presents the Alternative 5A peak hour turn movements at intersections adjacent to the project. The peak hour intersection level of service analysis is presented in Table 4.15-7. This table presents both Alternative 4B, the 2015 With Existing Roadway Network and Land Use Plus Western Sector Park Development Plan without a connection to the north and 5A, with a connection to the north. As can be seen, the differences are negligible and connection to the north does not provide a major impact or benefit based on the ITAM travel model methodology. It should be noted, however, that the Great Park Western Sector Park Development Plan does have events where the peak is quite pronounced at times other than the traditional AM or PM peak hour. Under those conditions, a second access to the north would provide for improved traffic flow and better ingress and egress. It should be noted that future authorization from Heritage Fields would be required for access to Trabuco Road.

4. Discussion of Checklist and Mitigation Measures

**Table 4.15-7. Alternative 5A - 2015 Baseline Plus Project
With Trabuco Road Access Intersection Level of Service Analysis**

ID	Intersection	Max LOS	Alternative 4B				Alternative 5A			
			ICU/Delay ¹		LOS		ICU/Delay ¹		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
282	Jeffrey Rd. & Portola Pkwy.	D	0.50	(0.50)	A	(A)	0.50	(0.50)	A	(A)
283	Jeffrey Rd. & Irvine Bl.	D	0.65	(0.87)	B	(D)	0.66	(0.87)	B	(D)
284	Jeffrey Rd. & Bryan Av.	D	0.65	(0.55)	B	(A)	0.65	(0.56)	B	(A)
285	Jeffrey Rd. & Trabuco Rd.	D	0.65	(0.70)	B	(B)	0.66	(0.71)	B	(C)
287	Jeffrey Rd. & I-5 NB Ramps	D	0.56	(0.78)	A	(C)	0.56	(0.77)	A	(C)
288	Jeffrey Rd. & Walnut Av./I-5 SB Ramps	D	0.71	(0.67)	C	(B)	0.71	(0.67)	C	(B)
289	Jeffrey Rd. & ICD	D	0.59	(0.79)	A	(C)	0.59	(0.79)	A	(C)
290	Jeffrey Rd. & Barranca Pkwy.	D	0.82	(0.73)	D	(C)	0.82	(0.72)	D	(C)
291	Jeffrey Rd. & Alton Pkwy.	D	0.86	(0.83)	D	(D)	0.86	(0.82)	D	(D)
293	Jeffrey Rd. & I-405 NB Ramps	D	0.78	(0.83)	C	(D)	0.77	(0.84)	C	(D)
294	University Dr. & I-405 SB Ramps	D	0.63	(0.61)	B	(B)	0.63	(0.62)	B	(B)
300	Sand Canyon. Av. & Portola Pkwy.	D	0.37	(0.46)	A	(A)	0.37	(0.46)	A	(A)
301	Sand Canyon. Av. & Irvine Bl.	D	0.68	(0.55)	B	(A)	0.68	(0.55)	B	(A)
302	Sand Canyon. Av. & Trabuco Pkwy.	D	0.60	(0.59)	A	(A)	0.59	(0.62)	A	(B)
303	Sand Canyon. Av. & I-5 NB Ramps	E	0.62	(0.72)	B	(C)	0.61	(0.70)	B	(B)
304	Sand Canyon. Av. & Marine Wy.	D	0.50	(0.82)	A	(D)	0.51	(0.79)	A	(C)
305	Sand Canyon. Av. & I-5 SB Ramps	E	0.72	(0.63)	C	(B)	0.73	(0.64)	C	(B)
306	Sand Canyon. Av. & Oak Cyn./Laguna Cyn. Rd.	D	0.62	(0.82)	B	(D)	0.62	(0.83)	B	(D)
307	Sand Canyon. Av. & ICD	D	0.55	(0.59)	A	(A)	0.55	(0.60)	A	(A)
309	Sand Canyon. Av. & Barranca Pkwy.	D	0.57	(0.52)	A	(A)	0.56	(0.52)	A	(A)
310	Sand Canyon. Av. & Alton Pkwy.	D	0.75	(0.71)	C	(C)	0. 74	(0.71)	C	(C)
311	Sand Canyon. Av. & I-405 NB Ramps	D	0.65	(0.48)	B	(A)	0.65	(0.49)	B	(A)
312	Sand Canyon. Av. & I-405 SB Ramps	D	0.85	(0.63)	D	(B)	0.85	(0.63)	D	(B)
313	Laguna Canyon Rd. & ICD	E	0.26	(0.35)	A	(A)	0.27	(0.35)	A	(A)
314	Laguna Canyon Rd. & Barranca Pkwy.	E	0.36	(0.34)	A	(A)	0.36	(0.34)	A	(A)
315	Laguna Canyon Rd. & Alton Pkwy.	E	0.55	(0.49)	A	(A)	0.55	(0.49)	A	(A)
316	SR-133 SB Ramps & Irvine Bl.	D	0.47	(0.52)	A	(A)	0.47	(0.52)	A	(A)
317	SR-133 NB Ramps & Irvine Bl.	D	0.49	(0.53)	A	(A)	0.49	(0.53)	A	(A)
318	Banting & Barranca Pkwy.	E	0.66	(0.61)	B	(A)	0.66	(0.61)	B	(B)
319	Banting & Alton Pkwy.	E	0.59	(0.52)	A	(A)	0.59	(0.52)	A	(A)
321	Laguna Canyon Rd. & Old Laguna Cyn. Rd.	D	0.65	(0.66)	B	(B)	0.65	(0.66)	B	(B)

4. Discussion of Checklist and Mitigation Measures

ID	Intersection	Max LOS	Alternative 4B				Alternative 5A			
			ICU/Delay ¹		LOS		ICU/Delay ¹		LOS	
			AM	(PM)	AM	(PM)	AM	(PM)	AM	(PM)
327	Barranca Pkwy. & Technology	E	0.49	(0.61)	A	(B)	0.50	(0.61)	A	(B)
328	Barranca Pkwy. & I-5 HOV Ramp	E	0.48	(0.43)	A	(A)	0.48	(0.43)	A	(A)
329	Barranca Pkwy. & ICD	E	0.56	(0.58)	A	(A)	0.56	(0.58)	A	(A)
330	Barranca Pkwy. & Pacifica	E	0.49	(0.72)	A	(C)	0.49	(0.72)	A	(C)
338	Alton Pkwy. & Irvine Bl.	E	0.85	(0.82)	D	(D)	0.85	(0.83)	D	(D)
339	Alton Pkwy. & Toledo Wy.	D	0.63	(0.55)	B	(A)	0.64	(0.55)	B	(A)
340	Alton Pkwy. & Jeronimo Rd.	D	0.61	(0.53)	B	(A)	0.61	(0.53)	B	(A)
341	Alton Pkwy. & Barranca Pkwy./Muirlands Bl.	D	0.56	(0.68)	A	(B)	0.56	(0.68)	A	(B)
343	Alton Pkwy. & Ada	E	0.45	(0.43)	A	(A)	0.45	(0.43)	A	(A)
344	Alton Pkwy. & Technology Dr. W.	E	0.45	(0.64)	A	(B)	0.45	(0.63)	A	(B)
345	Alton Pkwy. & I-5 NB Ramps	E	0.69	(0.46)	B	(A)	0.69	(0.46)	B	(A)
346	Alton Pkwy. & Enterprise	E	0.61	(0.67)	B	(B)	0.61	(0.67)	B	(B)
348	Alton Pkwy. & ICD	D	0.58	(0.64)	A	(B)	0.58	(0.64)	A	(B)
350	Alton Pkwy. & Pacifica	D	0.67	(0.52)	B	(A)	0.66	(0.52)	B	(A)
357	Enterprise Dr. & Fortune Dr./I-405 NB Ramps	E	0.45	(0.73)	A	(C)	0.45	(0.73)	A	(C)
358	ICD & Enterprise Dr.	E	0.72	(0.66)	C	(B)	0.72	(0.66)	C	(B)
359	ICD & I-405 SB Ramps	E	0.66	(0.75)	B	(C)	0.66	(0.74)	B	(C)
362	Bake Pkwy. & Irvine Bl.	E	0.74	(0.79)	C	(C)	0.73	(0.80)	C	(C)
363	Bake Pkwy. & Toledo Wy.	D	0.84	(0.64)	D	(B)	0.83	(0.64)	D	(B)
364	Bake Pkwy. & Jeronimo Rd.	D	0.76	(0.74)	C	(C)	0.76	(0.74)	C	(C)
365	Bake Pkwy. & Muirlands Bl.	D	0.63	(0.69)	B	(B)	0.64	(0.69)	B	(B)
366	Bake Pkwy. & Rockfield Bl.	D	0.58	(0.84)	A	(D)	0.58	(0.83)	A	(D)
367	Bake Pkwy. & I-5 NB Ramps	E	0.89	(0.67)	D	(B)	0.89	(0.67)	D	(B)
368	Bake Pkwy. & I-5 SB Ramps	E	0.70	(0.85)	B	(D)	0.70	(0.85)	B	(D)
372	Bake Pkwy. & ICD	E	0.38	(0.48)	A	(A)	0.37	(0.48)	A	(A)
409	Bake Pkwy. & Commercentre Dr.	D	0.61	(0.72)	B	(C)	0.61	(0.72)	B	(C)
444	Sand Canyon Av. & Burt Rd.	D	0.76	(0.58)	C	(A)	0.76	(0.58)	C	(A)
481	Laguna Canyon Rd. & Technology Dr.	E	0.38	(0.34)	A	(A)	0.38	(0.34)	A	(A)
514	Alton Pkwy. & Rancho Pkwy.	D	0.71	(0.59)	C	(A)	0.71	(0.58)	C	(A)
518	Alton Pkwy. & Commercentre	D	0.51	(0.64)	A	(B)	0.51	(0.64)	A	(B)
555	Bake Pkwy. & Rancho Pkwy. S	D	0.64	(0.68)	B	(B)	0.64	(0.68)	B	(B)
556	Ridge Valley & Portola Pkwy.	D	0.70	(0.45)	B	(A)	0.70	(0.45)	B	(A)
560	C St. & Marine Way (3-way stop)	D	8.70	(17.70)	A	(C)	8.40	(11.80)	A	(B)
567	Marine Wy. & Alton Pkwy.	E	0.41	(0.41)	A	(A)	0.41	(0.41)	A	(A)
572	Modjeska & Irvine Bl.	D	0.47	(0.58)	A	(A)	0.46	(0.57)	A	(A)
580	C St. & Trabuco Rd. (2-way stop)	D	Doesn't Exist				9.60	(9.90)	A	(A)
Note: ¹ ICU is reported for signalized intersection. Delay is reported for unsignalized intersections.										

4. Discussion of Checklist and Mitigation Measures

SENSITIVITY ANALYSIS – BASKETBALL AND HANDBALL COURTS

In addition to the land uses proposed for the Western Sector Park Development Plan, four basketball courts and two handball courts are being proposed. A sensitivity analysis was conducted, which concluded a finding of no significant impact. Therefore, these amenities would not require any new mitigation.

SPECIAL EVENTS

- OCGP would need to acquire a Special Event Permit from the City for all special events, which would include proposed conditions that would be implemented to control excess event traffic.

Conclusion

The Project would not produce new or substantially increase the severity of significant impacts previously identified in the OCGP FEIR. Consistent with the conclusions in the OCGP FEIR, traffic and circulation impacts associated with the Project would be less than significant as the future development would implement all applicable laws and regulations to reduce impacts on traffic and circulation.

The OCGP FEIR also disclosed the traffic analysis assumption that the cumulative impact of the adopted Overlay Plan traffic along with other regional growth at the identified ramp and freeway locations would be mitigated through a combination of regional programs that are the responsibility of other agencies, and if said programs are not implemented the cumulative freeway/toll-way ramp impacts would remain significant and unavoidable (OCGP FEIR page 7-19). The proposed Project would not alter this conclusion.

The Western Sector Park Development Plan (WSPDP) Phase 1 Traffic Study was initiated and a scope of work was approved prior to submittal of the recently approved Five Point Great Park Neighborhood (GPN) project and SEIR. Therefore, the WSPDP traffic study assumed, as background traffic for 2015 conditions, the previously approved Lifelong Learning District land uses. The conclusions of the WSPDP 2015 traffic study are that there are no significant environmental impacts.

In addition, the results of the OCGP Traffic Generation and Parking Demand analysis demonstrated that the modified Master Plan generated less traffic than analyzed in the original EIR and concluded that no new impacts were identified.

The SEIR for GPN assumed the WSPDP Phase I project although at a lower PM peak hour trip generation. This occurred due to additional uses added to the WSPDP after the SEIR analysis was initiated. The additional PM peak hour trips that would be added to the adjacent circulation system have been analyzed.

A review of the GPN traffic report, Chapter 5, indicates that there are no intersections within the immediate vicinity that are near the thresholds of exceeding capacities such that the additional trips would result in a significant impact. The highest ICU levels are Sand Canyon/Oak at 0.84, Irvine Boulevard/O Street at 0.85, and Irvine Boulevard/LQ Street at 0.82. Nominal levels of park traffic would impact these

4. Discussion of Checklist and Mitigation Measures

three locations. All other intersections are at Level of Service C (ICU 0.79) or better. The additional 350 PM peak hour trips added to the SEIR analyses would not change the conclusions.

In conclusion, it has been technically demonstrated through traffic studies for the WSPDP project as well as the GPN SEIR that the WSPDP project will not cause any significant environmental traffic impacts.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the Project would have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the Project, but the Project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the Project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the Project or additional mitigation measures that would substantially reduce one or more of the significant transportation/circulation-related effects identified in and considered by the certified OCGP FEIR.

4.15.5 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR identified mitigation measures TRAN1 through TRAN8 which, if fulfilled prior to specified development approvals, would eliminate or substantially reduce the traffic and circulation effects of development under the adopted Master Plan. The SEIR proposed that several mitigation measures from the certified OCGP FEIR be deleted (because they have been completed or they are no longer necessary in light of the NITM Program and new mitigation measures being proposed for Modified Project-specific impacts identified in the Traffic Study for the Modified Project). Mitigation Measure TRAN 1 would be carried forward for this project.

4. Discussion of Checklist and Mitigation Measures

TRAN1 Prior to the approval of any final map (other than a financing and conveyance map) allocating building intensity within Planning Areas 30 and 51, and prior to issuances of any building permits for permanent improvements within Planning Areas 30 and 51, the landowner or subsequent project applicant shall either (i) apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs, to reduce traffic, air quality and noise impacts or (ii) develop and implement a similar transportation management plan containing the elements and meeting the criteria described below as approved by the Director of Public Works:

Transportation Management Plan (TMP)

The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for Planning Areas 30 and 51. This document summarizes the key elements of the TMP.

A. Introduction

The purpose of this document is to provide an outline for a comprehensive TMP for the Planning Areas 30 and 51 ("Great Park TMP"). This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.

The applicant may elect to annex Planning Area 51 and a portion of Planning Area 30 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.

In the event that the applicant elects not to annex into Spectrumotion, a TMP similar to that provided by Spectrumotion will be developed and implemented. This document sets forth the components of the TMP should it be necessary.

B. Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

New Hire Orientation: Inform newly hired employees of commuting services available to them.

4. Discussion of Checklist and Mitigation Measures

Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services (i.e., OCTA buses, Metrolink, Amtrak, etc.).

Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.

On-site Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.

Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.

Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.

Website: Maintain a website with all of their program information available.

Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.

Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.

Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.

C. Transportation Management Plan Implementation

As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Planning Areas 30 and 51. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.

4.16 UTILITIES AND SERVICE SYSTEMS

4.16.1 Environmental Setting

Potable Water

The OCGP FEIR described the potable water system for the project. The IRWD is the jurisdictional agency responsible for plan approval and water service to the project area. Planning Area 51 is within Zone 3 North and Zone 4 of the IRWD water system. The existing on-site distribution system includes a network of distribution system pipelines, six reservoirs, and two pump stations.

4. Discussion of Checklist and Mitigation Measures

Recycled Water

As stated in the OCGP FEIR, IRWD is the jurisdictional agency responsible for plan approval and water service for the project area. Recycled water is currently supplied to Planning Area 51 via a 12-inch IRWD Zone B pipeline and connecting to an 8-inch former military base pipeline in the southwest corner of the property.

Sewer

As stated in the OCGP FEIR, IRWD is the jurisdictional agency responsible for plan approval and sewer service for the project area. Planning Area 51 is served by a two-branched system with flow, mainly by gravity, from the northeast to the southwest. The system includes a series of pipes ranging from 6 to 15 inches in diameter.

Solid Waste

The OCGP FEIR discussed in detail the environmental setting for solid waste for the project. Solid waste at the project site is collected by Waste Management, Inc., and is disposed of at the Frank R. Bowerman Landfill owned by the County of Orange Integrated Waste Management Department (IWMD).

The IWMD's Countywide Integrated Waste Management Plan (CIWMP) was approved in 1996 pursuant to California Integrated Waste Management Board requirement. The CIWMP shows that there is sufficient solid waste disposal capacity in the County for the next 27 years.

Energy and Communications

Southern California Edison (SCE) serves the project via two primary substations and the Southern California Gas Company serves Planning Area 51. AT&T is the communications provider. Detailed information regarding the environmental setting of dry utilities was included in the OCGP FEIR.

4.16.2 Impacts Identified in the OCGP FEIR and Addenda

Potable Water

The OCGP FEIR projected the potable water demand to be less than 1.75 million gallons per day (MGD) calculated for the land uses proposed within the project. Since the OCGP Master Plan Minor Modification and the Park Design Review does not include any additional intensity or change in the mix of land uses, the demand projection is consistent with the OCGP FEIR and addenda. As stated in the OCGP FEIR, selected portions of the existing potable water facilities are assumed to remain in place and operational through project buildout. The OCGP FEIR stated that the existing system will be expanded and integrated into the IRWD system and thus provide a backbone service to all users on the project site. The OCGP FEIR assumed a potable water system that would follow the routing of existing and proposed roadways. The approved Master Subdivision Map includes the alignment for water lines throughout Great Park Neighborhoods, which was an additional project design detail and not a change in the project description.

4. Discussion of Checklist and Mitigation Measures

Recycled Water

The OCGP FEIR stated that on January 27, 2003, the IRWD Board of Directors approved the assessment of water supply for the project. According to the findings of the assessment, the IRWD has determined that a sufficient non-potable water supply is available to serve the project. Since the OCGP Master Plan Minor Modification and the Park Design Review does not increase the intensity or change the mix of land uses, the total non-potable water supplies will meet the project demand.

The OCGP FEIR stated that the implementation of the project would require the expansion of the recycled water transmission lines to serve the project. It was assumed that selected on-site facilities would remain in place and operational through buildout. The OCGP FEIR stated that the existing system will be expanded and integrated into the IRWD system and provide a backbone service to all users in the project site. The OCGP FEIR assumed a non-potable system that would follow the routing of existing and proposed roadways within the project. The approved Master Subdivision Map included the alignment for the recycled water lines throughout Great Park Neighborhoods, which was an additional project design detail and is not a change in the project description.

Sewer

The OCGP FEIR stated that the IRWD will continue to provide sewer service to the project. The IRWD has indicated that it would have sufficient capacity to meet the future demand; however, additional wastewater treatment capacity may need to be purchased by project proponents as specific development projects come forward. The OCGP FEIR indicated that projected buildout demand for sewer services based on the land uses in the project were 0.89 MGD and that the project would require an increase of sewer transmission capacity to serve the project. The proposed sewer system would preserve selected, existing on-site facilities in place, remain operational through buildout and expand the system through extension of existing sewer lines. The OCGP FEIR stated that additional IRWD maintenance and equipment could be required to operate and maintain the proposed system.

The adopted Master Subdivision Map ensured that any projected use of the existing sewer system would be in conformance with all applicable regional and state requirements and the mitigation requirements of the OCGP FEIR and addenda. It included the alignment for the sewer lines throughout the project, which was an additional project design detail and did not change the project description.

Solid Waste

As stated in OCGP FEIR, demolition of existing runways, buildings, and structures within Planning Area 51 will generate debris materials that would have to be disposed of at local landfills. Green waste would also be generated as a result of ongoing park and landscaping maintenance. In addition to the City requirement for recycling of construction and demolition material to reduce waste, solid waste reduction would also be achieved through compliance with AB 939, which requires that a minimum of 50 percent of the solid waste generated in cities in California be diverted from landfills. Further, SB 1374 requires that all cities implement measures that would divert 75 percent of all construction and demolition waste from landfills. While the OCGP FEIR identified a potential impact related to solid waste, it concluded that, with the recommended, City-adopted mitigation measures, the impact would be less than significant.

4. Discussion of Checklist and Mitigation Measures

Energy and Communications

The Overlay Plan has proposed to install the new systems generally along a route that coincides with the existing and proposed roadway within the project. A portion of the routing, (specifically the portion along the "loop road") is not included in the project and would require an adjustment to the routing system for the expansion of the dry utilities system. However, the expansion of the system would generally coincide with the existing and proposed roadways consistent with the OCGP FEIR. The OCGP FEIR further stated that the specific impacts of constructing new energy and communication transmission facilities could not be determined at the program level analysis, as site-specific plans for the installation of the energy and communication transmission backbone system have not been prepared. The general significant impacts associated with the construction and operation of public facilities, including the project's construction and operation of the transmission system, were addressed in the OCGP FEIR.

4.16.3 Impacts Associated with the Master Plan Minor Modification and the Park Design Review

Potable Water

The OCGP Master Plan Minor Modification and the Park Design Review does not propose additional development intensity. Therefore, the demand projection for potable water is consistent with the OCGP FEIR and Addenda. No additional mitigation measures or change in any mitigation measure is required. The OCGP FEIR further stated that specific environmental impacts of the proposed Project on the existing and planned MWD facilities, as well as specific impacts of constructing new potable water facilities could not be determined at the program level analysis and project-level environmental review at the time that specific development plans have been prepared would be required. The general significant impacts associated with the project's construction and operation of public facilities has been addressed in the OCGP FEIR.

Recycled Water

The OCGP FEIR stated that on January 27, 2003, the IRWD Board of Directors approved the assessment of water supply for the project. The OCGP Master Plan Minor Modification and the Park Design Review does not propose any additional development intensity, and the total non-potable water supplies would meet the project demand, as analyzed in the OCGP FEIR and Addenda. The OCGP FEIR further stated that the specific environmental impacts of constructing the new recycled water facilities could not be determined at the General Plan level analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the project's construction and operation of public facilities has been addressed in the OCGP FEIR.

Sewer

The OCGP Master Plan Minor Modification and the Park Design Review does not propose any additional development intensity. Therefore, demand projections and proposed system expansion would remain the same. The OCGP FEIR further stated that the specific environmental impact of constructing new sewer facilities to serve the project cannot be determined at the program level analysis, as site-specific plans for the installation of the sewer backbone system had not been prepared. However, the general significant

4. Discussion of Checklist and Mitigation Measures

impacts associated with the construction and operation of public facilities, including the project's construction and operation of the sewer system, has been addressed in the OCGP FEIR.

Solid Waste

As stated in OCGP FEIR, demolition of existing runways, buildings, and structures within Planning Area 51 would generate debris materials that would have to be disposed of at local landfills. Green waste would also be generated as a result of ongoing park and landscape maintenance. The Project would not change the land uses or intensity of the uses; therefore, no change in impact to solid waste is anticipated. No additional mitigation measures or changes in any mitigation measure are required.

Energy and Communications

The analysis and conclusions in the OCGP FEIR do not change since the intensity and types of land uses in the modified plan have not changed from those previously analyzed in the OCGP FEIR. The OCGP FEIR stated that the specific impacts of constructing new energy and communication transmission facilities could not be determined at the program level analysis, as site-specific plans for the installation of the energy and communication transmission backbone system have not been prepared. The general significant impacts associated with the construction and operation of public facilities, including the project's construction and operation of the transmission system, were addressed in the OCGP FEIR.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the certified OCGP FEIR. The proposed Master Plan Minor Modification and the Park Design Review, which does not include any major change to the park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the Master Plan Minor Modification and the Park Design Review or otherwise available indicating substantial changes in circumstances that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was approved, augmented, and/or updated, indicating that the project will have one or more significant effects not discussed in the previous EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2)

4. Discussion of Checklist and Mitigation Measures

mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant effects identified in and considered by the certified OCGP FEIR.

4.16.4 Mitigation from the OCGP FEIR and Applicability to the Master Plan Minor Modification and the Park Design Review

The OCGP FEIR determined the mitigation measures identified in other sections of the OCGP FEIR (5.1-5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of facilities for the following types of utilities to serve the project area:

- potable water
- recycled water
- wastewater
- energy and communication transmission facilities

Mitigation Measures SW1 through SW5 apply to future demolition and new construction, and would be carried forward through permit approvals for subsequent development projects. The proposed Project would neither change these mitigation measures nor their application to future development projects.

SW1 It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other deconstruction of the aged structures and property, including but not limited to buildings and runways, at MCAS El Toro is contaminated with lead-based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the MCAS El Toro site by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.

If it is determined by the technical evaluation that material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as "waste-to-energy" (WTE) plants.

SW2 For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant must submit a written plan to the City and implement such plan to ensure that 75% of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.

4. Discussion of Checklist and Mitigation Measures

SW3 For that solid waste which the technical study deems to be suitable for recycling, the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75% of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180 ("Recycling" does not include transformation, as defined in Public Resources Code Section 40201).

SW4 To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by "weight ticket" receipts from state-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.

To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.

SW5 For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50% of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.

4.17 DETERMINATION

Based on the information and analysis in this Initial Study/Addendum, and pursuant to Section 15162 of the State CEQA Guidelines, the City has determined that:

1. There are no substantial changes to the project that will require major revisions to the OCGP FEIR due to new, significant environmental effects or a substantial increase in the severity of impacts identified in the OCGP FEIR;
2. Substantial changes have not occurred in the circumstances under which the project is being undertaken that will require major revisions of the OCGP FEIR to disclose new, significant environmental effects or a substantial increase in the severity of the impacts identified in the OCGP FEIR; and
3. There is no new information of substantial importance not known at the time the OCGP FEIR was approved, augmented, and/or updated that shows any of the following:
 - a) The project will have any new significant effects not discussed in the OCGP FEIR;

4. Discussion of Checklist and Mitigation Measures

- b) There are impacts that were determined to be significant in the OCGP FEIR that will be substantially increased;
- c) There are additional mitigation measures or alternatives to the project that would substantially reduce one or more of the significant effects identified in the OCGP FEIR; or
- d) There are additional mitigation measures or alternatives that were rejected by the project proponent that are considerably different from those analyzed in the OCGP FEIR that would substantially reduce any significant impact identified in that EIR.

5. Organizations and Persons Consulted

5.1 PREPARERS

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5. Organizations and Persons Consulted

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Appendix A.

OCGP FEIR Mitigation Monitoring and Reporting Program

*(Available at the City of Irvine, Community Development
Department)*

Appendices

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Appendix B.

Air Quality Emissions Reports by AECOM dated June 2011

Appendices

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\paukovitsj\My Documents\Great Park Modification\Great Park Modification - Approved - 6-14-11.urb924

Project Name: Great Park Modification

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	94.59	4.04	11.04	0.00	0.04	0.04	4,742.08

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	56.51	68.58	653.35	1.37	225.85	43.83	135,229.47

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	151.10	72.62	664.39	1.37	225.89	43.87	139,971.55

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.29	3.94	3.31	0.00	0.01	0.01	4,728.04
Hearth - No Summer Emissions							
Landscape	0.61	0.10	7.73	0.00	0.03	0.03	14.04
Consumer Products	0.00						
Architectural Coatings	93.69						
TOTALS (lbs/day, unmitigated)	94.59	4.04	11.04	0.00	0.04	0.04	4,742.08

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Library	2.84	3.60	34.35	0.07	11.86	2.30	7,103.86
Racquetball/health	3.11	3.43	32.68	0.07	11.29	2.19	6,759.81
Strip mall	2.00	2.64	25.10	0.05	8.69	1.69	5,199.73
Government (civic center)	10.10	11.39	109.14	0.23	37.57	7.29	22,514.20
Lawns and Promenade	38.46	47.52	452.08	0.95	156.44	30.36	93,651.87
TOTALS (lbs/day, unmitigated)	56.51	68.58	653.35	1.37	225.85	43.83	135,229.47

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses						
Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Library		19.40	1000 sq ft	39.00	756.60	6,871.82
Racquetball/health		6.12	1000 sq ft	117.64	719.96	6,539.01
Strip mall		42.94	1000 sq ft	13.06	560.80	5,032.03
Government (civic center)		6.81	1000 sq ft	344.94	2,349.04	21,763.87
Lawns and Promenade		14.20	acres	711.30	10,100.46	90,631.42
					14,486.86	130,838.15

Vehicle Fleet Mix				
Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.6	0.0	100.0	0.0
Light Truck < 3750 lbs	7.2	0.0	98.6	1.4
Light Truck 3751-5750 lbs	23.3	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.0	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0

<u>Vehicle Fleet Mix</u>				
Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.9	41.4	58.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

<u>Travel Conditions</u>						
	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Library	5.0	2.5	92.5
Racquetball/health	5.0	2.5	92.5
Strip mall	2.0	1.0	97.0
Government (civic center)	10.0	5.0	85.0
Lawns and Promenade	2.0	1.0	97.0

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\paukovitsj\My Documents\Great Park Modification\Great Park Modification 6-14-11.urb924

Project Name: Great Park Modification

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	94.47	3.56	15.21	0.00	0.05	0.05	4,088.05

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	55.07	67.16	639.45	1.35	221.13	42.92	132,391.96

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	149.54	70.72	654.66	1.35	221.18	42.97	136,480.01

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.25	3.39	2.85	0.00	0.01	0.01	4,065.58
Hearth - No Summer Emissions							
Landscape	0.98	0.17	12.36	0.00	0.04	0.04	22.47
Consumer Products	0.00						
Architectural Coatings	93.24						
TOTALS (lbs/day, unmitigated)	94.47	3.56	15.21	0.00	0.05	0.05	4,088.05

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Library	2.84	3.60	34.35	0.07	11.86	2.30	7,103.86
Racquetball/health	3.11	3.43	32.68	0.07	11.29	2.19	6,759.81
Government (civic center)	5.70	6.43	61.60	0.13	21.21	4.12	12,708.05
Field/Tea House	2.72	3.43	32.61	0.07	11.28	2.19	6,754.96
Nature Education Center	1.58	2.00	19.03	0.04	6.59	1.28	3,942.93
Hangar 244	0.30	0.34	3.20	0.01	1.11	0.22	663.44
Artist in Residence Facility	0.36	0.41	3.90	0.01	1.35	0.26	807.04
Lawns and Promenade	38.46	47.52	452.08	0.95	156.44	30.36	93,651.87
TOTALS (lbs/day, unmitigated)	55.07	67.16	639.45	1.35	221.13	42.92	132,391.96

Operational Settings:

Does not include correction for passby trips
Does not include double counting adjustment for internal trips
Analysis Year: 2020 Temperature (F): 80 Season: Summer
Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses						
Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Library		19.40	1000 sq ft	39.00	756.60	6,871.82
Racquetball/health		6.12	1000 sq ft	117.64	719.96	6,539.01
Government (civic center)		6.81	1000 sq ft	194.70	1,325.91	12,284.53
Field/Tea House		17.90	1000 sq ft	40.70	728.53	6,537.10
Nature Education Center		18.90	1000 sq ft	22.50	425.25	3,815.77
Hangar 244		6.90	1000 sq ft	10.37	71.55	642.05
Artist in Residence Facility		6.80	1000 sq ft	12.80	87.04	781.01
Lawns and Promenade		14.20	acres	711.30	10,100.46	90,631.42
					14,215.30	128,102.71

Vehicle Fleet Mix				
Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.6	0.0	100.0	0.0
Light Truck < 3750 lbs	7.2	0.0	98.6	1.4
Light Truck 3751-5750 lbs	23.3	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.0	0.0	100.0	0.0

<u>Vehicle Fleet Mix</u>				
Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.9	41.4	58.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

<u>Travel Conditions</u>						
	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Library				5.0	2.5	92.5
Racquetball/health				5.0	2.5	92.5
Government (civic center)				10.0	5.0	85.0

	<u>Travel Conditions</u>					
	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Field/Tea House				2.0	1.0	97.0
Nature Education Center				2.0	1.0	97.0
Hangar 244				2.0	1.0	97.0
Artist in Residence Facility				2.0	1.0	97.0
Lawns and Promenade				2.0	1.0	97.0

Appendix C.

Traffic Noise Prediction Model by AECOM dated June 2011

Appendices

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Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Model Input Sheet



Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 1: Existing
Ground Type : Soft
Metric (L_{eq}, L_{dn}, CNEL) : Ldn

K Factor :
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	Segment		Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
		From	To										
1	C Street	Marine Way	5th Street	2,000	30	100	97.5	1.5	1	87		13	
2	Marine Way	Sand Canyon Ave	C Street	4,000	30	100	97.5	1.5	1	87		13	
3	Marine Way	C Street	To the East	2,000	30	100	97.5	1.5	1	87		13	
4	Trabuco Road	Perimiter Road	To the East	3,000	30	100	97.5	1.5	1	87		13	

Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Predicted Noise Levels



Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 1: Existing
Metric (Leq, Ldn, CNEL) : Ldn

Segment	Roadway	Segment		Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	C Street	Marine Way	5th Street	49.1	41.5	46.9	51.6	6	13	28	59	128
2	Marine Way	Sand Canyon Ave	C Street	52.1	44.6	49.9	54.6	9	20	44	94	203
3	Marine Way	C Street	To the East	49.1	41.5	46.9	51.6	6	13	28	59	128
4	Trabuco Road	Perimiter Road	To the East	50.9	43.3	48.7	53.4	8	17	36	78	167

Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Model Input Sheet



Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 2: Existing Plus Western Sector Park Development Plan Phase 1
Ground Type : Soft
Metric (L_{eq}, L_{dn}, CNEL) : Ldn
K Factor :
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	Segment		Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
		From	To										
1	C Street	Marine Way	5th Street	4,000	30	100	97.5	1.5	1	87		13	
2	Marine Way	Sand Canyon Ave	C Street	6,000	30	100	97.5	1.5	1	87		13	
3	Marine Way	C Street	To the East	2,000	30	100	97.5	1.5	1	87		13	
4	Trabuco Road	Perimiter Road	To the East	3,000	30	100	97.5	1.5	1	87		13	

Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Predicted Noise Levels



Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 2: Existing Plus Western Sector Park Development Plan Phase 1
Metric (Leq, Ldn, CNEL) : Ldn

Segment	Roadway	Segment		Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	C Street	Marine Way	5th Street	52.1	44.6	49.9	54.6	9	20	44	94	203
2	Marine Way	Sand Canyon Ave	C Street	53.9	46.3	51.7	56.4	12	27	57	123	266
3	Marine Way	C Street	To the East	49.1	41.5	46.9	51.6	6	13	28	59	128
4	Trabuco Road	Perimiter Road	To the East	50.9	43.3	48.7	53.4	8	17	36	78	167

Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Model Input Sheet



Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 3A: 2015 Baseline with LLD
Ground Type : Soft
Metric (L_{eq}, L_{dn}, CNEL) : Ldn

K Factor :
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	Segment		Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
		From	To										
1	C Street	Marine Way	5th Street	2,000	30	100	97.5	1.5	1	87		13	
2	Marine Way	Sand Canyon Ave	C Street	6,000	30	100	97.5	1.5	1	87		13	
3	Marine Way	C Street	To the East	4,000	30	100	97.5	1.5	1	87		13	
4	O Street	Marine Way	C Street	2,000	30	100	97.5	1.5	1	87		13	
5	O Street	C Street	Trabuco Road	2,000	30	100	97.5	1.5	1	87		13	
6	Trabuco Road	O Street	X Street	13,000	30	100	97.5	1.5	1	87		13	
7	X Street	LV Street	Trabuco Road	2,000	30	100	97.5	1.5	1	87		13	

Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Predicted Noise Levels



Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 3A: 2015 Baseline with LLD
Metric (Leq, Ldn, CNEL) : Ldn

Segment	Roadway	Segment		Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	C Street	Marine Way	5th Street	49.1	41.5	46.9	51.6	6	13	28	59	128
2	Marine Way	Sand Canyon Ave	C Street	53.9	46.3	51.7	56.4	12	27	57	123	266
3	Marine Way	C Street	To the East	52.1	44.6	49.9	54.6	9	20	44	94	203
4	O Street	Marine Way	C Street	49.1	41.5	46.9	51.6	6	13	28	59	128
5	O Street	C Street	Trabuco Road	49.1	41.5	46.9	51.6	6	13	28	59	128
6	Trabuco Road	O Street	X Street	57.2	49.7	55.0	59.7	21	45	96	207	445
7	X Street	LV Street	Trabuco Road	49.1	41.5	46.9	51.6	6	13	28	59	128

Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Model Input Sheet



Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 4A: 2015 Baseline with Great Park Neighborhoods LLD & Improvements Plus Western Sector Park Development Plan Phase 1
Ground Type : Soft
Metric (L_{eq}, L_{dn}, CNEL) : Ldn
K Factor :
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	Segment		Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
		From	To										
1	C Street	O Street Access	2nd Access	3,000	30	100	97.5	1.5	1	87		13	
2	C Street	2nd Access	LV Street	3,000	30	100	97.5	1.5	1	87		13	
3	O Street	Marine Way	C Street	6,000	30	100	97.5	1.5	1	87		13	
4	O Street	C Street	2nd Access	2,000	30	100	97.5	1.5	1	87		13	
5	O Street	2nd Access	LV Street	1,000	30	100	97.5	1.5	1	87		13	
6	LV Street	O Street	X Street	1,000	30	100	97.5	1.5	1	87		13	
7	X Street	LV Street	Trabuco Road	3,000	30	100	97.5	1.5	1	87		13	
8	Marine Way	Sand Canyon Ave	C Street	8,000	30	100	97.5	1.5	1	87		13	
9	Marine Way	C Street	To the East	4,000	30	100	97.5	1.5	1	87		13	

Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Predicted Noise Levels



Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 4A: 2015 Baseline with Great Park Neighborhoods LLD & Improvements Plus Western Sector Park Development Plan Phase 1
Metric (Leq, Ldn, CNEL) : Ldn

Segment	Roadway	Segment		Noise Levels, dB Ldn				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	C Street	O Street Access	2nd Access	50.9	43.3	48.7	53.4	8	17	36	78	167
2	C Street	2nd Access	LV Street	50.9	43.3	48.7	53.4	8	17	36	78	167
3	O Street	Marine Way	C Street	53.9	46.3	51.7	56.4	12	27	57	123	266
4	O Street	C Street	2nd Access	49.1	41.5	46.9	51.6	6	13	28	59	128
5	O Street	2nd Access	LV Street	46.1	38.5	43.9	48.6	4	8	17	37	81
6	LV Street	O Street	X Street	46.1	38.5	43.9	48.6	4	8	17	37	81
7	X Street	LV Street	Trabuco Road	50.9	43.3	48.7	53.4	8	17	36	78	167
8	Marine Way	Sand Canyon Ave	C Street	55.1	47.6	52.9	57.6	15	32	69	149	322
9	Marine Way	C Street	To the East	52.1	44.6	49.9	54.6	9	20	44	94	203

Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Model Input Sheet



Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 3B: 2015 Baseline (No LLD) with Existing Roadway Network and Land Use
Ground Type : Soft
Metric (L_{eq}, L_{dn}, CNEL) :
K Factor :
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	Segment		Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
		From	To										
1	C Street	Marine Way	5th Street	1,000	30	100	97.5	1.5	1	87		13	
2	Marine Way	Sand Canyon Ave	C Street	5,000	30	100	97.5	1.5	1	87		13	
3	Marine Way	C Street	To the East	4,000	30	100	97.5	1.5	1	87		13	
4	Trabuco Road	SR 133	To the East	5,000	30	100	97.5	1.5	1	87		13	

Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Predicted Noise Levels



Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 3B: 2015 Baseline (No LLD) with Existing Roadway Network and Land Use
Metric (Leq, Ldn, CNEL) :

Segment	Roadway	Segment		Noise Levels, dB				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	C Street	Marine Way	5th Street	46.1	38.5	43.9	48.6	4	8	17	37	81
2	Marine Way	Sand Canyon Ave	C Street	53.1	45.5	50.9	55.6	11	24	51	109	235
3	Marine Way	C Street	To the East	52.1	44.6	49.9	54.6	9	20	44	94	203
4	Trabuco Road	SR 133	To the East	53.1	45.5	50.9	55.6	11	24	51	109	235

Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Model Input Sheet



Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 4B: 2015 Baseline (No LLD) with Existing Roadway Network and Land Use Plus Western Sector Park Development Plan Phase 1
Ground Type : Soft
K Factor :
Metric (L_{eq}, L_{dn}, CNEL) :
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	Segment		Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
		From	To										
1	C Street	Marine Way	5th Street	4,000	30	100	97.5	1.5	1	87		13	
2	Marine Way	Sand Canyon Ave	C Street	8,000	30	100	97.5	1.5	1	87		13	
3	Marine Way	C Street	To the East	4,000	30	100	97.5	1.5	1	87		13	
4	Trabuco Road	SR 133	To the East	5,000	30	100	97.5	1.5	1	87		13	

Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Predicted Noise Levels



Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 4B: 2015 Baseline (No LLD) with Existing Roadway Network and Land Use Plus Western Sector Park Development Plan Phase 1
Metric (Leq, Ldn, CNEL) :

Segment	Roadway	Segment		Noise Levels, dB				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	C Street	Marine Way	5th Street	52.1	44.6	49.9	54.6	9	20	44	94	203
2	Marine Way	Sand Canyon Ave	C Street	55.1	47.6	52.9	57.6	15	32	69	149	322
3	Marine Way	C Street	To the East	52.1	44.6	49.9	54.6	9	20	44	94	203
4	Trabuco Road	SR 133	To the East	53.1	45.5	50.9	55.6	11	24	51	109	235

Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Model Input Sheet



Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 4C: 2015 Baseline (No LLD) with Existing Roadway Network and Land Use Plus Western Sector Park Development Plan Phase 1 Plus TVI at 3,000 Tons Per Day
Ground Type : Soft
K Factor :
Metric (L_{eq}, L_{dn}, CNEL) :
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	Segment		Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
		From	To										
1	C Street	Marine Way	5th Street	4,000	30	100	97.5	1.5	1	87		13	
2	Marine Way	Sand Canyon Ave	C Street	10,000	30	100	97.5	1.5	1	87		13	
3	Marine Way	C Street	To the East	6,000	30	100	97.5	1.5	1	87		13	
4	Trabuco Road	SR 133	To the East	5,000	30	100	97.5	1.5	1	87		13	

Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Predicted Noise Levels



Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 4C: 2015 Baseline (No LLD) with Existing Roadway Network and Land Use Plus Western Sector Park Development Plan Phase 1 Plus TVI at 3,000 Tons Per Day
Metric (Leq, Ldn, CNEL) :

Segment	Roadway	Segment		Noise Levels, dB				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	C Street	Marine Way	5th Street	52.1	44.6	49.9	54.6	9	20	44	94	203
2	Marine Way	Sand Canyon Ave	C Street	56.1	48.5	53.9	58.6	17	37	81	173	374
3	Marine Way	C Street	To the East	53.9	46.3	51.7	56.4	12	27	57	123	266
4	Trabuco Road	SR 133	To the East	53.1	45.5	50.9	55.6	11	24	51	109	235

Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Model Input Sheet



Project Name : OCGP Master Plan Minor Modification
Project Number : 60213368
Modeling Condition : Alt 5A: 2015 Baseline (No LLD) with Existing Roadway Network and Land Use Plus Western Sector Park Development Plan Phase 1 with Additional Access Via Trabuco Road and C Street
Ground Type : Soft
Metric (L_{eq}, L_{dn}, CNEL) :
K Factor :
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	Segment		Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
		From	To										
1	C Street	Marine Way	5th Street	3,000	30	100	97.5	1.5	1	87		13	
2	C Street	5th Street	Trabuco Road	1,000	30	100	97.5	1.5	1	87		13	
3	Marine Way	Sand Canyon Ave	C Street	7,000	30	100	97.5	1.5	1	87		13	
4	Marine Way	C Street	To the East	4,000	45	100	97.5	1.5	1	87		13	
5	Trabuco Road	SR 133	C Street	6,000	30	100	97.5	1.5	1	87		13	

Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Predicted Noise Levels



Project Name : OCGP Master Plan Minor Modification

Project Number : 60213368

Modeling Condition : Alt 5A: 2015 Baseline (No LLD) with Existing Roadway Network and Land Use Plus Western Sector Park Development Plan Phase 1 with Additional Access Via Trabuco Road and C Street

Metric (Leq, Ldn, CNEL) :

Segment	Roadway	Segment		Noise Levels, dB				Distance to Traffic Noise Contours, Feet				
		From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	C Street	Marine Way	5th Street	50.9	43.3	48.7	53.4	8	17	36	78	167
2	C Street	5th Street	Trabuco Road	46.1	38.5	43.9	48.6	4	8	17	37	81
3	Marine Way	Sand Canyon Ave	C Street	54.5	47.0	52.3	57.0	14	29	63	137	295
4	Marine Way	C Street	To the East	57.2	47.3	50.0	58.3	17	36	77	166	358
5	Trabuco Road	SR 133	C Street	53.9	46.3	51.7	56.4	12	27	57	123	266

Appendix D.

*D-1 OCGP Western Sector Park Development Plan Phase I
Traffic Study by LSA Associates, Inc. dated August 2011*

&

*D-2 Orange County Great Park Trip Generation and Parking
Demand Analysis (Update #1) by LSA Associates, Inc.,
dated August 2011*

*(Available at the City of Irvine, Community Development
Department)*

Appendices

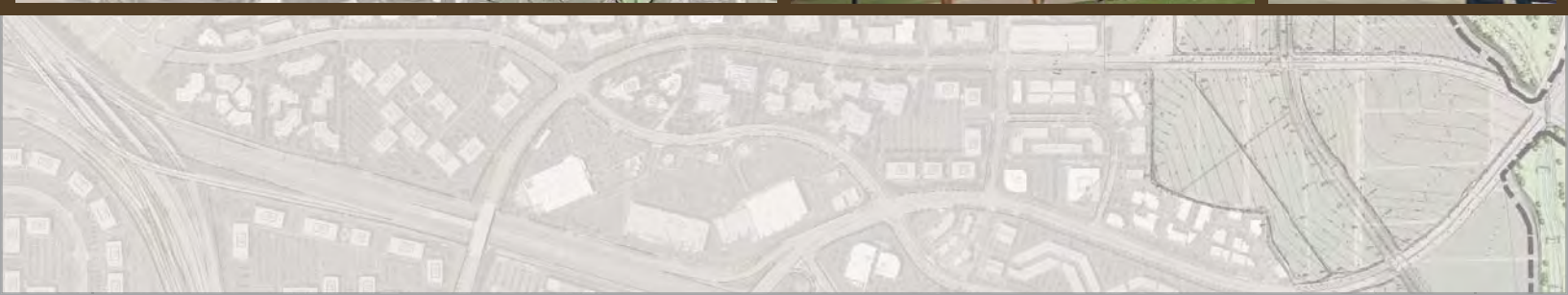
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City of Irvine

ADDENDUM NO. 9 - MODIFICATIONS TO THE OCGP IMPROVEMENT AREA

July 2014



ADDENDUM NO. 9

**ORANGE COUNTY GREAT PARK
MASTER PLAN**

MODIFICATIONS TO THE OCGP IMPROVEMENT AREA

SCH #2002101020

**Prepared by:
City of Irvine
Community Development Department
1 Civic Center Plaza
Irvine, CA 92606**

**Contact:
Barry Curtis, AICP
Manager of Planning Services**

JULY 2014

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1. EIR Addendum Summary

1.1 PURPOSE AND SCOPE

This Initial Study/Addendum provides the basis for augmenting the 2007 Great Park Master Plan (subject of the Addendum No. 4 and, as the Great Park Master Plan was modified in 2011, subject to Addendum No. 8) and the modifications to the 688 acre portion of the Orange County Great Park known as the OCGP Improvement Area, and serves as the California Environmental Quality Act (CEQA) documentation for the:

- Approval of Modification to the Great Park Master Plan
- City Council determination of consistency between modified Great Park Master Plan and the Park Design (Design Package) approved as part of the Second Agreement with City of Irvine as Adjacent Landowner (subject of Addendum No. 9)

The requested modifications do not propose any changes to approved and environmentally-reviewed development intensities within the OCGP Master Plan area. This Addendum has been prepared pursuant to the provisions of CEQA (Public Resources Code Sections 21000 et seq.), the State CEQA Guidelines (14 Cal. Code Regs. 15000 et seq.) and the City of Irvine Local Guidelines for Implementing CEQA (Local CEQA Guidelines).

The term “proposed Project” refers to the proposed Modifications to the OCGP Improvement Area of approximately 688 acres, while the term “project” refers to the total MCAS El Toro reuse plan analyzed in the OCGP FEIR (and its subsequent addenda) consisting of approximately 4,700 acres. The term “2012 Modified Project” refers to the Heritage Fields Project 2012 General Plan Amendment and Zone Change, which was the subject of the Heritage Fields Project 2012 General Plan Amendment and Zone Change Second Supplemental Environmental Impact Report (SSEIR). The term “OCGP FEIR” refers to the 2003 Orange County Great Park Final EIR (FEIR) as updated by its prior Addenda (Addendum No. 1 through Addendum No. 8) and Supplemental Environmental Impact Reports (SEIRs).

1.2 ENVIRONMENTAL PROCEDURES

Pursuant to CEQA, the State CEQA Guidelines, and the Local CEQA Guidelines, this Initial Study/Addendum focuses on the proposed Modifications to the OCGP Improvement Area to determine if the proposed Project would cause a change in the environmental impact conclusions of the OCGP FEIR, and if any change in circumstances or new information exists that would substantially change the conclusions of the OCGP FEIR.

Pursuant to Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines, when an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for the project unless the lead agency determines, on the basis of substantial evidence, that one or more of the following conditions are met:

1. EIR Addendum Summary

- (1) Substantial changes are proposed in the project that will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;*
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or*
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, suggests any of the following:*
 - a) The project would have one or more significant effects not discussed in the previous EIR or negative declaration.*
 - b) Significant effects previously examined would be substantially more severe than identified in the previous EIR.*
 - c) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives.*
 - d) Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.*

Section 15164 of the State CEQA Guidelines states that an Addendum to an EIR shall be prepared “if some changes or additions are necessary, but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.” This Initial Study/Addendum reviews the changes proposed by the proposed Project and any changes to the existing conditions that have occurred since the OCGP FEIR was last augmented by the Heritage Fields Project 2012 GPA & ZC Second Supplement EIR (approved in November 2013). It also reviews any new information of substantial importance that was not known and could not have been known with exercise of reasonable diligence at the time that the OCGP FEIR was certified. It further examines whether, as a result of any changes or any new information, a subsequent or supplemental EIR may be required. This examination includes an analysis of the provisions of Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines and their applicability to the proposed Project. This Initial Study/Addendum relies on the attached Environmental Analysis, which addresses environmental checklist issues on a section-by-section basis.

The City of Irvine Environmental Checklist Form has been completed by the City and included in Section 3, *Environmental Checklist*. The Environmental Checklist Form is marked with the findings of the Community Development Director as to the environmental effects of the proposed Project in comparison with the findings of the OCGP FEIR. The checklist has been prepared pursuant to Section 15168(c)(4) of

1. EIR Addendum Summary

CEQA, which states that “where the subsequent activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR.”

Using that approach, the City of Irvine, the Lead Agency, determined that an Addendum to the previously approved OCGP FEIR is the appropriate environmental clearance for the proposed Project.

1.3 PREVIOUS ENVIRONMENTAL DOCUMENTATION

The OCGP FEIR was originally certified by the City of Irvine in May 2003. The project analyzed in the OCGP FEIR consisted of the following actions: 1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area (PA) 51; 2) Annexation of the unincorporated portion of PA 35 (Irvine Ranch Water District Parcel); 3) General Plan Amendment and Zone Change for PA 30 (the overall site originally included PAs 30 and 51, which were later merged into a single PA 51; for purposes of this document, both PA 30 and PA 51 will be referred to as the PA 51); and 4) Approval of the form of a Development Agreement vesting approval of overlay uses and intensities in consideration for dedication of land for public purposes and for developing and funding certain infrastructure improvements and maintenance of the public uses by the purchaser/developer and subsequent landowners and funding for specific park, roadways, and other circulation facilities and infrastructure. Together, these actions establish the policy and legislative structure to guide the development of the former MCAS El Toro property.

The OCGP FEIR mitigation measures are provided in the adopted Mitigation Monitoring and Reporting Program included in Appendix A. The table includes:

- Mitigation Measure number and a description of the action;
- Timing for implementation;
- Approving authority and reviewing agency(s), if any; and
- Method of compliance

Subsequent to certification of the OCGP FEIR, eight Addenda (Addendum No. 1 through Addendum No. 8) and two supplemental Environmental Impact Reports (SEIR and SSEIR) were approved and certified to address the potential environmental impacts associated with modifications to OCGP FEIR. An in-depth description of the previous environmental documents is provided in Section 2.2.1 of this document.

The 2003 OCGP FEIR, as augmented by Addenda 1 through 8 (collectively, Addenda), SEIR, SSEIR, and all of the associated technical documents, reports and analyses are on file and can be reviewed at the City of Irvine, Community Development Department, at One Civic Center Plaza, Irvine, California 92623.

1.4 ENVIRONMENTAL SETTING

The Orange County Great Park is located in the central portion of Orange County, approximately 45 miles southeast of Los Angeles. The Project area is generally bounded by the Woodbury residential development to the west, Portola Springs residential development to the north (under construction), Irvine

1. EIR Addendum Summary

Spectrum to the south, and the City of Lake Forest to the east. Other nearby local jurisdictions includes the cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo, and Tustin.

Irvine Station is adjacent to the Southern California Regional Rail Authority (SCRRA) Metrolink tracks and is located to the south of the Project site. Commercial uses, including Irvine Spectrum, are located further to the south of the Project site. Surrounding the site are residential and nonresidential uses under construction to the north and west, open space to the east, and nonresidential and mixed land uses to the east and southeast within the cities of Lake Forest and Irvine.

The existing facilities and uses within the proposed Project site include existing portions of the Western Sector Park Development Plan Phase I such as the Balloon Park, Hangar 244, artist lofts, Central and West Timeline, North and South Lawns, Farm & Food Lab, Palm Court, and support parking. Consistent with the City's Zoning Ordinance, there are interim uses of the land or existing buildings which include Tierra Verde Industries, a composting and electronic waste recycling facility, agriculture, special event parking lot, and recreational vehicle parking.

1.5 CONCLUSIONS OF ADDENDUM

This Addendum No. 9 document analyzes the potential impacts of the proposed Modifications to the OCGP Improvement Area. The modifications consist of reducing the number of sports courts; expanding passive recreational area; relocating some of the Improvement Area components to optimize visibility, access and efficiency; and assessing adequacy of the parking plan. Section 4.0 of this document discusses the findings of the analysis in comparison to the OCGP FEIR.

The environmental analysis contained in this document focuses on the following environmental topics: Aesthetics, Agriculture and Forestry Resources, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Greenhouse Gas Emission, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Public Services, Transportation/Traffic, and Utilities and Service Systems. The analysis concluded that the proposed modifications reflect a development program that is consistent with the existing land use designations and does not deviate from the development program for the area. No new uses or significant changes are proposed as part of the proposed Project, beyond those previously studied and disclosed, that would create new adverse impacts related to any of the above environmental topics or a substantial increase in the severity of previously identified significant effects.

Also, there are no mitigation measures or alternatives previously found not to be feasible that would in fact be feasible, and would substantially reduce one or more significant effects of the project, and there are no mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR that would substantially reduce one or more significant effects on the environment. Therefore, no new mitigation measures are proposed, even though all original applicable mitigation measures from the OCGP FEIR and new mitigation measures; existing plans, programs, or policies (PPPs); and project design features (PDFs) from the supplemental EIRs (SEIR and SSEIR) have been carried forward into this document to further help reduce or avoid potential significant impacts.

2. Project Description

2.1 PROJECT LOCATION

The Orange County Great Park (OCGP) is located northeast of the freeway junction at Interstate 5 (I-5) and Interstate 405 (I-405), within Planning Area (PA) 51 in the City of Irvine. The proposed Project consists of modifications to the 688-acre portion of the OCGP Master Plan, which is known as the “OCGP Improvement Area”. The proposed modifications are within the Bosque and Sports Park Districts of the Improvement Area, which are bordered on the north by Irvine Boulevard; on the south by future Marine Way; on the west by future “LY” Street; and on the east by the future daylighted Agua Chinon wash. The 688-acre OCGP Improvement Area also includes the Wildlife Corridor bordering Irvine Boulevard to the north; I-5 to the south; and the project boundary to the east. Figure 2-1 depicts the Project location in a regional context and Figure 2-2 shows its local context.

The main vehicular entrance into the OCGP is from the west at Marine Way with a planned ceremonial entrance at Trabuco Road. An aerial photograph of the proposed Project site and surrounding area is shown on Figure 2-3. Irvine Station is adjacent to the Southern California Regional Rail Authority (SCRRA) Metrolink tracks and is located to the south of the Project site. Commercial uses, such as Irvine Spectrum, are located further to the south of the Project site. Surrounding the site are residential and nonresidential uses under construction to the north and west, open space to the northeast, and nonresidential and mixed land uses to the east and southeast within the cities of Lake Forest and Irvine.

2.2 PROJECT CHARACTERISTICS

2.2.1 Project Background

On May 27, 2003, the Irvine City Council certified a Final Environmental Impact Report (OCGP FEIR) and adopted a general plan amendment (GPA) and zone change (ZC) to implement the development of the OCGP. To develop at the maximum intensities allowed in the Overlay Plan shown in the General Plan and Zoning Ordinance, the land use entitlements required that the property owner enter into a development agreement with the City, which required, among other things, the dedication of land and the development or funding of certain infrastructure improvements.

On May 18, 2006, the City approved Addendum No. 1 to the OCGP FEIR to address the potential environmental impacts associated with the implementation of the OCGP Redevelopment Project Area Plan.

2. Project Description

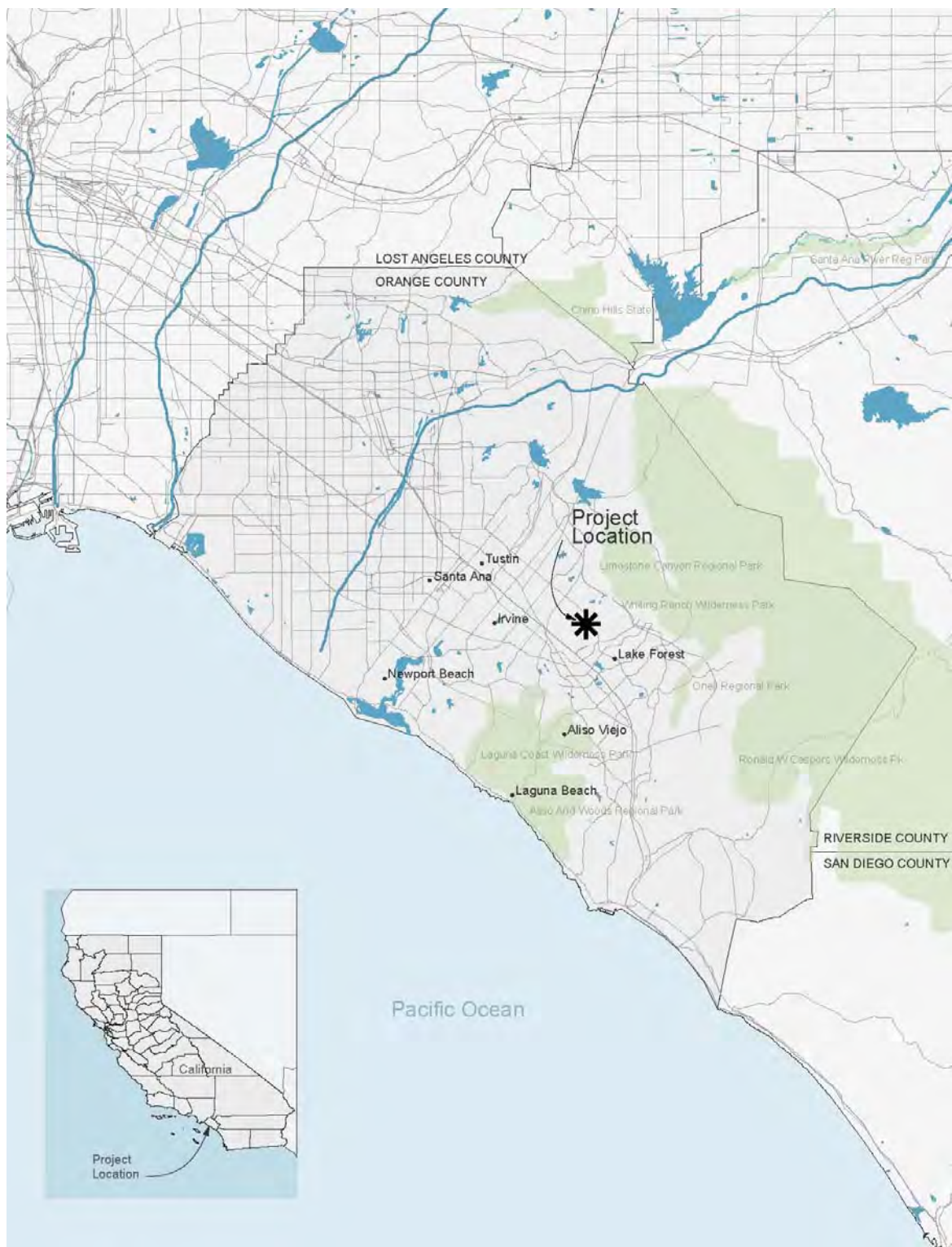
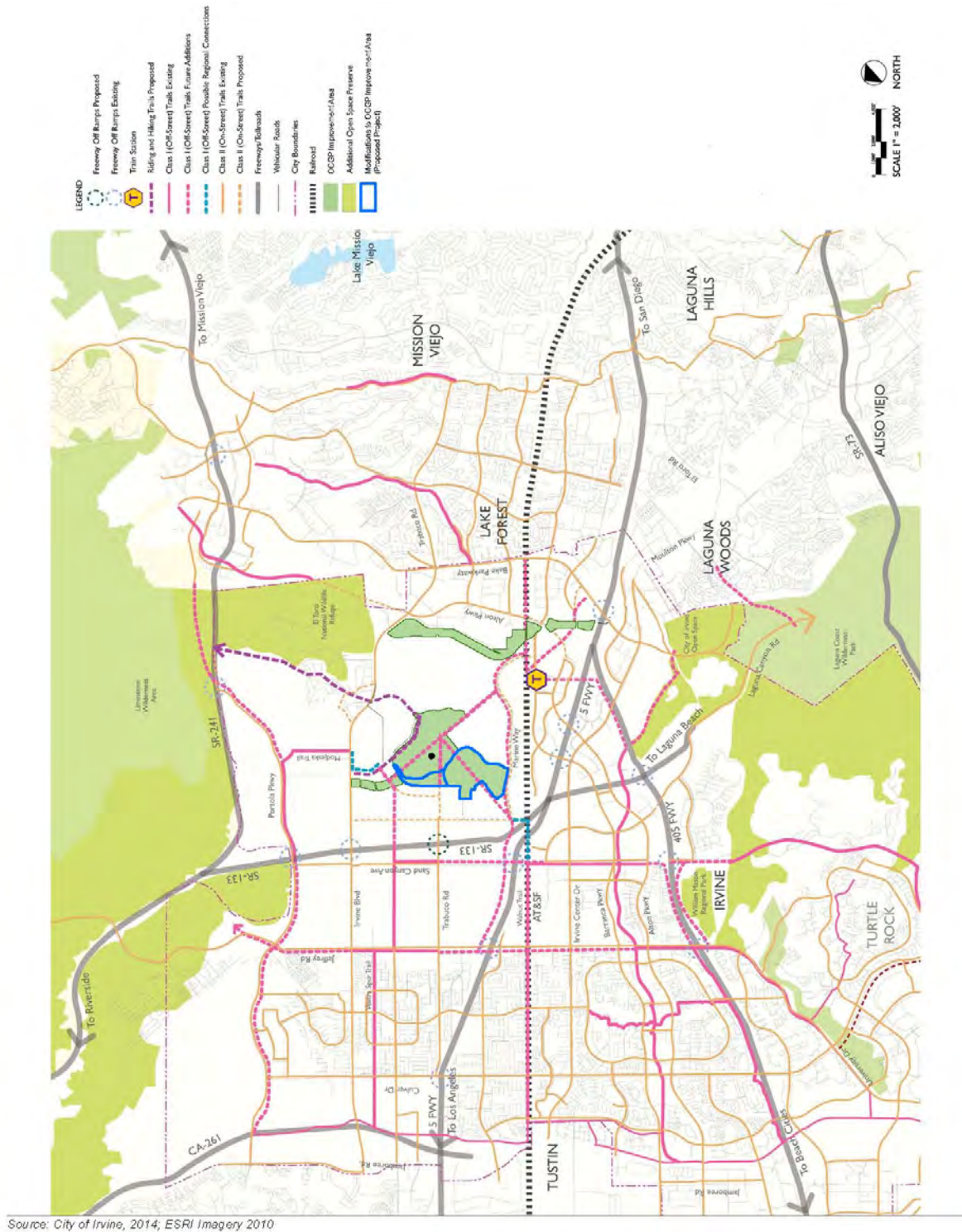


Figure 2-1
Project Location

Addendum No. 9 - Modifications to the OCGP Improvement Area



2. Project Description

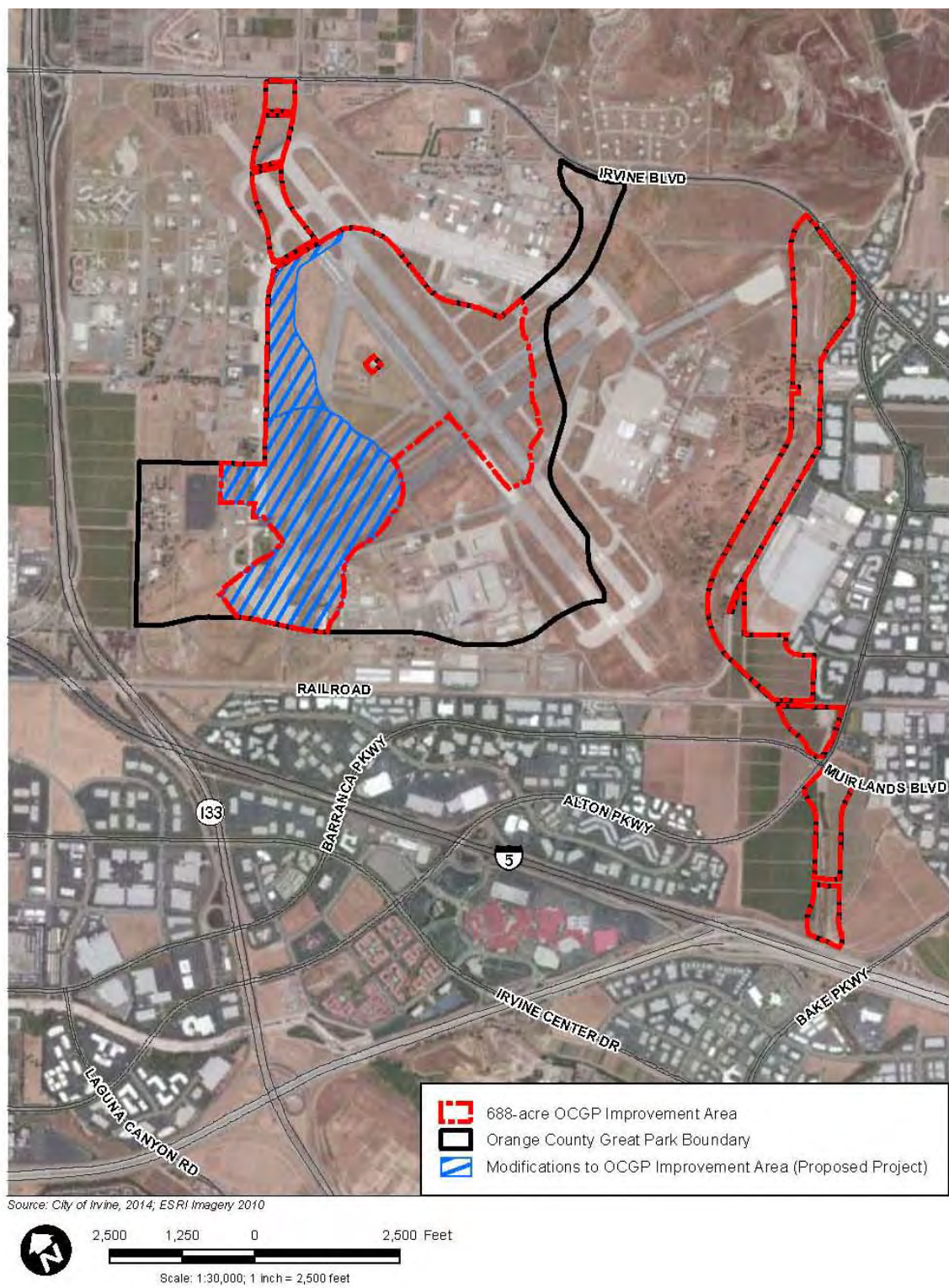


Figure 2-3
Aerial Photograph

In July 2005, Heritage Fields LLC, the predecessor of Heritage Fields El Toro, LLC (Heritage Fields), purchased the property that today is comprised of all of PA 51 (except such land as the federal government has determined to permanently retain), which includes the OCGP land. Heritage Fields thereafter made the aforementioned dedications, entered into the aforementioned development agreement, and received the aforementioned land use entitlements. The Orange County Great Park Corporation (GPC) and Heritage Fields then initiated their respective master design and development processes. To facilitate additional design options, both the GPC and Heritage Fields requested and the City initiated an amendment to the General Plan and the Zoning Ordinance to reconfigure the property boundaries between the two entities. Heritage Fields requested the creation of the 8.1/8.1A Lifelong Learning District zoning designations, which allowed mixed-use development, and also proposed various revisions to the zoning text within former PA 30 and PA 51. These revisions were analyzed in Addendum No. 2 dated September 2006, and were approved as the “Revised Overlay Plan” (Overlay Plan) by the City Council on October 10, 2006.

On June 28, 2006, Heritage Fields filed an application for approval of Vesting Tentative Tract Map No. 17008 (Master Subdivision Map). The Master Subdivision Map was approved by the Planning Commission on May 17, 2007. CEQA compliance for the Master Subdivision Map was accomplished via Addendum No. 3 approved on May 17, 2007.

In 2007, the GPC sought approval of a master plan for the development of the Orange County Great Park (OCGP Master Plan). The OCGP Master Plan was approved by the Planning Commission on August 2, 2007. The CEQA compliance for the OCGP Master Plan was established via Addendum No. 4 dated July 2007 and approved by the Planning Commission on August 2, 2007.

During preliminary consideration of the conceptual design of Marine Way, the California Department of Transportation (Caltrans) expressed concerns regarding the location of Marine Way and its relationship to the Bake Parkway freeway on-ramp. It was recognized that the revised alignment required an amendment to the General Plan, the Zoning Ordinance, and the Orange County Transportation Authority’s Master Plan of Arterial Highways. Addendum No. 5 provided that CEQA review and compliance for those entitlement actions. Addendum No. 5 also examined the amendments to the City-Heritage Fields Amended and Restated Development Agreement and related changes to the City’s General Plan and Zoning Ordinance. Addendum No. 5 was approved by the City Council on July 22, 2008.

In 2008, Addendum No. 6 was prepared analyzing the potential environmental issues associated with the following requested entitlements: amended Vesting Tentative Tract Map (AVTTM) No. 17008; VTTM No. 17283; Modification to the OCGP Streetscape Design Guidelines; Master Landscape and Trails Plan (MLTP); and Master Plan for Non-Residential Development within the Lifelong Learning District. Addendum No. 6 was approved by the Planning Commission on October 16, 2008.

In 2010, Addendum No. 7 was prepared in connection with revisions to the North Irvine Transportation Mitigation (NITM) Program, which removed planned traffic improvements at seven intersections from the list of traffic mitigation measures in the OCGP FEIR. Addendum No. 7 also removed the finding of a significant impact (and associated mitigation obligations) at one ramp (SR-241 at Lake Forest Drive). Addendum No. 7 was approved by the City Council on June 29, 2010.

2. Project Description

In 2011, Heritage Fields sought from the City a series of entitlements including: a general plan amendment, a zone change, seven subdivision maps, six master plans and five park plan approvals associated with the private development of a portion of the Heritage Fields-owned property within PA 51 and former PA 30 ("Modified Project"). A Supplement to the OCGP FEIR (SEIR) was prepared in connection with those entitlement applications. The SEIR was approved and certified by the City Council on August 30, 2011.

Addendum No. 8 was prepared analyzing the potential environmental issues associated with a minor modification to the Great Park Master Plan and Park Design Review, which was associated with implementation of the "Western Sector Park Development Plan Phase I". The minor modification proposed transferring non-residential square footage from the central area (i.e., Cultural Terrace) to the southwestern area of the OCGP (i.e., Sports Park); removing the Air Museum and Concessions/Retail, and replacing them with the Artist in Residency Facility, the proposed Community Ice Facility, and the proposed Nature Education Garden; and replacing the existing Air Museum Hangar with Hangar 244. Addendum No. 8 was approved by the City on October 20, 2011.

In 2012, a Second Supplemental EIR (supplement to the OCGP FEIR (SSEIR)) was prepared to analyze the 2012 Modified Project as compared to the 2011 Approved Project. The SSEIR addressed the environmental impacts associated with the implementation of the Heritage Fields 2012 General Plan Amendment and Zone Change Project, including the 688-acre OCGP Improvement Area. The 2012 Modified Project consisted of the reduction of 410,400_{sf} of non-residential intensity and a corresponding addition of 3,412 dwelling units, as well as 1,194 density bonus units for a total of 4,606 new dwelling units (9,500 total dwelling units). The Modified Project proposed relocation of certain portions of the Approved Wildlife Corridor Feature (Segments 2 and 3). The SSEIR also analyzed the potential impacts associated with two options for the "Main Street" development along Trabuco Road east of "O" Street. Additionally, the 2012 Modified Project included implementation of recreational facilities in the previously approved Sports Park District of the OCGP. PAs 30 and 51 were also combined into a single PA, Combined PA 51, to create a cohesive development governed by a unified set of land use and development regulations. On November 26, 2013, the City Council certified the SSEIR.

Concurrent with the certification of the SSEIR, on November 26, 2013, the City Council also approved a contractual agreement (ALA II) with Heritage Fields El Toro, LLC (Heritage Fields) that obligated Heritage Fields to construct 688 acres of the Great Park (the Design Package). The ALA II included provisions that allowed the City to unilaterally require program changes within the 688-acre OCGP Improvement Area, with respect to the following elements of the Design Package: a) sand volleyball, parking and sports courts within the Sports Park sub-area; b) the dog park and mini-amphitheater within the Bosque sub-area. On March 18, 2014, the City Council approved the Unilateral Changes to the Design Package of the contractual agreement (ALA II). This action will be reflected in the discretionary action that the Planning Commission will be asked to make with regards to the Master Plan modification. Since CEQA clearance for the "Design Package" was established through the SSEIR, this Addendum document analyzes the Unilateral and Program Changes as approved by the City Council. The SSEIR served as the environmental clearance for the ALA II and its implementation.

2.2.2 Project Components

This Addendum (Addendum No. 9) addresses the potential for environmental impacts associated with the modifications to the 688-acre OCGP Improvement Area, which include both the Unilateral Program changes allowed in the ALA II and other staff recommended changes to the OCGP Improvement Area¹. The proposed modifications are within the Bosque and Sports Park Districts of the 688-acre OCGP Improvement Area. Additionally, there are two design features of the Project that would be incorporated upon project implementation and they include dual 250-foot long eastbound left-turn pockets at Marine Way and Great Park Boulevard West (562) and a 250-foot long westbound right turn lane at the Marine Way right in/right out driveway (669), located west of Great Park Boulevard (West).

The OCGP Improvement Area includes the Sports Park complex with multi-use fields, baseball, softball, tennis, sand volleyball and sports courts, an area of Bosque and Upper Bee Canyon improvements, agricultural areas, a golf course and public clubhouse, trails, and wildlife corridor. A “Design Package,” which depicts the concept plans and programming of the OCGP Improvement Area, was prepared by the City and Heritage Fields and included in the ALA II. The OCGP Improvement Area as depicted in the Design Package includes the following Districts:

- Upper Bee Canyon
- Bosque
- Agriculture
- Golf Course
- Sports Park
- Wildlife Corridor

As authorized by the ALA II, the Unilateral and Program Changes are listed below:

1. Sand Volleyball Courts (within Sports Park)

In the area north of the Palm Court, bordering Heritage Fields property, the Project proposes to eliminate the planned 4,200-square-foot Volleyball Support Building and six of the eleven planned courts. The remaining five planned courts will be re-positioned further east to allow for the development of a large children’s playground in the reclaimed area. The new playground will blend naturally with the future neighborhood park (Sports Village Green) proposed on Heritage Fields El Toro, LLC’s (HEFT) adjacent property. Additionally, in the area south of the Kids Rock play feature, the Project proposes to eliminate the four planned volleyball courts in the crescent-shaped area to allow for the development of passive picnic grounds adjacent to the large Great Lawn area.

2. Sports Courts (within Sports Park)

In the area north of the Palm Court (current location of the Farm and Food Lab), the Project proposes to eliminate all eight of the planned basketball courts and reconfigure parking into this area to preserve more land for the children’s playground to the north and the entrance to the Championship

¹ To accomplish the environmental review for this Addendum, however, it was necessary to prepare analyses that verify that the overall environmental impacts of the OCGP Improvement Area are within the assumptions set forth in prior environmental analyses.

2. *Project Description*

Soccer Field Building. This modification will not change the total number of parking stalls. Additionally, in the area south of the Kids Rock play feature, the Project proposes to relocate the four full-courts further south to a crescent-shaped area adjacent to the softball facility. This would preserve more picnic and play area around Kids Rock (currently lawn), and allow for the future development of a Splash Park. This modification could include an adjustment to the Limits of Work between Orange County Great Park/Heritage Fields El Toro improvement areas to reserve this approximately 1.7-acre area.

3. Other Program Changes (within Bosque)

Other Program Changes (recommended by the City Staff) to the 688-acre OCGP Improvement Area include the following modifications:

- Relocation and design of the Great Park Farm and Food Lab from its existing location to a new approximately 3.7-acre location near the Trabuco Entry.
- Further site development of the dog park to optimize visibility, potential pet enclosure, and defining accessible routes to this amenity from the parking lot.
- Improvement in the quality of planned public restrooms.
- Construction of utilities infrastructure in certain parking facilities by providing conduit to be “solar ready”.
- A parking plan as modified by the approved Program Changes and design enhancements.

Modifications to the OCGP Improvement Area

The Modification to the OCGP Master Plan applies to the 688-acre OCGP Improvement Area and subsequent modifications to that Improvement Area, which include the Unilateral and other Program Changes. The ALA II includes a “Design Package” that sets forth the concept plans and programming for the 688-acre OCGP Improvement Area. The SSEIR served as the environmental clearance document for the ALA II and the Design Package. The proposed Modifications to the OCGP Improvement Area, which include the Unilateral Program changes and other Program changes, outlined above, constitute the “Project” in this Addendum No. 9 document (see Table 2-1 and Figure 2-4). The following Table 2-1 highlights the Modifications to the OCGP Improvement Area.

Table 2-1. Modifications to the OCGP Improvement Area

OCGP Improvement Area Districts	Program Changes to OCGP Improvement Area
Upper Bee Canyon (33.9 acres) <ul style="list-style-type: none">- Pedestrian Trails- Class I Bike Trail- Boulder Fields- Pedestrian Undercrossing- Landform- Potential Transit Stop (Not part of budget)	No changes proposed

2. Project Description

OCGP Improvement Area Districts	Program Changes to OCGP Improvement Area
Bosque (40.0 acres) <ul style="list-style-type: none"> Open Bee Canyon (Overlook Bridge) Pedestrian and Bicycle Trails Family Picnic Areas Bicycle Station Landforms Small Amphitheater/Stage Dog Park Children's Adventure Area Great Park Garden Proposed Food Lab Relocation Site Restroom 	<ul style="list-style-type: none"> Small Amphitheater/Stage (Integrate into the bermed entry feature) Dog Park (Relocate to a 2-ac location closer to the mini-amphitheater) Proposed Farm + Food Lab Relocation Site (Relocate to a 3.7-ac location near the Trabuco Entry)
Agriculture/Golf Course (258.8 acres) <ul style="list-style-type: none"> Golf Course Clubhouse Clubhouse Parking Driving Range Golf Maintenance Facility Single Track Trail Sidewalk Agriculture Area 	<ul style="list-style-type: none"> No changes proposed
Sports Park (175.0 acres) <ul style="list-style-type: none"> 17 Soccer Pitches (includes 5 Flex Fields) 1 Championship Soccer Pitch Admin/Soccer Press Box Building 2 Soccer Support Buildings Maintenance Building Visitor Center Building 6 Baseball Fields 1 Championship Baseball Stadium Championship Baseball Building Baseball Support Building 4 Softball Fields 1 Championship Softball Stadium Softball Support Building 10 Volleyball + 1 Championship Sand Volleyball Volleyball Support Building 24 Tennis Courts 1 Championship Tennis Court Tennis Support Building 12 Basketball Courts Timeline Avenue of Champions All-Star Plaza Parking Passive Garden Trails/Walking Paths 	All of features listed with the following revisions: <ul style="list-style-type: none"> 5 Sand Volleyball Courts (reduced from 10 Volleyball + 1 Championship San Volleyball) 0 Basketball Courts (reduced from 12) 12 Basketball Courts Children's Play Area Expanded Play Area 4 Sports Courts (4 full-sized Basketball Courts) Expanded Picnic Area Removal of 4,200-square-foot Volleyball Support Building

2. *Project Description*

OCGP Improvement Area Districts	Program Changes to OCGP Improvement Area
- Restrooms	
Wildlife Corridor (177.6 acres)	No changes proposed
HEFT Property (3.2 acres)	No changes proposed
	<ul style="list-style-type: none">- Improvement in the quality of planned public restrooms.- Construction of utilities infrastructure in certain parking facilities by providing conduit to be "solar ready".- A parking plan as modified by the approved Program Changes and design enhancements.
	<ul style="list-style-type: none">- Adjustment to the Limits of Work between Orange County Great Park/Heritage Fields El Toro improvement areas (approximately 1.7 acres).

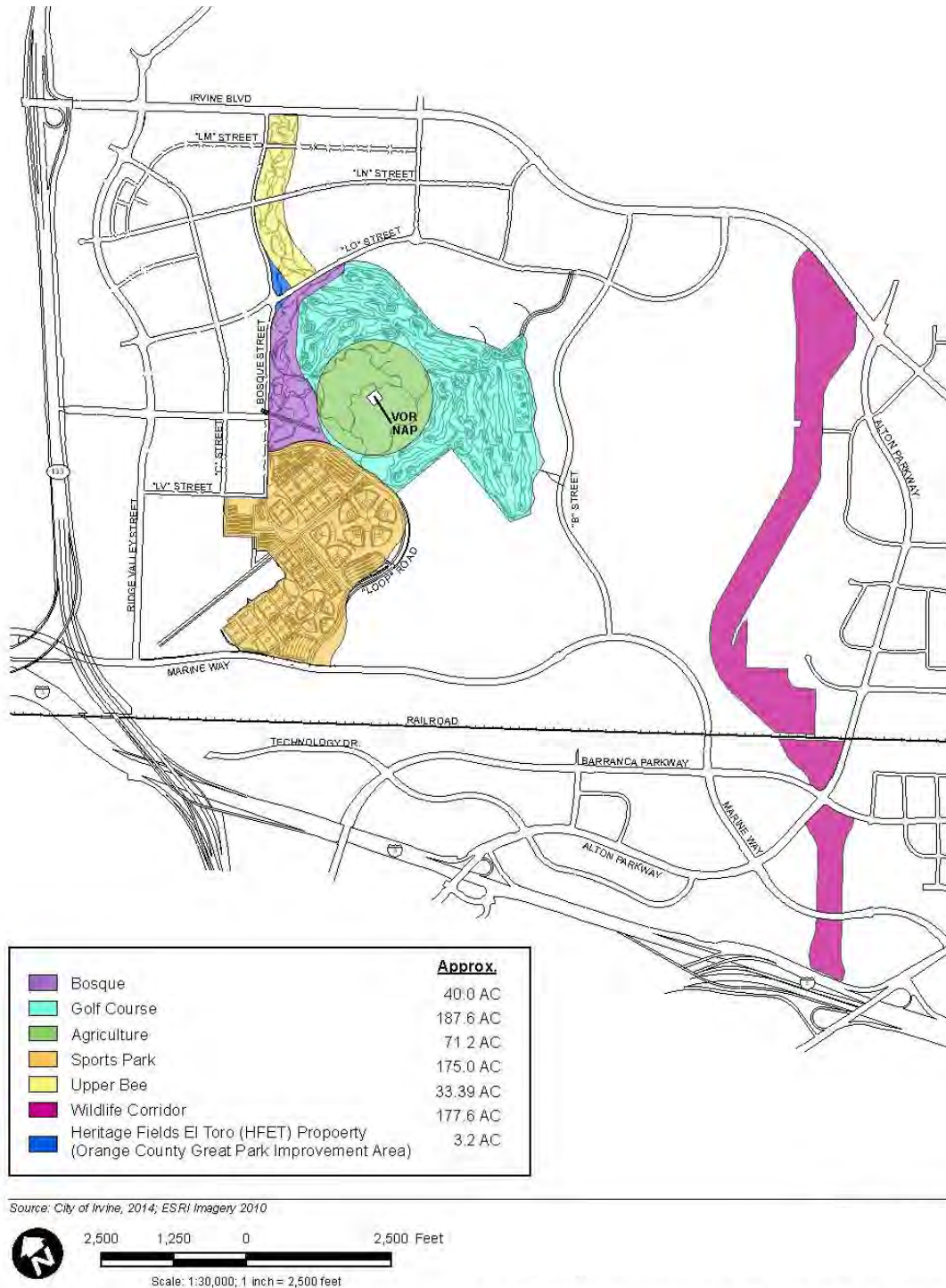


Figure 2-4
Great Park Improvement Area

2. Project Description

2.3 DISCRETIONARY APPROVALS

Implementation of the Project includes the following discretionary actions to be undertaken by the City:

- Approval of Modification to the Great Park Master Plan
- City Council determination of consistency between modified Great Park Master Plan and the Park Design (Design Package), approved as part of the Second Agreement with City of Irvine as Adjacent Landowner (subject of Addendum No. 9)

The OCGP FEIR lists additional discretionary actions to be taken by the City and other public agencies at or as part of the completion of the Project (OCGP FEIR pages 3-29 and 3-30). The actions and responsible public agencies include, but are not necessarily limited to, these approvals:

- Master plans and subdivisions for development (City)
- Community facilities districts or other assessment districts (City)
- Actions to improve interim use activities (City and DoN)
- Transfer of parcels within PA 51 (DoN)
- Clean Water Act section 404 permits (U.S. Army Corps of Engineers)
- Endangered Species Act compliance (U.S. Fish and Wildlife Service)
- Clean Water Act Section 401 and National Pollutant Discharge Elimination System (NPDES) permits (Regional Water Quality Control Board)
- California Fish and Game Code 1602 permits (California Department of Fish and Game)
- Revisions to the Orange County Master Plan of Arterial Highways (Orange County Transportation Authority)

The City of Irvine Environmental Information Form and Environmental Checklist Form have been completed by the City and are included on the following pages. The Environmental Checklist Form is marked with the findings of the Community Development Department as to the environmental effects of the changes included in the proposed Project that is the subject of this Addendum.

As explained above, this comparative analysis has been undertaken, pursuant to the provisions of the California Environmental Quality Act (CEQA), to provide the City with the factual basis for determining whether any changes in the OCGP FEIR project, any changes in the circumstances, or any new information requires additional environmental review and documentation. The basis for each of the findings listed in the attached Environmental Checklist Form in Section 3 is explained in Section 4 of the Addendum.

3. Environmental Checklist

3.1 CITY OF IRVINE INITIAL STUDY AND ENVIRONMENTAL EVALUATION

The City of Irvine Environmental Information Form and Environmental Checklist Form have been completed by the City and are included on the following pages. The Environmental Checklist Form is marked with the findings of the Community Development Department as to the environmental effects of the proposed Modifications to the OCGP Improvement Area in comparison with the findings of the OCGP FEIR.

As explained above, this comparative analysis has been undertaken, pursuant to the provisions of CEQA, to provide the City with the factual basis for determining whether any changes in the project, any changes in the circumstances under which the project is undertaken, or any new information requires additional environmental review or preparation of a subsequent or supplemental EIR. The basis for each of the findings listed in the attached Environmental Checklist Form is explained in Section 4 of this Addendum No. 9 document.

1. Project Title:

Addendum No. 9 – Modifications to the OCGP Improvement Area

2. Lead Agency Name and Address:

City of Irvine Community Development Department
One Civic Center Plaza Irvine, California 92623

3. Contact Person and Phone Number:

Barry Curtis, AICP, Manager of Planning Services (949) 724-7453

4. Project Location:

The Orange County Great Park (OCGP) is bordered on the north by Irvine Boulevard; on the south by future Marine Way; on the west by future Ridge Valley; and on the east by the future daylighted Agua Chinon wash. On the easterly border of Planning Area 51 is the future Wildlife Corridor.

5. Project Sponsor's Name and Address:

City of Irvine Community Development Department,
One Civic Center Plaza Irvine, California 92623

6. General Plan Designation:

Orange County Great Park (OCGP)

7. Zoning:

1.9 Orange County Great Park
1.4 Preservation

3. Environmental Checklist

8. Description of Project

See Section 2.2.2, *Project Components*

9. Surrounding Land Uses and Setting (Briefly describe the project's surroundings):

The proposed Project area is located in the central portion of Orange County, approximately 45 miles southeast of Los Angeles. Irvine Station is located to the south of the Project site. Commercial uses, such as Irvine Spectrum, are located further to the south of the Project site. Surrounding the site are residential and nonresidential uses under construction to the north and west, open space to the northeast, and nonresidential and mixed land uses to the east and southeast within the cities of Lake Forest and Irvine.

10. Other Public Agencies Whose Approval Is Required (e.g., permits, financing approval, or participation agreement):

N/A

3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|--|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

3.3 DETERMINATION

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☒ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further beyond an Addendum to the earlier EIR is required.

Barry Curtis, AICP, Manager of Planning Services

Date

3. Environmental Checklist

3.4 EVALUATION OF ENVIRONMENTAL IMPACTS

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 1 5063(c) (3) (D). In this case, a brief discussion should identify the following:
 - a) **Earlier Analysis Used.** Identify and state where they are available for review.
 - b) **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) **Mitigation Measures.** For effects that are “Less Than Significant With Mitigation Incorporated,” describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

3. Environmental Checklist

- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significant.

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
I. AESTHETICS: Would the project:						
a) Have a substantial adverse effect on a scenic vista?					X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway or local scenic expressway, scenic highway, or eligible scenic highway?					X	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?					X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?					X	
II. AGRICULTURE AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Mode (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:						
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the						X

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	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
ENVIRONMENTAL ISSUES						
Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?						
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?						X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?						X
d) Result in the loss of forest land or conversion of forest land to non-forest use?						X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?					X	
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:						
a) Conflict with or obstruct implementation of the applicable air quality plan?						X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?					X	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?					X	

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	Subsequent or Supplemental EIR				Addendum to EIR	
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ENVIRONMENTAL ISSUES						
d) Expose sensitive receptors to substantial pollutant concentrations?					X	
e) Create objectionable odors affecting a substantial number of people?						X
IV. BIOLOGICAL RESOURCES: Would the project:						
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?						X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?						X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?						X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?					X	
e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?						X
f) Conflict with the provisions of an adopted Habitat Conservation Plan,						X

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	Subsequent or Supplemental EIR				Addendum to EIR	
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ENVIRONMENTAL ISSUES						
Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?						
V. CULTURAL RESOURCES: Would the project:						
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the CEQA Guidelines?					X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the CEQA Guidelines?					X	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?					X	
d) Disturb any human remains, including those interred outside of formal cemeteries?					X	
VI. GEOLOGY AND SOILS: Would the project:						
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:						
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.						X
ii) Strong seismic ground shaking?					X	
iii) Seismic-related ground failure, including liquefaction?						X
iv) Landslides?						X
b) Result in substantial soil erosion or the loss of topsoil?					X	
c) Be located on a geologic unit or soil that is unstable, or that would become						X

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ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?						
d) Be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?					X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?						X
VII. GREENHOUSE GAS EMISSIONS: Would the project:						
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?						*
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?						*
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:						
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?					X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?						X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter-mile of an existing or proposed school?						X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to					X	

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	Subsequent or Supplemental EIR				Addendum to EIR	
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ENVIRONMENTAL ISSUES						
Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?						
e) For a project located within an airport land use plan, would the project result in a safety hazard for people residing or working in the project area?						X
f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?						X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?						X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?						X
IX. HYDROLOGY AND WATER QUALITY: Would the project:						
a) Violate any water quality standards or waste discharge requirements?					X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?						X
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner which would result in					X	

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ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
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substantial erosion or siltation on-site or off-site?						
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?					X	
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of pollutant runoff?					X	
f) Otherwise substantially degrade water quality?					X	
g) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?						X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?						X
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?						X
j) Inundation by seiche or mudflow?						X
X. LAND USE AND PLANNING: Would the project						
a) Physically divide an established community?						X
b) Conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?					X	

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	Subsequent or Supplemental EIR				Addendum to EIR	
ENVIRONMENTAL ISSUES	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?						X
XI. MINERAL RESOURCES: Would the project:						
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?						X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use?						X
XII. NOISE: Would the project result in:						
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?					X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?					X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?					X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?					X	
e) For a project located within an airport land use plan, would the project expose people residing or working in the project area to excessive noise levels?						X
f) For a project within the vicinity of a private airstrip, heliport or helistop, would the project expose people residing or working in the project area to excessive noise levels?						X

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XIII. POPULATION AND HOUSING: Would the project:						
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure)?					X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?						X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?						X
XIV. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:						
a) Fire protection?					X	
b) Police protection?					X	
c) Schools?					X	
d) Parks?					X	
e) Other public facilities?					X	
XV. RECREATION: Would the project:						
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?					X	
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?					X	
XVI. TRANSPORTATION/TRAFFIC: Would the project:						
a) Conflict with an applicable plan, ordinance or policy establishing					X	

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ENVIRONMENTAL ISSUES						
measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?						
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?					X	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or change in location that results in substantial safety risks?						X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?						X
e) Result in inadequate emergency access?					X	
f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus stops/routes, bicycle lanes, sidewalks, etc.)?						X
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:						
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?					X	
b) Require or result in the construction of new water or wastewater treatment facilities or					X	

3. Environmental Checklist

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expansion of existing facilities, the construction of which could cause significant environmental effects?						
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?					X	
d) Have sufficient water supplies available to serve the project (including large scale developments as defined by Public Resources Code Section 21151.9 and described in Question No. 20 of the Environmental Checklist) from existing entitlements and resources, or are new or expanded entitlements needed?					X	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?					X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?					X	
g) Comply with Federal, State, and local statutes and regulations related to solid waste?					X	
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE						
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the					X	

3. *Environmental Checklist*

	Subsequent or Supplemental EIR				Addendum to EIR	
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ENVIRONMENTAL ISSUES						
major periods of California history or prehistory?						
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)					X	
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?					X	

* The Environmental Checklist questions above related to greenhouse gas emissions are not answered because GHG emissions was not an issue identified and analyzed in the May 2003 certified OCGP Final Environmental Impact Report (FEIR) for a general plan amendment (GPA) and zone change (ZC) to implement the development of the Orange County Great Park. At the time of the FEIR certification, GHG emissions had been recognized as an environmental issue since the 1970s when the United States Congress enacted the National Climate Program Act (92 Stat.601, 1978) which required the President to establish a program to assist in understanding and responding to natural and human-induced climate processes, and since the 1980s when the Intergovernmental Panel on Climate Change (IPCC) was formed to assess scientific information related to climate change. Thus, issues related to climate change were known, or could have been known, at the time of the certification of the OCGP FEIR.

When an EIR has been certified for a project, no subsequent environmental document needs to be prepared by the lead agency (City of Irvine) unless there is substantial evidence that one or more of the following has occurred:

1. Substantial changes are proposed in the project involving new significant environmental effects or a substantial increase in the severity of previously significant effects;
2. Substantial changes occur with response to the project due to involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

3. New information of substantial importance, which was unknown or could not have been known with the exercise of reasonable diligence at the time the previous EIR was adopted shows any of the following:
 - a. The project will have one or more significant effects not discussed in the previous EIR;
 - b. Significant effects previously examined will be substantially more severe than shown in the previous EIR.
 - c. Mitigation measures or alternatives previously found to be infeasible would be feasible, and would substantially reduce one or more significance effects of the project, but the project proponents declined to adopt the mitigation measure or alternative; or
 - d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents declined to adopt the mitigation measure or alternative.

In this case, the proposed Project does not meet the Section 15162 criteria for preparing a subsequent environmental document and no analysis of GHG emissions is required based on the following supporting information:

1. As documented throughout this Initial Study, the proposed Project does not include substantial changes proposed that involve new significant environmental impacts or a substantial increase in the severity of previously identified significant effects. As for GHG emissions, the issue was not considered potentially significant in 2003 and the GHG emissions associated with the Modifications to the OCGP Improvement Area have not increased beyond those expected with the 2003 approved project, because the proposed changes allowed by the Modifications to the OCGP Improvement Area has not increased over that allowed by the 2003 approved project.
2. GHG emissions has been recognized as an environmental issue for at least three decades and the approved project contribution to GHG emissions is not new information that was unknown or could not have been known with the exercise of reasonable diligence at the time the EIR was certified in 2003.
3. A GHG analysis that analyzed the projected emissions for both the public and private development in Planning Area 51 (which includes former Planning Area 30) was prepared in connection with the Supplement to the OCGP FEIR (SEIR) that was circulated for public review on June 2, 2011. That analysis concluded that the emissions per service population falls below the 4.8 MTons per service population threshold proposed by South Coast Air Quality Management District (SCAQMD) and utilized as a threshold of significance by the City in the SEIR.
4. In 2012 a GHG analysis was conducted that compared the 2012 Modified Project's GHG emissions to the impacts of the 2011 Approve Project's GHG emissions. The significance of the 2012 Modified Project's emissions was assessed using the SCAQMD's threshold of 4.8 MTons of CO₂e per service population per year. Similar to the 2011 Approved Project, the analysis concluded that the 2012 Modified Project's construction and operational emissions, with and without the optional conversion, were below the SCAQMD's efficiency metric of 4.8 MTons per service population per year. Therefore, under both scenarios, the 2012 Modified Project would have a less than significant impact on GHG emissions.

3. Environmental Checklist

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4. Discussion of Checklist and Mitigation Measures

This section provides evidence to substantiate the conclusions set forth in the Environmental Checklist. It briefly summarizes the conclusions of the 2003 Orange County Great Park FEIR, as updated by its prior Addenda and Supplemental EIRs (SEIR and SSEIR). Collectively all of these CEQA documents are known as, "OCGP FEIR". Finally this section discusses whether the proposed Modifications to the OCGP Improvement Area are consistent with the findings contained in the OCGP FEIR.

4.1 AESTHETICS

4.1.1 Environmental Setting

The OCGP FEIR addressed the potential aesthetic and visual impacts associated with the development of the former MCAS El Toro. The OCGP FEIR discussed the project's visual setting associated with its location adjacent to various arterial and state and federal highways. None of these roadways is designated as a County or State scenic highway; however, Sand Canyon Avenue is designated as a highway with rural/natural character. The City's General Plan also designates Interstate 5 (I-5) as an urban character Scenic Highway.

Generally, views of the former military base are from the surrounding highways. From these highways, a variety of land uses, structures, and facilities of differing ages, sizes, and architectural styles can be viewed. Although agricultural areas are adjacent to and within the base, the predominant views are associated with the military use of the base, including runways, aprons, hangars, warehouses, barracks housing, recreational facilities, single-family housing, offices, and commercial structures. However, since certification of the 2003 OCGP FEIR, many of the base facilities have been demolished along with portions of the runway. Additionally, the Great Park Western Sector Park Development Plan (Phase 1) has been established on the western edge of the former military base.

The city of Lake Forest and the James A. Musick Branch Jail are located to the southeast of the proposed Project site; the Irvine Spectrum is to the east and south; and existing and developing residential areas are to the north and west of the site. Further to the south are the residential developments of the cities of Laguna Woods and Laguna Hills. Portions of these residential developments are at higher elevations and have panoramic views of the Project site.

There are minimal light sources on the Project site. Existing lighting is mostly associated with outdoor nighttime parking areas, field lighting and security lighting.

4.1.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR discussed the potential aesthetic effects associated with development of the site under the adopted Overlay Plan and found that future development of Planning Areas 51 would introduce new sources of light within the project area. These sources include street lighting along planned roadways and various forms of exterior lighting, including security lighting, parking lots, educational facilities, institutional and commercial developments, and lighting associated with athletic fields. The OCGP FEIR concluded that significant light impacts would occur if proposed light sources were directed into or located near existing or planned residential uses, which are sensitive to light intrusion during nighttime hours. However, it further noted that with the mitigation ultimately adopted by the City, these potential impacts would be less than significant.

4. Discussion of Checklist and Mitigation Measures

The OCGP Master Plan (the subject of Addendum No. 4) identified one potential source of nighttime illumination not previously identified in the OCGP FEIR described as illuminated iconic park elements, such as the helium tethered balloon. However, it was noted that such lighting is focused on the iconic element and not away from it. Lighting of this type would exhibit a degree of luminosity substantially lower than some of the other types already considered in the OCGP FEIR, such as lighting associated with athletic fields. As a consequence, the extent of any impact associated with the illumination of iconic park elements has already been adequately addressed in the OCGP FEIR.

No other significant or potentially significant aesthetic impacts were identified in the previous CEQA documents.

4.1.3 Impacts Associated with the Modifications to the OCGP Improvement Area

The OCGP Improvement Area is represented by a detailed Design Package, which demonstrates the design work and improvements for the 688-acre portion of the OCGP site. All land uses proposed within the Improvement Area are similar to the original OCGP Master Plan; however, the proposed Project introduces modifications to the 688-acre OCGP Improvement Area, within the Bosque and Sports Park, which include the Unilateral Program changes allowed in the ALA II and other Program changes that were recommended by the City staff.

The SSEIR, which analyzed the 688-acre OCGP Improvement Area, did not identify any significant aesthetics and light and glare impacts. While the visual character of the site would change compared to land uses to be developed under previous project, the changes would not degrade the visual quality of the site. In fact the conversion to residential from non-residential uses on the properties in the vicinity of the OCGP Improvement Area would provide more opportunity for landscaping and improvement to the visual quality of the area. The SSEIR also concluded, under the Main Street development options, that the range of permitted land uses and the permitted density would not exceed the approved permitted land uses and density. It was further indicated that development of additional acreage (11-acre Transportation Corridor Agency and 13 acres in from 1.1 Agriculture to 1.4 Preservation in Development District 6) would not result in reduced visual quality and the impacts would be similar to the previously approved project.

As described in detail in Section 2.0, Project Description, the proposed Modifications to the OCGP Improvement Area further enhance the use and efficiency of the existing and planned features. For instance, the improved parking layout would accommodate increased family amenities, and further site development within the dog park would optimize visibility within the dog park and enhance connectivity to parking and restroom facilities. The proposed Modifications to the OCGP Improvement Area reduces the number of sports courts, expands passive recreational area, relocates some of the Improvement Area components to optimize visibility, access and efficiency, and assessing adequacy of parking plan, reflect a development program that is consistent with the General Plan Land Use and Zoning Ordinance designations for the property and does not deviate from development program for the area. No new uses and facilities are included in the proposed Project that would have a substantial adverse effect on a scenic vista; substantially damage scenic resources; degrade the existing visual character or quality of the site and its surroundings; or introduce new sources of light and glare or highly reflective building materials beyond those already considered in the OCGP FEIR. Therefore, in the absence of any significant changes, besides minor adjustment to design, location, and efficiency, no revisions to the FEIR and its findings would be required.

4. Discussion of Checklist and Mitigation Measures

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the OCGP FEIR. The proposed Modifications to the OCGP Improvement Area, which do not include any major changes to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the Modifications to the OCGP Improvement Area or otherwise available indicating substantial changes in circumstances that would require major changes to the OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the OCGP FEIR.

4.1.4 Mitigation from the OCGP FEIR and Applicability to the Modifications to the OCGP Improvement Area

The OCGP FEIR identified Mitigation Measures A1 and A2, which, if implemented, would reduce the effects of development under the adopted Overlay Plan to a less than significant level. Those mitigation measures were modified in the SEIR, to make them consistent with the City of Irvine adopted conditions of approval.

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

- A1** Prior to issuance of building permits, lighting plans and signage plans for residential or non-residential new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent residential areas occurs.

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- A2** Prior to the issuance of building permits for residential and non-residential development, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.

Additionally, the SSEIR identified the following measure as existing plans, programs, or policies (“PPP”) that apply to the proposed Project and will help reduce or avoid potential aesthetics and light and glare impacts. The following PPP, as applicable, will be incorporated into the proposed Project upon project implementation.

PPP 1-1 Prior to issuance of building permits, the applicant shall demonstrate it has met the Irvine Uniform Security Code requirements for lighting by providing the below listed items for a complete review by the Police Department. Failure to provide a complete lighting package will result in the delay of satisfaction of this condition (City Standard Condition 3.6).

- a. Electrical plan showing light fixture locations, type of light fixture, height of light fixture, and point-by-point photometric lighting analysis overlaid on the landscape plan with a tree legend. The photometric plan should only show those fixtures used to meet the Irvine Uniform Security Code requirements.
- b. Corresponding fixture cut-sheets (specifications) of those lights used to meet the Irvine Uniform Security Code.
- c. Site plan demonstrating that landscaping shall not be planted so as to obscure required light levels.
- d. Site plans that are full-scale and legible.

4.2 AGRICULTURE AND FORESTRY RESOURCES

4.2.1 Environmental Setting

The OCGP FEIR identified approximately 659 acres of designated Prime Farmland, 70 acres of designated Unique Farmland, and 99 acres of designated Farmland of Statewide Importance (as defined below). No agricultural land within the project area is currently covered by Williamson Act contracts.

The OCGP FEIR described the Farmland Mapping and Monitoring Program (FMMP Program) of the California Department of Conservation Division of Land Resources Protection classifications of agricultural lands present within the project area as follows (California Department of Conservation, 2014):

- **Prime Farmland:** Land which has the best combination of physical and chemical features able to sustain long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

4. Discussion of Checklist and Mitigation Measures

- **Farmland of Statewide Importance:** Similar to Prime Farmland, except this land has minor shortcomings such as greater slopes or less ability to store soil moisture than Prime Farmland. Land must have been used for production of irrigated crops at some time during the four years prior to the mapping date.
- **Unique Farmland:** Lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climate zones in California. This land is used for the production of specific high economic value crops such as oranges, olives, avocados, rice, grapes, or cut flowers. Land must have been cropped at some time during the four years prior to the mapping date.
- **Farmland of Local Importance:** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- **Grazing Land:** Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.
- **Urban and Built-Up Land:** Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, and sewage treatment and water control structures.
- **Other Land:** Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines or borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land greater than 40 acres and surrounded on all sides by urban development is mapped as Other Land.
- **Land Committed to Nonagricultural Use:** This optional designation is an overlay to the standard farmland categories described above and represents existing farmland and grazing land, and vacant areas that have a permanent commitment for development. Examples of Land Committed to Nonagricultural Use would include an area undergoing permanent infrastructure installation or for which bonds or assessments have been issued for public utilities. Such lands represent planning areas where there are commitments for future nonagricultural development that are not reversible by a simple majority vote by a city council or board or supervisors.

Although the OCGP FEIR identified approximately 659 acres of designated Prime Farmland, 70 acres of designated Unique Farmland, and 99 acres of designated Farmland of Statewide Importance within OCGP overall, based on information provided through the California Department of Conservation's FMMP, land within the proposed Modifications to the OCGP Improvement Area project site falls into two of these agricultural land use designations: Urban and Built-Up Land and Other Land. The location of these land classifications are identified in Figure 4.2-1, Farmland Map.

4. Discussion of Checklist and Mitigation Measures

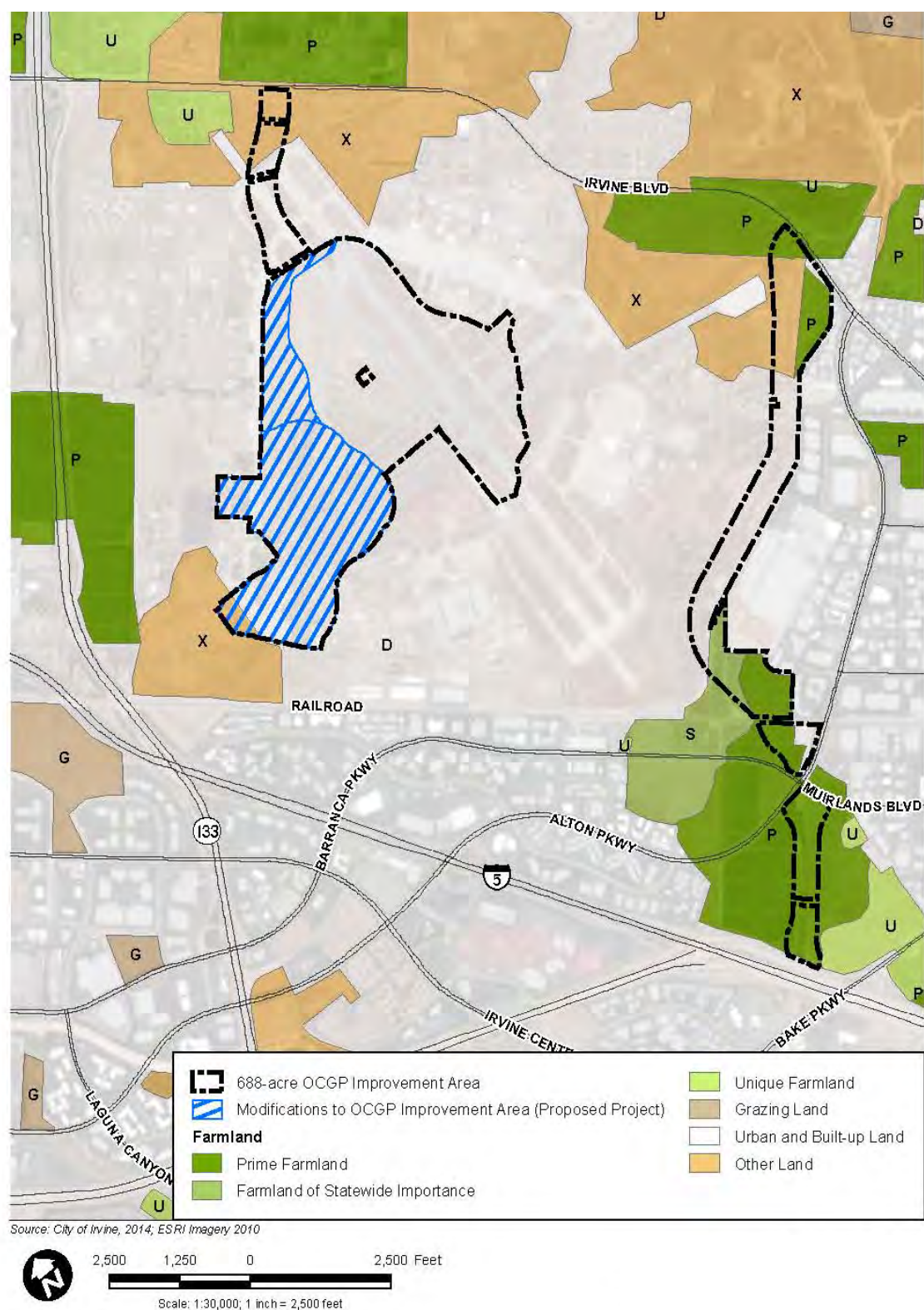


Figure 4.2-1
OCGP Improvement Area Farmland Map

4. Discussion of Checklist and Mitigation Measures

City of Irvine Policies and Programs

The project site is designated for a variety of urban uses in the City of Irvine General Plan. The OCGP Master Plan encourages agriculture as an interim land use prior to development of the land. The City of Irvine General Plan Objective L-10, as amended in 2002 and presented in the OCGP FEIR, includes the following policies to "encourage the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development".

Policy (a): Provide for farming opportunities in the community, where feasible and appropriate, through an Agricultural Legacy Program facilitating limited scale agricultural operations and programs on public lands. The program may include components such as edible landscape, metro-farming, heritage farming, model farming, education and community service farming and other farm or farm market programs. Locations for implementation of the Agricultural Legacy Program to be considered should, at a minimum, include:

- Designated open space spine network
- Designated open space areas not subject to the Natural Community Conservation Plan (NCCP)
- Other appropriate publicly owned lands

Policy (b): Consider creating a "working model" farm to act as a center for education and enjoyment of all age groups pursuant to the Agricultural Legacy Program in conjunction with the City's planning efforts concerning the reuse of MCAS El Toro, or with the South Coast Research Extension owned by UC Regents.

Policy (c): Permit agricultural use of land that is unsuitable for building because it is within flood plains, or is subject to hazards to public health, safety, and welfare or similar constraints precluding development. Conversion from agricultural use may be allowed where the identified hazard conditions have been eliminated.

Policy (d): Permit agriculture uses, on an interim basis, on land designated for development, and consider agricultural uses as part of the City's planning efforts for the re-use of MCAS El Toro.

Policy (e): Encourage and support federal and state legislation proposed for the purpose of preservation of agricultural lands that are compatible with the City's goals and objectives.

Policy (f): Allow for conversion of interim and permanent agricultural uses to development to provide land for the construction of housing units consistent with the Land Use and Housing Elements, and the development of commercial and industrial buildings consistent with the provision of job opportunities as described in the Land Use Element, where such conversion does not conflict with other L-10 policies.

Policy (g): Pursue the open space policies contained in the Conservation and Open Space Element and address any open space or aesthetic impacts from the conversion of interim and permanent agricultural uses to development as part of the City's existing policies for the preservation of open space and existing

4. Discussion of Checklist and Mitigation Measures

policies for mitigation of views and aesthetic impacts under the policies in the Conservation and Open Space Element.

4.2.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR determined the Overlay Plan would preserve in perpetuity 303 acres¹ of land for agricultural use, of which 251 acres are classified as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. The locations of the 303 acres of permanent agricultural land are listed below and can be found in the OCGP FEIR as Figure 5.8-1.

- **Former PA 30:** 13 acres within Planning Area Zone (PAZ) 26; and
- **PA 51:** 90 acres within PAZ 4; 200 acres within PAZ 1.

The Overlay Plan also resulted in the permanent loss of 802 acres of designated farmland comprised of 651 acres of Prime Farmland, 63 acres of Unique Farmland, and 88 acres of Farmland of Statewide Importance. This impact was considered significant and unavoidable in the OCGP FEIR.

It was determined the Overlay Plan resulted in a significant impact associated with the conversion of agricultural land to nonagricultural use. The OCGP FEIR noted the context of agricultural production in Orange County, including development pressures that have contributed to the decrease in agricultural production in the County over time, which suggested that conversion of agricultural land to urban uses would occur with or without the development of the OCGP.

Addendum No. 5 determined that the removal of 173 acres of designated Prime Farmland in PAZ 1 would not result in new significant impacts to agricultural resources (Section 4.2.3 of Addendum No. 5). Despite the Prime Farmland designation, none of the soils in PAZ 1 were used for agricultural production. In addition, existing regulatory programs, namely the City of Irvine General Plan Objective L-10 and establishment of the Irvine Agricultural Legacy Program, addressed and mitigated the loss of agricultural land. Since certification of the OCGP FEIR, an additional 508 acres within Planning Area 1 (Orchard Hills) has been designated “Exclusive Agriculture” and added to the Agricultural Legacy Program. As a result, overall acreage enrolled within the Agricultural Legacy Program was greater than that assumed in the certified OCGP FEIR.

4.2.3 Impacts Associated with the Modifications to the OCGP Improvement Area

The 2012 Modified Project in the SSEIR proposed rezoning a 13-acre area in Development District 6 that was zoned 1.1 Exclusive Agriculture to 1.4, Preservation. The rezoning allows for the Relocated Wildlife Corridor Feature. The proposed use of the 13 acres under the 2012 Modified Project would not conflict with the zoning designation for the area, and no adverse impacts would occur. The 2011 Approved Project included 117 acres of agriculture in PA 51 in addition to the 13 acres in former PA 30, for a total of 130 acres of agriculture. All other farmland within PA 51 has already been approved for conversion to non-agricultural uses by the 2011 Approved Project.

¹ There is a typographical error within the OCGP FEIR: Table 1-2 on page 1-8 and Table 3-4 on pages 3-12 and 3-13 identify the total agricultural land as 303 acres (correct acreage); however on page 5.8-10 the agricultural use acreage is noted as 307.

4. Discussion of Checklist and Mitigation Measures

The proposed Project consists of modifications to the 688-acre OCGP Improvement Area within Bosque and Sports Park Districts. All land uses proposed within the Improvement Area are similar to the original OCGP Master Plan, and the proposed modifications do not introduce new uses or designations that would conflict with zoning (1.9 Orange County Great Park and 1.4 Preservation) or result in conversion of agriculture land or forest land to non-agriculture and non-forest land. The General Plan land use designation of the proposed Project site is "Orange County Great Park" and the proposed Project is consistent with the land uses approved in concert with the certification and updates to the OCGP FEIR.

The proposed Modifications to the OCGP Improvement Area involves reducing the number of sports courts, expanding passive recreational area, relocating some of the OCGP Improvement Area components to further enhance visibility, access and efficiency of the existing features. These modifications would reflect a development program that is consistent with the General Plan Land Use and Zoning designations for PA 51 and would occur within areas that are not designated for agriculture use. No new uses and facilities are proposed that would affect the agriculture and forestry resources, as none exists within the Project area. Consequently, the proposed Project would not result in any additional impact, beyond that previously studied and disclosed, on agricultural resources. The proposed Project would not result in conflicts with agricultural zoning, convert farmland to non-farmland uses, result in a loss of forest land, or create any new impacts to agriculture and forest resources beyond those evaluated in the OCGP FEIR.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the OCGP FEIR. The proposed Modifications to the OCGP Improvement Area, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Modifications to Improvement Area or otherwise available indicating substantial changes in circumstances that would require major changes to the OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially

4. Discussion of Checklist and Mitigation Measures

reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant effects on agriculture and forest resources identified in and considered by the OCGP FEIR.

4.2.4 Mitigation from the OCGP FEIR and Applicability to the Modifications to the OCGP Improvement Area

The OCGP FEIR identified Mitigation Measures AG1 through AG3 for implementation in conjunction with master plan review and subsequent development permits. Mitigation Measure AG1 was modified in the SSEIR to eliminate obsolete references to prior Standard Conditions. The proposed changes to Mitigation Measure AG1 would not change its substantive operation.

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

AG1 In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operators, disclosure statements shall include the following for subdivisions proposed adjacent to existing agricultural operations:

Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:

- Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.

AG2 Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.

AG3 Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operation and adjacent urban uses.

Additionally, the SSEIR identified the following measure as existing PPP that apply to the proposed Project and will help reduce or avoid potential agriculture and forestry resources impacts. The following PPP, as applicable, will be incorporated into the proposed Project upon project implementation.

PPP2-1 The City shall continue to implement the Agricultural Legacy Program outlined in City of Irvine General Plan Open Space and Conservation Element. Objective L-10 is intended to mitigate the conversion of agricultural land to nonagricultural uses citywide by facilitating limited-scale agricultural operations and programs on public lands within Irvine. As part of the Agricultural

4. Discussion of Checklist and Mitigation Measures

Legacy Program, specific sites in Irvine will be identified and made available for metro-farming within five years. Metro-farming generally includes small-scale agricultural operations and activities that can be accommodated in an urban environment. Such activities could include, but not limited to, small-scale specialty farming, model farming, heritage farming, and community service/educational farming.

4.3 AIR QUALITY

4.3.1 Environmental Setting

The OCGP FEIR described the air quality conditions regarding the following regulated pollutants: ozone (O₃), carbon monoxide (CO), nitrogen dioxides (NO₂), sulfur dioxide (SO₂), lead and particulate matter (PM), which is subdivided into two classes based on particle size: PM equal to or less than 10 micrometers in diameter (PM₁₀) and PM equal to or less than 2.5 micrometers in diameter (PM_{2.5}).

The proposed Project site is located in the Orange County portion of the South Coast Air Basin. Table 4.3-1 shows the pollutants and associated attainment status for the South Coast Air Basin. Orange County is designated as a federal non-attainment area for O₃, and PM_{2.5}, maintenance for CO and PM₁₀, and an attainment area for SO₂, NO₂, and lead. Orange County is designated as a state non-attainment area for O₃, PM₁₀, and PM_{2.5}, and an attainment area for CO, SO₂, NO₂, and lead.

Table 4.3-1. Attainment Status for the Orange County Portion of the South Coast Air Basin

Pollutant	Attainment Status	
	Federal	State
O ₃ – 1-Hour	--	Non-attainment
O ₃ – 8-hour	Nonattainment (Extreme)	Non-attainment
PM ₁₀	Attainment/Maintenance	Non-attainment
PM _{2.5}	Nonattainment	Non-attainment
CO	Attainment/Maintenance	Attainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment
Lead	Attainment	Attainment

Sources: EPA 2014; ARB 2014.

4.3.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR identified significant air quality impacts associated with construction and operation of the Overlay Plan. The OCGP FEIR described the construction air impacts after mitigation as significant and unavoidable. Addenda No. 3 and 4 included an analysis to determine the projected emissions associated with more recent, precise and refined information regarding the Revised Overlay Plan and OCGP Conceptual Master Plan. The Addenda determined that earthmoving activities would be consistent with the emissions inventory assumed in the certified OCGP FEIR and within the scope of the original air quality analysis.

4. Discussion of Checklist and Mitigation Measures

The analysis was conducted using URBEMIS 2007 Version 9.2, which was in accordance with SCAQMD's recommendations for preparation of air quality analyses at the time the document was developed. The emission estimates from Addendum No. 4 are provided in Table 4.3-2.

Table 4.3-2. Comparison of Daily Construction Emissions for OCGP Construction Activities

Emissions Inventory	Emission Totals, lbs./day [tons per day]				
	CO	NOx	PM ₁₀	VOC	SOx
OCGP FEIR	280	840	1,440	4,660	40
OCGP Site Grading	174	343	663	37	<1
SCAQMD Significance Threshold	550	100	150	75	150
Over (Under)	(376)	243	513	(38)	(149)
Significant for OCGP FEIR?	No	Yes	Yes	Yes	No
Significant for OCGP Equipment Mix?	No	Yes	Yes	No	No

Source: PCR Services Corporation 2007.

As shown in Table 4.3-2 above and as Addendum No. 4 concluded, no new significant impacts and no substantial increase in the severity of previously identified impacts would occur as a result of implementation of the OCGP.

The site grading and demolition would most likely occur in a phased approach, over the course of several years. A technical consultant (PCR) also conducted an analysis for Addendum No. 4 to determine whether the construction emissions inventory for a maximum worst case day (consisting of concurrent grading of the OCGP Master Plan along with site grading activities for Heritage Fields, the Agua Chinon, and the wildlife corridor and runway demolition activities) is consistent with the emissions inventory presented in the OCGP FEIR and is within the scope of the original air quality impact assessment.

The emissions from the concurrent construction activities are presented in Table 4.3-3. Concurrent grading and demolition activities estimated for Addendum No. 4 resulted in a slight decrease in equipment exhaust emissions and fugitive dust PM₁₀ emissions, as compared to those levels estimated for the OCGP FEIR.

4. Discussion of Checklist and Mitigation Measures

Table 4.3-3. Comparison of Daily Construction Emissions for
Concurrent OCGP Construction Activities

Emissions Inventory	Emission Totals, lbs./day [tons per day]				
	CO	NOx	PM10	VOC	SOx
Certified EIR	280	840	1,440	4,660	40
OCGP Site Grading	174	343	663	37	<1
Heritage Fields Site Grading	171	332	663	37	<1
Runway Demolition	66	165	76	17	<1
Total	411	839	1,402	91	<1
SCAQMD Significance Threshold	550	100	150	75	150
Over (Under)	(139)	739	1,252	16	(149)
Significant for OCGP	No	Yes	Yes	Yes	No
Significant for concurrent activities?	No	Yes	Yes	Yes	No

Source: PCR Services Corporation 2007.

Among the various sources of a project's operational emissions, those attributable to mobile sources (i.e. vehicular traffic) comprise the largest proportion of emissions. Mobile source emissions are a function of both the number and trip length characteristics of vehicle trips directly and indirectly associated with the project under consideration. Operational emissions for project area and mobile sources were estimated at above the significance thresholds for volatile organic compounds (VOC), nitrogen oxides (NOX), CO, and PM10, and are described in the OCGP FEIR and Addenda as significant and unavoidable after mitigation. In addition, the OCGP FEIR included the results of the CO "hotspots" analysis, in which no intersections in the traffic study area were expected to result in one-hour or eight-hour CO concentrations above the state standard of 20 parts per million (ppm) for one-hour concentrations and 9 ppm for eight-hour concentrations. No other construction- and operations-related significant air quality impacts were identified in the OCGP FEIR.

The SSEIR stated that the 2012 Modified Project would also result in significant and unavoidable short-term construction air quality impacts due to emissions of VOC, NO_x, CO, PM₁₀ and PM_{2.5} at levels above the applicable thresholds. PPPs 3-1 through 3-4 and Mitigation Measures AQ-1 and AQ-2 would reduce construction emissions to the extent feasible. However, the impact would remain significant and unavoidable even after mitigation.

In addition, long-term operation of the 2012 Modified Project (with and without optional conversion) would result in significant and unavoidable impacts due to emissions of VOC, NO_x, CO, and PM_{2.5}. PPP 3-5, PDFs 4-7, and 4-8, and Mitigation Measures AQ-3 through AQ-5 would reduce operational phase air quality impacts to the extent feasible. However, the impact would remain significant and unavoidable even after mitigation.

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4.3.3 Impacts Associated with the Modifications to OCGP Improvement Area

Regional Construction Impacts

The proposed Project consists of modifications to the 688-acre OCGP Improvement Area, reducing the number of sports courts, expanding passive recreational area, relocating some of the Improvement Area components to optimize visibility, access and efficiency, and assessing adequacy of parking plan.

Construction activities associated with the proposed Project would have a short-term impact on air quality. The analytical assumptions concerning construction, development phasing, and operations of the adopted OCGP Master Plan remain consistent with all prior assumptions, since there is no substantial change in overall square footage or development within the project area.

Consequently, the proposed Project would not increase the maximum daily air pollutant emissions generated during construction and demolition activities. The OCGP FEIR concluded that air pollutant emissions associated with construction and demolition activities of the Overlay Plan were considered a significant and unavoidable impact. The construction air emissions associated with the proposed Project are anticipated to be similar to those addressed in the OCGP FEIR, and therefore would not result in any new significant impacts.

Regional Operational Impacts

Operation of the proposed Project would result in long-term regional emissions associated with area and mobile sources. Area-source emissions would be associated with equipment used for landscaping and maintenance of park. Mobile-source emissions would include project-generated vehicle trips associated with workers, recreational users, and visitors to the project site. Mobile source emissions from vehicle trips to the project site would be the primary source of criteria pollutant emissions.

The emission estimates in the OCGP FEIR documents were all developed using different models recommended by SCAQMD at the time of the analysis. Therefore, the comparison of emissions from those documents will be affected by changes to the project description, as well as any changes to assumptions in the model. Therefore, the most appropriate approach to determining air quality impacts would be based on changes to the assumptions in the project description using the same model for the analysis.

Operational emissions associated with the proposed Project were quantified using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2. The operational emissions associated with the activities for the proposed Project were quantified using CalEEMod to determine the net change in operational emissions associated with the proposed Project. The emission estimates presented in this Addendum are based on changes to the daily trip estimates, since mobile sources are the primary source of emissions.

Regional area- and mobile-source emissions were modeled based on proposed land use types and sizes as indicated in the Project Description (Section 2.0 of this Addendum) and the change in trip generation from the Traffic Study (LSA, 2014). According to the traffic data used to prepare this Addendum, the total daily trip generation for the Western Sector Park Development Plan and the 688 Acre Park Development

4. Discussion of Checklist and Mitigation Measures

Plan is 10,030. The total daily trip generation from the Western Sector Park Development Plan was 4,586. The 688 Acre Park Development Plan will generate an additional 5,444 daily trips for the total of 10,030. This is less than the 19,083 daily trips approved in the OCGP FEIR.

Table 4.3-4. Summary of Modeled Long-Term Operational Emissions

Source	Emissions (lb/day)				
	CO	NOx	PM ₁₀	VOC	SOx
Approved Master Plan	66.31	125.37	606.87	117.81	32.59
Proposed Project	39.86	65.89	319.00	61.91	17.13
Net Change	(24.45)	(59.48)	(287.87)	(55.90)	(15.46)

Source: AECOM 2014

As shown in Table 4.3-4, the proposed Project would decrease the maximum daily air pollutant emissions generated during operational activities compared to the approved Master Plan. The OCGP FEIR concluded that air pollutant emissions associated with operational activities of the Overlay Plan were considered a significant and unavoidable impact. The changes to the land uses as part of the proposed Project would result in the elimination of sports facilities or reconfiguration of other planned land uses. Those proposed changes would be expected to require fewer or similar activity levels for area sources (e.g., maintenance equipment), energy use, and vehicle trips. Therefore, the operational air emissions associated with the proposed Project are anticipated to be less than those addressed in the OCGP FEIR, and therefore would not adversely contribute to the impacts otherwise caused by the project analyzed in the OCGP FEIR.

Consistency Determination with the Air Quality Management Plan

The OCGP FEIR included a consistency evaluation with the SCAQMD's Air Quality Management Plan (AQMP). The consistency evaluation concluded development of the adopted Overlay Plan would have a negligible impact on the overall air quality within the South Coast Air Basin. Since the approval of the OCGP, the SCAQMD has adopted a revised AQMP. The applicable AQMP for the proposed Project was adopted by the SCAQMD in December 2012. The 2012 AQMP is the legally enforceable blueprint for how the region will meet and maintain federal ozone and PM_{2.5} air quality standards in the South Coast Air Basin.

Projects that are consistent with the land use development assumptions used in the AQMP are considered to not conflict with or obstruct the attainment of the air quality levels identified in the plan. The proposed Project would not result in an increase in VMT or new land uses that would change the consistency evaluation in the OCGP FEIR.

Localized Construction Impacts

As stated previously, the proposed Project would not increase the maximum daily air pollutant emissions generated during construction activities. However, the OCGP FEIR identified significant localized air quality impacts based on the extent and schedule of construction activities, primarily from particulate matter (PM₁₀ and PM_{2.5}) emissions associated with fugitive dust. The OCGP FEIR concluded that air pollutant emissions were considered a significant unavoidable adverse impact. The construction air

4. Discussion of Checklist and Mitigation Measures

emissions associated with the proposed Project are anticipated to be less than those addressed in the OCGP FEIR, and therefore would not adversely contribute to the impacts otherwise caused by the project analyzed in the OCGP FEIR.

Localized Operational Impacts

The OCGP FEIR did not identify significant localized air quality impacts for operational activities. Because the proposed Project would not result in an increase of the intensity of land uses and would not include any stationary sources, the proposed Project would not increase the concentrations of air pollutant emissions generated during operational activities.

Odors

The OCGP FEIR identified that development of PAs 30 and 51 would not handle large amounts of solid waste, chemicals associated with heavy industry, or other uses that would generate objectionable odors and that no significant odor impacts would occur. The proposed Project would not result in new activities or new land uses that would change the odor evaluation in the OCGP FEIR and Addenda.

Major EIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the OCGP FEIR. The proposed Modifications to OCGP Improvement Area, which do not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the OCGP FEIR.

No Substantial Change in Circumstances Requiring Major EIR Revisions. There is no information in the Modifications to OCGP Improvement Area or otherwise available indicating substantial changes in circumstances that would require major changes to the OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. All available relevant information has been analyzed, and there is no new information of substantial importance, that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was approved, augmented, and/or updated, indicating that the proposed Project would have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. All available relevant information has been analyzed, and there is no new information of substantial importance, that was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that; 1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or 2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation

4. Discussion of Checklist and Mitigation Measures

measures that would substantially reduce one or more of the significant air quality effects identified in and considered by the OCGP FEIR.

4.3.4 Mitigation from the OCGP FEIR and Applicability to the Modifications to OCGP Improvement Area

The OCGP FEIR identified Mitigation Measures AQ1 through AQ5, which reduce the air quality effects of construction and operations of development under the adopted Plan. However, as noted above, the OCGP FEIR found that short-term and long-term air quality impacts would remain significant and unavoidable. The measures are applicable to future development under the proposed Project. However, the mitigation measures were modified in the SEIR to account for the latest improvements in emission control technologies and updated SCAQMD recommendations for reducing air pollutant emissions.

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

Construction Phase

AQ1 Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors; etc.; shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.

AQ2 Prior to the commencement of construction activities required to demolish and/or remove existing DON structure, including, runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plans shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Utilize off-road construction equipment that conforms to Tier 3 of the United States Environmental Protection Agency, or higher emissions standards for construction equipment over 50 horsepower that are commercially available. The construction contractor shall be made aware of this requirement prior to the start of construction activities. Use of commercially available Tier 3 or higher off-road equipment, which is:
 - Year 2006 or newer construction equipment for engines rated equal to 175 horsepower (hp) and greater;
 - Year 2007 and newer construction equipment for engines rated equal to 100 hp but less than 175 hp; and

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- Year 2008 and newer construction equipment for engines rated equal to or greater than 50 hp but less than 100 hp.

The use of such equipment shall be stated on all grading plans. The construction contractor shall maintain a list of all operating equipment in use on the project site. The construction equipment list shall state the makes, models, and numbers of construction equipment on-site.

- Water exposed soils at least three times daily and maintain equipment and vehicle engines in good condition and in proper tune.
- Wash off trucks leaving the site.
- Replace ground cover on construction sites when it is determined that the site will be undisturbed for lengthy periods.
- Reduce speeds on unpaved roads to less than 15 miles per hour.
- Halt all grading and excavation operations when wind speeds exceed 25 miles per hour.
- Suspend all emission generating activities during smog alerts.
- Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible.
- Properly maintain diesel-powered on-site mobile equipment.
- Prohibit nonessential idling of construction equipment to five minutes or less in compliance with California Air Resources Board's Rule 2449.
- Sweep streets with SCAQMD Rule 1186 compliant PM₁₀-efficient vacuum units at the end of the day if substantial visible soil material is carried over to the adjacent streets.
- Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible.
- Use of low-VOC asphalt.
- Maintain a minimum 24-inch freeboard on trucks hauling dirt, sand, soil, or other loose materials and tarp materials with a fabric cover or other suitable means. Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic.
- Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible.
- Reroute construction trucks away from congested streets, whenever feasible.

4. Discussion of Checklist and Mitigation Measures

- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible.
- Use coatings and solvents with a volatile organic compound (VOC) content lower than required under SCAQMD Rule 1113 (i.e., Super Compliant Paints). All architectural coatings shall be applied either by (1) using a high-volume, low-pressure spray method operated at an air pressure between 0.1 and 10 pounds per square inch gauge to achieve a 65 percent application efficiency; or (2) manual application using a paintbrush, hand-roller, trowel, spatula, dauber, rag, or sponge, to achieve a 100 percent applicant efficiency. The construction contractor shall also use precoated/natural colored building, where feasible. Use of low-VOC paints and spray method shall be included as a note on architectural building plans.

Operational Phase

AQ3 Prior to the issuance of building permits for any future development, the applicant shall submit, and the Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Utilize built-in energy-efficient appliances to reduce energy consumption and emissions.
- Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions.
- Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible.
- Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning.
- Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible.
- Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods.
- Centralize space heating and cooling for multiple-family dwelling units and commercial space.
- Orient buildings north/south for reducing energy-related combustion emissions.
- Use solar energy, when feasible.
- Use high rating insulation in walls and ceilings.

4. Discussion of Checklist and Mitigation Measures

- AQ4** Prior to the issuance of building permits, future sales information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find employment nearby.
- AQ5** Prior to the issuance of building permits, the applicant shall demonstrate to the satisfaction of the Director of Community Development that future employment generating non-residential development shall include measures to reduce vehicle trips including: the promotion of carpool incentives and alternative work schedules, easy access to public transit systems, trail linkages between uses, low-emissions vehicle fleets, and the provision of on-site facilities such as banking and food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.

Additionally, the SSEIR identified the following measures as existing PPPs that apply to the proposed Project and will help reduce or avoid potential air quality impacts. Of the PPPs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

- PPP 3-1 SCAQMD Rule 201 – Permit to Construct:** The SCAQMD requires developers who build, install, or replace any equipment or agricultural permit unit, which may cause new emissions of or reduce, eliminate, or control emissions of air contaminants to obtain a permit to construct from the Executive Officer.
- PPP 3-2 SCAQMD Rule 402 – Nuisance Odors:** The SCAQMD prohibits the discharge of any quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property to be emitted within the SoCAB.
- PPP 3-3 SCAQMD Rule 403 – Fugitive Dust (PM₁₀ and PM_{2.5}):** The SCAQMD prohibits any person to cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturb surface area such that: (a) the dust remains visible in the atmosphere beyond the property line of the emission source; or (b) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook) if the dust emission is the result of movement of a motorized vehicle.
- PPP 3-4 SCAQMD Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities:** This rule specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials (ACM). All operators are required to maintain records, including waste shipment records, and are required to use appropriate warning labels, signs, and markings.
- PPP 3-5 SCAQMD Rule 445 – Wood-Burning Devices:** SCAQMD prohibits installation of wood-burning devices such as fire places and wood-burning stoves in new development unless the development is located at an elevation above 3,000 feet or if existing infrastructure for natural

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gas service is not available within 150-feet of the development. All fireplaces installed within the Proposed Project Site will be natural gas fueled fireplaces.

The SSEIR also identified the following measures as PDFs that apply to the proposed Project and will help reduce or avoid potential air quality impacts. Of the PDFs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

PDF 4-1 Compact/Mixed-Use Development: The California Energy Commission (CEC) considers compact development forms beneficial for minimizing energy consumption that leads to greenhouse gas emissions. In fact, the CEC's report on the connections between land use and climate change identifies density as the project feature most predictive of the number of vehicle trips and vehicle miles traveled ("VMT") by project occupants. Like the 2011 Approved Project, the 2012 Modified Project increases the density of development on the Proposed Project Site. Doing so will tend to reduce VMT on a local and regional basis. For the purpose of this analysis, it was assumed that there would be only a 25 percent reduction in VMT, which is within the range observed in Southern California.

PDF 4-2 High Rate of Internal Trip Capture: With the inclusion of a mix of land uses including office, commercial, industrial, and residential in the Proposed Project Site, the 2012 Modified Project significantly reduces trips outside the Proposed Project Site. This reduces trip length and congestion on the local circulation system outside the Proposed Project Site.

PDF 4-7 Energy Star Appliances: EnergyStar appliances (excluding refrigerators), such as dishwashers, clothes washers, clothes dryers, air conditions, furnaces, and water heaters, shall be offered or installed in all residential dwelling units.

PDF 4-8 Building Energy Efficiency: Residential dwellings and non-residential buildings will be constructed so that they achieve 15 percent higher energy efficiency than the applicable standards set forth in the 2008 California Building and Energy Efficiency Standards (Title 24, Part 6 of the California Building Code) or meet the standards in effect at the time of issuance of building permit. The Energy Commission's 2013 Building Energy Efficiency Standards are 25 percent more efficient than the 2008 standards for residential construction and 30 percent more efficient for nonresidential construction. The 2013 Energy Efficiency Standards, which take effect on January 1, 2014, offer builders more efficient windows, insulation, lighting, ventilation systems and other options that would reduce energy consumption in homes and businesses.

4.4 BIOLOGICAL RESOURCES

4.4.1 Environmental Setting

The OCGP FEIR described the biological resources within Planning Area 51 (including former PA 30), including a 995-acre parcel of land in the easternmost portion of Planning Area 51 retained in federal ownership and designated as both "habitat reserve" and a part of the Orange County Central-Coastal Sub-region Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP). The areas

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outside the habitat reserve were described as: 1) providing minimal native or undisturbed habitat, and, 2) consisting of agricultural, ornamental, and domestic landscapes.

The OCGP FEIR identified nine vegetative communities within the project site, including Venturan-Diegan sage scrub, southern cactus scrub, chaparral, woodland, riparian scrub, grassland, open water, agriculture, and predominately disturbed or developed areas. Several sensitive plant species and a large number of mature trees also were identified as potentially occurring within the project site. The sensitive plant species potentially occurring in Planning Area 51 included the southern tarplant, Palmer's grappling hook, many-stemmed dudleya, Coulter's Matilija poppy, Catalina mariposa lily, and intermediate mariposa lily. The OCGP FEIR also noted the Coulter's saltbush, Laguna Beach dudleya, San Fernando Valley spineflower, and the Lewis's evening-primrose as having a moderate potential for occurrence. Species with a low potential for occurrence included the Los Angeles sunflower, south coast saltscale, Santa Monica Mountains dudleya, heart-leafed pitcher sage, coast wooly-heads, slender-horned spineflower, Santa Barbara morning glory, tecate cypress, and salt spring checkerbloom.

The OCGP FEIR documented an observation of one sensitive wildlife species, a burrowing owl. This individual, observed during the protocol focus studies for a nearby development proposal, was outside the habitat reserve at the southwest end of Planning Area 51 along Serrano Creek. Forty other sensitive wildlife species or species of local concern were identified as having a potential to occur on the site.

The OCGP FEIR also described the Wildlife Corridor Concept Plan that would be incorporated into the eastern portion of the project site (Refer to pp. 5.9-9 through 5.9-14 of the OCGP FEIR) and explained the guidelines pursuant to which the ultimate corridor will be designed and constructed. The subject guidelines were primarily concerned with the creation and re-vegetation of wildlife habitats that would flourish in the proposed areas and serve as protective cover for target wildlife species that will presumably utilize the proposed corridor. A preliminary design concept for the creation and/or re-vegetation of the proposed route was also prepared consistent with the guidelines described below (Draft Irvine Wildlife Corridor Master Plan, November 2002). The draft recommended a series of actions to improve the environmental quality for wildlife:

- Creation (establishes historical ecosystems on lands that did not previously support that ecosystem or on severely altered sites)
- Revegetation
- Reduce the amount of noise pollution and urban influence.
- Remove and restore the unnecessary developed (paved) areas within the corridor right-of-way.
- Create a protective habitat along the entire length of the corridor.
- Apply minimum height/width requirements based on the specific wildlife species.

OCGP FEIR Mitigation Measure BIO3, which continues to apply to this Addendum, ensures that the City of Irvine will continue to work with State and federal agencies to implement the revegetation/restoration plan necessary to create a viable wildlife corridor within the Project area. The City has already engaged in

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this process as has been demonstrated through the preparation of the Irvine Wildlife Corridor Master Plan, which is independent of this project.

4.4.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR concluded that implementation of the overall project could result in the occurrence of the following potentially significant effects:

- The southern tarplant, a federal species of concern, might be adversely affected by the overall OCGP Master Plan project development.
- Although very limited in aerial extent and highly disturbed, isolated riparian habitat remnants that could be adversely impacted by the OCGP Master Plan project implementation.

The Project site contains a large number of trees, many of them mature, representing a wide range of species. The OCGP project implementation may result in damage and destruction to the trees. A significant impact related to conflicts with the City of Irvine's Urban Forestry Ordinance could occur.

Addendum No. 4 (OCGP Master Plan) stated that the OCGP Master Plan portion of the overall OCGP project included essentially the same land uses and encompassed the same land area as depicted in the OCGP FEIR. Therefore, it concluded that, the OCGP FEIR adequately described the nature and severity of the environmental effects of OCGP Master Plan implementation on biological resources.

OCGP FEIR Mitigation Measure BIO1 stated that prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. MM BIO1 also stated that prior to approval of a subdivision map for development within, or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement or, if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG). Mitigation Measure BIO1 would continue to apply to this proposed Project (see Mitigation Measure BIO1, below).

The OCGP FEIR also stated that prior to approval of a subdivision map for each project area, a jurisdictional wetland delineation shall be performed for all areas within the Master Plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a Wetland Mitigation Plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). For wetlands impacted on-site replacement, recreation (i.e., within the proposed wildlife corridor), and/or re-vegetation is deemed acceptable by the appropriate jurisdictional agencies. Accordingly, Mitigation Measure BIO2 below would also continue to apply to the proposed Project.

4. Discussion of Checklist and Mitigation Measures

The OCGP FEIR required that several focus surveys be conducted on 51 (including former PA 30) for sensitive plant and wildlife species prior to development. PCR Services prepared a *Biological Resources Assessment for Lennar Heritage Fields, Orange County, California* in November of 2005 and an updated assessment was prepared in June of 2006.² This biological resources assessment complies with mitigation measures BIO1, requiring a focus survey for the southern tarplant, mountain plover, and burrowing owl, and BIO2 requiring a wetlands delineation to be prepared for all areas within the Master Plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The subject study and each of its constituent focused technical studies cover a land area of approximately 3,700 acres and includes the OCGP Master Plan.

Jurisdictional Wetlands and “Waters of the U.S.”

A Jurisdictional Delineation for the site has been performed (*Investigation of Jurisdictional Wetlands and Waters of the U.S. Lennar Heritage Fields*, June 2006 PCR). The property supports six intermittent drainage systems and a variety of associated ephemeral tributaries. Five of the drainages have their headwaters in undeveloped areas of the Lomas de Santiago Foothills to the north. San Diego Creek originates in an eastern portion of the watershed that is occupied by substantial residential and commercial development. Disturbances such as channelization of large stretches of the drainages and dumping of debris and trash into portions of drainages have significantly altered several waterways and obscured many drainage features. Other disturbances on site include vegetation clearing to create roads and structures, agricultural runoff, and invasion by exotic species. Current and historic land uses associated with the establishment of MCAS El Toro (military structures, roads, agriculture, and residential development) have significantly changed the overall drainage patterns within the San Diego Creek watershed. The cumulative impact to each wash or creek has resulted in habitat and water quality impairment within the San Diego Creek watershed.

These impacts include increased sediment and debris transport due to concrete-lined stream channels, increased flow velocities and scouring, increased bank erosion, increases in the presence of non-native plant species, and an overall reduction in the amount and the quality of the riparian habitat within the watershed. Alternatively, the disturbances have increased the amount of jurisdictional areas due to the creation of freshwater marsh habitat resulting from impoundment of storm water runoff within and adjacent to drainages. In total, the site contains 31,102.11 linear feet of jurisdictional streambed that includes 22.02 acres of U.S. Army Corps of Engineers (USACE) jurisdictional “Waters of the U.S.,” and, of which, 1.66-acres meet the three parameter definition of a jurisdictional wetland. CDFG jurisdictional streambed and associated riparian habitat total 38.61 acres.

Sensitive Biological Resources

There are numerous plant and wildlife species present, or potentially present within the project area that have received special recognition by federal, State, or local resource conservation agencies and organizations. Their status is principally due to the species decline or limited population size, usually resulting from habitat loss. Protected sensitive species are those species identified by either State or federal resource management agencies, or both, as threatened or endangered under provisions of the California and Federal Endangered Species Acts, respectively.

² This report is available for review at the City of Irvine.

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Sensitive species that occur or could potentially occur within the project area are based on one or more of the following:

- The direct observation of the species within the project area during one of the biological surveys.
- A record reported in the California Natural Diversity Database (CNDDDB).
- The project area is within a known distribution of a species and contains appropriate habitat.

Sensitive Plant Communities

The project area is dominated by highly disturbed habitat types and only small areas of native vegetation exist. A total of 9.7 acres of southern willow scrub occurs in scattered patches throughout the project area. Southern willow scrub is a high priority inventory community in the CNDDDB. This community is considered sensitive because it has experienced a sharp decline in California and because it has the ability to support a number of sensitive bird species such as least Bell's vireo and southwestern willow flycatcher.

Sensitive Plant Species

Sensitive plants include those that are either candidates or are currently listed by the CDFG and USFWS and those that are considered sensitive by the California Native Plant Society (CNPS). Several sensitive plant species were reported in the CNDDDB from the surrounding region. In accordance with the mitigation measures of the OCGP FEIR, focused surveys for southern tarplant were conducted on June 3 and June 8, 2005. No species were found. The highly disturbed character of the site and reduced presence of habitat capable of supporting sensitive plant species make it highly unlikely that any listed plant species will occur on the site.

Sensitive Wildlife Species

Forty-nine sensitive wildlife species were reported in the CNDDDB as occurring with the USGS 7.5-minute El Toro quadrangle map and the eight surrounding maps. Habitat suitability assessments for these species were conducted concurrently with the site investigation throughout the 2005 fieldwork. The intent of the habitat assessment was to evaluate habitat for its ability to support sensitive species and ascertain which sensitive species are likely to be present within the project area based on expected habitat use, geographic range, and information collected in the vicinity of the project area.

The OCGP Master Plan is not within a proposed or listed critical habitat area. Six sensitive wildlife species were observed within the project area during initial field investigations: northern harrier (*Circus cyaneus*), merlin (*Falco columbarius*), Cooper's hawk (*Accipiter cooperii*), California horned lark (*Eremophila alpestris actia*), cactus wren (*Campylorhynchus brunneicapillus*), and loggerhead shrike (*Lanius ludovicianus*). Three of these species (northern harrier, merlin, and Cooper's hawk) were also observed during wintering bird surveys. In addition, the golden eagle (*Aquila chrysaetos*), burrowing owl (*Athene cunicularia*), and ferruginous hawk (*Buteo regalis*) were observed utilizing the site during these subsequent wintering bird surveys. Surveys for mountain plover (*Charadrius montanus*), in accordance

4. Discussion of Checklist and Mitigation Measures

with the OCGP FEIR mitigation measures, were conducted during the wintering bird surveys as part of Addendum No. 3; no individuals of this species, were observed on site during those field investigations. In a follow-up report ³on wintering birds dated October 30, 2006 with surveys conducted between October 2005 and March 2006, PCR Services searched the site for activity. No burrowing owls were observed until February 2006. Although the project site is open, its vegetation becomes dense and over two feet tall in most areas. A single owl occupied a burrow during the late winter but abandoned the area as the vegetation surrounding the burrow became three feet high and very dense. There was no indication that breeding activity had been initiated. Because the habitat became unsuitable as a natural result of not being mowed, PCR Services determined that no mitigation would be required.

Summary of the Biological Status of the Site

The OCGP FEIR required that focus surveys be conducted on the project site for several sensitive plant and wildlife species prior to development. The required surveys were carried out during 2005 and 2006. No species of endangered plants or wildlife were recorded on site during these investigations, conducted by PCR Services. The sensitive plant community of willow scrub extant on site is heavily disturbed and fragmented. As such, PCR Services did not recommend attempting to preserve any of the remnant stands or streambeds as they currently exist. It was also determined that the presence of several sensitive species would be addressed through mitigation designed to avoid disturbance of nesting avian species. PCR Services' findings did not indicate a need to consult formally with the USFWS.

4.4.3 Impacts Associated with the Modifications to the OCGP Improvement Area

The SSEIR for the 2012 Modified Project did not analyze biological resources, as it was screened out during the initial environmental assessment and initial study process. However, a separate, stand-alone study was prepared to analyze the potential biological resources impacts of the Wildlife Corridor relocation.

The Project proposes modifications within the Bosque and Sports Park Districts of the 688-acre OCGP Improvement Area, an area which has been part of the original OCGP Master Plan. Therefore, the OCGP FEIR adequately described the nature and severity of the environmental effects of OCGP Master Plan and its current modifications to the 688-acre OCGP Improvement Area, the subject of this Addendum, on biological resources. The proposed Modifications to the OCGP Improvement Area reducing the number of sports courts, expanding passive recreational area, relocating some of the Improvement Area components to optimize visibility, access and efficiency, and assessing adequacy of parking plan reflect a development program that is consistent with the General Plan Land Use and Zoning Ordinance designations for Planning Area 51 and Bosque and Sports Park in particular. The proposed Project would not have a substantial adverse impact on any sensitive species, riparian habitat or other sensitive natural community, and federally protected wetlands, as none exists within the Project area. Additionally, the proposed Project would not interfere with the movement of any native resident or migratory fish or wildlife species; conflict with any local policies or ordinances protecting biological resources and adopted Habitat Conservation Plan. The proposed Modifications to the OCGP Improvement Area would not result in any changes within the Wildlife Corridor. Consequently, no changes to the OCGP FEIR would be required as a result of the proposed modifications.

³ This report is available for review at the City of Irvine.

4. Discussion of Checklist and Mitigation Measures

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the OCGP FEIR. The proposed Modifications to the OCGP Improvement Area, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor will there be a substantial increase in the severity of impacts from that described in the OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the Modifications to the OCGP Improvement Area or otherwise available indicating substantial changes in circumstances that would require major changes to the OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant biological effects identified in and considered by the OCGP FEIR.

4.4.4 Mitigation from the OCGP FEIR and Applicability to the Modifications to OCGP Improvement Area

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

BIO1 Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. Prior to approval of a subdivision map for development within or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated through

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consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).

- BIO2** Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, recreation (i.e., within the proposed wildlife corridor), and/or re-vegetation as deemed acceptable by the appropriate jurisdictional agencies.
- BIO3** The City shall continue to work with State and federal agencies during the implementation of the proposed project to implement the revegetation/restoration plan for the wildlife corridor. Measures such as sight and sound barriers, including artificial sound walls and natural diversions (e.g., hedges and tree lines) shall be incorporated into corridor design to ensure the viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the Final FEIR.
- BIO4** Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant plants (as determined by a certified arborist selected by the City) on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered "Significant Trees" under the City of Irvine's Urban Forestry Ordinance (UFO) (Sections 5-7-401 et al.) and the UFO shall apply to all trees included in this inventory.

4.5 CULTURAL RESOURCES

4.5.1 Environmental Setting

Archaeological and Historical Resources

This discussion of cultural resources includes archaeological and historical resources. The OCGP FEIR presented information pertaining to the regional setting of former MCAS El Toro from both a prehistoric and historic perspective. The OCGP FEIR reported the presence of ten prehistoric archaeological sites and eight isolated prehistoric artifacts that have been recorded in the northeastern habitat preserve portions of PA 51. These sites are generally on the ridges between Borrego Canyon Wash and the Agua Chinon Wash.

The former MCAS El Toro was surveyed to determine whether any of the structures would be eligible for the National Register. Generally, a structure that has achieved significance in the past 50 years is not considered eligible for the National Register unless it is of exceptional importance. The evaluation was expanded to include eligibility under the Legacy Cold War Project (Public Law No. 101-511, Section

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8120). Portions of PA 51, including former PA 30, (the former MCAS El Toro) were established during WWII, and no structure earlier than this period is at the former MCAS El Toro. Therefore, the historical significance of any structures at the former military base would be as part of the Cold War Legacy. Surveys conducted by the US Army Corps of Engineers and the Department of the Navy in conjunction with the base's closure concluded there were no structures eligible for designation as Cold War Legacy or for inclusion in the National Register of Historic Places.

Paleontological Resources

The OCGP FEIR reported that a majority of PA 51, including former PA 31, is on the Tustin Plain, a coastal alluvial plain. Alluvium from the Late Pleistocene to Holocene Epochs immediately underlies the majority of the project area, including the part occupying the coastal plain and washes in the eastern portion of PA 51. The Pleistocene Alluvium formation is widespread and believed to extend to depths of 1,000 feet in former PA 30. A significant deposit of Pleistocene terrestrial vertebrates was recovered during excavation of a flood control basin four miles from former PA 30; thus, it is possible that similar beds underlie the former PA 30 (OCGP FEIR 5.10-2).

The eastern portion of PA 51 is in the western foothills of the northern Santa Ana Mountains. The hills and ridges in the eastern part of PA 51 are composed of older, underlying marine and non-marine rock units of early Oligocene to late Pleistocene (23 million to 2 million years ago). In order of decreasing geologic age, these latter rock units include the undifferentiated Sespe and Vaqueros Formations, Topanga and Monterey Formations, Oso Member of the Capistrano Formation, Niguel Formation, and Non marine Terrace Deposits. Non marine Terrace Deposits also underlie the terraces at the south corner of PA 51.

The northwestern corner of PA 51 contains a small portion of the Santa Ana Mountains foothills, which were separated from the main formation by erosion. This small portion is composed of undifferentiated late Cretaceous (135 million years ago) Marine Williams Formation. The rock units underlying portions of PA 51 have previously yielded important fossil remains at recorded fossil sites on and near the site. There are three recorded fossil sites in PA 51. These sites occur in undifferentiated Sespe and Vaqueros Formations and in the Topanga Formation. Fossil types include marine invertebrates and vertebrates, continental vertebrates, land plants, and land mammals. The three recorded fossil sites lie within the proposed habitat preserve portion of PA 51.

4.5.2 Impacts Identified in the OCGP FEIR

Archaeological and Historical Resources

The OCGP FEIR determined that development according to the adopted Overlay Plan would not cause a substantial adverse change in the significance of any historical structure. The consequence of grading activities associated with future development; however, could potentially result in a substantial adverse change in the significance of an archaeological resource. The OCGP FEIR also stated that grading activities could uncover previously unknown human remains, including those interred outside formal cemeteries.

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Although the entire project area was the subject of previous cultural resources investigations as part of the Base Realignment and Closure process, it was later determined that an updated survey and report was necessary to supplement the previous work. PCR Services performed an additional Phase I and II cultural resources investigation, the results of which can be found in the *Cultural Resources Update and Review, Heritage Fields/The Great Park, City of Irvine, Orange County, California* report dated September 2006.

Later, the OCGP Master Plan reflected a development program that was consistent with the General Plan Land Use and Zoning designations for PA 51. Earth moving activities were also projected to be the same as that analyzed in the OCGP FEIR.

Paleontological Resources

The OCGP FEIR stated that earthmoving operations associated with grading and trenching have the greatest potential to impact buried paleontological resources in the moderately to highly sensitive areas in the coastal plain and washes, northeastern, northwestern, and southern portions of Planning Area 51. The OCGP FEIR considered the potential impact associated with earthmoving operations as a significant impact for which mitigation was necessary.

The OCGP Master Plan findings were also consistent with the OCGP FEIR, and the mitigation measures proposed in the OCGP FEIR were applicable and necessary in addressing potential impacts of future development.

The SSEIR document did not analyze cultural resources, as it was screened out during the initial environmental assessment and initial study process.

4.5.3 Impacts Associated with the Proposed Modifications to the OCGP Improvement Area

The SSEIR for the 2012 Modified Project did not analyze cultural resources, as it was screened out during the initial environmental assessment and initial study process.

The Project proposes modifications within the Bosque and Sports Park Districts of the 688-acre OCGP Improvement Area, an area which has been part of the original Master Plan. The OCGP FEIR adequately describes the nature and severity of the environmental effects of OCGP Master Plan and its Modifications to the OCGP Improvement Area, the subject of this Addendum, on cultural resources. The modifications are minor adjustments to the design, location and efficiency of development program components. No new uses and facilities are proposed that would cause a substantial adverse change in the significance of archaeological, paleontological, and historic resources impacts within the Project site. In addition, the proposed Project would not directly or indirectly destroy a unique cultural resource or site or unique geological feature; or disturb any human remains, including those interred outside of formal cemeteries.

Archaeological and Historical Resources

The Project as currently proposed would not cause a substantial adverse change in the significance of any historical structure, but grading associated with future development could still potentially result in a

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substantial adverse change in the significance of an archaeological resource, or uncover previously unknown human remains. As such, the cultural resources mitigation measures developed for the OCGP FEIR remain applicable to, and sufficient to mitigate impacts of, future development.

The proposed Modifications to the OCGP Improvement Area reducing the number of sports courts, expanding passive recreational area, relocating some of the Improvement Area components to optimize visibility, access and efficiency, and assessing adequacy of parking plan reflect a development program that is consistent with the General Plan Land Use and Zoning designations for Planning Area 51. Therefore, the discussion of impacts on archaeological and historical resources disclosed in the OCGP FEIR remains valid and the proposed modifications to the 688-acre OCGP Improvement Area would not result in any significant impacts or require changes to the OCGP FEIR.

Paleontological Resources

The proposed Modifications to the OCGP Improvement Area described above reflect a development program that is consistent with the General Plan Land Use and Zoning designations for Planning Area 51. Therefore, the discussion of potential impacts on paleontological resources disclosed in the OCGP FEIR remains valid and the proposed Modifications to the OCGP Improvement Area would not result in any significant impacts. As such, the paleontological Mitigation Measure P1 developed for the OCGP FEIR remains applicable to, and sufficient to mitigate impacts of, future development pursuant to the OCGP Master Plan.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the OCGP FEIR. The proposed Modifications to the OCGP Improvement Area, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the Modifications to the OCGP Improvement Area or otherwise available indicating substantial changes in circumstances that would require major changes to the OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project

4. Discussion of Checklist and Mitigation Measures

proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant biological effects identified in and considered by the OCGP FEIR.

4.5.4 Mitigation from the OCGP FEIR and Applicability to the Proposed Modification to the OCGP Improvement Area

Cultural Resources

The OCGP FEIR identified mitigation measures CULT1 through CULT4 which, if fulfilled, would reduce the effects of development to a level less than significant.

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

CULT1 Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PAs 51 and 30. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

CULT2 Monitoring of excavation and grading activities associated with future development in PAs 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure CULT1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and an assessment of their importance under CEQA and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.

CULT3 Prior to the issuance of grading permits and/or building permits for any future development in PAs 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City of Irvine to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.

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CULT4 Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City of Irvine to address the accidental discovery of recognition of any human remains. The program shall include the following:

There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- The county coroner must be contacted to determine that no investigation of the cause of death is required, and

If the coroner determines the remains to be Native American:

- The coroner shall contact the Native American Heritage Commission within 24 hours.
- The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
- The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for the means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
- Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
 - The Native American heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
 - The descendant identified fails to make a recommendation; or
 - The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage commission fails to provide measures acceptable to the landowner.

Compliance with this measure shall be verified by the Community Development Department.

Paleontological Resources

The OCGP FEIR identified Mitigation Measure P1, which, if fulfilled, would reduce the effects of development under the adopted Overlay Plan to a level less than significant.

P1 Prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of

4. Discussion of Checklist and Mitigation Measures

the area proposed for grading. (A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.

When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossil specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screening-washing operation on-site.

Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.

4.6 GEOLOGY AND SOILS

4.6.1 Environmental Setting

The OCGP FEIR describes the topography of the OCGP as nearly flat and gently sloping down to the west to southwest with elevations ranging from 450 feet above mean sea level (msl) to 200 feet above msl. The proposed Project is located in Planning Area 51 (PA 51), which includes some slopes of the Santa Ana foothills which reach elevations of 750 feet above msl. Alluvial soils of six major soil associations consisting predominantly of varying sands, silts, and clayey silty sands are present within PA 51. The foothill portions of the project area are underlain by sedimentary bedrock units, mantled by only a thin soil cover.

The OCGP FEIR identified the primary potential seismic hazard in the area as ground motion. Seismic Response Area (SRA) designations are used by the City to assess the geologic and seismic risk associated with potential development. A majority of PA 51 is within SRA-2 (denser soils/deeper groundwater) and is considered suitable for development.

No known active faults crossing or projecting into the project area were identified; however, the proposed Project site is within the seismically active southern California region and two active faults, Whittier-Elsinore Fault and Newport-Inglewood Fault, are located within 14 miles of the site.

4.6.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR disclosed the potential for future development of the OCGP area to result in the exposure of people or structures to strong ground shaking in the event of a major earthquake along anyone of the active faults in the region. The OCGP FEIR noted that new construction would be required

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to adhere to current seismic safety building codes which address seismic concerns. Existing buildings within current PA 51 do not meet current seismic codes; therefore, the temporary or permanent reuse of the existing buildings and the associated exposure of people or structures to potential substantial adverse effects due to strong seismic-related ground shaking were considered significant impacts.

Because of the documented landslides in the northeastern Santa Ana foothills area of the Site, the OCGP FEIR analysis concluded that the OCGP project would result in a significant impact associated with landslides in the affected area of PA 51 east of Irvine Boulevard, where future development of habitable structures could occur under the adopted Overlay Plan. The OCGP FEIR also concluded future development has the potential to result in soil erosion or the loss of topsoils and risk to life and property with the presence of expansive soils, and that these impacts are considered significant.

The conclusions drawn in the OCGP Master Plan were consistent to those in the OCGP FEIR. No new impacts were identified, and the OCGP FEIR had adequately described the environmental impacts of the project relative to soils, geologic hazards, and seismic safety, as well as the severity of the impacts.

4.6.3 Impacts Associated with the Modifications to the OCGP Improvement Area

The SSEIR document did not analyze geology and soils, as it was screened out during the initial environmental assessment and initial study process.

The Project site is located within the OCGP 688-acre Improvement Area and includes the same land uses as the OCGP Improvement Area. The proposed Project, consisting of modifications to the OCGP Improvement Area reducing the number of sports courts, expanding passive recreational area, relocating some of the Improvement Area components to optimize visibility, access and efficiency, and assessing adequacy of parking plan, and does not propose new uses or additional development intensity. Impacts related to seismic hazards, landslides, expansive soils, and loss of topsoil or soil erosion, are not intensified by the proposed Project. The modifications, while reducing the number of sports facilities, further enhance the use and efficiency of the existing features. No new uses and facilities and intensification of existing uses are proposed that would affect the geologic resources within the proposed Project site. Therefore the conclusions drawn in the OCGP FEIR adequately describe the environmental effects of the proposed Project relative to soils, geologic hazards, and seismic safety, as well as the severity of the impacts, and no changes to the OCGP FEIR would be required.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the OCGP FEIR. The proposed Modifications to the OCGP Improvement Area, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Improvement Area or otherwise available indicating substantial changes in circumstances that would require major changes to the OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of

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substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant geological effects identified in and considered by the OCGP FEIR.

4.6.4 Mitigation from the OCGP FEIR and Applicability to the Modifications to OCGP Improvement Area

The OCGP FEIR identified Mitigation Measures GS1 through GS4, which, if fulfilled, would reduce the effects of development under the adopted Overlay Plan to a level of less than significant.

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

GS1 Prior to issuance of a building permit, the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.

GS2 Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.

1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be conducted. The purpose of the subsurface evaluation is to:
 - a. Further evaluate the subsurface conditions in the area of the proposed structures.

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- b. Provide specific data on potential geologic and geotechnical hazards.
- c. Provide information pertaining to the engineering characteristics of earth materials in the project area.

From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural section, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:

- Seismic Ground Shaking - Measures to prevent risk of loss, injury or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.
- Erosion or Loss of Topsoil - Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances.
- Where Expansive Soils Exist - Measures for the design of foundation, slabs, flatwork and other improvements subject to drainage from expansive soils.

Compliance with this measure shall be verified by the Community Development Department.

GS3 Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of any existing structure if a building permit is not issued, a seismic evaluation of the structure including recommendations for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.

GS4 Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

4.7 GREENHOUSE GAS EMISSIONS

As discussed in more detail in Section 3.4, the proposed Project does not meet the Section 15162 criteria for preparing a subsequent environmental document and no analysis of GHG emissions is required. However, the SSEIR included an analysis of GHG emissions and a discussion of measures that are applicable to the proposed Project. The SSEIR identified the following measures as existing PPP that apply to the proposed Project and will help reduce or avoid potential GHG impacts:

4. Discussion of Checklist and Mitigation Measures

Of the PPPs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

PPP 4-1 City of Irvine Construction and Demolition ("C&D") Debris Recycling and Reuse

Ordinance: The C&D ordinance requires that 1) all residential projects of more than one unit, 2) nonresidential developments on 5,000 square feet or larger, and 3) nonresidential demolition/renovations with more than 10,000 square feet of building, recycle or reuse a minimum of 75 percent of concrete and asphalt and 50 percent of nonhazardous debris generated.

PPP 4-2 SCAQMD Rule 445 – Wood-Burning Devices:

SCAQMD prohibits installation of wood-burning devices such as fireplaces and wood-burning stoves in new development unless the development is located at an elevation above 3,000 feet or if existing infrastructure for natural gas service is not available within 150-feet of the development. All fireplaces installed within the proposed Project site will be natural gas fueled fireplaces.

PPP 4-3 Building and Energy Efficiency Standards (CCR Title 24):

Prior to the issuance of a building permit for residential, commercial, or office structures in the Proposed Project Site, development plans for these structures shall be required to demonstrate that the project meets the 2008 Building and Energy Efficiency Standards. Commonly known as Title 24, these standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2008 standards are approximately 15 percent more energy efficient than the 2005 Building and Energy Efficiency Standards. Plans submitted for building permits shall include written notes demonstrating compliance with the 2008 energy standards and shall be reviewed and approved by the Public Utilities Department prior to issuance of building permits. Design strategies to meet this standard may include maximizing solar orientation for daylighting and passive heating/cooling, installing appropriate shading devices and landscaping, utilizing natural ventilation, and installing cool roofs. Other techniques include installing insulation (high R value) and radiant heat barriers, low-e window glazing, or double-paned windows.

PPP 4-4 Title 24 Code Cycles: Net-Zero Buildings (Residential & Non-Residential):

The California Public Utilities Commission adopted its Long-Term Energy Efficiency Strategic Plan on September 18, 2008, presenting a roadmap for all new residential and commercial construction to achieve a zero-net energy standard. This Plan outlines the goal of reaching zero net energy in residential construction by 2020 and in commercial construction by 2030. Achieving this goal will require increased stringency in each code cycle of California's Energy Code (Title 24).

PPP 4-5 California Renewable Portfolio Standard:

CARB's Renewable Portfolio Standard (RPS) is a foundational element of the State's emissions reduction plan. In 2002, Senate Bill 1078 established the California RPS program, requiring 20 percent renewable energy by 2017. In 2006, Senate Bill 107 advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II. On September 15, 2009, Governor Arnold Schwarzenegger signed Executive Order S-21-09 directing CARB to adopt regulations increasing RPS to 33 percent by 2020. These mandates apply directly to investor-owned utilities, which in the case of the 2012 Modified Project is Southern California Edison ("SCE").

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PPP 4-6 California Low Carbon Fuel Standard: On January 18, 2007, Governor Arnold Schwarzenegger issued Executive Order S-1-07 requiring the establishment of a Low Carbon Fuel Standard ("LCFS") for transportation fuels. This statewide goal requires that California's transportation fuels reduce their carbon intensity by at least 10 percent by 2020. Regulatory proceedings and implementation of the LCFS have been directed to CARB. The LCFS has been identified by CARB as a discrete early action item in the Scoping Plan. CARB expects the LCFS to achieve the minimum 10 percent reduction goal; however, many of the early action items outlined in the Scoping Plan work in tandem with one another. To avoid the potential for double-counting emission reductions associated with AB 1493 (Pavley), the Scoping Plan has modified the aggregate reduction expected from the LCFS to 9.1 percent.

PPP 4-7 Federal Corporate Average Fuel Economy ("CAFE") Standards: The 2007 Energy Bill creates new federal requirements for increases in fleetwide fuel economy for passenger vehicles and light trucks. The federal legislation requires a fleetwide average of 35 miles per gallon (mpg) to be achieved by 2020. The National Highway Traffic Safety Administration is directed to phase in requirements to achieve this goal. Analysis by CARB suggests that this will require an annual improvement of approximately 3.4 percent between 2008 and 2020.

PPP 4-8 California Assembly Bill 1493 – Pavley Standards: On July 22, 2002, Governor Gray Davis signed Assembly Bill 1493 requiring CARB to develop and adopt regulations designed to reduce greenhouse gases emitted by passenger vehicles and light-duty trucks beginning with the 2009 model year. The standards set within the Pavley regulations are expected to reduce GHG emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016. California had petitioned the USEPA in December 2005 to allow these more stringent standards and California executive agencies have repeated their commitment to higher mileage standards. On July 1, 2009, the USEPA granted California a waiver that will enable the state to enforce stricter tailpipe emissions on new motor vehicles.

PPP 4-9 SB 375: SB 375 requires the reduction of GHG emissions from light trucks and automobiles through land use and transportation efforts that will reduce vehicle miles traveled ("VMT"). In essence, SB 375's goal is to control GHGs by curbing urban sprawl and through better land use planning. SB 375 essentially becomes the land use contribution to the GHG reduction requirements of AB 32, California's global warming bill enacted in 2006. The Modified Project is consistent with SB 375 strategies to reduce VMT and associated GHG emissions in that it represents a compact, mixed-use development, improves the jobs/housing balance in the city of Irvine and the Orange County Council of Governments Subregion, and provides access to mass transit. According to SCAG's 2008 Regional Comprehensive Plan, SCAG's Land Use and Housing Action Plan can be expected to result in a 10 percent reduction in VMT in 2035 when compared to current trends.

PPP 4-11 Comprehensive Signal Retiming and Coordination Program: Emissions are highest at the lowest travel speeds. The City is currently retiming and coordinating signals throughout Irvine under its ITEMS (Irvine Traffic Engineering System) program. A program to retime and coordinate traffic signals would produce more even traffic flows, so that vehicles are not starting and stopping constantly. These types of programs can improve vehicular level of service ("LOS"), thereby decreasing emissions for the same volume of vehicles.

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PPP 4-12 Waste Reduction: The City adopted a Zero Waste program in 2007 to approach waste management. The City recovers approximately 66 percent of its waste for recycling and composting, which exceeds the state's AB 939 waste diversion goals. Furthermore, waste haulers establish rate schedules according to bin size and frequency of collection. Commercial customers that subscribe to smaller bins (e.g., 2 cubic-yard bins) are routinely charged less by haulers. This pricing structure encourages waste reduction and recycling, and tends to minimize hauler pickups.

The SSEIR also identified the following measures as PDFs that apply to the proposed Project and will help reduce or avoid potential GHG impacts:

Of the PDFs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

PDF 4-1 Compact/Mixed-Use Development: The California Energy Commission ("CEC") considers compact development forms beneficial for minimizing energy consumption that leads to greenhouse gas emissions. In fact, the CEC's report on the connections between land use and climate change identifies density as the project feature most predictive of the number of vehicle trips and vehicle miles traveled ("VMT") by project occupants. The 2012 Modified Project intensified the residential development on the Proposed Project Site as compared to the 2011 Approved Project, and locates additional housing opportunities near major employment and transportation centers. Doing so will tend to reduce VMT on a local and regional basis.

PDF 4-2 High Rate of Internal Trip Capture: With the inclusion of a mix of land uses including office, commercial, industrial, and residential in the Proposed Project Site, the 2012 Modified Project significantly reduces trips outside the Proposed Project Site. This reduces trip length and congestion on the local circulation system outside the Proposed Project Site.

PDF 4-3 Low-Flow Fixtures: The 2012 Modified Project incorporates low-flow water fixtures that will meet the requirements of the California Green Building Standards Code standards. Prior to issuance of building permit, the Applicant or its successor shall submit evidence to the satisfaction of the Director of Community Development that toilets, urinals, sinks, showers, and other water fixtures installed on-site are low-flow water fixtures that meet the California Green Building Standards Code standards.

PDF 4-4 Landscaping and Irrigation Systems: The 2012 Modified Project incorporates automated, high-efficiency landscaping irrigation systems on all master landscaped areas that reduce water use, such as evapotranspiration "smart" weather-based irrigation controllers, and bubbler irrigation; low-angle, low-flow spray heads; moisture sensors; and use of a California-friendly landscape palette. Prior to approval of landscape plans, the Applicant or its successor shall submit evidence to the satisfaction of the City's Director of Community Development that such landscaping irrigation systems will be installed so as to make the 2012 Modified Project consistent with the intent of the California Water Conservation in Landscaping Act of 2006 ("AB 1881"), including provisions to reduce the wasteful, uneconomic, inefficient, and unnecessary consumption of water.

4. Discussion of Checklist and Mitigation Measures

- PDF 4-5 Use of Reclaimed Water on All Master Landscaped Areas:** Prior to approval of landscape plans, the Applicant or its successor shall submit evidence to the satisfaction of the City's Director of Community Development and the Irvine Ranch Water District ("IRWD") that the landscape plans incorporate the use of reclaimed water in all master landscaped areas, including master landscaped commercial, multifamily, common, roadways, and park areas. Master landscapes shall also incorporate weather-based controllers and efficient irrigation system designs to reduce overwatering, combined with the application of a California-friendly landscape palette.
- PDF 4-6 Material Recovery:** The 2012 Modified Project incorporates measures to reduce waste generated by Proposed Project Site residents, occupants and visitors, and to encourage recycling of solid wastes, utilizing the Orange County Integrated Waste Management Department's material recovery facilities to recycle glass, plastic, cans, junk mail, paper, cardboard, greenwaste (e.g., grass, weeds, leaves, branches, yard trimmings, and scrap wood), and scrap metal. Future employees, residents, and customers would participate in these programs. These measures include the requirement to include on-site recycling facilities at all commercial, retail, industrial, and multi-family residential developments. In addition, educational materials identifying available recycling programs shall be distributed to all land uses, including single-family residential.
- PDF 4-7 Energy Star Appliances:** EnergyStar appliances (excluding refrigerators), such as dishwashers, clothes washers, clothes dryers, air conditions, furnaces, and water heaters, shall be offered or installed in all residential dwelling units.
- PDF 4-8 Building Energy Efficiency:** Residential dwellings and non-residential buildings will be constructed so that they achieve 15 percent higher energy efficiency than the applicable standards set forth in the 2008 California Building and Energy Efficiency Standards (Title 24, Part 6 of the California Building Code) or meet the standards in effect at the time of issuance of building permit. The Energy Commission's 2013 Building Energy Efficiency Standards are 25 percent more efficient than the 2008 standards for residential construction and 30 percent more efficient for nonresidential construction. The 2013 Energy Efficiency Standards, which take effect on January 1, 2014, offer builders more efficient windows, insulation, lighting, ventilation systems and other options that would reduce energy consumption in homes and businesses.
- PDF 4-9 Carbon Sequestration:** The 2012 Modified Project incorporates landscaping and a plant palate that will foster carbon sequestration within the Proposed Project Site that is comparable to the landscaping and plant palate that was already incorporated into the 2011 Approved Project.
- PDF 4-10 Softscape Landscaped Areas:** Consistent with the sustainable practices and modern landscaping standards, and consistent with the landscaping used in the 2011 Approved Project, the 2012 Modified Project reduces softscape (e.g., plants/horticultural elements of landscape design) landscaped areas by 28 percent as compared to the default assumption in CalEEMod.

4. Discussion of Checklist and Mitigation Measures

4.8 HAZARDS AND HAZARDOUS MATERIALS

4.8.1 Environmental Setting

Hazardous Materials and Hazardous Wastes

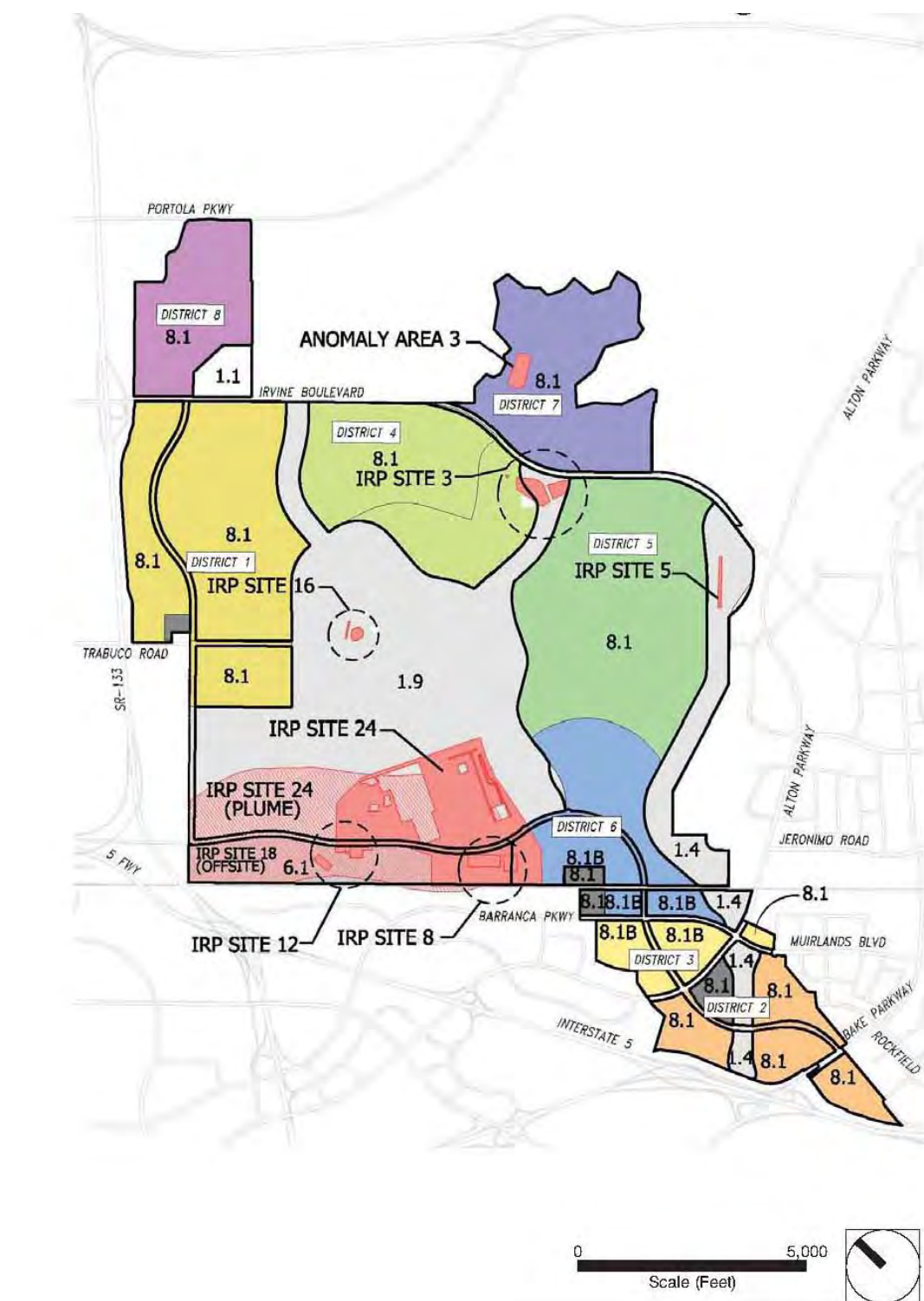
The OCGP FEIR discussed an environmental baseline survey (EBS) that was conducted for the project area. Information was used from the Base Realignment and Closure Business Plan for Marine Corps Air Station (MCAS) El Toro dated May 2002; the EBS dated 1995; and an update to the EBS-April 2003 Draft Final EBS. The 2003 EBS identified "76 potential release locations, all of which require further evaluation for potential releases to the environment and subsequent remediation, if required" (Refer to OCGP FEIR p.5.5-5).

The Installation Restoration Program (IRP) for the former MCAS El Toro was authorized in 1984. The IRP outlined hazardous remediation needs and identified 24 sites (Sites 1-22, 24, and 25) for investigation at the former MCAS El Toro. The IRP sites were originally divided into two categories: No Further Action sites (Table 4.8-1) and Action Required sites (Table 4.8-2). The IRP Sites identified as Action Required sites are depicted on Figure 4.8-1, *Installation Restoration Program Sites*. The Action Required IRP sites that are located within the 688-acre OCGP Improvement Area include sites 5 and 16.

IRP Site 5 (Perimeter Landfill), which covers approximately 1.8 acres, operated between 1955 and the late-1960s as a cut-and-fill disposal facility. Typical of municipal landfills, Site 5 contains a variety of materials. Reportedly, almost any waste generated at former MCAS El Toro may have been disposed at IRP Site 5, including burnable trash; municipal solid waste; cleaning fluids; scrap metals; paint residues; and unspecified fuels, oils, and solvents. Wastes were typically burned in place to reduce volume prior to burial. A Remedial Action Completion Report (RACR) dated August 2012 has been prepared and documents that the landfill has been remediated and is protective of human health and the environment. An Operations and Maintenance/Long-Term Monitoring (LTM) Plan dated November 2010 has been prepared and approved by the Department of Toxic Substances Control. The post-construction LTM activities at IRP Site 5 monitor the effectiveness of the landfill cap, surface-water drainage structures, landfill gas monitoring system, groundwater monitoring network, and site security features.

At IRP Site 16 (Crash Crew Pit No. 2), aviation fuels (JP-5, AVGAS), chlorinated solvents, hydraulic fluid, crankcase oil, white phosphorus, magnesium phosphate, and napalm were burned in unlined pits for fire training from 1972 to 1985. The Draft Remedial Action Completion Report (RACR) prepared for Site 16 documents that the deep vadose zone (from 10 feet below ground surface [bgs] to groundwater, which is present at approximately 170 feet bgs) response action (i.e., monitoring) is complete and No Further Action is required for the deep vadose zone at Site 16. The Draft RACR Report meets the requirements of a Closure Report as specified in the Final Record of Decision (ROD). The Final ROD documented No Further Action for surface and shallow soil (0-10 feet bgs) at IRP Site 16. Based on the results of soil gas monitoring, petroleum corrective actions including soil vapor extraction and MPE remediation, and modeling results, it is unlikely for VOCs to further impact groundwater (due to infiltration) at concentrations exceeding drinking water standards. As a result, it has been recommended that the requirements for positive drainage within the Main Pit on Site 16 be eliminated.

Addendum No. 9 - Modifications to the OCGP Improvement Area



4. Discussion of Checklist and Mitigation Measures

Of the 404 underground storage tanks (USTs) identified at the Base, 357 had been remediated and received findings of "no further action" at the time the OCGP FEIR was prepared. Of the 39 aboveground storage tanks (ASTs) on the property, 36 had been remediated and received findings of "no further action".

Evaluation and remediation of previously identified IRP sites within the project site continues with the resulting changes in the condition of the property largely anticipated in the OCGP FEIR. Subsequent to certification of the OCGP FEIR, the DON completed environmental related findings that support the suitability to transfer (FOST) real property made available through the Base Realignment and Closure process and to support the lease of areas not yet suitable for transfer.⁴ Please see Figure 4.8-1 for Installation Restoration Program (IRP) Locations.

The areas suitable for lease encompassed locations of concern identified in the 1995 and 2003 EBS, and in the OCGP FEIR, where future evaluation and/or actions are ongoing or required. These areas were identified as "carve-outs" in the DON documentation.⁵

Subsequent to certification of the OCGP FEIR, a total of seven FOSTs have documented that all necessary remediation has been completed to protect human health and the environment on approximately 3,478 acres of the former MCAS El Toro. Information concerning remediation is subject to periodic change as additional information is generated from cleanup programs and activities that are being planned for, or are in progress.

Emergency Plans

The OCGP FEIR described the former MCAS El Toro site (PA 51, including former PA 30) as a potential emergency response staging area because of its capacity for processing and storing large quantities of cargo. The Orange County Emergency Plan, which incorporates the statewide standardized emergency management system (SEMS), guides multijurisdictional response to emergency conditions. No substantial change to the description of the setting regarding emergency plans has occurred that would alter the analysis and conclusions of the OCGP FEIR on emergency plans and response.

Wildland Fires

The OCGP FEIR identified high fire hazard areas within open space, undeveloped land northeast of and adjacent to Planning Area 51. The City has no construction records of existing buildings and structures on the property. No substantial change to the description of the setting relative to wild land fires has occurred that would alter the analysis and conclusions of the OCGP FEIR regarding wild land fires.

⁴ U.S. Department of the Navy, 2004. *Final Finding of Suitability to Transfer, Parcel IV and Portions of Parcels I, II, and III, Former Marine Corps Air Station, El Taro, California, July 2004; Final Finding of Suitability to Lease for Carve-outs Within Parcels I, II, and III, Former Marine Corps Air Station, El Taro, California, July 2004.*

⁵ U.S. Department of the Navy, 2004a. *Final Finding of Suitability to Lease for Carve-outs within Parcels I, II, and III, Former Marine Corps Air Station, El Taro, California, July 2004.*

4. Discussion of Checklist and Mitigation Measures

4.8.2 Impacts Identified in the OCGP FEIR

Hazardous Materials and Wastes

The OCGP FEIR identified no significant impacts associated with the No Further Action IRP sites, which are listed in Table 4.8-1. Table 4.8-2 identifies each Action Required IRP site and its location relative to the adopted Overlay Plan. The OCGP FEIR disclosed the following environmental consequences of the adopted Overlay Plan as significant impacts:

- Construction activities involving demolition and possible substantial remodeling of existing structures in the project area as the project area develops could result in the disturbance of structures and soils containing asbestos-containing building materials (ACM) and lead-based paint.
- IRP site 24 is located in the 6.1 Institutional and 1.9 Orange County Great Park zoning districts. The site may be conveyed with temporary restrictions on use that are not appropriate for transportation facility use. This is considered a significant impact.
- Future uses of IRP site 3 may be potentially constrained by the implementation of institutional controls.
- IRP site 16 (Crash Crew Pit No.2) is located in the 1.9 Orange County Great Park zoning district. The site may be conveyed with temporary restrictions on use that are not appropriate for recreational land uses.

Table 4.8-1. No Further Action IRP Sites and Zoning

IRP Site	IRP Designation	Adopted Overlay Plan Zoning District
4	Ferrocene Spill Area	8.1 Trails and Transit Oriented District
6	Drop Tank Drainage Area No. 1	8.1 Trails and Transit Oriented District
7	Drop Tank Drainage Area No. 2	1.9 Orange County Great Park
9	Crash Crew Pit No. 1	1.9 Orange County Great Park
10	Petroleum Disposal Area	1.9 Orange County Great Park
13	Oil Change Area	1.9 Orange County Great Park
14	Battery Acid Disposal Area	1.9 Orange County Great Park
15	Suspended Fuel Tanks	1.9 Orange County Great Park
19	Air Craft Expeditionary Refueling	8.1 Trails and Transit Oriented District
20	Hobby Shop	8.1 Trails and Transit Oriented District
21	Materials Management Group	6.1 Institutional
22	Tactical Air Fuel Dispensing System	1.9 Orange County Great Park

Source: OCGP FEIR, Table 5.5-3, p. 5.5-21; SEMA Associates (June 7, 2006) (rev June 2008).

4. Discussion of Checklist and Mitigation Measures

Table 4.8-2. Action Required IRP Sites and Zoning

IRP Site	IRP Designation	Adopted Overlay Plan Zoning District
1	EOD Range	1.4 Preservation
2	Magazine Road Landfill	1.4 Preservation
3	Original Landfill	8.1 Trails and Transit Oriented District
5	Perimeter Road Landfill	1.9 Orange County Great Park
8	DRMO Storage Yard	6.1 Institutional/ 8.1 Trails and Transit Oriented District
11	Transformer Storage Area	1.9 Orange County Great Park
12	Sludge Drying Beds	6.1 Institutional
16	Crash Crew Pit No. 2	1.9 Orange County Great Park
17	Communications Station Landfill	1.4 Preservation
24	VOC Source Area	6.1 Institutional/ 1.9 Orange County Great Park/8.1 Trails and Transit Oriented District

Source: OCGP FEIR, Table 5.5-4, p. 5.5-22; SEMA Associates (June 7, 2006) (rev June 2008).

Emergency Plans

The OCGP FEIR determined the Overlay Plan would not be expected to interfere with emergency response and evacuation plans on the basis that other sites within Orange County are already designated as emergency staging areas and portions of the OCGP would remain available to non-aviation emergency response equipment. Accordingly, the OCGP FEIR concluded that the adopted Overlay Plan would not result in a significant impact related to emergency response and evacuation plans.

Wildland Fires

The OCGP FEIR concluded that the Habitat Reserve, Wildlife Corridor, and Recreational areas in the northeastern portion of Planning Area 51 would be exposed to the highest level of fire risk from wildland fires under the adopted Overlay Plan, and that reuse of existing buildings require inspection for conformance to fire life safety code requirements. The OCGP FEIR identified the wild land fire impacts as potentially significant.

4.8.3 Impacts Associated with the Modifications to the OCGP Improvement Area

As previously mentioned, the Action Required IRP sites that are located within the 688-acre OCGP Improvement Area include IRP Sites 5 and 16.

Issues relating to IRP Site 5 (Perimeter Road Landfill), including settling, are not expected to constraint proposed land uses within the proposed Project site. The remediation for this site (which is within the Wildlife Corridor Feature area), consisting of the installation of a synthetic liner and implementation of institutional controls, has been completed. This site has been capped and can accommodate shallow-rooted plants. The proposed native grasses for the Wildlife Corridor Feature meet the “shallow-rooted” restriction. Based on the DON’s Operations and Monitoring/Long Term Monitoring Plan, the Wildlife

4. Discussion of Checklist and Mitigation Measures

Corridor Feature is an acceptable use of the capped landfill, and all land use restrictions associated with this area can, and will be followed in developing the Wildlife Corridor Feature. The planting restrictions apply only to the footprint of the capped landfill (less than 10 acres), and would not affect the overall flora and fauna of the Wildlife Corridor Feature. Implementation of the institutional controls (ICs) would reduce any potential exposure from the IRP Site 5, and therefore, would have a less than significant impact.

IRP Site 16 (Crash Crew Pit No. 2) consisted of three unlined fire fighter training pits. Due to the potential risks associated with the existing groundwater contamination, the DON may restrict use of the site until the groundwater is remediated to an appropriate risk level, at which time the site would be released for unrestricted use. This remediation process will likely take multiple years to complete, and during this time various ICs could be implemented to limit certain activities and unauthorized access to the site. Long-term monitoring of the ICs is conducted annually by the City of Irvine and the developer in accordance with the Property Deed and "Covenant to Restrict the Use of Property". Additionally, site inspections were conducted by the Navy's consultant in June and December 2012 in accordance with the Final Remedial Design. Based on the results from the site inspections and maintenance activities, the goals of maintaining positive site drainage, preventing exposure to contaminants at the site, and maintaining the integrity of monitoring equipment continue to be met (Trevet, October 2013). Implementation of the ICs and maintenance activities would reduce any potential exposure from IRP Site 16 such that the proposed Project would have a less than significant impact.

The proposed Project includes modifications to the 688-acre OCGP Improvement Area within the same land area as depicted in the OCGP FEIR, consisting of reducing the number of sports courts; expanding passive recreational area; relocating some of the Improvement Area components to further enhance the visibility, access and efficiency of the existing features, and assessing adequacy of the parking plan. Therefore, the OCGP FEIR adequately described the nature and severity of the environmental effects of the proposed Modifications to the OCGP Improvement Area, the subject of this Addendum, on hazardous materials and wastes. No new land uses are proposed that would create a significant hazard to the public or the environment; involve routine transport or use of hazardous materials; emit hazardous emissions; expose people to risks involving wildland fires, and interfere with an adopted emergency response plan. The modifications, while significantly reducing the number of sports facilities, further enhance the use and efficiency of the existing features. Therefore, the proposed Project would not result in impacts related to hazards and hazardous materials within the Project site and would not require any changes to the OCGP FEIR.

Hazardous Materials and Wastes

As previously mentioned, a total of seven FOSTs documented that all necessary remediation has been completed to protect human health and the environment on approximately 3,478 acres of the former MCAS El Toro. Overall, the proposed Modification to the OCGP Improvement Area would not change the OCGP FEIR conclusions, and with Mitigation Measures HH1, HH2, HH5, and HH6, the Project would result in less than significant impacts related to hazardous materials and wastes.

Emergency Plans

Like the Overlay Plan, the implementation of the proposed Modification to the OCGP Improvement Area would not be expected to interfere with emergency response and evacuation plans on the base since

4. Discussion of Checklist and Mitigation Measures

other sites within Orange County are already designated emergency staging areas and portions of the OCGP would remain available to emergency response equipment. Accordingly, the proposed Modifications to the OCGP Improvement Area would not change the OCGP FEIR conclusions; the proposed Project would not result in a significant impact related to emergency response and evacuation plans.

Wildland Fires

The Wildlife Corridor Feature within the 688-acre OCGP Improvement Area would be exposed to the highest level of fire risk from wildland fires because this area is adjacent to the NCCP Reserve which is currently defined as having high risk for wildland fires under the updated Fire Hazard Map. Although not considered a high wildland fire hazard area, the Wildlife Corridor Feature would be subject to fuel modification requirements within its boundary.

As the potential significant wildland fire impacts of the Modifications to the OCGP Improvement Area are similar to those disclosed in the OCGP FEIR, the Modifications to the OCGP Improvement Area would not substantially change the findings and conclusions of the OCGP FEIR regarding wildland fires.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the OCGP FEIR. The proposed Modifications to the OCGP Improvement Area, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the Modifications to the OCGP Improvement Area or otherwise available indicating substantial changes in circumstances that would require major changes to the OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional

4. Discussion of Checklist and Mitigation Measures

mitigation measures that would substantially reduce one or more of the significant biological effects identified in and considered by the OCGP FEIR.

4.8.4 Mitigation from the OCGP FEIR and Applicability to the Modifications to the OCGP Improvement Area

The OCGP FEIR identified six mitigation measures to reduce the effects of the adopted Overlay Plan on public health and safety, specifically environmental effects associated with hazardous materials and waste, emergency response, and wildland fires, to a level less than significant. However, the mitigation measures were modified and new measures were adopted in the SEIR. An explanation for the new mitigation measures is set forth below. In addition, SSEIR proposed to make two minor modifications to Mitigation Measures HH2 and HH3 adopted by the City for the 2011 Approved Project. The modification to HH2 was made to update the reference to the SSEIR. The modification to HH3 was made to note that the high fire hazard maps are occasionally updated and does not affect the substance of the mitigation measure.

The certified OCGP FEIR's Mitigation Measure HH1 was updated because much of the abatement it required has been completed. In addition, many of its requirements are triggered upon the transfer of the property from the Navy to the City of Irvine, and that transfer has already occurred for a substantial portion of the property associated with the Modified Project. The new Mitigation Measure HH1 is provided below:

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

HH1 For any remaining structures known to contain asbestos-containing materials ("ACMs") that will be renovated and/or demolished, Heritage Fields shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.

Prior to occupancy, renovation or demolition of any remaining structures constructed before October 1988, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by Heritage Fields. This requirement can be waived if an architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building materials, and to the best of their knowledge, no ACMs were used as a building materials, if the asbestos survey identifies ACMs, the applicant shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.

Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.

Any renovation and/or lead-based paint ("LBP") abatement activities on residential units at former MCAS El Toro shall be conducted in accordance with all applicable federal, state and local regulatory requirements.

4. Discussion of Checklist and Mitigation Measures

The certified OCGP FEIR's Mitigation Measure HH2 required updating because its requirements were triggered upon the transfer of the property from the Navy to the City of Irvine, and that transfer has already occurred for a substantial portion of the property associated with the Modified Project. In addition, since the certified OCGP FEIR was prepared, FOSTs 4, 5, 6, and 7 have been issued and each of them specifies in detail the nature of the restrictions and institutional controls that must be implemented. The new Mitigation Measure HH2 is provided below:

- HH2** The portions of the Proposed Project Site located on the active Installation Restoration Program ("IRP") Sites listed in Table 5.5-2, *Action Required IRP Sites and Zoning – 2012 Modified Project*, of the DSSEIR for the 2012 Modified Project shall be used only in accordance with the requirements of the applicable Final Finding of Suitability for Transfer or Finding of Suitability to Lease, including in strict compliance with all lease restrictions (such as restrictions against soil or groundwater disturbance without approval from the Department of the Navy and regulators) and all institutional controls (such as restrictions against disturbing the integrity of physical remedial components like caps or groundwater treatment systems and other restrictions imposed by the Department of the Navy).
- HH3** The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wild land fire hazards will be subject to OCFA Guidelines for "Development Within and Exclusion from Very High Fire Severity Zones" and "Fuel Modification Plans and Maintenance." Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures and based on the revised Fire Hazard Maps, the 2012 Modified Project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.
- HH4** Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.
- HH5** Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event that unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the Department of Navy ("DON") shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director of Community Development of the City of Irvine in a timely manner.

4. Discussion of Checklist and Mitigation Measures

Additionally, said Protocol Plan shall be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities.

- HH6** The City of Irvine shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells on the former MCAS El Toro in a geographic information systems database ("GIS"). The City will review all permit applications on the former air station for monitoring well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to monitoring wells will be limited to authorized personnel.

Additionally, the SSEIR identified the following measures as existing PPP that apply to the proposed Project and will help reduce or avoid potential hazards and hazardous materials impacts:

Of the PPPs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

- PPP 5-1** If any underground storage tanks ("USTs") are encountered during site grading and excavation activities, they shall be removed in accordance with the existing standards and regulations of, and oversight by, the Orange County Health Care Agency ("OCHCA"), based on compliance authority granted through the California Code of Regulations, Title 23, Division 3, Chapter 16, Underground Tank Regulations. The process for UST removal is detailed in the OCHCA's "Underground Storage Tanks: The Basics." Soil samples from areas where storage tanks have been removed or where soil contamination is suspected shall be analyzed for hydrocarbons including gasoline and diesel in accordance with procedures set forth by OCHCA. If hydrocarbons are identified in the soil, the appropriate response/remedial measures will be implemented as directed by OCHCA with support review from the Regional Water Quality Control Board until all specified requirements are satisfied and a Tank Closure Letter is issued. Any aboveground storage tank ("AST") in existence at the commencement of site development shall be removed in accordance with all applicable regulations under the oversight of Orange County Fire Authority. Compliance requirements relative to the removal/closure of storage tanks are set forth through the California Health and Safety Code, Sections 25280 through 25299.
- PPP 5-2** During demolition, grading, and excavation, workers shall comply with the requirements of Title 8 of the California Code of Regulations, Section 1532.1, which provides for exposure limits, exposure monitoring, respiratory protection, and good working practice by workers exposed to lead. Lead-contaminated debris and other wastes shall be managed and disposed of in accordance with the applicable provision(s) of the California Health and Safety Code.
- PPP 5-3** Prior to approval of a conditional use permit, project applicants shall prepare a Fire Master Plan for submittal to the Orange County Fire Authority ("OCFA") consistent with OCFA Guideline B-09 (Fire Master Plans for Commercial and Residential Development).
- PPP 5-4** Federal law requires compliance with Rule 29 of the Code of Federal Regulations ("CFR") Part 1926. Prior to site demolition activities, building materials shall be carefully assessed for the presence of lead-based paint, and its removal, where necessary, must comply with state and federal regulations, including Occupational Safety and Health Administration ("OSHA") 29 CFR Part 1926. The OSHA rule establishes standards for occupational health and environmental

4. Discussion of Checklist and Mitigation Measures

controls for lead exposure. The standard also includes requirements addressing exposure assessment, methods of compliance, respiratory protection, protective clothing and equipment, hygiene facilities and practices, medical surveillance, medical removal protection, employee information and training, signs, recordkeeping, and observation of monitoring. Furthermore, the requirements of California Code of Regulations, Title 17, Division 1, Chapter 8, identify procedures that must be followed for accreditation, certification, and work practices for lead-based paint and lead hazards. Section 36100 thereof specifically sets forth requirements for lead-based paint abatement in public and residential buildings.

- PPP 5-5** Prior to site demolition activities, building materials must be carefully assessed for the presence of asbestos-containing materials ("ACM"), and removal of this material, where necessary, must comply with state and federal regulations, including SCAQMD Rule 1403, which specifies work practices with the goal of minimizing asbestos emissions during building demolition and renovation activities, including the removal and associated disturbance of ACMs. The requirements for demolition and renovation activities include asbestos surveying; notification; ACM removal procedures and time schedules; ACM handling and cleanup procedures; and storage, disposal, and landfill disposal requirements for asbestos-containing waste materials.
- PPP 5-6** During site decommissioning and demolition activities, hazardous wastes must be managed in accordance with the requirements of Title 22, Division 4.5 of the California Code of Regulations. Title 22 sets forth the requirements with which hazardous-waste generators, transporters, and owners or operators of treatment, storage, or disposal facilities must comply. These regulations include the requirements for packaging, storage, labeling, reporting, and general management of hazardous waste prior to shipment. In addition, the regulations identify standards applicable to transporters of hazardous waste such as the requirements for transporting shipments of hazardous waste, manifesting, vehicle registration, and emergency accidental discharges during transportation.
- PPP 5-7** During demolition, grading, and excavation, workers shall comply with the requirements of Title 8 of the California Code of Regulations, Section 1529, which provides for exposure limits, exposure monitoring, respiratory protection, and good working practices by workers exposed to asbestos. Asbestos-contaminated debris and other wastes shall be managed and disposed of in accordance with the applicable provision(s) of the California Health and Safety Code.
- PPP 5-8** Evidence of soil and/or groundwater contamination (e.g., chemical odors, staining) unrelated to above/underground storage tank releases may be encountered during site development. The appropriate agency (e.g., OCHCA, DTSC, or the RWQCB) shall be notified if these conditions are encountered during construction or grading activities. With their oversight, an environmental site assessment shall be completed and a determination shall be made as to whether cleanup is required. Cleanup activities are required to be consistent with all applicable federal, State and local rules, regulations, and laws. A cleanup would not be considered complete until confirmatory samples of soil and/or groundwater reveal levels of contamination below the standards established by the oversight agency. Alternatively, a risk assessment may be prepared for the site to determine that there are no human or environmental risks associated with leaving contamination below specific levels in place. Construction in the impacted area

4. Discussion of Checklist and Mitigation Measures

shall not proceed until a “no further action” clearance letter or similar determination is issued by the oversight agency, or until a land use covenant is implemented.

4.9 HYDROLOGY AND WATER QUALITY

4.9.1 Environmental Setting

The OCGP FEIR describes the project site as within the San Diego Creek watershed, which includes the San Diego Creek, Peters Canyon Channel, and the tributaries to these water courses. The major drainage channels that traverse the site (PA 51) are the Marshburn Channel, Bee Canyon Channel, Agua Chinon Channel, and Borrego Canyon Channel.

San Diego Creek and Upper Newport Bay are listed as impaired water bodies under Section 303(d) of the Clean Water Act. Accordingly, Total Maximum Daily Load (TMDL) for pollutants that have impaired these water bodies has been established and was included in the OCGP FEIR (OCGP FEIR Table 5.7-2). The OCGP FEIR also noted that the County of Orange and the City of Irvine hold a Nationwide Pollution Discharge Elimination System (NPDES) permit for the storm drain systems, and that the State has issued a NPDES general permit relating to construction activities on sites over five acres in the area. Lastly, the flood control improvements associated with the SR-133 toll road were noted in the OCGP FEIR as having reduced the 100-year flood zone north and west of the property.

4.9.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR identified several significant impacts on hydrology and water quality associated with future development under the adopted Overlay Plan before mitigation. First, grading and excavation activities required for future development could result in the exposure of bare soils to both wind- and water-related erosion and associated significant water quality impacts (specifically, a violation of water quality standards or waste discharge requirements). Compliance with City grading and water quality regulations, including the NPDES discharge permitting requirements and preparation of a Storm Water Pollution Prevention Plan (SWPPP) and a Water Quality Management Plan (WQMP), are the primary means of controlling the potential impacts of grading and excavation activities. These City requirements, which are described in mitigation measures H/WQ1 and H/WQ2, will reduce the impact to a less-than significant level.

According to the OCGP FEIR, the existing drainage patterns and stream courses would not be substantially altered by future development under the adopted Overlay Plan. In addition, the potential for inundation is reduced by improvements to upstream flood-control facilities. Without project-related flood-control facilities, the rate or amount of surface runoff due to new development would result in flooding on- and off-site, depending on the nature of the specific development. Although this impact was identified as significant, the effect of increased runoff would be reduced to a less-than-significant level through preparation and implementation of hydraulic studies, recommendations for each specific development and the construction of flood-control improvements commensurate with each specific development (Mitigation Measure H/WQ3).

The impact analysis for the Overlay Plan assumed development of the land use patterns created by the zoning designations for the Overlay Plan area and a backbone storm drain system. The storm drain

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system took into consideration and included improvements identified in the San Diego Creek Flood Control Master Plan. The drainage plan for the Overlay Plan area included improvements to the major drainages, including Marshburn Channel, Bee Canyon Channel, Agua Chinon Channel, and the Borrego Channel, the Wildlife Corridor and Serrano Creek, and San Diego Creek, as described in the OCGP FEIR and addenda.

While conceptually defined in the OCGP FEIR, the foregoing area-wide drainage and flood control facility system has since been undergoing increasingly more definitive design engineering refinement. The latest formal expression of these system enhancements is memorialized in the following documents: Master Plan of Drainage, Fuscoe Engineering February 23, 2007,⁶ Orange County Great Park - Hydrology/Hydraulic Report, Fuscoe Engineering June 12, 2007 (collectively, Fuscoe Reports); PAs 30 and 51 Bee Canyon, Agua Chinon, Borrego, Serrano and Upper San Diego Creek Update, RBF Consulting February 27, 2008, and Planning Area 51 Marshburn Watershed Update, RBF Consulting March 14, 2008 (collectively, RBF Reports). These reports refine the drainage control system components described in the OCGP FEIR. The on-site channels will continue to drain the project site under existing conditions. Additional backbone storm drain facilities will be designed to accommodate the changes in the land use surface runoff within the Great Park Neighborhoods development. The post development hydrology was analyzed per the Orange County Hydrology Manual for a 100-year peak storm design event.

OCGP FEIR Mitigation Measure H/WQ3 states that prior to approval of the first tentative tract or parcel map in the project area, detailed hydrologic and hydraulic analysis shall be conducted. Studies and analyses shall be prepared in accordance with Orange County Flood Control District (OCFCD) methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. In compliance with the mitigation measure, the Fuscoe Reports, and RBF Reports were prepared.

4.9.3 Impacts Associated with Modifications to the OCGP Improvement Area

The Modifications to the OCGP Improvement Area encompass the same land area proposed for park development as depicted in the OCGP FEIR. The proposed Project, consisting of modifications to the OCGP Improvement Area reducing the number of sports courts, expanding passive recreational area, relocating some of the Improvement Area components to optimize visibility, access and efficiency, and assessing adequacy of parking plan, does not propose any new uses or facilities that would violate water quality standards or waste discharge requirements; substantially alter the existing drainage pattern of the site; deplete groundwater supplies; create or contribute runoff water; or create risks involving flooding. Therefore, the OCGP FEIR adequately describes the nature and severity of the environmental effects of OCGP Master Plan and its proposed Modifications to the OCGP Improvement Area, the subject of this Addendum, on hydrology and water quality.

Just as the area-wide and off-site drainage and flood control system facility components have undergone continued design engineering refinement, so has the concurrent refinement of on-site drainage and flood

⁶ This report was submitted to the City of Irvine as a part of the Master Subdivision Map application.

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control systems. However, those refinements do not alter the environmental conclusions in the OCGP FEIR and this Addendum.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the OCGP FEIR. The proposed Modifications to the OCGP Improvement Area, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the OCGP Modifications to Improvement Area or otherwise available indicating substantial changes in circumstances that would require major changes to the OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant effects on hydrology and/or water quality identified in and considered by the OCGP FEIR.

4.9.4 Mitigation from the OCGP FEIR and Applicability to the Modifications to the OCGP Improvement Area

The OCGP FEIR identified four mitigation measures to reduce the effects of the project on hydrology and water quality. All of the mitigation measures are applicable to the proposed Project and would be carried forward to future development of the project site. Implementation of Mitigation Measures H/WQ 1 through H/WQ 4 would reduce project impacts to a less than significant level. The mitigation measures were modified in the SEIR.

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

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H/WQ1 Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City of Irvine adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area ... and residential construction sites that result in the disturbance of five acres or more ... shall be required to develop and implement BMPs ... to control erosion and siltation and contaminated runoff from the construction sites." Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of one acre or more.

The City's standard conditions of approval indicate that a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.

Additionally, prior to the issuance of a grading permit, project applicants must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, lessee, etc.), and shall reference the location(s) of structural BMPs.

Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOI) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the Director of Community Development of any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

4. Discussion of Checklist and Mitigation Measures

H/WQ2 Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water Quality Control Board Basin Plan, including Total Maximum Daily Load (TMDL) Implementation Plan adopted for this watershed.

H/WQ3 Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrologic and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

H/WQ4 Prior to issuance of a building permit for any unit within the 100-year floodplain, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the FIRMS revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.

After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process.

Additionally, the SSEIR identified the following measures as existing PPP that apply to the proposed Project and will help reduce or avoid potential hydrology and water quality impacts:

Of the PPPs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

PPP 6-1 Prior to the issuance of a precise grading permit, the applicant shall submit a hydrology and hydraulic analysis of the site. The analysis shall be prepared by a professional civil engineer versed in flood control analysis and shall include the following information and analysis (Standard Condition A.6):

- a. Hydrology/hydraulic analysis of 100-year surface water elevation at the project site to determine building elevation or flood proofing elevation.
- b. Analysis of existing and post-development peak 100-year storm flow rates, including mitigation measures to reduce peak flows to existing conditions.
- c. An analysis demonstrating that the volume of water ponded on the site and stored underground in the drainage system outside of the building envelope in the proposed

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condition is greater than or equal to the corresponding volume in the existing condition. The water surface used to determine the ponded volume shall be based on the water surface in the major flood control facility that the site is tributary to.

PPP 6-2 Prior to the issuance of a precise grading permit, the applicant shall submit a groundwater survey of the site. The analysis shall be prepared by a geotechnical engineer versed in groundwater analysis and shall include the following information and analysis (Standard Condition A.7):

- a. Potential for perched groundwater intrusion into the shallow groundwater zone upon buildout.
- b. Analysis for relief of groundwater buildup and properties of soil materials on-site.
- c. Impact of groundwater potential on building and structural foundations.
- d. Proposed mitigation to avoid potential for groundwater intrusion within five feet of the bottom of the footings.

PPP 6-3 This project will result in soil disturbance of one or more acres of land that has not been addressed by an underlying subdivision map. Prior to the issuance of preliminary or precise grading permits, the applicant shall provide the City Engineer with evidence that a Notice of Intent (NOI) and relevant Permit Registration Documents have been filed with the State Water Resources Control Board and that a Waste Discharge Identification ("WDID") Number is issued. Such evidence shall consist of a copy of the NOI Receipt letter with WDID retrieved from the State Water Resources Control Board Stormwater Multi-Application and Report Tracking System (SMARTS) website or the Regional Water Quality Control Board, or a letter from either agency stating that the NOI has been filed (Standard Condition A.10).

PPP 6-4 Prior to the issuance of precise grading permits, the applicant shall submit, and the Director of Community Development shall have approved, a project water quality management plan (WQMP). The WQMP shall identify the best management practices that will be used on the site to control predictable pollutant runoff (Standard Condition A.13).

4.10 LAND USE AND PLANNING

4.10.1 Environmental Setting

The OCGP FEIR described the existing and former land uses in PA 51, including former PA 31, and other areas adjoining and surrounding these planning areas. Subsequent to the City's approval of the General Plan Amendment and Zone Change for the Overlay Plan, DON initiated an auction process for the sale of the former MCAS El Toro property. To facilitate the transfer, the property was divided and presented to prospective buyers as four distinct parcels. Interested parties were invited to bid on one or more of the parcels. In 2005, Heritage Fields, El Toro, LLC successfully purchased all four parcels from the DON (3,671 acres), and entered into a Development Agreement with the City of Irvine on July 12, 2005. The Development Agreement sets forth the terms and conditions of subsequent development and

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implementation of the Great Park, including dedication in fee of 1,096 acres of the property for development of the Great Park Master Plan.

The existing uses within the site include portions of the Western Sector Park Development Plan Phase I, which includes OCGP Balloon, Hangar 244, the artist lofts, Central and West Timeline, Palm Court, North Lawn, Farm and Food Lab and support parking. Consistent with a provision in the Zoning Ordinance, there are interim uses such as Tierra Verde Industries, a composting and electronic waste recycling operation, special event parking lot, and recreational vehicle storage that operating on an interim basis.

4.10.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR identified no significant impact to established communities. There were no residents living within the PA 51 at the time the OCGP FEIR was prepared and there has been no change in this regard; there are no residents living within the OCGP project site. The OCGP FEIR analyzed certain amendments to the City's General Plan that were adopted on May 27, 2003, as part of the City's adoption of the Overlay Plan. The adopted Overlay Plan was determined to be consistent with each element of the General Plan.

Additionally, the detailed General Plan and Zoning Ordinance consistency analysis conducted in the SSEIR also concluded that the 2012 Modified Project was consistent with the applicable goals and policies of the General Plan. The 2012 Modified Project proposed to include various changes to the City's Zoning Ordinance, not consistent with the zoning at that time, which could potentially create a significant land use impact. However, it was concluded that implementation of the zone changes that were proposed would bring the zoning into compliance and no impact would result.

4.10.3 Impacts Associated with the Modifications to the OCGP Improvement Area

The proposed Project is consistent with the land uses approved in concert with the certification and updates to the OCGP FEIR. The proposed Project would implement approved development, and therefore would not affect the goals, objectives or policies, or the facilities and services described in any of the General Plan Elements. No changes or new impacts would occur. In addition, the proposed Project does not contain elements that would alter the findings, conclusions and mitigation measures since all proposed Project development remains within the previously established project boundaries. Although the proposed Project involves reducing the number of sports facilities, it would further enhance the use and efficiency of the existing and planned features. No new uses and facilities are proposed that would physically divide an established community; conflict with any applicable land use plan, policy or regulations; or conflict with any applicable habitat conservation plan or natural community conservation plan. The modifications further enhance the use and efficiency of the existing features. The following analysis discusses the proposed Project, consisting of modifications to the OCGP Improvement Area reducing the number of sports courts, expanding passive recreational area, relocating some of the Improvement Area components to optimize visibility, access and efficiency, and assessing adequacy of parking plan, in consideration of each General Plan Element:

Circulation Element: The goal of the Circulation Element is “to provide a balanced transportation system.” The proposed Project would not alter the planned network of arterials and connections to roadways in the surrounding area; nor would they materially change the riding and hiking trails and trail

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linkages; pedestrian and bicycle circulation; and transit, air transportation, and telecommunication opportunities.

Housing Element: The goal of the Housing Element is to “provide for safe and decent housing for all economic segments of the community.” The proposed Project would not increase or decrease the number of residential units approved for the project analyzed in the OCGP FEIR since only parkland is affected by the proposed modifications.

Cultural Resources: The proposed Project would not affect the adopted goals, objectives, and policies of this element. Development would be required to comply with this element’s requirements and to implement mitigation measures found in the OCGP FEIR. With implementation of OCGP FEIR measures P1 and CULT1 through CULT4, the impacts of new development on paleontological and cultural resources would be less than significant. Furthermore, the proper disposition of such resources, if any are encountered prior to or during construction would be ensured; and through the information recovered, the community’s understanding and appreciation for its historic and prehistoric heritage would have been enhanced.

Noise Element: The proposed Project would not affect the goal of this element – “to contribute to a healthy and safe environment by minimizing noise impacts” – or the mobile noise, stationary noise, and noise abatement objectives and implementing policies of the element. The proposed Project modifies the existing set of planned park uses, but not in a way that would increase or decrease noise to a significant extent.

Public Facilities and Services Element: The Project would not affect facilities or services described in the Urban Service Plan for the adopted Overlay Plan. As no substantive change in the Urban Service Plan is necessary, and that plan was a principle means of demonstrating consistency with the Public Facilities and Services Element, the proposed Project also is consistent with this element of the General Plan. In fact, development of the proposed Project facilitates accomplishment of the Public Facilities and Services Element by assisting in achieving the objectives and policies that ensure a full range of necessary public facilities and services that are convenient to the users.

Integrated Waste Management Element: This element seeks to “encourage solid waste reduction and provide for the efficient recycling and disposal of refuse and solid waste material without deteriorating the environment.” The proposed Project would not affect the adopted objectives and implementing policies regarding solid waste, waste, wastewater, and solid waste facility siting requirements.

Growth Management Element: The goal of the Growth Management Element is to “ensure that growth and development are integrally planned with, and phased concurrently with, the City of Irvine’s ability to provide an adequate circulation system and public facilities.” When the OCGP FEIR was certified, it disclosed that although it included changes to the Master Plan of Arterial Highways. The OCGP project would not change any of the objectives or implementing policies of the Growth Management Element. The proposed Project likewise would not alter any of the objectives or implementing policies because it would remain consistent with the development phasing already a part of the overall development plan.

Parks and Recreation Element: The goal of the Parks and Recreation Element is to “provide park and recreation opportunities at a level that maximizes available funds and enables residents of all ages to

4. Discussion of Checklist and Mitigation Measures

utilize their leisure time in a rewarding, relaxing, and creative manner.” The proposed Project facilitates achievement of this objective by adopting changes to the OCGP Master Plan that are necessary to proceed forward with development of 688 additional acres of the Orange County Great Park.

Conservation and Open Space Element: The goal of this element is to “maintain and preserve the environmental systems as a major feature in the City.” This goal would continue to be achieved through the implementation of objectives L-1 through L-12 and corresponding policies. Objective L-10 encourages “the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development.” The proposed Project would not alter any of the objectives or implementing policies.

Seismic Element: The goal of the Seismic Element is to “minimize the loss of life, disruption of goods and services, and the destruction of property associated with an earthquake.” Five Seismic Response Area (SRA) designations are used to describe the magnitude and types of potential seismic hazards present within the City, and provide policy guidance. The OCGP FEIR reported that the majority of the El Toro property was in category SRA-2. The OCGP FEIR reported that no objectives or implementing policies would be changed as a result of the OCGP project. Likewise, the proposed Project would not alter that finding/conclusion because all proposed Project development remains within the previously established boundaries.

Safety Element: The goal of the Safety Element is to “minimize the danger to life and property from manmade and natural hazards, including fire hazards, flood hazards, non-seismic geologic hazards, and air hazards.” The OCGP FEIR disclosed the need for fuel modification to mitigate potential wildland fire hazards and drainage improvements to lessen flood hazards associated with implementation of the project, and concluded no objectives or implementing policies would be changed as a result of the adopted Overlay Plan. Likewise, the proposed Project would not alter any of the objectives or implementing policies.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the OCGP FEIR. The proposed Modifications to the OCGP Improvement Area, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the Modifications to the OCGP Improvement Area or otherwise available indicating substantial changes in circumstances that would require major changes to the OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

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No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant effects on hydrology and/or water quality identified in and considered by the OCGP FEIR.

4.10.4 Mitigation from the OCGP FEIR and Applicability to the Modifications to the OCGP Improvement Area

The OCGP FEIR identified no significant land use impacts; therefore, no mitigation measures were proposed. However, the following existing PPPs and PDFs would help reduce and avoid potential impacts related to land use and planning.

Of the PPPs and PDFs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

- Aesthetics PPP 1-1
- Air Quality PPP 3-1 through 3-5
- Greenhouse Gas Emissions PPP 4-1 through 4-12
- Hazards and Hazardous Materials PPP 5-1 through 5-8
- Hydrology and Water Quality PPP 6-1
- Noise PPP 8-1 through 8-3
- Public Services PPP 10-1 through 10-10
- Utilities and Service Systems PPP 13-1 through 13-8
- Greenhouse Gas Emissions PDFs 4-5, 4-7 and 4-8

4.11 NOISE

4.11.1 Environmental Setting

The OCGP FEIR described mobile noise sources from nearby freeways, roadways, rail facilities, and vehicle use at adjacent commercial businesses, light industrial facilities, and agricultural lands as the

4. Discussion of Checklist and Mitigation Measures

dominant noise source in the project area. Stationary sources of noise included temporary and intermittent noise from construction activities and agricultural operations, noise associated with the industrial/business parks to the east and the business park and entertainment uses to the south.

The OCGP FEIR presented the results of a noise survey, in which noise measurements were conducted at nine locations. Ambient noise levels at the four surveyed representative residential locations ranged from 58 dBA to 65 dBA CNEL (Refer to OCGP FEIR p. 5.4-18, Figure 5.4-6, and Table 5.4-7). The audible noise sources included local traffic, distant traffic, birds, aircraft, and human voices, all of which were characterized as typical of suburban areas.

4.11.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR concluded that development of the Overlay Plan would not result in any significant noise effects. The noise assessment considered a worst-case condition of simultaneous demolition and construction activities with the combined sound level of 20 pieces of large mobile equipment operating at a distance of 5,000 feet; 5 concrete breakers operating at a distance of 6,000 feet; and 2 crusher plants operating at a distance of 10,000 feet from the nearest off-project area residential location. The distances represented the closest possible location of the construction equipment to the nearest off-project area residences during a heavy construction period. The nearest off-site residential uses (sensitive noise source) were located approximately 4,000 feet from the property boundary. Under this scenario, the analysis estimated sound levels of approximately 56 dBA at the nearest off-site residential location. (Refer to OCGP FEIR, p. 5.4-24 and Table 5.4-8)

As buildout of the project site was assumed to occur over time (years 2007–2025), construction-related noise impacts on residential areas within the proposed Project site were also estimated. Using the same construction equipment assumptions and a distance of 600 feet from the nearest residential area, the combined effect of the equipment was estimated at a sound level of 70 dBA at the nearest on-site residential locations during a heavy construction period. While the City of Irvine Noise Ordinance does not specify a limit on construction noise levels, it stipulates the days and hours during which construction activities may occur and when construction would not be allowed unless a temporary waiver is requested and granted; specifically, construction is allowed Monday through Friday between 7:00 a.m. and 7:00 p.m., and on Saturdays between 9:00 a.m. and 6:00 p.m.; no construction is allowed outside those hours, on Sundays, or on federal holidays unless a temporary waiver is granted by the Chief Building Official or authorized representative (Refer to OCGP FEIR, p. 5.4-31.)

The SSEIR concluded that operational noise levels of the Modified Project would not create a substantial permanent increase in ambient noise levels or expose persons to noise levels in excess of the exterior or interior noise level standards established in the City's Noise Ordinance and the Noise Element of the City's General Plan. In terms of ambient noise levels at sensitive receptors, the SSEIR concluded that with preparation of a noise study (interior and exterior noise) prior to obtaining building permits (Mitigation Measure N-1), the Modified Project's impacts would be less than significant. The SSEIR also indicated that with implementation of plans, programs and policies and project design features, the Modified Project's construction noise impacts to off-site noise-sensitive receptors would be less than significant. It was also concluded that the Modified Project would not result in cumulative noise impacts.

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4.11.3 Impacts Associated with the Modifications to the OCGP Improvement Area

The OCGP FEIR noise assessment considered a worst-case condition of simultaneous demolition and construction activities. The worst-case assumptions described for the adopted Overlay Plan remain reasonable assumptions for the proposed Project, consisting of modifications to the OCGP Improvement Area reducing the number of sports courts, expanding passive recreational area, relocating some of the Improvement Area components to optimize visibility, access and efficiency, and assessing adequacy of the parking plan; no new information about future demolition and construction has become available that would increase the number of pieces of equipment to be operated simultaneously.

Construction Noise

Construction activities associated with the proposed Project would result in a short-term increase in ambient noise levels in proximity to construction activities on the proposed Project site. The Modifications to the OCGP Improvement Area will not allow any additional development intensity (i.e., building square footage) beyond what is allowed by the adopted Overlay Plan, and therefore, the proposed Project, consisting of modifications to the OCGP Improvement Area reducing the number of sports courts, expanding passive recreational area, relocating some of the Improvement Area components to optimize visibility, access and efficiency, and assessing adequacy of the parking plan, would not result in an increase in construction noise levels above those forecasted in the OCGP FEIR. Consequently, the proposed Project would not increase the forecasted noise levels generated during construction activities. Therefore, the construction noise levels associated with the proposed Project are anticipated to be similar to those addressed in the OCGP FEIR, and would not result in any significant impacts.

Construction Vibration

The OCGP FEIR identified that nuisance vibration (i.e., human annoyance) from construction activities associated with the adopted Overlay Plan would result in noticeable vibration levels in proximity to the construction activities. However, vibration annoyance from construction activities would be temporary, and occur during the daytime in proximity to construction activities; therefore, nuisance vibration would be less than significant. Existing structures are located sufficient distance away from construction activities such that structural damage from vibration would not occur (i.e., the nearest residence is 600 feet from the construction activities). The proposed Project, consisting of modifications to the OCGP Improvement Area reducing the number of sports courts, expanding passive recreational area, relocating some of the Improvement Area components to optimize visibility, access and efficiency, and assessing the adequacy of parking plan, would not generate significantly higher levels of vibration. Therefore, the construction vibration levels associated with the proposed Project are anticipated to be similar to those addressed in the OCGP FEIR, and would not result in any significant impacts.

Operation Noise

Current information regarding the noise impacts within the proposed Project site were previously evaluated in the OCGP FEIR. The OCGP FEIR concluded that noise associated with land uses would not be significant with use of acoustical design features (e.g., sound insulating construction, perimeter barrier walls, acoustical equipment enclosures, and operational restrictions) incorporated to comply with the local regulations. The proposed Modifications to the OCGP Improvement Area, consisting of Modifications to

4. Discussion of Checklist and Mitigation Measures

the OCGP Improvement Area reducing the number of sports courts, expanding passive recreational area, relocating some of the Improvement Area components to optimize visibility, access and efficiency, and assessing adequacy of the parking plan, would not result in land use changes that would increase project-related stationary or mobile source noise generated by the proposed Project. Therefore, noise levels associated with the proposed Project are anticipated to be similar to those addressed in the OCGP FEIR and would not result in any significant impacts.

Traffic Noise

The Environmental Noise Assessment prepared for the OCGP FEIR identified a traffic noise screening analysis threshold of 1.5 dBA for all project-related traffic noise level increases where the resulting noise levels would be in excess of 65 dBA, and required further analysis where that screening threshold was met within residential and other sensitive areas. Although changes in noise levels of 3 dBA are considered "barely perceptible," and changes of 5 dBA are considered "clearly noticeable," the OCGP FEIR used this 1.5 dBA noise level screening threshold to be conservative. The OCGP FEIR concluded that the development within PA 51 would cause no significant impact on account of traffic noise.

Traffic volumes have been predicted for affected roadways of the 688-acre OCGP Improvement Area based on the Modifications to the OCGP Improvement Area, consisting of reducing the number of sports courts, expanding passive recreational area, relocating some of the Improvement Area components to optimize visibility, access and efficiency, and assessing adequacy of the parking plan. According to "The 688 Acre Park Development Plan Traffic Study," prepared by LSA in July 2014, the Modifications to the OCGP Improvement Area would result in average daily traffic volumes which are consistent with the assumptions in the OCGP FEIR (LSA 2014).

The proposed Modifications to the OCGP Improvement Area would not result in traffic noise level changes that would increase project-related traffic noise generated by the proposed Project or result in traffic noise levels that exceed 65 dBA at noise sensitive receptors. Therefore, noise levels associated with the proposed Project are anticipated to be similar to those addressed in the OCGP FEIR and would not result in any significant impacts.

Airport Noise

The former MCAS El Toro operations have ceased and no public airport, public use airport, or airport land use plan exists in the proposed Project vicinity. Therefore, noise levels associated with the proposed Project are anticipated to be similar to those addressed in the OCGP FEIR and would not result in any significant impacts.

Land Use Compatibility

The proposed Modifications to the OCGP Improvement Area would include removal of the 4,200-square-foot volleyball support building and replacement with the children's play area. The overall square footage of the ancillary buildings within the OCGP Improvement Area would be reduced by 4,200 square feet with the removal of the volleyball support building. .

4. Discussion of Checklist and Mitigation Measures

The overall land use types and activities of the proposed Project would remain substantially similar to the adopted Overlay Plan. Because the OCGP FEIR did not identify any significant impacts related to land use compatibility, the proposed Project, consisting of modifications to the 688-acre OCGP Improvement Area reducing the number of sports courts, expanding passive recreational area, relocating some of the Improvement Area components to optimize visibility, access and efficiency, and assessing adequacy of the parking plan, is also compatible with the Irvine General Plan and Zoning Ordinance for noise and vibration compatibility.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the Project require a major change to the OCGP FEIR. The proposed Modifications to the OCGP Improvement Area, which does not include an major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the Modifications to the OCGP Improvement Area or otherwise available indicating substantial changes in circumstances that would require major changes to the OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant noise effects identified in and considered by the OCGP FEIR.

4.11.4 Mitigation from the OCGP FEIR and Applicability to the OCGP Improvement Area

The OCGP FEIR identified no significant noise impacts; therefore no mitigation measures were proposed. However, the SEIR identified the following measures that apply to the proposed Project and will help reduce or avoid potential noise impacts:

4. Discussion of Checklist and Mitigation Measures

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

N-1 Prior to the issuance of building permits for lots facing or located near major highways such as Irvine Boulevard, the project applicant or its successor shall provide a final noise study to the Director of Community Development that demonstrates how the exterior and interior noise requirements (65 dBA CNEL and 45 dBA CNEL, respectively) of the City of Irvine General Plan Noise Element will be met. To attain the exterior and interior noise requirements, the final noise study shall include, but not be limited to the following measures, in addition to such measures as the final noise study determines are required and shall be shown on the final map:

Exterior

- Provide a minimum six-foot high noise barrier for single-family detached residences shown in Figures 5.7-3 through 5.7-7 of this DSEIR.

Interior

- Provide a “windows closed” condition, requiring a means of mechanical ventilation (e.g., air conditioning) for all units.
- Provide standard and upgraded dual-glazed windows with a minimum Sound Transmission Coefficient rating of 26. Specific window recommendations shall be made once final architectural plans are available and detailed interior noise reduction calculations can be calculated based on actual building assembly details.

N-2 Prior to authorization to use, occupy and/or operate any multi-family residential unit, the project applicant or its successor shall submit evidence to the satisfaction of the Director of Community Development that occupancy disclosure notices for residential units with balconies that do not meet the City’s exterior noise standard of 65 dBA CNEL will be provided to all future tenants pursuant to the City’s Noise Ordinance.

The SSEIR identified the following measures as existing PPPs that apply to the proposed Project and will help reduce or avoid potential noise impacts:

Of the PPPs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

PPP 8-1 Title 6 (Public Works), Division 8 (Pollution), Chapter 2 (Noise) of the Irvine Municipal Code, also known as the City’s Noise Ordinance, outlines the regulations necessary to control unnecessary, excessive and annoying noise in the City. The provisions of this chapter are applicable to nontransportation-related stationary noise sources. It outlines the noise level measurement criteria; establishes the noise zones and the maximum permitted exterior and interior noise standards in each zone; and discloses special noise provisions for construction, truck delivery and maintenance activities. For example, as outlined in Section 6-8-205 of the Noise Ordinance, no construction shall be permitted outside of the hours of 7:00 AM to 7:00 PM

4. Discussion of Checklist and Mitigation Measures

Monday through Friday and 9:00 AM to 6:00 PM Saturdays, unless a temporary waiver is granted by the Chief Building Official or authorized representative. Trucks, vehicles, and equipment that are making, or are involved with, material deliveries, loading, or transfer of materials, equipment service, maintenance of any devices or appurtenances for or within any construction project in the City shall not be operated or driven on City streets outside of these hours or on Sundays and federal holidays unless a temporary waiver is granted by the City. Any waiver granted shall take impact upon the community into consideration. No construction activity will be permitted outside of these hours except in emergencies including maintenance work on the City rights-of-way that might be required.

PPP 8-2 Prior to the issuance of building permits for each structure or tenant improvement, other than a parking structure, the applicant shall submit a final acoustical report prepared to the satisfaction of the Director of Community Development. The report shall demonstrate that the development will be sound attenuated against present and projected noise levels including stationary, roadway, aircraft, helicopter, and railroad noise to meet City interior and exterior noise standards. The final acoustical report shall include all information required by the City's Acoustical Report Information Sheet (Form 42-48). The report shall be accompanied by a list identifying the sheet(s) of the building plans that include required sound attenuation measures (Standard Condition 3.5).

PPP 8-3 Title 5 (Planning), Division 10 (Grading Code and Encroachment Regulations), Chapter 1 (Grading Code), Section 5-10-127.G (Import and Export of Earth Materials) of the Irvine Municipal Code, states that if a grading project includes the movement of earth material to or from the site in an amount considered substantial by the Chief Building Official, the permittee is required to submit the proposed haul route for review and approval by the Chief Building Official. Special conditions of the grading permit may be imposed that require alternate routes or other measures in consideration of the possible impact on the adjacent community environment or effect on the public right-of-way itself.

The SSEIR also identified the following measure as PDF that apply to the proposed Project and will help reduce or avoid potential noise impacts. The following PDF, as applicable, will be incorporated into the proposed Project upon project implementation.

PDF 8-1 Construction Noise: Prior to issuance of grading permits, the project applicant or its successor shall incorporate the following measures as a note on the grading plan cover sheet to ensure that the greatest distance between noise sources and sensitive receptors during construction activities has been achieved, and that construction noise has been reduced.

- During construction activities, all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, consistent with manufacturers' standards. All stationary construction equipment shall be placed so that emitted noise is directed away from the noise-sensitive receptors nearest the Proposed Project Site boundaries.

4. Discussion of Checklist and Mitigation Measures

- Equipment shall be staged in areas that will create the greatest distance between construction-related noise sources and the noise-sensitive receptors nearest the Proposed Project Site during all project construction.
- All construction-related activities shall be restricted to the construction hours outlined in the City's Noise Ordinance (Municipal Code Section 6-8-205).
- Haul truck and other construction-related trucks traveling to and from the Proposed Project Site shall be restricted to the same hours specified for the operation of construction equipment. To the extent feasible, haul routes shall not pass directly by sensitive land uses or residential dwellings.
- Where construction will occur adjacent to any developed/occupied noise-sensitive uses, a construction-related noise mitigation plan shall be submitted the Director of Community Development for review and approval prior to the issuance of grading permits. The plan must depict the location of construction equipment and how the noise from this equipment will be mitigated during construction of the 2012 Modified Project, through the use of such methods as: (1) temporary noise attenuation fences; (2) preferential location of equipment; and (3) use of current technology and noise-suppression equipment.
- Construction of planned sound walls that have been incorporated into the project design shall be installed prior to construction of the building foundation; or temporary sound blankets (fences typically composed of poly-vinyl-chloride-coated outer shells with absorbent inner insulation) shall be placed along the boundary of the Proposed Project Site facing the nearest noise-sensitive receptors during construction activities.

4.12 POPULATION AND HOUSING

4.12.1 Environmental Setting

The OCGP FEIR examined demographics in the context of the existing and projected population of the Orange County region and the City of Irvine. Population and housing information was developed based on the 2000 United States Bureau of Census population, household, and employment census information. The most recent Census was conducted in 2010 ("2010 Census") and this data is used, when available, for analysis in this section. The areas surrounding the former base and the Orange County subregion are considered jobs-rich and housing-poor. The Southern California Association of Governments (SCAG) seeks to encourage housing growth over job growth in the Orange County subregion.

The OCGP FEIR reported that the ratio of jobs to housing in the area has environmental implications related to transportation and air quality. Thus, a major focus of the regional planning efforts has been to improve the ratio of jobs to housing in all affected subregions in order to reduce the vehicular trips, costly infrastructure improvements, and resultant air emissions.

4. Discussion of Checklist and Mitigation Measures

4.12.2 Impacts Identified in the OCGP FEIR

As noted above, the area surrounding the former MCAS El Toro and the Orange County subregion are considered jobs-rich and housing-poor. SCAG seeks to improve the jobs-to-housing ratio in the Orange County subregion. The OCGP FEIR reported that regional projections are dynamic and, as a compilation of local land use projections, reflect changing community views on the location and the types of growth desired. The Orange County Council of Governments (OCCOG) adopted the Orange County Projections 2010 report (OCP-2010), which provides projections of anticipated growth for Orange County in terms of population, housing and employment based on detailed information about growth trends, development and local land use provided by Orange County jurisdictions and public agencies; infrastructure, utility and service providers; and the private sector. OCP-2010 accounts for projects in progress, including the 1,269 density bonus units. According to the OCP-2010, forecast growth rates for population, dwelling units, and employment in Irvine over the 2008-2035 period are all higher than the corresponding rates for the entire Orange County area, as shown in Table 4.12-1.

Table 4.12-1. OCP-2010 Projections for Orange County and the City of Irvine, 2008-2035

	2008	2010	2020	2035	Change, 2010-2035	
					Total	Percent
Orange County						
Population	3,123,058	3,182,061	3,430,505	3,582,266	400,205	12.6%
Dwelling Units	1,035,005	1,045,959	1,100,260	1,174,912	128,953	12.3%
Employment	1,624,061	1,510,928	1,646,437	1,799,477	288,549	19.1%
City of Irvine						
Population	210,761	223,024	271,340	309,977	86,953	39.0%
Dwelling Units	78,955	83,103	100,572	117,427	34,324	41.3%
Employment	223,480	203,831	236,641	286,492	82,661	40.6%

Source: OCGP DSEIR, Table 5.8-3, p. 5.8-3; Center for Demographic Research, Cal State Fullerton. "2010 Orange County Projections", released January 27, 2011.

According to OCP-2000, as of June 2000, Orange County had approximately 1.5 million jobs. According to OCP-2010, that number was projected to increase to approximately 1.51 million by 2010. OCP-2010 projects that jobs in Orange County will grow by 288,549 between 2010 and 2035, which amounts to an average of 11,542 jobs per year (a 19.1 percent increase in jobs over the 25-year period).

Although implementation of the Overlay Plan would not have exceeded the OCP-2010 employment projections, its impact on employment was considered significant because the Orange County subregion is anticipated to become increasingly jobs-rich over the next 20 years and the Overlay Plan-related employment would exacerbate the subregional jobs/housing imbalance. As discussed in the OCGP FEIR, the Overlay Plan is expected to result in:

- An increase of up to 9,000 residents
- A provision of 3,625 dwelling units
- An approximate increase of 16,510 jobs
- An on-site jobs-housing ratio of 4.55

4. Discussion of Checklist and Mitigation Measures

The increase in population would not substantially exceed projections contained for the site in OCP-2010. The increase in jobs, however, would contribute to worsening Orange County's jobs/housing ratio imbalance and is therefore considered a significant impact. The OCGP FEIR identified less than significant impacts for population and housing, and a significant and unavoidable impact for employment.

In 2008, the City granted 1,269 density bonus residential units to Heritage Fields pursuant to state law. Consequently, the Overlay Plan now includes a total of 4,894 residential units, and a total of 12,462 residents, based on estimates of persons per household in the City's General Plan. The Overlay Plan, including the 1,269 density bonus units, was included in the City's data for OCP-2010, which will in turn be used by SCAG to establish regional growth forecasts. Therefore, the population, housing and employment growth created by the Overlay Plan is consistent with OCP-2010 regional planning projections, and will be consistent with anticipated forecasts forthcoming from SCAG. OCP-2010 estimates a jobs-housing balance of 2.45 in Irvine in 2010 and 2.44 in 2035, as shown in Table 4.12-2. The Overlay Plan would contribute to making the community more jobs-housing balanced over time.

Table 4.12-2. OCP-2010 Jobs to Housing Ratio for Orange County and the City of Irvine, 2008-2035

	2008	2010	2020	2035
Orange County				
Dwelling Units	1,035,005	1,045,959	1,100,260	1,174,912
Employment	1,624,061	1,510,928	1,646,437	1,799,477
<i>Jobs-Housing Ratio</i>	<i>1.57</i>	<i>1.44</i>	<i>1.50</i>	<i>1.53</i>
City of Irvine				
Dwelling Units	78,955	83,103	100,572	117,427
Employment	223,480	203,831	236,641	286,492
<i>Jobs-Housing Ratio</i>	<i>2.83</i>	<i>2.45</i>	<i>2.35</i>	<i>2.44</i>

Source: OCGP DSEIR, Table 5.6-7, p. 5.6-8; Center for Demographic Research, Cal State Fullerton. "2010 Orange County Projections", released January 27, 2011.

The 16,510 new jobs contemplated in the 2003 EIR will still be generated under the Overlay Plan. Therefore, the Overlay Plan, which includes 4,894 residential units, would have an on-site jobs-housing ratio of 3.37, which is substantially improved from the 4.55 ratio associated with the 3,625 units analyzed in the Certified EIR. However, since the 3.37 jobs-housing ratio is still greater than Irvine's existing jobs-housing ratio of 2.45, the Overlay Plan's significant impact to the jobs-housing balance remains.

Although OCP-2010 was originally approved in January 2011, publication was delayed until 2012 to incorporate 2010 Census population and housing data. The OCP-2010 Modified represents the growth projected in the approved 2010 projections, with the inclusion of the 2010 Census data. According to the OCP-2010, forecast growth rates for population, dwelling units, and employment in Irvine over the 2010-2035 period are all higher than the corresponding rates for the entire Orange County area, as shown in Table 4.12-3.

4. Discussion of Checklist and Mitigation Measures

Table 4.12-3. OCP-2010 Projections for Orange County and the City of Irvine, 2010-2035

	2010	2020	2035	Change, 2010-2035	
				Total	Percent
Orange County					
Population	3,019,356	3,266,107	3,421,228	401,872	13.3%
Dwelling Units	1,050,330	1,105,238	1,180,929	130,599	12.4%
Employment	1,490,296	1,625,805	1,778,845	288,549	19.4%
City of Irvine					
Population	215,644	265,605	304,242	88,598	41.1%
Dwelling Units	84,189	103,303	120,158	35,969	42.7%
Employment	209,152	241,962	291,813	82,661	39.5%

Source: Center for Demographic Research, Cal State Fullerton. "2010 Orange County Projections Modified", released January 26, 2012.

According to OCP-2000, there were a total of 1.49 million jobs in Orange County in 2010 (as shown in Table 4.12-2). OCP-2010 projects that jobs in Orange County will grow by 288,549, between 2010 and 2035, which amounts to an average of 11,542 jobs per year (a 19.4 percent increase in jobs over the 25-year period).

OCP-2010 estimates a jobs-housing balance of 2.48 in Irvine in 2010 and 2.43 in 2035, as shown in Table 4.12-4. These are well above the industry standard for an ideal jobs-housing ratio in the range of 1.3 to 1.7. OCP-2010 projects that Irvine will outpace Orange County's housing and employment growth rates between 2010 and 2035.

Table 4.12-4. OCP-2010 Jobs to Housing Ratio for Orange County and the City of Irvine, 2010-2035

	2010	2020	2035
Orange County			
Dwelling Units	1,050,330	1,105,238	1,180,929
Employment	1,490,296	1,625,805	1,778,845
<i>Jobs-Housing Ratio</i>	<i>1.42</i>	<i>1.47</i>	<i>1.51</i>
City of Irvine			
Dwelling Units	84,189	103,303	120,158
Employment	209,152	241,962	291,813
<i>Jobs-Housing Ratio</i>	<i>2.48</i>	<i>2.34</i>	<i>2.43</i>

Source: Center for Demographic Research, Cal State Fullerton. "2010 Orange County Projections Modified", released January 26, 2012.

Additionally, in terms of jobs-housing imbalance, the SSEIR concluded that the implementation the 2012 Modified Project would improve this condition by increasing the amount of housing opportunities. The additional housing proposed by the 2012 Modified Project would assist the City in achieving a healthier jobs-housing balance with the ratio of 1.85. Therefore, the jobs-housing impact is not considered a significant impact.

4. Discussion of Checklist and Mitigation Measures

4.12.3 Impacts Associated with the Modifications to the OCGP Improvement Area

The proposed Project would not alter the population, housing, and employment information contained in the OCGP FEIR or change the ratio of jobs to housing beyond that already analyzed in the OCGP FEIR. Additionally, the proposed Project, consisting of modifications to the 688-acre OCGP Improvement Area reducing the number of sports courts, expanding passive recreational area, relocating some of the Improvement Area components to optimize visibility, access and efficiency, and assessing adequacy of parking plan, does not propose new uses and facilities that would induce substantial population growth in the area; displace a substantial number of existing housing; or displace substantial number of people.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the OCGP FEIR. The proposed Modifications to the OCGP Improvement Area, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the Modifications to the OCGP Improvement Area or otherwise available indicating substantial changes in circumstances that would require major changes to the OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant effects on population and housing identified in and considered by the OCGP FEIR.

4. Discussion of Checklist and Mitigation Measures

4.12.4 Mitigation from the OCGP FEIR and Applicability to the Modifications to the OCGP Improvement Area

The OCGP FEIR identified a significant impact associated with the jobs/housing ratio. The OCGP FEIR also stated that no mitigation is available to rectify conflicts between the numerical objectives of regional planning documents including the jobs/housing ratio.

The SSEIR identified the following measure as existing PPP that applies to the proposed Project and will help reduce or avoid potential population and housing impacts. The following PPP, as applicable, will be incorporated into the proposed Project upon project implementation.

PPP 9-1 Compliance with the City's Housing Element. Compliance with the City's Housing Element policies provides a strategic blueprint to ensure the siting of new very low, low, and moderate income housing units in future development projects under the 2012 Modified Project to help the City continue to meet its State fair share housing targets. The Housing Ordinance mandates that all projects with 50 or more housing units shall set-aside 15 percent of the total units for very low, low, and moderate income households.

4.13 PUBLIC SERVICES

4.13.1 Environmental Setting

Law Enforcement

The Irvine Police Department (IPD) provides law enforcement services to the Project site. IPD is headquartered at the Irvine Civic Center Complex located at one Civic Center Plaza and has a satellite facility in the Irvine Spectrum Entertainment Complex. Primary response to the Project site would be patrol vehicles assigned geographically throughout the City. The ratio of police officers to population is 0.94 officers per 1,000 residents. At any given time, a minimum of 9 sworn officers are available to respond to calls for service anywhere in Irvine.

The James A. Musick Jail Facility is owned by the County of Orange and operated by the Orange County Sheriff's Department. The jail facility is located on a 105-acre parcel in PA 35 located northeast of the proposed Project site. The jail facility has permanently assigned staff personnel that guard the jail 24 hours a day. The staff includes deputies, special officers, and correctional service technicians. The jail facility is currently a minimum-security detention and corrections facility. Inmate housing and detention facilities are located in the northeast corner of the jail facility site. The remainder of the site is used for agriculture uses associated with inmate detention. The IPD also has a mutual aid agreement with the County Sheriff's Department and is available to assist the Sheriff with law enforcement at the Musick Jail Facility, if requested by the Sheriff.

Fire and Emergency Medical Services

The Orange County Fire Authority (OCFA) provides fire protection services to the city of Irvine, unincorporated Orange County, and 22 other jurisdictions. It maintains mutual aid agreements with all other cities in Orange County and with the State of California. Prior to annexation of the Project site,

4. Discussion of Checklist and Mitigation Measures

primary fire protection to Planning Area 51 was provided by OCFA under contract to the county of Orange on an interim basis. Subsequent to the annexation of the property into the city of Irvine, OCFA has continued and will continue to provide fire protection service to the project area. OCFA has 71 fire stations, and 11 of these stations are in Irvine. Nearby OCFA fire stations outside of the City limits (i.e., Tustin and Lake Forest) may respond to calls in the City, if necessary. OCFA also has in place Secured Fire Protection Services Agreement with the Irvine Company, as part of the Northern Sphere Area that funds fire protection facilities and apparatus and would help provide adequate service to all areas surrounding the Project site.

Parks and Recreation

The private neighborhood park serving Pavilion Park (first phased residential development for the Great Park Neighborhoods) is open and serving residents. A portion of the Western Sector Park Development Plan Phase I is currently operating with recreation facilities that are open to the public. In addition, many public facilities are located within five miles of the OCGP including neighborhood and community parks, recreational trails, and open space.

There are approximately 506 acres of neighborhood and community parks and recreational trails in the City of Irvine's public park system, including one aquatic complex containing three competition size pools. Irvine presently has 18 community parks, 37 public neighborhood parks, and 200 private neighborhood parks. William R. Mason Regional Park, a County of Orange facility, and numerous private parks and recreation facilities are also available throughout Irvine that provide additional recreational opportunities for the City's residents.

The City of Irvine, through its Conservation and Open Space Element has established an open space program comprehensively aggregating open space, adjoining other regional open space, and promoting conservation and passive recreational opportunities (e.g. Bommer Canyon, Shady Canyon and Limestone Canyon).

School Services

Planning Area 51 is within the school service boundaries of the Irvine Unified School District (IUSD) and the Saddleback Valley Unified School District (SVUSD). Prior to the closure of the base, an IUSD elementary school (El Toro Marine Elementary School at 8171 Southeast Trabuco Road) with a 650-student capacity was operating on the former base property. There are currently 48 schools in IUSD, including 22 elementary schools, five middle schools, four high schools, two alternative education schools, and 15 Title I schools. There are currently 35 schools in SVUSD, including 24 elementary schools, four intermediate schools, four high schools, one continuation high school, one independent study high school, and one special education school.

Library Services

The Orange County Public Library (OCPL) provides library services to municipalities and unincorporated parts of Orange County through 33 library branches located throughout the OCPL service area. Irvine is served by three OCPL branches, the Heritage Park Regional Library located at 14361 Yale Avenue, the

4. Discussion of Checklist and Mitigation Measures

University Park Library located at 4512 Sandburg Way, and the Katie Wheeler Library located at 13109 Old Myford Road.

In addition, there are three colleges and universities, each with academic libraries, in Irvine. Residents can use these academic libraries to supplement the public library branches, as each academic library allows nonstudents to purchase a library card that provides borrowing privileges.

4.13.2 Impacts Identified in the OCGP FEIR

Law Enforcement

The OCGP FEIR discussed the law enforcement needs of Planning Area 51 and stated that following annexation, the Irvine Police Department would provide law enforcement for the entire project area. The OCGP FEIR also analyzed the number of police officers, police supervisors and support staff, as well as the number of vehicles, equipment, and services. The OCGP FEIR stated that police protection for the park area would be funded through the use of a special park assessment. As stated in the OCGP FEIR, the general impacts associated with construction and operation of public facilities were analyzed in the OCGP FEIR as part of the planned land uses which also included the construction of a new Police substation. The OCGP FEIR concluded that the police facilities were adequate to handle the personnel and equipment that were employed and utilized by the department.

Additional police personnel and associated equipment would be provided through the continued implementation of the City's Strategic Business Plan and annual budget review process. Pursuant to the ARDA, Heritage Field El Toro, LLC has provided 5.5 acre site located in District 1 North to the City for civic uses. It is anticipated that the City will be funding and constructing a new IPD substation at this location. During the development review and permitting process, the IPD would review and approve any new development plans to ensure that adequate facilities and personnel are provided to allow the IPD to serve the needs of all of Irvine residents. All standard conditions and guidelines would be applied during the normal review process, including the PPPs outlined in Section 4.13.4. Implementation of the PPPs would reduce potential impacts associated with police protection to less than significant.

Fire and Emergency Medical Services

Subsequent to annexation of the property, Planning Area 51 would continue to be served by OCFA. The OCGP FEIR stated that it was likely that additional fire services infrastructure would be required to support the proposed project. OCFA had not provided the detailed calculations of the extent of new services. The OCGP FEIR stated that the final determination of fire station needs and locations would be made at a future date when more information is known about risk, layout, and types of occupancy. The specific environmental impact of constructing the new fire facilities to serve the project could not be determined at the General Plan level of analysis as specific site plans and locations had not been prepared. However, the general impacts associated with the construction and operation of public facilities were addressed within the OCGP FEIR. A temporary fire station is currently located a short distance from the planned ceremonial entrance to the OCGP along Trabuco Road.

4. Discussion of Checklist and Mitigation Measures

Table 5.10-1 of the SSEIR (see Table 4.13-1 below) includes the stations that would provide initial response and the next level of response to calls for emergency services from the project site and surrounding area. All portions of the project site are within four minutes (two miles) of an existing fire station.

Table 4.13-1. OCFA Responding Stations (Table 5.10-2 of the SSEIR)

Station Number	Station Location	Equipment and Personnel
Initial Responding Stations to roject Site		
Fire Station 20	7020 Trabuco Road	1 Paramedic Engine/1 Water Tender/12 Personnel
Fire Station 27	12400 Portola Springs Road	1 Paramedic Engine/9 Personnel
Fire Station 38	26 Parker	1 Engine/1 Medic Van/15 Personnel
Fire Station 51 ¹	18 Cushing Division Chief Headquarters	1 Paramedic Engine/14 Personnel (including Division II Chief and Administrative Captain)
Next Level of Responding Stations to Project Site		
Fire Station 26	4861 Walnut Avenue	1 Engine/1 Medic Van/1 Patrol/15 Personnel/Reserve Firefighters
Fire Station 55	4955 Portola Parkway	1 Paramedic Assessment Unit (PAU) Engine/9 Personnel
Fire Station 47	47 Fossil Road	1 Paramedic Assessment Unit (PAU) Engine/9 Personnel
Fire Station 22	24001 Paseo de Valencia, City of Laguna Woods	2 Paramedic Engines/1 Truck/1 Battalion/39 Personnel
Fire Station 19	23022 El Toro Road, City of Lake Forest	1 Paramedic Engine/1 Squad/12 personnel/Reserve Firefighters

Source: SSEIR 2012

¹ Fire Station 51 is the initial responding station for PA 51.

In addition to the fire stations listed above, OCFA has in place a Secured Fire Protection Services Agreement with the Irvine Company as part of the Northern Sphere Area that funds fire protection facilities and apparatus and would help provide adequate service to all areas surrounding and within the proposed Project site. Overall, compliance with the Mitigation Measures HH-3 and HH-4, PPP 10-1 through 10-10, and PDF 10-1 would ensure a less than significant impact on fire protection and emergency services.

Parks and Recreation

As discussed in detail in OCGP FEIR, the parkland acreage under the project would greatly exceed the existing City of Irvine's standards, and would provide a regional open space amenity for the benefit of Orange County. The OCGP FEIR calculated a total of 45.1 acres of parkland required for the Great Park Neighborhoods development. A portion of that acreage would be in neighborhood parks.

The community park requirement for the future Great Park Neighborhoods development has been addressed through the Development Agreement between the City and Heritage Fields (Recorded on July 12, 2005) and reflected in the Amended and Restated Development Agreement (ARDA) (December 2010). Based on the SSEIR, requirement for dedication of community parkland has been met via past dedication of 165 acres of parkland and payment of fees to the City as set forth in the ARDA. Conveyance of the OCGP to the City satisfied any requirement imposed on the developer for the dedication or development of community parks as required by the City's General Plan and Municipal Ordinance. The neighborhood park requirements for the future Great Park Neighborhoods development

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would be met within the Great Park Neighborhoods development, outside the OCGP. Details of specific park locations, ownership, sizes, and improvements would be presented to the Community Services Commission as a part of the Park Plan for the new residential developments. Since the OCGP Master Plan does not create a demand for parks and recreation but is itself a park and recreation amenity, no new impacts on parks and recreation are anticipated. This is consistent with the findings of the OCGP FEIR.

School Services

The OCGP FEIR discussed in detail the proposed project, the related student generation, and the required school facilities. Based on an initial analysis, the IUSD estimated the need for one 13-acre K-8 site as well as funding for expansion and modernization of existing middle and high school facilities by project buildout.

According to the SSEIR, per the Heritage Fields (HF) Mitigation Agreement with IUSD, two K-8 schools, each with a maximum capacity of 1,000 students, and a new high school (HS #5) with a maximum capacity of 2,600 students are planned for construction. Based on the current projections and the provisions contained within the HF Mitigation Agreement with IUSD, IUSD would be able to provide adequate school services and facilities. As for SVUSD, with payment of the SB 50 Fees, no significant impacts to the SVUSD would occur.

Library Services

Impacts to library services are determined only by the development of residential land uses. To meet the demand of library services, the City completed a Library Needs Assessment Study in October 2006 to evaluate the state of library services and identify options for enhanced library services within the City. The study determined that new facilities are needed, especially in light of anticipated population growth.

The 2007 Library Alternatives Study prepared by the City present six potential sites for new libraries, and identifies library facility options, including construction of a new branch library and/or a new main library, totaling 39,000 square feet, at the Great Park. The study further recommended inclusion of new library facilities in the Citywide Capital Improvement Program and Public Facilities Master Plan that would allow the City Council to assess development of new library facilities. However, there are no capital funds designated for expansion of the OCPL system.

Since a portion of property taxes are specifically allocated for capital improvement and operating costs for the OCPL system, new residents of the Irvine (including the project) would be required to make a financial contribution to expand and/or construct new library facilities. Development of the project would also be required to comply with PPP 10-10. In addition, residents of Irvine, including future residents of the City have access to any branch of OCPL library system, including those within neighboring cities such as Tustin and Costa Mesa, and also those within academic libraries and resources of the colleges and universities within the City. Therefore, significant impact on library services is not anticipated.

4. Discussion of Checklist and Mitigation Measures

4.13.3 Impacts Associated with the Modifications to the OCGP Improvement Area

The proposed modifications, consisting of modifications to the OCGP Improvement Area reducing the number of sports courts, expanding passive recreational area, relocating some of the Improvement Area components to optimize visibility, access and efficiency, and assessing adequacy of parking plan further enhance the use and efficiency of the existing features. The proposed Project would not result in new uses that would impact or alter provision of public services or create additional demand on existing level of service.

Law Enforcement

The proposed Project would not result in changes to the intensity or type of the land uses and therefore, the demand on law enforcement is within the envelope of analysis presented in the OCGP FEIR.

Fire and Emergency Medical Services

Since the proposed Project would not result in change the intensity or type of land uses, the demand on fire protection is consistent with the analysis presented in the OCGP FEIR.

Parks and Recreation

The proposed Project would not result in changes to the land use intensity and type. Therefore, the demand and potential impact on parks and recreation remains consistent with the analysis contained in the OCGP FEIR.

School Services

The proposed Project would not result in changes to the land use intensity and type. Therefore, the demand and potential impact on school services remains consistent with the analysis contained in the OCGP FEIR.

Library Services

The proposed Project would not result in changes to the land use intensity and type. Therefore, the demand and potential impact on library services remains consistent with the analysis contained in the OCGP FEIR.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the OCGP FEIR. The proposed Modifications to the OCGP Improvement Area, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the OCGP FEIR.

4. Discussion of Checklist and Mitigation Measures

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the Modifications to the OCGP Improvement Area or otherwise available indicating substantial changes in circumstances that would require major changes to the OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated and addenda were approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant public services-related effects identified in and considered by the OCGP FEIR.

4.13.4 Mitigation from the OCGP FEIR and Applicability to the Modifications to the OCGP Improvement Area

The OCGP FEIR determined the mitigation measures identified in other sections of the OCGP FEIR (Sections 5.1-5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of facilities for police, fire protection, park and recreation, and education services.

In addition, the SSEIR identified the following measures as existing PPPs that apply to the proposed Project and will help reduce or avoid potential public services impacts:

Of the PPPs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

PPP 10-1 Every project applicant shall comply with all applicable Orange County Fire Authority codes, ordinances, and standard conditions regarding fire prevention and suppression measures relating to water improvement plans, fire hydrants, automatic fire extinguishing systems, fire access, access gates, combustible construction, water availability, and fire sprinkler systems.

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- PPP 10-2** Prior to the approval of the first certificate of occupancy the applicant shall arrange for and have passed an inspection, to be performed by the Police Department and the Orange County Fire Authority, to ensure compliance with the Emergency Access Plan requirements. The inspector shall verify test acceptance and locations of all Knox boxes and key switches as depicted on the approved plan (Standard Condition 4.9).
- PPP 10-3** Prior to the issuance of the first building permit, the applicant shall submit and have approved by the Chief of Police an Emergency Access Plan, which identifies and locates all Knox Boxes, Knox key switches, and Click2Enter radio access control receivers. Said plan shall be incorporated into the plan set approved for building permits (Standard Condition 3.17).
- PPP 10-4** Prior to the issuance of the first building permit, the applicant shall have executed a Secured Fire Protection Agreement with the Orange County Fire Authority (Standard Condition A.15).
- PPP 10-5** The project applicant shall comply with all applicable requirements of the City of Irvine Uniform Security Code (Municipal Code Title 5, Division 9, Chapter 5).
- PPP 10-6** Prior to issuance of the first building permit, a Construction Site Security Plan, per the Irvine Uniform Security Code, Section 5-9-521, shall be approved by the Chief of Police. Said plan shall be incorporated into the plan set approved for building permits (Standard Condition 3.20).
- PPP 10-7** Prior to approval of the first certificate of occupancy, the project applicant shall demonstrate to the City's Police Department that an Opticom traffic light control system has been installed at all signalized intersections servicing or adjacent to the Proposed Project Site (Condition of Approval).
- PPP 10-8** The project applicant shall implement the concepts of Crime Prevention Through Environmental Design in the design and layout of individual development projects within the Proposed Project Site to reduce criminal opportunity and calls for police service. Implementation of these concepts shall be verified by the City's Police Department during the development review process (Condition of Approval).
- PPP 10-9** Pursuant to California Government Code Section 65995, the individual applicant shall pay developer fees to the appropriate school districts at the time building permits are issued; payment of the adopted fees would provide full and complete mitigation of school impacts. Alternatively, the applicant may enter into a school finance agreement with the school district(s) to address mitigation to school impacts in lieu of payment of developer fees. The agreement shall establish financing mechanisms for funding facilities to serve the students from the project. If the applicant and the affected school district(s) do not reach a mutually satisfying agreement, then project impact would be subject to development fees.
- PPP 10-10** In the event that a city-wide library impact fee is adopted and in force, the developer shall pay this fee prior to issuance of building permits for new development. Since a 39,000 square foot library facility is approved for development within Existing PA 51, this would satisfy payment of a library impact fee, if adopted by the City at a future date.

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The SSEIR also identified the following measure as PDF that apply to the proposed Project and will help reduce or avoid potential public services impacts. The following PDF, as applicable, will be incorporated into the proposed Project upon project implementation:

PDF 10-1 A key consideration in the final planting program for the Relocated Wildlife Corridor Feature will be to ensure that the planting plan does not create a fire hazard for adjacent development. The WLC has been designed with native grasslands and southern cactus scrub within 150 feet of future development. Maintenance of vegetation within the WLC is not anticipated, but is allowed as needed for fire control. Final approval of the planting schemes and palettes will require approval from the Orange County Fire Authority and assurance that the WLC will not create a fire hazard for the adjacent development or require mitigation by the adjacent development.

4.14 RECREATION

Issues related to Recreation are discussed above under Section 4.13, *Public Services*.

4.15 TRANSPORTATION/TRAFFIC

4.15.1 Environmental Setting

The OCGP FEIR described the traffic and circulation conditions of a study area that encompassed 145 existing intersections (2007) and an additional 11 future intersections (Post 2025) in the City of Irvine, and portions of seven adjacent jurisdictions including the cities of Lake Forest, Mission Viejo, Laguna Hills, Laguna Woods, Aliso Viejo, Laguna Beach, and unincorporated areas of Orange County.

The OCGP FEIR used the City of Irvine Traffic Performance Criteria, which establishes level of service (LOS) "A" to "D" as the peak-hour minimum acceptable service level. In its adoption of the Overlay Plan, the City General Plan Policy B-1(C), which allowed for the consideration of LOS E as acceptable for application to intersections in Planning Areas 13, 31, 32, 34, 35 and 39, was changed to include the effects of future development in PA 51, including former PA 31, on the intersections in those Planning Areas.

The City's performance criteria also includes a standard of 0.02 or greater for existing deficiencies, roadway volume to capacity (V/C) ratio or the intersection capacity utilization (ICU) or an increase from acceptable to unacceptable LOS, to identify significant project impacts and associated need for improvements at both roadways and intersections.

4.15.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR assessed the traffic impacts of two development scenarios for the overall OCGP project, the Base Plan and the Overlay Plan. The OCGP FEIR concluded that the adopted Overlay Plan would cause an increase in traffic which would be substantial in relation to the existing traffic load and capacity of the street system in the year 2007, year 2025, and post-2025 scenarios.

4. Discussion of Checklist and Mitigation Measures

The OCGP FEIR concluded that the adopted Overlay Plan would exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways in the 2007 and 2025 scenarios.

The OCGP FEIR utilized trip thresholds (also known as “trip caps”) for each of the planning areas within the Great Park area. The trip cap is based on socioeconomic data average daily trip generation for the approved Orange County Great Park plan (the Overlay Plan area), which includes the Heritage Fields development. The traffic impacts of the 2006 GPA/ZC project were analyzed in Addendum No. 2 by distributing project-related traffic over existing and future traffic conditions. The three future conditions (year 2010, year 2025 and post-2025) were based on the circulation system plus fully funded intersection improvements that were planned to be in place in each future time frame and the land use and development growth that is projected in each future time frame. In each case, project impacts were identified by comparing traffic conditions with and without the 2006 GPA/ZC project.

The circulation system performance criteria applied in the analysis were the criteria approved in the 2003 North Irvine Transportation Mitigation (NITM) Program Nexus Study. The performance criteria were also consistent with the criteria adopted by the jurisdictions that are within the project study area. The criteria include components for arterial roadways, intersections, freeway/tollway ramps, and freeway/tollway mainline segments.

The results of the year 2010, year 2025 and post-2025 analysis indicated that the proposed 2006 GPA/ZC project was not forecast to significantly impact any roadway segment based on the second level of analysis (the City’s peak hour link capacity analysis methodology), intersection, freeway/tollway ramp, or any freeway/tollway mainline segment.

Subsequently, as addressed in Addendum No. 3, a Traffic Study for the Master Subdivision Map was prepared by Austin-Foust Associates, Inc. to address the transportation impacts for the “project,” i.e. backbone infrastructure with no new land use development in an interim year timeframe consistent with the TTM scope of work of the North Irvine Transportation Mitigation (NITM) Program Ordinance. The Traffic Study analyzed the impacts of the Master Subdivision Map (MSM) application based on Year 2010 traffic conditions in the traffic analysis study area.

An Internal Circulation Analysis for the Master Subdivision Map in the Overlay Plan area was prepared by Austin-Foust Associates, Inc. to analyze the access and internal circulation for the Heritage Fields project. The project traffic loaded directly onto the surrounding arterial system at several locations.

The intersections were analyzed using intersection capacity utilization (ICU) values to determine level of service (LOS). The results of this analysis showed that all intersections operate at an acceptable level of service under Post-2025 buildout conditions. The intersections were then analyzed for signalization needs. Traffic signal warrants based on peak hour volumes (as adopted by the Federal Highway Administration and Caltrans) were used to determine the need for signalization. Based on the application of the warrants, it was determined that traffic signals should be installed at all of the analyzed intersections except for the intersections of “C” Street and “D” Street at Marine Way.

Recommended on-site traffic-control measures included stop signs, traffic signals, and roundabouts. Left-turn pocket lengths for project access intersections with exclusive left-turn lanes were estimated using the

4. Discussion of Checklist and Mitigation Measures

County of Orange Environmental Management Agency (EMA) Highway Design Manual. The estimated left-turn storage length requirements for the analyzed intersections were based on peak hour volumes. Right-turn lanes were proposed to be provided for select project access locations on site where additional intersection capacity is needed.

Addendum No. 4 analyzed the impacts of the proposed OCGP Master Plan. Since the proposed land uses within the OCGP Master Plan were consistent with those analyzed in the OCGP FEIR and the updated traffic study for the Revised Overlay Plan, no additional traffic analysis was found to be necessary, and no new significant impacts related to traffic were anticipated.

Addendum No. 5 analyzed the impacts associated with realignment of the Marine Way/Bake Parkway intersection and concluded that the project would not produce or substantially worsen significant impacts identified in the OCGP FEIR. Consistent with the conclusions in the OCGP FEIR, traffic and circulation impacts associated with the project would be less than significant, as the future development would implement all applicable laws and regulations to reduce impacts on traffic and circulation.

Addendum No. 7 analyzed potential impacts associated with the removal of certain NITM Improvements from the OCGP FEIR that were determined to no longer be necessary. Based on the findings of the NITM Five-Year Review Traffic Study, it was determined that previously proposed traffic mitigation strategies were not required for seven intersections and one ramp since they operate at an acceptable LOS under all interim year and build-out conditions. In addition, improvements above and beyond the baseline conditions for these locations were not warranted based on forecast future traffic activity.

The SEIR analyzed the potential impacts of the 2nd Amended VTTM 17008, Amended TTM 17283, TTM 17202, TTM 17364, TTM 17366 and TTM 17368 within the Heritage Fields site located in PA 51, including former PA 30, in the City of Irvine. The purpose of the comprehensive and tract map-level NITM traffic studies was to identify the location, timing and prioritization of applicable NITM improvements and any necessary project-related improvements that address potential impacts caused by project traffic.

The results of the analyses indicated the need for the following NITM improvements:

- Alton & Technology (2030): Westbound Technology restripe to include 2.5 left turn lanes, 1.5 through lanes, and a defacto right turn lane.
- El Toro & Jeronimo (2030): Add second southbound El Toro left turn lane.
- Alicia & Muirlands (2015): Add second southbound Alicia left turn lane.
- I-5 Southbound off-ramp to Sand Canyon (Post-2030): Add a second drop lane from the I-5 to the off-ramp.
- I-5 Southbound off-ramp to Alton (Post-2030): Add a second auxiliary lane from the I-5 to the off-ramp.
- I-5 Southbound off-ramp to El Toro (2030): Add a second drop lane from the I-5 to the off-ramp.

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Additional improvements needed to address traffic impacts caused by the project include:

- Jeffrey & Roosevelt (2030): Restripe eastbound Roosevelt approach to provide a shared through/right turn lane.
- Bake & Portola (Post-2030): Restripe the northbound Bake approach to provide a shared through/left lane (which currently exists as a through lane) and modify the traffic signal for a north/south split phase signal operation. Alternatively, restripe the northbound approach to provide dual left turn lanes in combination with a single through lane and single right turn lane, and modify signal operation to include northbound right turn overlap.
- Lake Forest & Portola (2030, fair-share): Conversion of the northbound Lake Forest approach from de-facto right-turn to dedicated right-turn, and modification of the traffic signal to include right turn overlap phase.

As part of Addendum No. 8, two traffic studies were prepared by LSA for the OCGP Western Sector Development Plan Phase 1 located in Planning Area 51 in the City of Irvine. The results of the August 2011 parking and traffic generation analysis indicated that 2,804 parking spaces would be necessary to accommodate the park visitors on a weekday, and 3,842 spaces would be required on a weekend. The conceptual Great Park design included regular day-to-day parking for 5,505 vehicles. This supply of parking would be more than sufficient to accommodate the parking demand for the entire park at any given time on a typical weekday or weekend. The analysis also concluded that the maximum daily trip generation of the park modification would be 13,537 trips on a typical weekday. This is below the 19,083 weekday trips calculated in the OCGP FEIR, and therefore no changes to the impact analysis would occur.

According to the traffic data used to prepare Addendum No. 8, full build-out of the Great Park Master Plan would result in a total of 19,030 weekday trips, which is below the FEIR maximum; however, the FEIR traffic analysis was not based on weekend conditions. The weekend trip analysis was conducted for the parking demand calculations and was not included in the original OCGP FEIR.

As presented in the August 2011 traffic study, the Western Sector Development Plan Project would generate approximately 4,635 daily trips, which was significantly below the 19,083 daily trips approved as part of the OCGP FEIR. The AM peak hour is forecast at 184 and the PM peak hour at 659.

The project would not produce new or substantially increase the severity of significant impacts previously identified in the OCGP FEIR. Consistent with the conclusions in the OCGP FEIR, traffic and circulation impacts associated with the project would be less than significant as the future development would implement all applicable laws and regulations to reduce impacts on traffic and circulation.

The 2011 SEIR concluded that with the 2011 Approved Project all intersections and roadway/freeway/tollway/ramp segments would operate at acceptable levels of service with the existing or planned improvements. However, it stated that since the primary responsibility for approving and/or completing certain improvements outside of the City of Irvine limits lie with agencies other than the City (i.e., City of Lake Forest, Laguna Woods, Mission Viejo, County of Orange, and Caltrans), there is the potential that significant impacts may not be fully mitigated if such improvements are not completed for reasons beyond

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the City's control. Should that occur, impacts relating to traffic generated by the 2011 Approved Project would remain significant.

4.15.3 Impacts Associated with the Modifications to the OCGP Improvement Area

The SSEIR document identified the traffic impacts of the 2012 Modified Project by analyzing the study area circulation system based on existing traffic conditions, 2015, 2030 and Post-2030 future traffic conditions. In some cases, new project impacts that were not mitigated by improvements identified in the North Irvine Transportation Mitigation (NITM) Program were identified for project development scenarios. Recommended mitigation measures for each impacted location were presented. The SSEIR concluded that if identified improvement for intersections were not be feasible due to cost, right-of-way issues, or community opposition, traffic impacts could remain significant and unavoidable.

A Traffic Study for the 688-acre Park Development Plan was prepared to analyze the potential traffic impacts of the Project in general accordance with the North Irvine Transportation Mitigation (NITM) Program per City Council Resolution 03-61 and applicable sections of the City's Traffic Study Guidelines (updated August 24, 2004) and the City of Irvine Transportation Guidelines (TG) dated July 31, 1993. The analysis identifies potential impacts of the proposed Project in the Project area based on Existing (2012) and Future Year (2017) traffic conditions using the Irvine Transportation Analysis Model (ITAM 12.3). The Traffic Study area extends from Jeffrey Road on the west, Bake Parkway on the east, Portola Parkway on the north, and the I-405 freeway to the south. The analysis includes all arterials and major intersections within the study boundary area.

The following summarizes the existing conditions and 2017 base, and the OCGP 688-acre Park Development Plan alternatives that have been evaluated and included in the Traffic Study:

1. Existing Conditions
2. Existing plus 688 Acre Park Development Plan
3. 2017 Baseline (No Project) (Assumes Heritage Fields Project Option 2)
4. 2017 Baseline + 688 Acre Park Development Plan
5. 2017 Baseline + 688 Acre Park Development Plan with Heritage Fields Project Option 1
6. 2017 Baseline + 688 Acre Park Development Plan with connector roadway between "LY" Street and Marine Way (Roadway Connection Alternative)

Existing Roadways and Intersections

The existing roadway network is presented in Figure 4.15-1. This figure presents the roadway classification and the existing number of travel lanes. All access to the project connects from Sand Canyon Road and Marine Way. Trabuco Road also connects to the OCGP; however, park uses are not accessible from Trabuco Road at this time. As Marine Way extends east of Sand Canyon, it terminates at the intersection of Marine Way and "C" Street. "C" Street extends north and provides all access to the OCGP 688 Acre Park Development Plan except for some uses which will be accessed via Trabuco Road.

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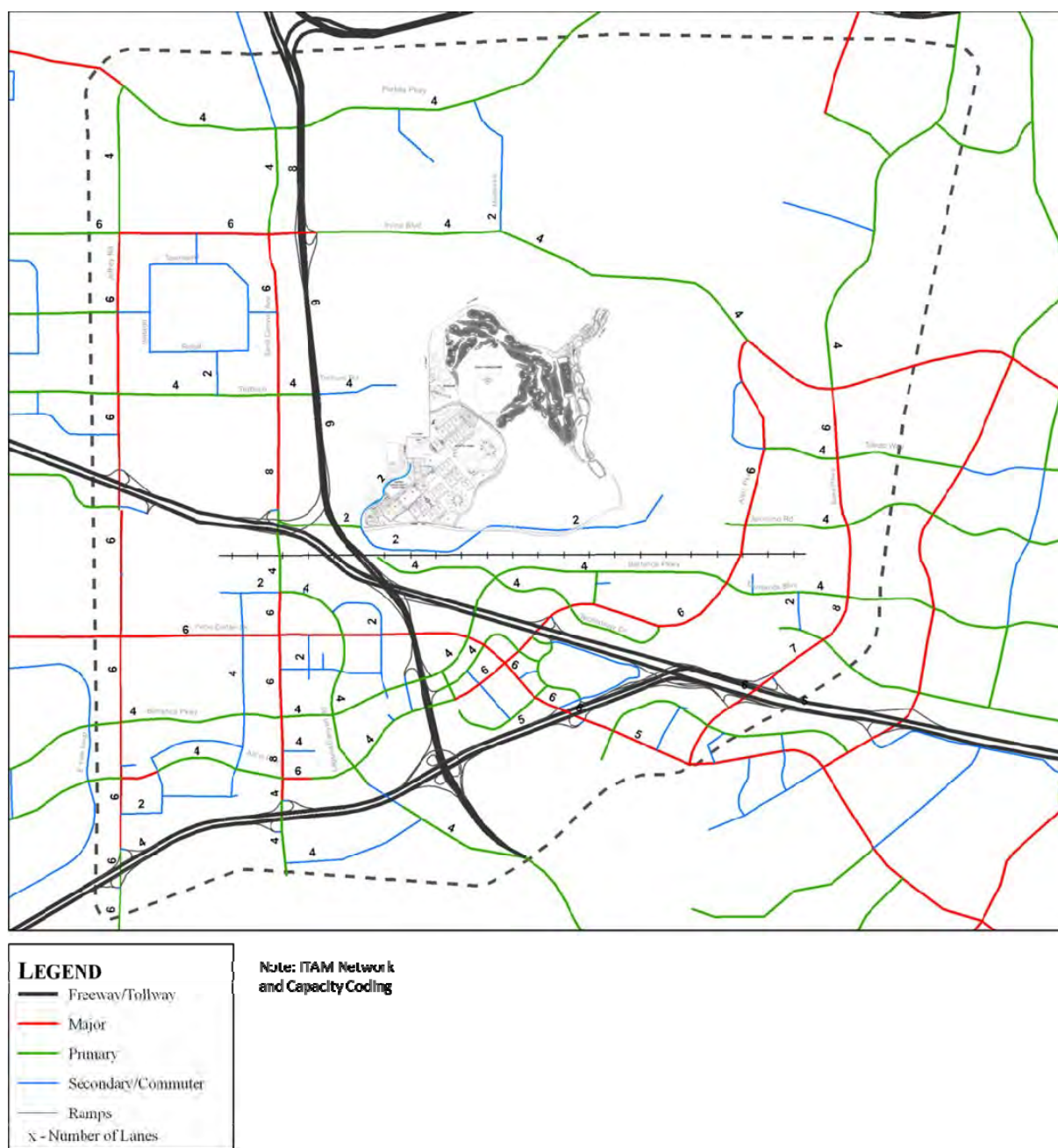


Figure 4.15-1
Existing Roadway Network

4. Discussion of Checklist and Mitigation Measures



Figure 4.15-2
Traffic Study Area Intersections

4. Discussion of Checklist and Mitigation Measures

The intersections included in the Traffic Study are also presented in Figure 4.15-2. These intersections are identified with a three digit intersection identification number. Not all intersections currently exist, but will be added as part of the 2017 analysis.

Presented in Figure III-3 of the Traffic Study are the existing intersection geometrics for each of the intersections included in the Traffic Study. These figures present the number of left, through, and right turn lanes.

Methodology and Approach

The Traffic Study is based on the latest version of the Irvine Transportation Analysis Model (ITAM 12.3). The analysis reports the Base Year (2012) Existing and the 2017 Baseline without the project. The alternatives analysis then added the project to the Existing and 2017 Baseline alternatives. The 2017 Baseline ITAM model run used for the “No Project” includes approved projects and infrastructure improvements assumed in ITAM 12.3 for interim 2017 conditions. The Traffic Study includes the entire 688-acre Improvement Area as the study area.

Alternatives

The “With Project” condition adds the OCGP 688 Acre Park Development Plan to the Existing Conditions and the 2017 Baseline plus various alternatives described below.

1. Existing Conditions
2. Existing plus 688 Acre Park Development Plan
3. 2017 Baseline, No Project (Assumes Heritage Fields Project Option 2)
4. 2017 Baseline + 688 Acre Park Development Plan
5. 2017 Baseline + 688 Acre Park Development Plan with Heritage Fields Project Option 1
6. 2017 Baseline + 688 Acre Park Development Plan with connector roadway between “LY” and Great Park Boulevard (Roadway Connection Alternative)

ITAM Traffic Analysis Zones

The daily traffic volumes and peak hour intersection turn movement forecasts were generated using the Irvine Transportation Analysis Model (ITAM 12.3). Project related adjustments include refinement to the traffic analysis zones within the OCGP to better define OCGP trip activity traveling to and from various parking destinations within the park. A map of the updated Traffic Analysis Zones is presented in Figure 4.15-3.

Trip Generation

The daily and peak hour trip generation forecasts by ITAM Traffic Analysis Zone and parking area for the Western Sector Park Development Plan and the 688 Acre Park Development Plan are presented in Table

4. Discussion of Checklist and Mitigation Measures

4.15-1. The project land uses and trip generation for the 688 Acre Park Development Plan for the 2012 (existing) + project and the 2017 + project traffic analysis is basically the same, except for one land use. The proposed Community Ice Facility is not included in the 2012 existing baseline, but is included in the 2017 as it was previously approved as part of the Western Sector Park Development Plan.

As presented in Table 4.15-1, the total OCGP daily trip generation for the Western Sector Park Development Plan and the 688 Acre Park Development Plan is 10,030. This is less than the 19,083 daily trips approved in the OCGP FEIR. The difference between 19,083 and 10,030 is 9,053, which would be available for the future phased development of the Orange County Great Park. The total daily trip generation for the Western Sector Park Development Plan and the 688 Acre Park Development Plan without the Community Ice Facility is 9,310.

ITAM Assumptions for Alternatives

The Alternative 1 (Existing Conditions Baseline) and Alternative 3 (2017 Baseline No Project) ITAM traffic forecasts were provided by the City of Irvine. The remaining four alternatives required land use and network adjustments to ITAM. They are summarized as follows:

Alternative 2 is the Existing Plus Project alternative that adds the 688 Acre Park Development to the Existing Conditions.

Alternative 4 (i.e., 2017 “With Project”) adds the 688 Acre Park Development Plan to the 2017 Baseline alternative.

Alternatives 5 and 6 are alternatives to Alternative 4, the 2017 Baseline plus 688 Acre Park Development Plan.

Alternative 5 analyzes an alternative Heritage Fields Project Option 1 land use plan. For this alternative, the ITAM land use assumptions for Heritage Fields Project Option 2 TAZ land uses and quantities were replaced with the Option 1 land use and quantities. The Option 1 TAZ land use and quantities were provided by the City of Irvine.

All alternatives include a high school in TAZ 606, which is south of Irvine Boulevard referred to as High School Site A.

Alternative 6 is identical to Alternative 4, the 2017 ITAM Baseline plus the proposed 688 Acre Park Development, except for a roadway network change that provides a loop connection between “LY” Street and Great Park Boulevard along the eastern edge of the Sports Park ball fields. All land use, trip generation and network changes for Alternatives 2, 4, 5 and 6 were reviewed and approved by the City of Irvine.

4. Discussion of Checklist and Mitigation Measures

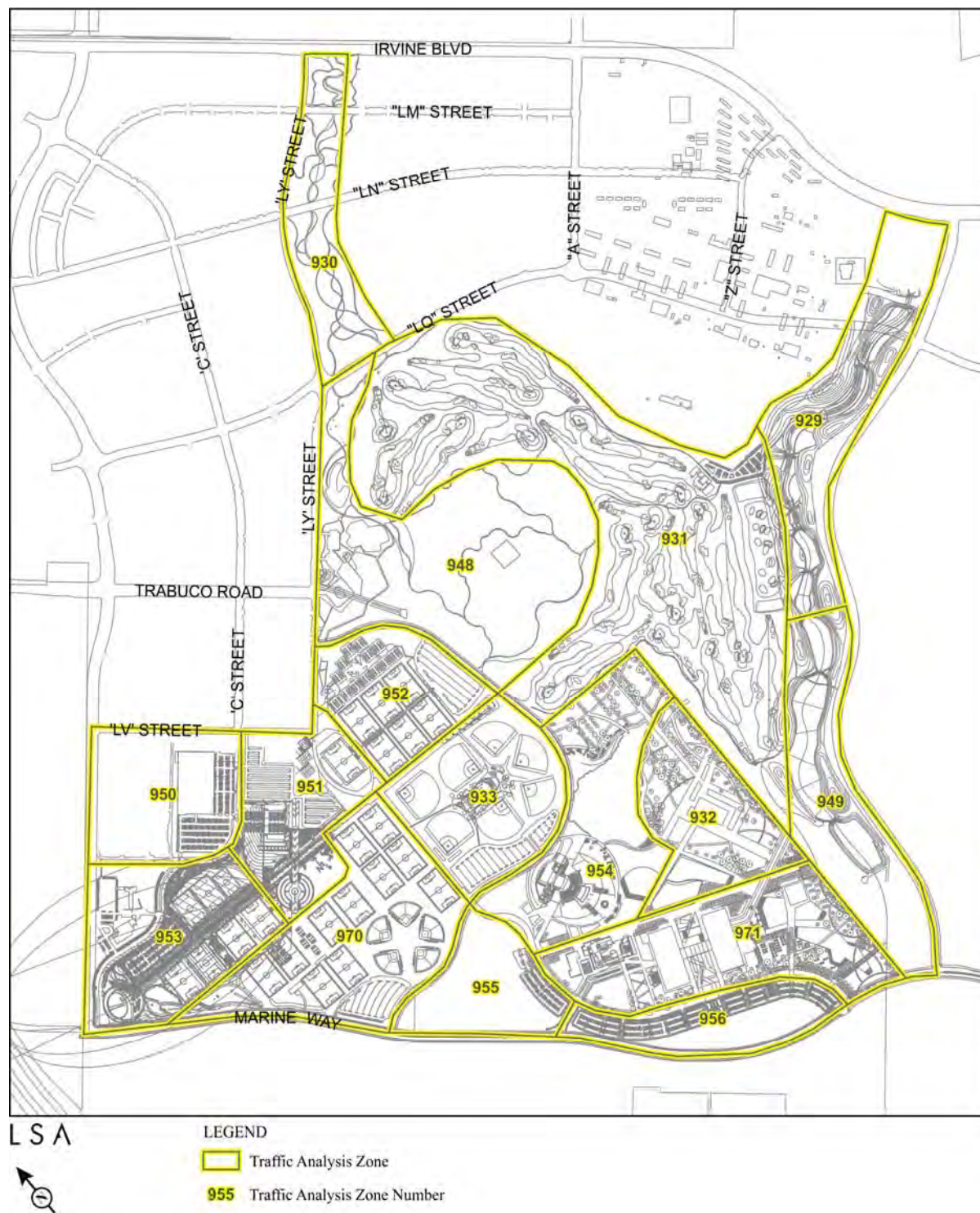


Figure 4.15-3
Great Park Traffic Analysis Zones

4. Discussion of Checklist and Mitigation Measures

Table 4.15-1. Great Park Daily and Peak Hour Trip Generation

Use	Master Plan		Trip Generation				Peak Hour Trip Generation (Note: Based on Effective Auto Trip Generation - No Alternative Modes)						TAZ	Parking Area
			Daily Auto Trip Generation Rate	Daily Auto Trip Generation	Number of Sites Visited	Effective Auto Trip Generation	Peak Hour Volumes							
	Size	Units					AM In	AM Out	AM Total	PM In	PM Out	PM Total		
Upper Bee														
Upper Canyon Open Space - North	18	Acres	4.57	82	2.5	33	0	0	0	3	2	5	930	2
Upper Canyon Open Space - South	18	Acres	4.57	82	2.5	33	0	0	0	3	2	5		
Upper Canyon Open Space Subtotal						66	0	0	0	5	4	9		
Golf Course														
Golf Course	18	Holes	35.74	643	1	643	32	8	40	23	28	50	931	1
Club House (Community Center)	15	ksf GFA	33.82	507	1	507	25	7	31	18	22	40		
Golf Course						1,151	56	15	71	40	49	90		
Bosque + Agriculture														
Agriculture	71.2	Acres	2.01	143	1	143	7	6	13	6	9	14	948	2
Bosque	36	acres	4.57	165	2.5	66	0	0	0	5	4	9		
Farm & Food Lab	400	persons	0.80	320	1.0	320	19	19	38	51	51	102		
Farmer's Market	1.3	acres	375.00	488	2.5	195	6	5	10	9	11	20		
Small Amphitheater / Stage	60	seats	1.33	80	2.5	32	0	0	0	3	3	6		
Great Park Gardens	100	Plots	1.00	100	1.0	100	7	7	14	7	4	11		
Dog Park	2.0	Acres	192	384	1.0	384	18	11	30	16	13	30		
Bosque + Agriculture Total						1,240	58	48	105	97	95	193		
Western Sector (Includes Some Sport Park)														
Community Ice Facility	3.00	Sheets	240.00	720	1.0	720	12	12	24	59	34	93	950	3
Western Picnic Area	6.80	acres	13.71	93	1.0	93	0	0	0	7	4	10		
Balloon Ride, Tent, Misc. Uses	1.00	each	800.00	800	2.5	320	9	2	11	6	9	15	951	4
Artist In Residency Facility (Hangar 242 & 245)	12.80	ksf GFA	18.90	242	2.5	97	3	1	3	2	3	5		
Hanger 244	10.37	ksf GFA	18.90	196	2.5	78	2	0	3	2	2	4		
Palm Court Landscaped	5.80	acres	4.57	27	2.5	11	1	0	1	0	1	2		
Palm Court Hardscape	52.30	ksf GFA	18.90	988	2.5	395	29	1	30	16	54	70		
Soccer Field Seating	150	Seats	0.66	99	1.0	99	0	0	0	10	10	20		
Soccer Fields	1	fields	108.97	109	1.0	109	1.29	0.97	2.26	20.01	9.85	29.86		
Sand Volleyball	5	Courts	45.56	228	1.0	228	4	4	8	14	14	28	953	5
North Lawn	18.50	acres	13.71	254	1.0	254	0	0	0	18	10	28		
Soccer Fields	4	fields	108.97	436	1.0	436	5	4	9	80	39	119		
Promenade/OS	6.40	acres	4.57	29	2.5	12	0	0	0	1	1	2		
Timeline	5.10	acres	4.57	23	2.5	9	0	0	0	1	1	1		
Aqua Chiron	7.5	acres	0	0	2.5	0	0	0	0	0	0	0		
Western Sector Total						2,861	66	24	90	235	191	426		
Sports Park														
Baseball Stadium Seating	500	Seats	0.66	330	1.0	330	0	0	0	33	33	66	933	6
Baseball Fields	7	fields	108.97	763	1.0	763	9	7	16	140	69	209		
Timeline	3	acres	4.57	14	2.5	5	0	0	0	0	0	1		
Soccer Fields	6	fields	108.97	654	1.0	654	8	6	14	120	59	179	952	7
Tennis Courts	24	each	31.04	745	1.0	745	13	13	25	47	47	93		
Soccer Fields	11	fields	108.97	1,199	1.0	1,199	14	11	25	220	108	328	970	8
Softball / Baseball Seating	300	Seats	0.66	198	1.0	198	0	0	0	20	20	40		
Softball / Baseball	5	field	108.97	545	1.0	545	6	5	11	100	49	149		
Basketball / Sports Courts	4	Courts	62.08	248	1.0	248	4	4	8	16	16	31		
Splash Park	1.00	acres	25.8	26	1.0	26	0	0	0	2	2	4		
Sports Park Total						4,713	54	45	99	698	402	1,100		
Total Great Park						10,030	234	132	366	1,076	743	1,818		

4. Discussion of Checklist and Mitigation Measures

2017 Baseline Roadway Network Updates

The committed 2017 intersection geometry includes some additional improvements assumed in place by 2017. The resulting 2017 Intersection Geometry is presented in Figure IV-2 of the Traffic Study.

Performance Criteria

Two levels of traffic analysis were conducted, and they are: 1) daily and peak hour arterial link volume to capacity ratio level of service analysis and peak hour Intersection Capacity Utilization (ICU – for signalized intersections) or Highway Capacity Manual (HCM – for unsignalized intersections); and 2) intersection design analysis per the City's Transportation Guidelines (TG). The following section describes the performance measures.

Daily Arterial Volume to Capacity Level of Service Analysis

For each arterial link within the study area a daily link level of service is based on the average daily traffic (ADT) volume/capacity (V/C) ratios, based on the following capacities:

City of Irvine

Major Arterial	8-lane	72,000
	6-lane	54,000
Primary Arterial	4-lane	32,000
Secondary Arterial	4-lane	28,000
Commuter	2-lane	13,000

Outside City of Irvine

Major Arterial	8-lane	75,000
	6-lane	56,300
Primary Arterial	4-lane	37,500
Secondary Arterial	4-lane	25,000 (24,000 – City of Orange)
Commuter	2-lane	12,500 (12,000 – City of Orange)

The performance standards for the daily volume to capacity ratios for all links is LOS D or a V/C ratio less than or equal to 0.90 except arterials in Irvine Planning Area 33 (Spectrum I) and Planning Area 36 (Irvine Business Complex/IBC), and Congestion Management Plan arterials outside the City of Irvine where the threshold is LOS E where daily volume to capacity ratio must be less than or equal to 1.00.

Daily and Peak Hour Arterial Volume to Capacity Level of Service Analysis

As required by the City of Irvine Peak Hour Link Capacity Analysis guidelines, arterial links that exceed the daily volume to capacity ratio level of service analysis thresholds must conduct a peak hour link volume to capacity ratio analysis.

4. Discussion of Checklist and Mitigation Measures

AM and PM Peak Hour Intersection Capacity Utilization

To determine significant impacts at signalized intersections, the ICU methodology was used for intersections within the study area. The ICU methodology compares the volume-to-capacity (v/c) ratios of conflicting turn movements at an intersection, sums these critical conflicting v/c ratios for each intersection approach, and determines the overall ICU. The resulting ICU is expressed in terms of level of service (LOS), where LOS A represents free-flow activity and LOS F represents overcapacity operation. Parameters set by the City for ICU calculations, including lane capacity, right-turn treatment, and clearance interval, which are included in the analysis. According to the City Traffic Impact Analysis Guidelines (adopted by City Council on August 24, 2004), level of service at an intersection or roadway is considered to be unsatisfactory when the ICU exceeds 0.90 (LOS D). In addition, the City General Plan has identified intersection locations in which an ICU is acceptable when less than or equal to 1.0 (LOS E) in Planning Area 33, Planning Area 36, CMP intersections outside the City of Irvine, intersections of Bake Parkway/I-5 northbound and southbound ramps, Alton Parkway/Irvine Boulevard, Bake Parkway/Irvine Boulevard, Lake Forest Drive/I-5 southbound ramps-Avenida de la Carlotta and Lake Forest Drive/Irvine Center Drive.

A project impact is identified if the project results in an ICU greater than the acceptable level or service, the project contribution is required to bring the intersection back to an acceptable level of service, or when the projects results in an ICU of 0.02 or greater for an already deficient location, the project contribution is required back to no-project conditions.

The intersection turn movements and level of service is presented in Appendix C of the Traffic Study. The ICU level of service calculation sheets are presented in the Appendix D of the Traffic Study.

AM and PM Peak Hour Unsignalized Intersection Level of Service Analysis

To determine adequacy of peak-hour operations at unsignalized intersections, the HCM methodology was used. The HCM methodology evaluates conflicting flows and applies gap acceptance criteria to determine delay and level of service for stop controlled unsignalized intersection. The Unsignalized Intersection Level of Service calculation sheets are presented in Appendix E of the Traffic Study.

Alternatives Analysis

The following chapter provides an evaluation of each of the six alternatives. This analysis includes:

1. OCGP Project Trip Distribution
2. Daily Traffic Link Volume Forecasts and Volume/Capacity Level of Service Analysis
3. Peak Hour Link Analysis (for those alternatives and links which exceeded the daily thresholds)
4. Signal Warrant Analysis to determine which intersections warrant signalization and will be evaluated with Intersection Capacity Utilization level of service and which intersections will be stop controlled and evaluated per the Highway Capacity Manual unsignalized intersection level of service analysis.
5. Peak Hour Intersection Level of Service Analysis

4. Discussion of Checklist and Mitigation Measures

The Transportation Guidelines (TG) analyses are presented in Section VII of the Traffic Study.

Project Trip Distribution

The forecast OCGP 688-acre Park Development Plan trip distribution percentages provide an understanding as to where trips traveling to and from the OCGP will travel and which roadways and intersections might be affected. A select zone analysis was conducted that aggregated all of the affected TAZs associated with the proposed OCGP 688-acre Park Development Plan to determine how traffic is distributed throughout the roadway network. The OCGP 688-acre Park Development Plan trip distribution is presented in Figure 4.15-4.

Daily Traffic Forecasts and Volume/Capacity Ratio Level of Service Analysis

Based on the ITAM, daily traffic forecasts were prepared for each alternative. Utilizing these daily forecasts and daily threshold capacities from the Performance Criteria above, the daily volume to capacity ratio level of service analysis was performed.

Figures VI-2 through VI-13 of the Traffic Study present the average daily traffic and the resulting daily volume to capacity level of service for each of the six alternatives. The links, which were identified as over the daily threshold, are highlighted on the volume to capacity level of service maps.

As presented in the Figures VI-2 through VI-13 of the Traffic Study, there were six links for Alternative 1: Existing Conditions and Alternative 2: Existing plus OCGP 688 Acre Park Development Plan, which exceeded the City of Irvine's daily capacity thresholds. The addition of the OCGP traffic to the existing traffic volumes did not result in any additional links being impacted.

There were 23 links for Alternative 3: 2017 Baseline which exceeded the daily threshold. There were no project alternatives (Alternative 4 through 6), which resulted in additional links being impacted.

4. Discussion of Checklist and Mitigation Measures

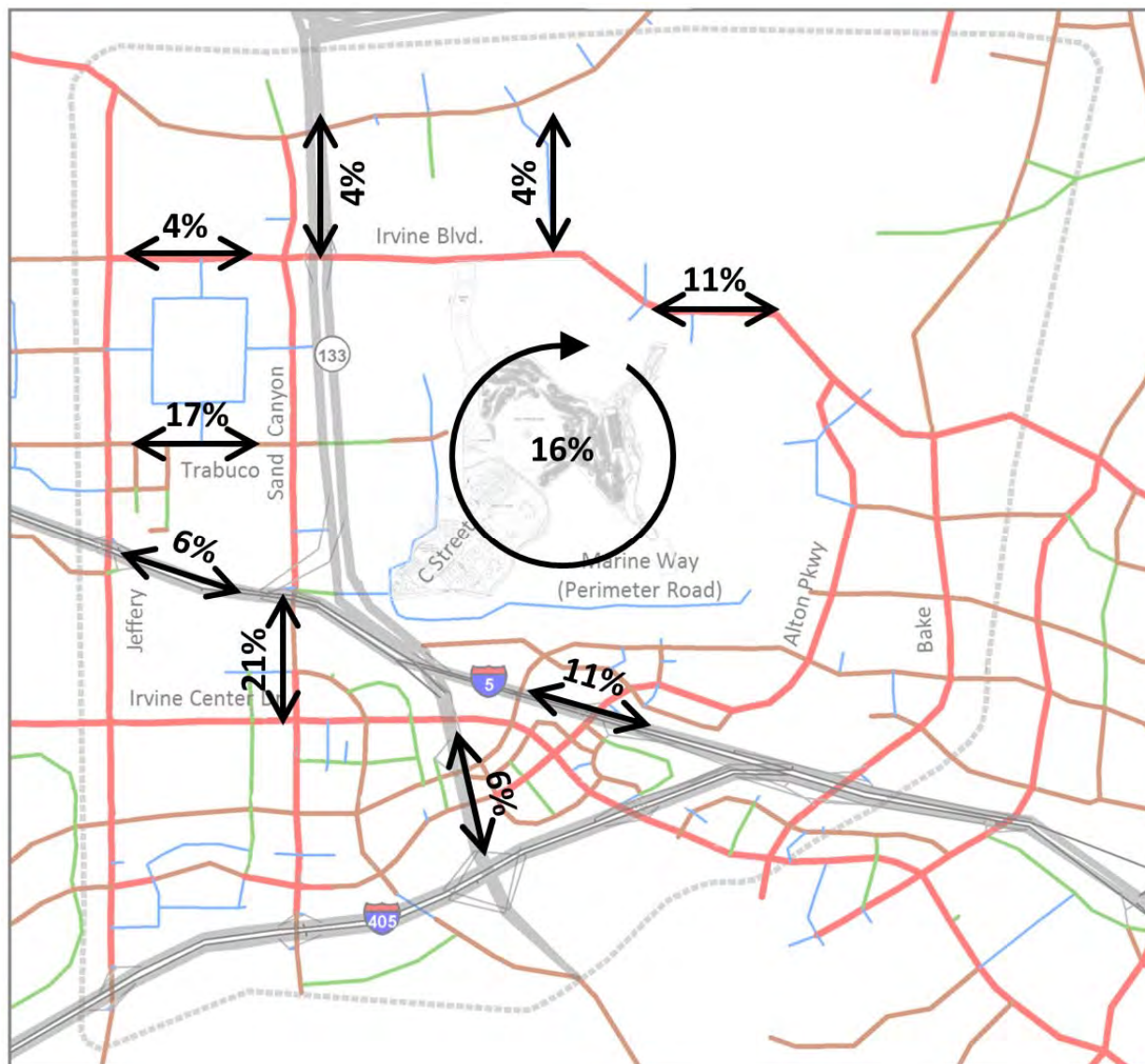


Figure 4.15-4
Great Park 688-acre Park Development Plan Trip Distribution

4. Discussion of Checklist and Mitigation Measures

AM and PM Peak Hour Link Analysis

The City of Irvine's Traffic Impact Analysis Guidelines requires an AM and PM Peak Hour level of service link analysis for links which exceed the daily threshold. Presented in Tables 4.15-2 and 4.15-3 are the AM and PM peak hour link analysis for the six roadway links for all six alternatives. Based on this analysis, all six links of the Existing and the Existing plus OCGP 688 Acre Park Development Plan resulted in acceptable AM and PM peak hour link levels of service.

In addition, all 23 links for the 2017 Baseline and all 2017 OCGP alternatives also resulted in acceptable AM and PM peak hour link levels of service.

Signal Warrant Analysis

The Traffic Study also evaluates whether each intersection will function at an acceptable levels of service. The methodology to evaluate peak hour intersection traffic for signalized intersections is Intersection Capacity Utilization. If an intersection is not signalized, then the peak hour intersection level of service analysis is based on the Highway Capacity Manual Unsignalized Intersection Level of Service analysis.

The majority of the intersections that were included in the Traffic Study are existing intersections that are already signalized. However, the project intersections included as part of the 688-Acre Park Design Plan are either currently not signalized or they have not been constructed. Therefore, to determine which, if any, of these intersections will warrant signalization, an unsignalized intersection level of service analysis was first required for all project or future intersections.

The signal warrant analysis is based on peak hour traffic volumes on the major street and the approaching minor street. Presented in Table 4.15-4 is the resulting signal warrant analysis, which shows six intersections that warrant signalization based on forecast 2017 Base No Project traffic: Intersections 558 – “O” Street at Irvine Boulevard; Intersection 559 – “O” Street at Trabuco; Intersection 560 – “O” Street at Marine Way; Intersection 561 – “LY” Street at Irvine Boulevard; Intersection 572 – Modjeska-A Street at Irvine Boulevard; and Intersection 577 - Pusan Way-Z Street at Irvine Boulevard. The signalization of these six intersections is similarly identified in the 2011 GPN VTTM traffic study as being needed for interim-year conditions. Intersection 562: Marine Way and Great Park Boulevard warrants a signal with the addition of the 688 Acre OCGP. The remaining intersections in the study area will not warrant signalization and the peak hour intersection level of service analysis is based on the Highway Capacity Manual unsignalized intersection level of service methodology. The signal warrant analysis by alternative is presented in Appendix B of the Traffic Study.

5. Discussion of Checklist and Mitigation Measures

Table 4.15-2. AM Peak Hour Existing and 2017 Link Analysis

AM Peak Hour Link Analysis					Alternative 1 Existing			Alternative 2 Existing + 688 Acre PDP			Alternative 3 2017 Baseline			Alternative 4 2017 Baseline + 688 Acre PDP			Alternative 5 2017 Baseline + 688 Acre PDP + FivePoint Option 1			Alternative 6 2017 Baseline + 688 Acre PDP + Connector Road		
ADT ID	Roadway	Directional Lanes	Peak Hour Capacity	Max LOS	Highest Directional Volume	V/c	LOS	Highest Directional Volume	V/c	LOS	Highest Directional Volume	V/c	LOS	Highest Directional Volume	V/c	LOS	Highest Directional Volume	V/c	LOS	Highest Directional Volume	V/c	LOS
299	Jeffrey Rd.(b/w Alton Pkwy.and Quailcre)	3	4,800	D							2,970	0.62	B	2,970	0.62	B	2,970	0.62	B	2,970	0.62	B
321	Sand Canyon. Av.(b/w Alton Pkwy.and I-405 N)	3	4,800	D							2,034	0.42	A	2,037	0.42	A	2,029	0.42	A	2,030	0.42	A
419	Bake Pkwy. (n/o Irvine Bl.)	2	3,200	D	2,487	0.78	C	2,369	0.74	C	2,210	0.69	B	2,210	0.69	B	2,210	0.69	B	2,210	0.69	B
420	Bake Pkwy.(s/o Irvine Bl.)	3	4,800	D							2,282	0.48	A	2,282	0.48	A	2,277	0.47	A	2,279	0.47	A
421	Bake Pkwy. (b/w Toledo Wy. And Jeronim)	3	4,800	D							2,596	0.54	A	2,602	0.54	A	2,595	0.54	A	2,594	0.54	A
422	Bake Pkwy. (s/o Jeronimo Rd)	3	4,800	D	2,779	0.58	A	2,739	0.57	A	2,901	0.60	B	2,903	0.60	B	2,901	0.60	B	2,894	0.60	B
423	Bake Pkwy. (n/o Muirlands Bl.)	3	4,800	D	2,628	0.55	A	2,739	0.57	A	2,978	0.62	B	2,983	0.62	B	2,983	0.62	B	2,973	0.62	B
425	Bake Pkwy. (n/o I-5 NB Slip Ramp)	4	6,400	D	3,436	0.54	A	2,822	0.44	A	3,790	0.59	A	3,801	0.59	A	3,791	0.59	A	3,791	0.59	A
524	Irvine Bl.(w/o Alton Pkwy.)	3	4,800	D							2,150	0.45	A	2,156	0.45	A	2,150	0.45	A	2,156	0.45	A
567	Trabuco Rd.(e/o SR-133 SB Ramps)	2	3,200	D							1,380	0.43	A	1,401	0.44	A	1,373	0.43	A	1,392	0.44	A
568	Trabuco Rd.(w/o SR-133 SB Ramps)	2	3,200	D							1,380	0.43	A	1,401	0.44	A	1,373	0.43	A	1,392	0.44	A
583	Roosevelt(w/o Jeffrey Rd.)	1	1,600	D							473	0.30	A	479	0.30	A	480	0.30	A	480	0.30	A
647	Sand Canyon. Av.(b/w I-5 NB Ramps and Marin)	3	4,800	D							3,460	0.72	C	3,489	0.73	C	3,476	0.72	C	3,481	0.73	C
791	Alton Pkwy.(e/o E. Yale Lp.)	2	3,200	D							1,459	0.46	A	1,450	0.45	A	1,451	0.45	A	1,461	0.46	A
792	Alton Pkwy.(w/o Jeffrey Rd.)	2	3,200	D							1,459	0.46	A	1,450	0.45	A	1,451	0.45	A	1,461	0.46	A
961	Sand Canyon. Av.(b/w I-405 NB and SB Ramps)	2	3,200	D							2,123	0.66	B	2,130	0.67	B	2,123	0.66	B	2,123	0.66	B
1400	Bake Pkwy.(s/o Commercentre Dr.)	2	3,200	D	2,487	0.78	C	2,369	0.74	C	2,210	0.69	B	2,210	0.69	B	2,210	0.69	B	2,210	0.69	B
1639	Bake Pkwy.(n/o Toledo Wy.)	3	4,800	D							2,245	0.47	A	2,255	0.47	A	2,245	0.47	A	2,234	0.47	A
1641	Sand Canyon. Av.(n/o I-5 SB Ramps)	4	6,400	D							3,440	0.54	A	3,450	0.54	A	3,440	0.54	A	3,450	0.54	A
1661	Bake Pkwy.(b/w I-5 SB On and Off Ramp)	3	4,800	D							3,335	0.69	B	3,335	0.69	B	3,335	0.69	B	3,332	0.69	B
2014	Trabuco Rd.(e/o O St.)	1	1,600	D							655	0.41	A	663	0.41	A	652	0.41	A	664	0.42	A
2015	Trabuco Rd.(w/o O St.)	2	3,200	D							1,370	0.43	A	1,389	0.43	A	1,365	0.43	A	1,386	0.43	A
2061	Bake Pkwy.(s/o Rockfield Bl.)	4	6,400	D	3,436	0.54	A	2,765	0.43	A	3,790	0.59	A	3,801	0.59	A	3,791	0.59	A	3,791	0.59	A

4. Discussion of Checklist and Mitigation Measures

Table 4.15-3. PM Peak Hour Existing and 2017 Link Analysis

PM Peak Hour Link Analysis					Alternative 1 Existing			Alternative 2 Existing + 688 Acre PDP			Alternative 3 2017 Baseline			Alternative 4 2017 Baseline + 688 Acre PDP			Alternative 5 2017 Baseline + 688 Acre PDP + FivePoint Option 1			Alternative 7 2017 Baseline + 688 Acre PDP + Connector Road		
ADT ID	Roadway	Directional Lanes	Peak Hour Capacity	Max LOS	Highest Directional Volume	V/C	LOS	Highest Directional Volume	V/C	LOS	Highest Directional Volume	V/C	LOS	Highest Directional Volume	V/C	LOS	Highest Directional Volume	V/C	LOS	Highest Directional Volume	V/C	LOS
299	Jeffrey Rd.(b/w Alton Pkwy.and Quailcre)	3	4,800	D							2,539	0.53	A	2,549	0.53	A	2,553	0.53	A	2,560	0.53	A
321	Sand Canyon. Av.(b/w Alton Pkwy.and I-405 N)	3	4,800	D							2,197	0.46	A	2,197	0.46	A	2,196	0.46	A	2,200	0.46	A
419	Bake Pkwy. (n/o Irvine Bl.)	2	3,200	D	2,317	0.72	C	2,365	0.74	C	2,064	0.65	B	2,065	0.65	B	2,066	0.65	B	2,066	0.65	B
420	Bake Pkwy.(s/o Irvine Bl.)	3	4,800	D							2,125	0.44	A	2,135	0.44	A	2,134	0.44	A	2,134	0.44	A
421	Bake Pkwy. (b/w Toledo Wy. And Jeronim)	3	4,800	D							2,601	0.54	A	2,610	0.54	A	2,610	0.54	A	2,601	0.54	A
422	Bake Pkwy. (s/o Jeronimo Rd)	3	4,800	D	2,628	0.55	A	2,670	0.56	A	2,757	0.57	A	2,770	0.58	A	2,770	0.58	A	2,756	0.57	A
423	Bake Pkwy. (n/o Muirlands Bl.)	3	4,800	D	2,298	0.48	A	2,539	0.53	A	2,901	0.60	B	2,901	0.60	B	2,905	0.61	B	2,906	0.61	B
425	Bake Pkwy. (n/o I-5 NB Slip Ramp)	4	6,400	D	3,224	0.50	A	2,495	0.39	A	3,690	0.58	A	3,700	0.58	A	3,690	0.58	A	3,690	0.58	A
524	Irvine Bl.(w/o Alton Pkwy.)	3	4,800	D							2,428	0.51	A	2,490	0.52	A	2,483	0.52	A	2,511	0.52	A
567	Trabuco Rd.(e/o SR-133 SB Ramps)	2	3,200	D							1,220	0.38	A	1,320	0.41	A	1,300	0.41	A	1,350	0.42	A
568	Trabuco Rd.(w/o SR-133 SB Ramps)	2	3,200	D							1,220	0.38	A	1,320	0.41	A	1,300	0.41	A	1,350	0.42	A
583	Roosevelt(w/o Jeffrey Rd.)	1	1,600	D							710	0.44	A	721	0.45	A	719	0.45	A	720	0.45	A
647	Sand Canyon. Av.(b/w I-5 NB Ramps and Marin)	3	4,800	D							2,990	0.62	B	3,010	0.63	B	3,000	0.63	B	3,000	0.63	B
791	Alton Pkwy.(e/o E. Yale Lp.)	2	3,200	D							1,660	0.52	A	1,672	0.52	A	1,670	0.52	A	1,666	0.52	A
792	Alton Pkwy.(w/o Jeffrey Rd.)	2	3,200	D							1,660	0.52	A	1,672	0.52	A	1,670	0.52	A	1,666	0.52	A
961	Sand Canyon. Av.(b/w I-405 NB and SB Ramps)	2	3,200	D							1,242	0.39	A	1,262	0.39	A	1,265	0.40	A	1,260	0.39	A
1400	Bake Pkwy.(s/o Commercentre Dr.)	2	3,200	D	2,317	0.72	C	2,365	0.74	C	2,064	0.65	B	2,065	0.65	B	2,066	0.65	B	2,066	0.65	B
1639	Bake Pkwy.(n/o Toledo Wy.)	3	4,800	D							2,240	0.47	A	2,250	0.47	A	2,250	0.47	A	2,250	0.47	A
1641	Sand Canyon. Av.(n/o I-5 SB Ramps)	4	6,400	D							2,950	0.46	A	3,185	0.50	A	3,180	0.50	A	3,171	0.50	A
1661	Bake Pkwy.(b/w I-5 SB On and Off Ramp)	3	4,800	D							3,748	0.78	C	3,757	0.78	C	3,756	0.78	C	3,746	0.78	C
2014	Trabuco Rd.(e/o O St.)	1	1,600	D							760	0.48	A	782	0.49	A	801	0.50	A	790	0.49	A
2015	Trabuco Rd.(w/o O St.)	2	3,200	D							1,201	0.38	A	1,303	0.41	A	1,271	0.40	A	1,313	0.41	A
2061	Bake Pkwy.(s/o Rockfield Bl.)	4	6,400	D	3,224	0.50	A	2,495	0.39	A	3,690	0.58	A	3,700	0.58	A	3,690	0.58	A	3,690	0.58	A

6. Discussion of Checklist and Mitigation Measures

Table 4.15-4. Signal Warrant Analysis

Int. ID	Intersection Name	Alternative 3 2017 Baseline (No Project)	Alternative 4 2017 Baseline + 688 Acre PDP	Alternative 5 2017 + 688 Acre PDP + Five Point Option 1	Alternative 6 2017 Baseline + 688 Acre PDP + Connector Road
558	Ridge Valley-O St./Irvine Blvd.*	Yes (AM/PM)	Yes (AM/PM)	Yes (AM/PM)	Yes (AM/PM)
559	O St./Trabuco Rd.*	Yes (AM/PM)	Yes (AM/PM)	Yes (AM/PM)	Yes (AM/PM)
560	O St./Marine Way*	Yes (PM)	Yes (PM)	Yes (PM)	Yes (PM)
561	LY St./Irvine Blvd.*	Yes (AM/PM)	Yes (AM/PM)	Yes (PM)	Yes (AM/PM)
562	Great Park Blvd. W./Marine Way	No	No	No	No
572	Modjeska-A St./Irvine Blvd.*	Yes (AM/PM)	Yes (AM/PM)	Yes (AM/PM)	Yes (AM/PM)
575	O St./LV St.	No	No	No	No
576	O St./C St.	No	No	No	No
577	Pusan Way-Z St./Irvine Blvd.*	Yes (AM/PM)	Yes (AM/PM)	Yes (AM/PM)	Yes (AM/PM)
651	C St./Trabuco Rd.	No	No	No	No
652	LY St./Trabuco Rd.	No	No	No	No
653	LY St./Loop Rd.	No	No	No	No
654	C St./LV St.	No	No	No	No
655	O St./8 th St.	No	No	No	No
656	C St./8 th St.	No	No	No	No
657	GP Blvd. N/S Conn/GP Blvd. E/W	--	No	No	No

Notes: Intersections where signals are warranted are shown in **bold**.

*The 2011 GPN VTTM traffic study identified six intersections as warranting a signal in interim year conditions and is reflected in the baseline conditions.

Peak Hour Intersection Level of Service Analysis

An AM and PM peak hour intersection level of service analysis was conducted for all intersections included in the Traffic Study. The intersections that warranted signalization were evaluated based on the Intersection Capacity Utilization methodology, and intersections that did not warrant signalization were evaluated based on the High Capacity Manual unsignalized intersection level of service methodology.

The results of this analysis for all alternatives are presented in Table VI-4 of the Traffic Study. As presented, there are no existing intersections which were found to exceed the City of Irvine's acceptable level of service threshold.

In review of the 2017 alternatives, Alternative 3: 2017 No Project Baseline, there were two intersections which were found to exceed the City of Irvine's peak hour level of service threshold. These intersections are at Jeffrey Road and Alton Parkway (#291) and at Laguna Canyon Road and Lake Forest Drive (#406). The City of Irvine's criteria for determining project impacts is whether the forecast Intersection Capacity Utilization for intersections exceeding the acceptable LOS threshold is increased by 0.02 or more with the addition of project traffic or if the LOS goes from acceptable to unacceptable LOS. Based on the Intersection Capacity Utilization analysis, there were no OCGP 688 Acre Park Development Plan alternatives (Alternatives 4-6) which added to existing deficiencies at either of these two intersections. Therefore, there are no intersection level of service impacts from the project.

4. Discussion of Checklist and Mitigation Measures

Special Issues – Transportation Guidelines

Transportation Guidelines (TG)

The traffic analysis includes the evaluation of Project intersections based on the Transportation Guidelines (TGs), July 30, 1993, to determine consistency with the City's design requirements. Specific design elements to be evaluated include turn-pocket lengths (TG-1), signal spacing (TG-7), distance between driveways and intersections (TG-8), corner clearance (TG-9), left-turn in/out access (TG-10), right turn lanes at driveways (TG-11), signal warrants (TG-13), and driveway length (TG-15).

As previously presented, the signal warrant analysis (TG-13) was conducted for project intersections for each alternative and intersection to determine whether the intersection warranted being signalized and evaluated with the ICU capacity analysis methodology, or unsignalized, HCM methodology. Therefore, the following presents the analysis of the remaining Transportation Guidelines.

TG-1 Turn Lane Pocket Lengths

The lengths of left-turn pockets at signalized intersections are based on several parameters, including traffic control, turn volume, and cycle length.

The purpose of the turn pocket length is to allow the turning vehicle to exit the through movement and decelerate into the turn pocket without impacting the through movement. The minimum single-turn pocket length for Commuter and Local streets is 90 feet. For Major, Primary, and Secondary arterials, the minimum allowed left turn pocket is 150 feet. The maximum length of a single left turn pocket is 300 feet. For purposes of this analysis, a conservative 120-second cycle length, 10% truck mix, and 95% confidence level have been assumed.

For each intersection, the required left turn bay length was identified according to TG guidelines. Consistent with NITM Program traffic studies, where pocket lengths exceed the standard 150 feet for public arterials or 90 feet for commuter and local roadways, the recommended length is based on 1-foot per peak hour left-turn volume (highest of AM and PM) and rounded into increments of 10 feet. The resulting left turn pocket storage requirement for each signalized intersection and alternative is presented in Table VII-1 of the Traffic Study.

At Great Park Boulevard (West) and Marine Way (562), dual 250-foot eastbound turn lanes are a design feature of the Project.

Based on the 2017 analysis, there was one other left turn pocket length demand which exceeded the 300-foot threshold. This was the westbound left turn lane from Irvine Boulevard to "Z" Street/Pusan Way (577). This left turn lane is not recommended to be widened to two lanes because this intersection will operate at an acceptable LOS (LOS A/B) with a single westbound left-turn lane. Additionally, the OCGP Access Study indicates that the westbound left turn demand drops significantly at Post 2030 buildout with additional anticipated network improvements, and a single westbound left turn lane will operate acceptably.

5. Discussion of Checklist and Mitigation Measures

TG-7 Distance Between Signalized Intersections

Adequate separation between signalized intersections along highways is a key parameter for maintaining signal progression. Marine Way is a Primary Highway with a desirable spacing of one mile between signalized intersections and a minimum of one-half mile between signalized intersections.

The intersection of "O" Street and Trabuco Road (#559) warrants a signal in the 2017 Baseline No Project Alternative as well as in all With Project alternatives. The distance between these two future signalized intersections exceed the minimum thresholds as presented in Table 4.15-5.

Based on the findings of the Traffic Study, there are three signals proposed along Marine Way: at "O" Street, Great Park Boulevard (West), and Great Park Boulevard (East). The distances between both sets of signals exceed the minimum spacing requirements.

Table 4.15-5. Distances between Signalized Intersections

Street	From	To	Desirable	Minimum Distance	Measured Distance	Exceeds Minimum Spacing
Marine Way	"O" Street	Great Park Boulevard West	2,640	1,320	3,000	Yes
	Great Park Boulevard West	Great Park Boulevard East (build-out condition)	2,640	1,320	3,750	Yes
"O" Street	Marine Way	Trabuco Road	1,320	400	3,900	Yes

TG-8 Distance Between Driveways and Intersections

Driveway and intersection spacing requirements are provided in TG-8. The minimum separation for Primary Highways is 230 feet (Marine Way), for Secondary Highways is 185 feet ("O" Street), for Commuter Streets is 150 feet, and for Local Streets is 105 feet. As presented in Figure VII-1 of the Traffic Study, all driveways equal or exceed the minimum TG-8 requirement for distances between intersections and driveways.

TG-9 Corner Clearance

TG-9 ensures that access driveways do not interfere with nearby signalized intersections. The following items are considered for each unsignalized driveway that is adjacent to one or more signalized intersections:

1. Downstream right turn considerations (right turns at the nearest adjacent intersection must not back up as to the unsignalized driveway);
2. Downstream left turn considerations (right turning vehicles must be able to adequately maneuver into the left turn lane at the nearest adjacent intersection); and
3. Sufficient spacing for major street left turn bays.

4. Discussion of Checklist and Mitigation Measures

There is only one stop controlled driveway that could potentially impact a future signal. This is the proposed right-in and right-out access at driveway 669, which is 600 feet west of the future proposed intersection of Marine Way and Great Park Boulevard West (562). The 600 feet between this driveway and the intersection of Great Park Boulevard West allows sufficient distance to avoid right turn queue interference and adequate distance to merge to the left turn lane, if needed.

TG-10 Left Turn In / Left Turn Out Access

TG-10 provides procedures to determine whether left-in only or left-in/left-out access at unsignalized intersection locations will be considered along Major, Primary, Secondary, and Commuter streets. This procedure has been used along with Highway Capacity Manual unsignalized level of service analysis to determine the appropriate configurations.

Presented in Table 4.15-6 is the Left Turn In and Left Turn Out access analysis for project intersections for Alternatives 4 through 6, which include the 2017 plus Great Park 688 Acre Park Development Plan alternatives. As presented in Table 4.15-6, left turn in and out movements can be accommodated for all alternatives and intersections.

Table 4.15-6. Left Turn In and Out Access Analysis

Alternatives	Int. ID	Intersection Name	Conflicting Left In Volume AM (PM)	Left In Volume AM (PM)	Conflicting Left Out Volume AM (PM)	Left Out Volume AM (PM)	Left In & Out Acceptable
Alternative 4 2017 Base + 688 Acre GP	576	O St./C St. (South)	70 (282)	6 (16)	221 (489)	5 (40)	Yes / Yes
	653	LY St./GP Blvd. (N/S)	10 (30)	21 (163)	50 (200)	5 (3)	Yes / Yes
	655	O St./8 th St.	63 (212)	28 (32)	189 (349)	28 (32)	Yes / Yes
	656	C St./8 th St.	20 (30)	4 (12)	60 (78)	5 (2)	Yes / Yes
Alternative 5 2017 Base + 688 Acre GP + Five Point Option 1	576	O St./C St. (South)	55 (294)	5 (14)	215 (469)	7 (39)	Yes / Yes
	653	LY St./GP Blvd. (N/S)	11 (20)	20 (166)	39 (192)	4 (4)	Yes / Yes
	655	O St./8 th St.	39 (213)	8 (5)	183 (479)	18 (23)	Yes / Yes
	656	C St./8 th St.	19 (48)	2 (17)	37 (40)	4 (1)	Yes / Yes
Alternative 6 2017 Base + 688 Acre GP + Connector Road	576	O St./C St. (South)	111 (237)	6 (14)	168 (311)	6 (31)	Yes / Yes
	653	LY St./GP Blvd. (N/S)	11 (29)	67 (280)	96 (307)	2 (4)	Yes / Yes
	655	O St./8 th St.	47 (162)	4 (7)	130 (231)	29 (31)	Yes / Yes
	656	C St./8 th St.	21 (41)	4 (11)	56 (97)	5 (3)	Yes / Yes

TG-11 Right Turn Lanes at Driveways

Right turn lanes are required at unsignalized driveways on Major, Primary, and Secondary roadways when the turn volumes and through volumes could conflict and increase the potential for accidents. TG-11 provides guidelines for when right turn lanes are required at unsignalized driveways. TG-11 does not require right turn lanes on Commuter roadways.

5. Discussion of Checklist and Mitigation Measures

Ideally, TG-11 should be based on buildout conditions and not interim year 2017 conditions as future year additional traffic might result in a threshold to be exceeded. Therefore, the ultimate improvement should be provided when the project is constructed as presented in Table 4.15-7.

Table 4.15-7. Right Turn Lanes at Driveways (Post 2035 Forecasts)

Alternatives	Int. ID	Intersection Name	Conflicting Left In Volume AM (PM)	Left In Volume AM (PM)	Threshold Exceeded
Alternative 4 Post 2035 Base + 688 Acre GP	576	O St./C St. (South)	8 / 73	200	No
	655	O St./8 th St.	10 / 38	200	No
	663	O St./Ice Rink/Picnic Area	2 / 4	200	No
	669	Marine Way & Parking Area 8 RIRO	10 / 170	100	No*
Alternative 5 Post 2035 Base + 688 Acre GP + Five Point Option 1	576	O St./C St. (South)	4 / 72	200	No
	655	O St./8 th St.	8 / 29	200	No
	663	O St./Ice Rink/Picnic Area	17 / 35	200	No
	669	Marine Way & Parking Area 8 RIRO	10 / 170	100	No*
Alternative 5 Post 2035 Base + 688 Acre GP + Connector Road	576	O St./C St. (South)	8 / 65	200	No
	655	O St./8 th St.	8 / 29	200	No
	663	O St./Ice Rink/Picnic Area	13 / 36	200	No
	669	Marine Way & Parking Area 8 RIRO	10 / 170	100	No*

* A project design feature of a 250-foot right turn pocket is proposed.

There are three project driveways/intersections along “O” Street. “O” Street is designed as a Secondary Highway which requires a right turn lane if either the AM or PM peak hour volumes exceeds 200. Based on the findings of the Traffic Study, right turn volumes are below the threshold and a right turn lane is not required.

At the Marine Way right in/right out driveway (669), located west of Great Park Boulevard that provides access to Parking Area 8, a 250-foot long westbound right turn lane will be provided as a design feature of the Project.

TG-15 Driveway Length

Primary driveways should be of sufficient length to allow vehicles to enter the parking area without causing subsequent vehicles to back out onto City streets. Driveways should be measured from the back of the sidewalk or the stop bar exiting the site to the near curb line of the first intersection parking stall or traffic control measure (internal drive aisle or pedestrian crosswalk) located on site. The minimum driveway length is based on one foot per entering vehicle rounded up to the next 25-foot.

Based on the findings of the Traffic Study, the resulting driveway lengths for each project access are presented in Table 4.15-8.

4. Discussion of Checklist and Mitigation Measures

Table 4.15-8. Driveway Length Requirements

Int. ID	Intersection Name	Alternative 4 post 2035 Base + 688 Acre GP (No Project)		Alternative 5 post 2035 Base + 688 Acre GP + Five Point Option 1		Alternative 6 post 2035 Base + 688 Acre GP + Connector Road	
		Entering AM (PM) Peak Hour Volumes	Minimum Driveway Length	Entering AM (PM) Peak Hour Volumes	Minimum Driveway Length	Entering AM (PM) Peak Hour Volumes	Minimum Driveway Length
653	LY St./GP Blvd. (N/S)	20 (170)	175	20 (170)	175	110 (210)	225
658	Golf Course/LQ St.	50 (50)	50	50 (50)	50	50 (50)	50
659	LY St./Parking Area 2	56 (102)	125	58 (91)	100	54 (104)	125
660	Parking Area 7 North/GP Blvd. (N/S)	21 (171)	175	21 (172)	175	20 (150)	150
661	Parking Area 7 South/GP Blvd. (N/S)	2 (2)	25	2 (2)	25	2 (21)	25
662	Ice Rink/Picnic Area/LV St.	6 (8)	25	7 (6)	25	6 (7)	25
663	O St./Ice Rink/Picnic Area	50 (70)	75	50 (70)	75	50 (70)	75
664	C St./Picnic Area 4 (North)	36 (37)	50	37 (85)	100	35 (37)	50
665	C St./Parking Area 4 (South)	20 (42)	50	4 (34)	50	20 (40)	50
666	GP Blvd. (N/S)/Parking Area 6	11 (181)	200	11 (181)	200	10 (180)	200
667	C St./Parking Area 5 (North)	1 (3)	25	2 (2)	25	2 (2)	25
668	C St./Parking Area 5 (South)	10 (80)	100	9 (80)	100	9 (90)	100
670	GP Blvd. (N/S) Parking Area 8	20 (200)	200	20 (200)	200	20 (200)	200
671	Parking Area 9 (West)/GP Blvd. (E/W)	120 (132)	150	120 (130)	150	120 (130)	150
672	Parking Area 9 (Middle)/GP Blvd. (E/W)	125 (132)	150	125 (131)	150	123 (140)	150
673	Parking Area 9 (East)/GP Blvd. (E/W)	120 (140)	150	120 (140)	150	124 (130)	150

Special Issues – Alternative Access to Parking Areas 3 and 4

The analysis evaluated two “T” intersection access locations on “C” Street to Parking Area 4 (664 and 665) and one access to Parking Area 3 (675). None of the three intersections warranted a signal, all had acceptable levels of service, and all met each of the Transportation Guidelines (TG).

As part of the design process for the OCGP, an alternative has been proposed to create two full access intersections along “C” at 664 and 665 that would provide access to both Parking Area 3 and 4. With this alternative, the intersection at 675 would be eliminated.

To determine if the proposed access alternative would result in any impacts, a sensitivity analysis was conducted which includes the following:

1. Post 2035 Project Intersection and Driveway Geometry
2. Signal Warrant Analysis (TG-13)
3. Intersection Level of Service Analysis
4. TG-1: Turn Lane Pocket Lengths
5. TG-8: Distance Between Driveways and Intersections

5. Discussion of Checklist and Mitigation Measures

6. TG-10: Left Turn In/Out Access
7. TG-11: Right Turn Lanes at Driveways
8. TG-15: Driveway Length

Project Intersection and Driveway Geometry

The proposed project intersection and driveway geometry for the “C” Street north intersection (664) and south intersection (665) is presented in Figure VIII-1 of the Traffic Study. As presented, these intersections would include one lane for all approaches that provide for left, through and right turn movements. “C” Street would not be stop controlled, but all driveway approaches from Parking Area 3 and 4 would be stop controlled.

Signal Warrant Analysis (TG-13)

A signal warrant analysis was conducted for both intersections as presented in Appendix F of the Traffic Study and intersection lane geometrics as presented in Figure VIII-1 of the Traffic Study. The Signal Warrant worksheets for each alternative and intersection are included in Appendix F of the Traffic Study. As presented in Table 4.15-9, neither intersection warrants a signal.

Table 4.15-9. Special Issue - “C” Street and Parking Areas 3 & 4 Signal Warrant Analysis

Int. ID	Intersection Name	AM Peak Hour Volumes		PM Peak Hour Volumes		Signal Warrant
		(Dir)	(Dir)	(Dir)	(Dir)	
664	C St./Parking Area 3 & 4 North	120 (NB/SB)	7 (WB)	126 (NB/SB)	69 (WB)	No
665	C St./Parking Area 3 & 4 South	100 (NB/SB)	5 (EB)	114 (NB/SB)	46 (WB)	No

Intersection Level of Service Analysis

An unsignalized intersection level of service analysis was conducted for each of the two intersections. The Level of Service work sheets are presented in Appendix F of the Traffic Study and the resulting intersection level of service at each intersection is presented in Table 4.15-10.

Table 4.15-10. Special Issue – “C” Street and Parking Areas 3 & 4 Intersection LOS

Int. ID	Intersection Name	Control	Special Issue – Parking Areas 3 & 4 Intersection Level of Service Analysis	
			(Dir)	(Dir)
664	C St./Parking Area 3 & 4 North	TWSC	9.7 / 10.0 Seconds	A / B
665	C St./Parking Area 3 & 4 South	TWSC	9.4 / 9.3 Seconds	A / A

As presented, both intersections will operate at acceptable level of service.

4. Discussion of Checklist and Mitigation Measures

TG-1 Turn Lane Pocket Lengths

The length of left turn lanes is based on peak hour left turn volumes for intersections which warrant left turn lanes. The aligned intersections of 664 and 665 along “C” Street operate with acceptable levels of service with single lane that serves left, through and right turns. Therefore, determining the length of the turn lane is not required.

TG-8 Distance Between Driveways and Intersections

Driveway and intersection spacing requirements are provided in TG-8. The minimum separation for driveways and intersections on Commuter Streets is 150 feet and for Local Streets is 105 feet. As presented in Figure VIII-2 of the Traffic Study, the distances between the “C” Street and Parking Area 3 & 4 North and Parking Area 3 & 4 South exceeds the minimum requirements for a Commuter or Local Street. These two driveways also exceed the minimum distance requirements between “C” Street and “LV” Street and “C” Street and 8th Street.

TG-10 Left Turn In/Out Access

TG-10 determines whether left-in only or left-in/left-out access at unsignalized intersection locations will be considered along Major, Primary, Secondary, and Commuter streets.

Presented in Table 4.15-11 is the Left Turn In and Left Turn Out access analysis for the “C” Street driveways and Parking Area 3 and 4 North and Parking Area 3 and 4 South. As presented, both intersections will accommodate forecast left in and out turn movements.

Table 4.15-11. Special Issue – TG-10: Left Turn In/Out Access

Int. ID	Intersection Name	Conflicting Left In Volume AM (PM)	Left In Volume AM (PM)	Conflicting Left Out Volume AM (PM)	Left Out Volume AM (PM)	Left In & Out Acceptable
664	C St./Parking Area 3 North	67 / 34	- / -	113 / 182	1 / 1	Yes / Yes
	C St./Parking Area 4 North	18 / 25	33 / 35	114 / 120	2 / 5	Yes / Yes
665	C St./Parking Area 3 South	60 / 23	2 / 1	99 / 154	1 / 5	Yes / Yes
	C St./Parking Area 4 South	31 / 88	7 / 2	100 / 113	1 / 2	Yes / Yes

TG-11 Right Turn Lanes at Driveways

Right turn lanes are required on major, primary and secondary roadways if peak hour right turn volumes exceed the TG’s minimum volume warrant. “C” Street is a Commuter roadway and right turn lanes are not required.

TG-15 Driveway Length

Primary driveways should be of sufficient length to allow vehicles to enter the parking area without causing subsequent vehicles to back out onto City streets. The minimum driveway length is based on one

5. Discussion of Checklist and Mitigation Measures

foot per entering vehicle rounded up to the next 25-foot. The resulting driveway lengths for the Parking Area 3 and 4 North and the Parking Area 3 and 4 South on “C” Street are presented in Table 4.15-12.

Table 4.15-12. Special Issue – TG-15: Drive Length

Int. ID	Intersection Name	Entering AM (PM) Peak Hour Volumes	Minimum Driveway Length
664	C St./Parking Area 3 North	12 (18)	25
	C St./Parking Area 4 North	39 (39)	50
665	C St./Parking Area 3 South	9 (12)	25
	C St./Parking Area 4 South	23 (44)	50

Special Issues – Alternative Travel Modes

Pedestrian and Bicycle Circulation

When complete, the OCGP will include a comprehensive trail network for bicyclist and pedestrians. The proposed bicycle and pedestrian connectivity plan is illustrated in Figure VIII-1 of the Traffic Study. As presented, the Project will include an internal trail network, Class I (Off-Street) trails, as well as other off-street trails.

Pedestrian and bicycle connections are also available along the Timeline. Bicycles are considered as part of the mixed-flow on the Timeline and are not intended to be confined to a specified bicycle lane. Pedestrian connections are provided between existing uses in the Western Sector Park Development Plan and to future development areas in the OCGP.

Almost the entire pedestrian network provides the user the ability to walk without having to cross any major roadways.

General Plan Policies (A, B, and C)

At buildout, the OCGP will provide a comprehensive trail network for pedestrians and bicyclists. In the interim condition, with the development of the OCGP 688 Acre Park Development Plan, the initial elements of the plan framework will be developed.

Objective B-3, Pedestrian Circulation

- ***Policy (a):*** Link residences with schools, shopping centers, and other public facilities, both within a planning area and to adjacent planning areas, through an internal system of trails.

Bicycle connections between the OCGP and neighborhood residences, schools, shopping centers, and other public facilities are important. The project includes an extensive internal trail network and will provide connections to regional trails, as well as the surrounding Great Park Neighborhoods development.

4. Discussion of Checklist and Mitigation Measures

- **Policy (b):** *Require development to provide safe, convenient, and direct pedestrian access to surrounding land uses and transit stops. Issues such as anticipated interaction between pedestrians and vehicles, proposed infrastructure improvements and design standards shall be considered.*

Presented in the Connectivity Plan (Figure VIII-1 of the Traffic Study) are locations of pedestrian entry points and potential transit stops. These entry points and transit stops are connected to the park through the extensive hierarchy of pedestrian and bicycle trails.

- **Policy (c):** *Design and locate land uses to encourage access to them by non-automotive means.*

The project proposes an extensive internal pedestrian and bicycle system, which will provide easy pedestrian and bicycle connections from one area of the park to another. Several large parking areas are provided rather than many smaller lots, allowing visitors to park and access various uses through other non-automotive means. Non-automotive access is facilitated by regional transit opportunities via the Irvine Station and OCTA will be encouraged to provide direct drop offs to the park, additionally the City's trail system will provide multiple points of access to park uses.

Objective B-4, Bicycle Circulation

Similar the discussion above, the OCGP has an extensive system of all types of bicycle trails and paths for bicyclist. The OCGP 688 Acre Park Development Plan provides the second phase of the improvements along with the Western Sector Park Development Plan area, and will be complemented with the future Cultural Terrace.

- **Policy (a):** *Use the Trails Network diagram as a basis for detailed planning of the bicycle trail system. Detailed planning shall occur though the development process outlined in the City's Zoning and Subdivision Ordinances.*

The internal bicycle and pedestrian system provides connections to Class I (Off-Street) and Class II (On-Street) trails consist with the City of Irvine trail network.

- **Policy (b):** *Require a system of bicycle trails, both on and off street, in each planning area. Such trails shall be linked to the system shown in Figure B-4. The on street trails shall be designed for the safety of the cyclist.*

The internal trail system is consistent with trail network shown on General Plan Figure B-4 (Trails Network). The internal bicycle trails within the OCGP has minimal vehicle conflicts for increased level of safety. These paths are integrated with the existing development from the Western Sector Park Development Plan. Where bicycle trails interact with vehicles, appropriate classification design will be implemented.

- **Policy (c):** *The trail system shall be designed to accommodate cyclists of all levels of experience and shall provide for both recreation and transportation.*

5. Discussion of Checklist and Mitigation Measures

The bicycle paths and trails will provide opportunities for all levels of experience from the easy and safe cycling along a Class I Trail.

- **Policy (d):** *Require bicycle trail linkages between residential areas, employment areas, schools, parks, community facilities, commercial centers and transit facilities.*

Class I (Off-Street) Trails as well as other pedestrian trails will be provided as a part of the development of the OCGP. These trails provide linkages connecting to the City's existing trail system and expanded trail network for future development areas such as the Irvine Station, surrounding Great Park Neighborhoods development and commercial uses nearby.

- **Policy (e):** *Require pedestrian and bicycle circulation plans detailing access to the subject property and adjacent properties in conjunction with new development.*

The OCGP Pedestrian and Bicycle network will provide connections to the Great Park Neighborhoods development and to the future Marine Way improvements.

- **Policy (f):** *Require the bicycle trip destinations, including community facilities, commercial centers, and transit facilities to be equipped with appropriate bicycle facilities, including but not limited to the provision of showers and bike racks.*

The OCGP is a recreational destination with extensive bike trail connectivity to the park and trails within the park for bike use; therefore, it will include bicycle facilities, including bike racks within the park. In addition, the OCGP will participate in the future "Orange Bike Program" which emphasizes connecting the Great Park Neighborhoods to the OCGP.

- **Policy (g):** *Require traffic control devices and traffic signal phasing for bicycle crossing, turning and through movements.*

No traffic control devices, such as traffic signals, are proposed within the OCGP 688 Acre Park Development Plan.

- **Policy (h):** *Require grade separated crossing for Class I bikeways at major intersections, wherever feasible, to increase safety and efficiency.*

No grade separated crossings are proposed.

- **Policy (i):** *Provide off-street bicycle trails in areas with minimal cross traffic, such as open space spine, flood control and utility easements where possible.*

As stated previously, the entire OCGP will provide a comprehensive off-street bicycle path and trails network with very limited cross traffic.

- **Policy (j):** *Support programs to increase public awareness of bicycle safety and bicycling as an alternative mode of transportation.*

4. Discussion of Checklist and Mitigation Measures

A wide-variety of programs will be offered through the OCGP to educate the public on alternative modes of transportation. Bicycling and bicycling safety will be an important topic, which will be available at various events and kiosks located around the park as well as a bike sharing program.

- ***Policy (k):*** *Incorporate, where appropriate, school and park locations within the design of the bikeway system.*

The OCGP is a park and incorporates a comprehensive bikeway system.

Transit

Transit is an important element of the transportation mobility opportunities for the OCGP. With buildout of the OCGP, transit will provide regional and local access to and from the park. The OCTA bus transit service will be both permitted and encouraged to enter the OCGP and provide passenger drop-offs and pick-ups at the various sites. Special transit service for key events is also anticipated.

Riding and Hiking

There are no proposed riding or hiking trails within the OCGP 688 Acre Park Development Plan. However, these facilities are proposed in subsequent phases of development.

Conclusions and Recommendations of the Traffic Study

Based on the OCGP 688-acre Park Development Plan Traffic Study, the following findings are summarized.

- The OCGP 688 Acre Park Development Plan will generate approximately 5,444 daily trips. This trip generation will not result in significant impacts to the local and regional roadway network.
- Under existing conditions, there are six links where the existing traffic volume to capacity ratio exceeds the City Standards. Based on the peak hour volume to capacity ratios, all six links are within City level of service standards. The proposed OCGP 688-acre Park Development Plan does not result in any additional links to fail the City volume to capacity ratio standards.
- Based on the Existing Conditions ICU level of service analysis, there are no intersections that exceed the City of Irvine level of service standards. All intersections continue to operate at acceptable conditions with the addition of the OCGP 688-acre Park Development Plan traffic.
- Based on Alternative 3, the 2017 Baseline alternative without the OCGP 688-acre Park Development Plan (i.e., 2017 No Project), there are 23 arterial links which will have volume to capacity ratios which exceed the daily thresholds. Based on the peak hour link analysis, all 23 links will result in acceptable peak hour volume to capacity ratios.
- There are no additional links that will exceed the daily thresholds with any of the 2017 OCGP 688-acre Park Development Plan alternatives. All 23 peak hour links will result in acceptable peak hour volume to capacity ratios.

5. Discussion of Checklist and Mitigation Measures

- Based on the 2017 Conditions ICU level of service analysis, there are no intersection level of service impacts from the proposed Project.
- There are six intersections in which signalization is assumed in the 2017 Base No Project condition: Intersections 558 – Ridge Valley/"O" Street at Irvine Boulevard; Intersection 559 - "O" Street at Trabuco; Intersection 561 – "LY" Street at Irvine Boulevard; Intersection 560 – "O" Street at Marine Way; Intersection 572 – Modjeska-A Street at Irvine Boulevard; and Intersection 577 - Pusan Way-Z Street at Irvine Boulevard. The signalization of these six intersections is previously identified in the 2011 GPN VTTM Traffic Study as being needed for interim-year conditions.
- The OCGP 688 Acre Park does not warrant any additional signals with the Baseline 2017 plus 688 Acre OCGP alternatives. At "O" Street and 8th Street, while a signal is currently not warranted, the permanent location of a future Fire Station in the vicinity will likely require that this intersection be signalized. At "O" Street and "C" Street, while a signal is also currently not warranted, the left in/left out analysis for Post 2035 (see OCGP Access Study) presents left turn volumes that exceed thresholds. A traffic signal would provide the necessary gaps to address the left turn volumes and therefore should be considered. The ultimate determination of traffic signals at these locations is subject to the review and approval of the City Engineer."
- For Marine Way at Great Park Boulevard (562), dual 250-foot eastbound turn lanes are a design feature of the Project.
- The OCGP 688 Acre Park Development Plan as proposed will accommodate adequate signal spacing between signalized intersections (TG-7), adequate distance between driveways and intersections (TG-8), and adequate corner clearance (TG-9). All proposed left turn in and out intersections and driveways are acceptable.
- At the Marine Way right in/right out driveway located west of Great Park Boulevard (669), a 250-foot westbound right turn lane is a design feature of the Project.

The Traffic Study analyzed the potential impacts from the OCGP 688-acre area, which includes the Bosque and Sports Park Districts where the proposed Modifications to the OCGP Improvement Area occur; and therefore, it includes the traffic and access related impacts of the proposed Project. Additionally, the proposed Project, reducing the number of sports courts, expanding passive recreational area, relocating some of the Improvement Area components to optimize visibility, access and efficiency, and assessing adequacy of parking plan, would not introduce new uses that would impact traffic, circulation and access within the proposed Project area. Therefore, the traffic related impacts of the proposed Modifications to the OCGP Improvement Area would be less than significant.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the OCGP FEIR. The proposed Modifications to the OCGP Improvement Area, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the OCGP FEIR.

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No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the Modifications to the OCGP Improvement Area or otherwise available indicating substantial changes in circumstances that would require major changes to the OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project would have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the proposed project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant transportation/circulation-related effects identified in and considered by the OCGP FEIR.

4.15.4 Mitigation from the OCGP FEIR and Applicability to the Modifications to the OCGP Improvement Area

The OCGP FEIR identified Mitigation Measures TRAN1 through TRAN8 which, if fulfilled prior to specified development approvals, would eliminate or substantially reduce the traffic and circulation effects of development under the adopted Master Plan. The SEIR proposed that several mitigation measures from the certified OCGP FEIR be deleted (because they have been completed or they are no longer necessary in light of the NITM Program and new mitigation measures being proposed for Modified Project-specific impacts identified in the Traffic Study for the Modified Project). Mitigation Measure TRAN 1 would be carried forward for this project; however, it was modified by the City and approved as shown with 2nd AVTTM 17008 (PC Resolution 11-3109). References to PA 30 were proposed to be removed since the 2012 Modified Project's proposed GPA/ZC consolidated PAs 30 and 51 into one PA to be designated Combined PA 51.

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

TRAN1 Prior to the approval of any final map of a subsequent subdivision map (other than a financing and conveyance map) for any land use, excluding single family land uses (single family land use includes single family detached and single family attached projects), parks, schools, daycare, and religious institutions, that allocates building intensity within Combined Planning Area 51, the landowner or subsequent project applicant shall either (i) apply for annexation of

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any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) ("Spectrumotion") in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs, to reduce traffic, air quality and noise impacts or (ii) develop and implement a similar transportation management plan containing the elements and meeting the criteria described below as approved by the Director of Public Works. The transportation management plan shall be implemented via payment of assessment dues to an organization similar to Spectrumotion for all land uses, with the exceptions noted above. While affordable housing units will be included, their assessment fees will be covered by other remaining adjacent land uses. The implementation (payment of assessment dues) for either option described above shall occur prior to issuance of building permit(s):

Transportation Management Plan (TMP)

The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for Combined Planning Area 51. This document summarizes the key elements of the TMP.

A. Introduction

The purpose of this document is to provide an outline for a comprehensive TMP for the Combined Planning Area 51 ("Great Park TMP"). This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.

The applicant may elect to annex Combined PA 51 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, non-profit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.

In the event that applicant elects not to annex into Spectrumotion, a TMP similar to that provided by Spectrumotion will be developed and implemented. This document sets forth the components of the TMP should it be necessary.

B. Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

New Hire Orientation: Inform newly-hired employees of commuting services available to them.

Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services (i.e., OCTA buses, Metrolink, Amtrak, etc.).

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Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.

Onsite Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.

Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.

Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.

Website: Maintain a website with all of their program information available.

Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.

Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.

Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.

C. Transportation Management Plan Implementation

As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Combined PA 51. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.

TRAN2 Following adoption of a land use plan and circulation plan for the Great Park property and before the issuance of any building permits within the base property, the City of Irvine shall request a cooperative study with OCTA and other affected jurisdictions to amend the Orange County Master Plan of Arterial Highways (MPAH). Marine Way, Trabuco Road from the SR-133 toll way to "O" Street/(formerly College Road), and Ridge Valley (formerly Y Street) should be included on the MPAH.

TRAN3 Prior to issuance of the first building permit for dwelling units or non-residential square footage, a Fee Reallocation Study shall be completed to recalculate the NITM Fees, reflecting any fair share allocation modifications. The landowner or subsequent property owner shall submit the Fee Reallocation Study under a separate cover to be approved by the Director of Public Works in consultation with the NITM Advisory Committee.

TRAN4 Prior to approval of the last final map for the Modified Project (or any portion thereof in the event that the final map is approved in multiple phases), the landowner or subsequent property owner shall pay the costs of the following mitigation in an amount to be mutually agreed upon

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between the landowner or subsequent property owner and the City and reflective of the costs of the mitigation at the time of payment:

- 286 Jeffrey Road & Roosevelt: Restripe the eastbound approach to provide a shared through/right turn lane.
- 361 Bake Parkway & Portola Parkway: Restripe the northbound approach to provide a share through/left lane (which currently exists as a through lane) and modify the traffic signal for a north/south split phase signal operation. Alternatively, restripe the northbound approach to provide dual left-turn lanes in combination with a single through lane and single right-turn lane, and modify signal operation to include northbound right-turn overlap phase.
- 374 Lake Forest & Portola Parkway (Pending Projects analysis impact): Convert the existing northbound approach from de-facto right-turn to a dedicated right-turn, and modify the existing traffic signal operation to include right-turn overlap phase.

The following additional mitigation measures were proposed in the SSEIR:

TRAN5 (For specific Project-related non-NITM improvements): In conjunction with the submittal of any tentative tract maps/tentative parcel maps for the Project within Combined PA 51, the landowner or subsequent project applicant shall prepare, subject to review and approval of the City, the required tentative tract map/tentative parcel map (TTM/TPM) level traffic study per City Resolution No. 03-61. This Traffic Study will verify whether the intersection locations listed below, which have been identified as impacted in this SSEIR, are projected to be impacted by the subject project of the Interim Year Analysis. For those intersections impacted by subject project of the TTM/TPM Traffic Study, the tentative tract map/tentative parcel map will be conditioned to construct the necessary improvements that have been identified in the TTM/TPM Traffic Study. For those intersections listed below, which are not projected to be impacted by the subject project of the TTM/TPM Traffic Study, and prior to approval of the last final map for the 2012 Modified Project (or any portion thereof in the event that the final map is approved in multiple phases), the land owner or subsequent property owner shall construct, pay fair share of the costs or enter into an agreement with the City to establish the mechanism in which the funds generated by the fair share mitigations shall be provided and utilized by Caltrans, City of Lake Forest, City of Tustin and/or City of Irvine toward implementing the improvements.

- 16. Newport & Irvine – Modification of signal to provide a northbound right turn overlap phase. (2030, Option 2) Improvement no longer needed if Pending projects are approved.
- 54. Browning & Irvine – Application of ATMS, subject to approval by City of Tustin. (2030, Options 1 & 2)
- 221. Culver & Bryan – Addition of a westbound defacto right turn lane. (2030, Option 2) Improvement no longer needed if Pending projects are approved.

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- 286. Jeffrey & Roosevelt – Conversion of the eastbound shared through/right lane into a through lane and addition of a second right turn lane. (Post-2030, Options 1 & 2)
- 290. Jeffrey & Barranca – Application of PA9C-identified ATMS. (2030. Options 1 & 2)
- 291. Jeffrey & Alton – Provision of an eastbound standard right-turn lane with right-turn overlap resulting in an ultimate eastbound lane configuration of 2 left-turn lanes, 2 through lanes, and 1 right-turn lane. (Post-2030, Options 1 & 2)
- 303. Sand Canyon & I-5 NB ramp/Marine Way – Conversion of the northbound defacto right turn lane to a standard right turn lane with right turn overlap signal operation. (2030, Options 1 & 2)
- 306. Sand Canyon & Oak Canyon - Fair Share contribution towards – conversion of the westbound shared through/right lane to a single through lane and conversion of the westbound right-turn lane into a free-right turn lane, as identified in the PA40/12 GPA/ZC. (2030, Options 1 & 2) Improvement no longer needed if Pending projects are approved.
- 321. Laguna Canyon & Old Laguna Canyon – Application of ATMS, subject to approval by the Director of Public Works. Alternate improvement is the addition of a fourth northbound through lane. (Post-2030, Options 1 & 2) Improvement no longer needed if Pending projects are approved.
- 366. Bake & Rockfield – Fully funded LFTM improvement: Conversion of a westbound through lane to a third left turn lane. (2030, Options 1 & 2)

TRAN6 (For specific Project-related NITM improvements): The NITM Program provides a funding mechanism for the coordinated and phased installation of required traffic and transportation improvements established in connection with land use entitlements for City of Irvine Planning Areas 1, 5, 6, 8, 9, 40 and 51. As established by City Ordinance No. 03-20, Combined PA 51 is included in this program and, as such, is required to pay its fair share towards the List of NITM Improvements included within the established NITM Program. The following Project impacted locations are included in the NITM List of Improvements and thus, payment of NITM fees will mitigate the Combined PA 51 project's fair share responsibility towards these improvements:

- 228. Culver & Barranca – Conversion of the westbound defacto right-turn lane to a through lane. (2030, Options 1 & 2)
- 424. Los Alisos & Rockfield – Addition of a southbound right turn lane. (2030, Option 1)
- I-5 Northbound Off-ramp to Jamboree – Addition of a second drop lane from the I-5 to the Jamboree off-ramp. (2030, Option 1)

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TRAN7 (If pending projects are approved, Project-related non-NITM improvements): In the event that all of the pending (not approved) projects analyzed are approved and in conjunction with the submittal of any tentative tract maps/tentative parcel maps for the Project within Combined PA 51, the landowner or subsequent project applicant shall prepare, subject to review and approval of the City, the required tentative tract map/tentative parcel map (TTM/TPM) level Traffic Study per City Resolution No. 03-61. This Traffic Study will verify whether the intersection locations listed below, which have been identified as impacted in this SSEIR, are projected to be impacted by the subject project of the Interim Year Analysis. For those intersections impacted by subject project of the TTM/TPM Traffic Study, the tentative tract map/tentative parcel map will be conditioned to construct the necessary improvements that have been identified in the TTM/TPM Traffic Study. For those intersections listed below, which are not projected to be impacted by the subject project of the TTM/TPM Traffic Study, and prior to approval of the last final map for the 2012 Modified Project (or any portion thereof in the event that the final map is approved in multiple phases), the land owner or subsequent property owner shall construct, pay fair share of the costs or enter into an agreement with the City to establish the mechanism in which the funds generated by the fair share mitigations shall be provided and utilized by Caltrans, City of Lake Forest, City of Tustin and/or City of Irvine toward implementing the improvements.

- 54. Browning & Irvine – Application of ATMS, subject to approval by City of Tustin. (2030, Options 1 & 2)
- 286. Jeffrey & Roosevelt – Conversion of the eastbound shared through/right lane into a through lane and addition of a second right turn lane. (Post-2030, Options 1 & 2)
- 290. Jeffrey & Barranca – Application of PA9C-identified ATMS.
- 291. Jeffrey & Alton – Provision of an eastbound standard right-turn lane with right-turn overlap resulting in an ultimate eastbound lane configuration of 2 left-turn lanes, 2 through lanes, and 1 right-turn lane. (2030 & Post-2030, Options 1, Post-2030, Option 2)
- 303. Sand Canyon & I-5 NB ramp/Marine Way – Conversion of the northbound defacto right turn lane to a standard right turn lane with right turn overlap signal operation. (2030, Options 1 & 2)
- 366. Bake & Rockfield – Fully funded LFTM improvement: Conversion of a westbound through lane to a third left turn lane. (2030, Options 1 & 2)
- 417. El Toro & Portola – Fully funded LFTM improvement: Addition of a southbound right turn overlap phase. (2030, Options 1 & 2)

TRAN8 (If pending projects are approved, For specific Project-related NITM improvements): The NITM Program provides a funding mechanism for the coordinated and phased installation of required traffic and transportation improvements established in connection with land use

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entitlements for City of Irvine Planning Areas 1, 5, 6, 8, 9, 40 and 51. As established by City Ordinance No. 03-20, Combined PA 51 is included in this program and, as such, is required to pay its fair share towards the List of NITM Improvements included within the established NITM Program. In the event that all of the pending (not approved) projects analyzed are approved, the following Project impacted locations are included in the NITM List of Improvements and thus, payment of NITM fees will mitigate the Combined PA 51 project's fair share responsibility towards these improvements:

- 228. Culver & Barranca – Conversion of the westbound defacto right-turn lane to a through lane. (2030, Options 1 & 2)
- I-5 NB Off-ramp to Jamboree – Addition of a second drop lane from the I-5 to the Jamboree off-ramp. (2030 & Post-2030, Option 1 & 2)

TRAN9 (Caltrans Fair Share): Prior to approval of the last final map for the 2012 Modified Project (or any portion thereof in the event that the final map is approved in multiple phases), the land owner or subsequent property owner shall make a good-faith effort to enter into a fair share agreement with Caltrans and the City of Irvine to establish its fair share allocation towards the future implementation of the following freeway facility improvements. It may not be possible for the City of Irvine to successfully negotiate the agreement. Fair share contribution shall be calculated using the same methodology for determining fair share contributions as included in the North Irvine Transportation Mitigation Program. The Agreement shall establish the mechanism in which the funds generated by the Project's fair share mitigations shall be provided and utilized by Caltrans and/or City of Irvine toward implementing the following improvements:

- I-5 Northbound, north of Culver – Directional capacity enhancement equivalent to a single general purpose lane. (2030, Options 1 & 2)
- I-5 Northbound, north of Jeffrey – Directional capacity enhancement equivalent to a single general purpose lane. (2030, Options 1 & 2) Improvement no longer needed if Pending projects are approved.
- I-405 Northbound, north of Jeffrey – Directional capacity enhancement equivalent to a single general purpose lane. (2030 and Post-2030, Options 1 & 2) Improvement no longer needed if Pending projects are approved.

TRAN10 (If pending projects are approved, Caltrans Fair Share): In the event that all of the pending (not approved) projects analyzed are approved, and prior to approval of the last final map for the 2012 Modified Project (or any portion thereof in the event that the final map is approved in multiple phases), the land owner or subsequent property owner shall make a good-faith effort to enter into a fair share agreement with Caltrans and the City of Irvine to establish its fair share allocation towards the future implementation of the following freeway facility improvements. It may not be possible for the City of Irvine to successfully negotiate the agreement with Caltrans. Fair share contribution shall be calculated using the same methodology for determining fair share contributions as included in the North Irvine Transportation Mitigation Program. The Agreement shall establish the mechanism in which

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the funds generated by the Project's fair share mitigations shall be provided and utilized by Caltrans and/or City of Irvine toward implementing the following improvements:

- SR-133 northbound loop on-ramp at Barranca Parkway – Conversion of the HOV preferential lane to a second metered mixed-flow lane (2015, Option 2)
- I-5 Northbound, north of Culver – Directional capacity enhancement equivalent to a single general purpose lane. (2030, Options 1 & 2)

TRAN11 (Rockfield MPAH Amendment) The City of Irvine shall submit a request to OCTA and other affected jurisdictions to amend the Orange County Master Plan of Arterial Highways (MPAH) to eliminate the extension of Rockfield Boulevard from the eastern project boundary to Marine Way.

TRAN12 (If Rockfield MPAH Amendment not approved by OCTA) In the event that the Rockfield MPAH change does not occur and the Rockfield connection to Marine Way is ultimately constructed, and in addition to previously identified Post-2030 Option 1 improvements, the land owner or subsequent property owner shall enter into a fair share agreement with the City of Irvine to establish its fair share allocation towards the future implementation of the conversion of the HOV preferential lane at the SR-133 northbound loop on-ramp at Barranca Parkway to a second metered mixed-flow lane. The fair share contribution shall be calculated using the same methodology for determining fair share contributions as included in the North Irvine Transportation Mitigation Program. For Option 2, the mitigations as indicated in TRAN5 through TRAN10 remain unchanged in the event that the Rockfield MPAH change does not occur and the Rockfield connection to Marine Way is ultimately constructed.

Additionally, the SSEIR identified the following PDF to help reduce or avoid potential traffic impacts. The following PDF, as applicable, will be incorporate into the proposed Project upon project implementation:

PDF 12-1 The 2012 Modified Project's optional conversion of non-residential square footage to residential units, if implemented, will be subject to a traffic analysis to assess traffic impacts, if any, due to the specific changes in land use and will include a reduction in allowable Multi-Use intensity in terms of equivalent traffic generation (excluding DB units) based on AM peak, PM peak, and ADT. Conversions to other non-residential uses within the Multi-Use category, if implemented, will also be subject to a traffic analysis to assess traffic impacts, if any, and shall be reflected in terms of equivalent traffic generation based on AM peak, PM peak, and ADT.

4.16 UTILITIES AND SERVICE SYSTEMS

4.16.1 Environmental Setting

Potable Water

The Irvine Ranch Water District (IRWD) is the purveyor of potable and non-potable water service to the project site. IRWD is a multiservice agency that provides potable and non-potable water supply and wastewater collection, treatment, and disposal services to a population of approximately 266,000, within

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an area covering 84,610 acres (132 square miles). PA 51 is within Zone 3 North, Zone 4, and Zone 5 of the IRWD water system. The existing on-site distribution system includes a network of distribution system pipelines, six reservoirs, and two pump stations. The original water system for the former MCAS El Toro property was designed and built as a stand-alone system. Currently, IRWD supplies potable water through four metered connections that connect to the IRWD Zone 3 North and Zone 4 water system. The on-site existing distribution system consists of a network of distribution system pipelines, six reservoirs, and two pump stations.

Recycled Water

The IRWD is the jurisdictional agency responsible for water service for the project area. Recycled water is currently supplied to PA 51 via a 12-inch IRWD Zone B pipeline that connects to an eight-inch pipeline in the southwest corner of the project area. PA 51 lies within three separate IRWD recycled water system pressure zones, including Zone B East Irvine, Zone C East Irvine, and Zone D AMP East.

Sewer

The IRWD is the jurisdictional agency responsible for sewer service for the project area. Wastewater treatment is provided by IRWD's Michelson Wastewater Reclamation Plant (MWRP) that has a capacity of 28 mgd. PA 51 is served by a two-branched system with flow from the northeast to the southwest, mainly by gravity. The system includes a series of pipes ranging from 6- to 15-inches in diameter. The sewer discharge exits PA 51 at the southwest boundary of the project site, flows through the system, and discharges through the San Diego Creek Interceptor on the north side of the San Diego (I-405) Freeway.

Solid Waste

OC Waste & Recycling (OCWR) is the regulating agency that operates the local Orange County landfills, including the Frank R. Bowerman Landfill, located in the City. Waste Management of Orange County is the private contract waste hauler for all residential developments in Irvine. Solid waste at the project site is collected by Waste Management, Inc., and is disposed of at the Frank R. Bowerman Landfill. The average daily rate of disposal for the Frank R. Bowerman landfill is 5,500 tpd, with a maximum daily permitted capacity of 11,500 tpd. This landfill has capacity through year 2053.

Energy and Communications

Southern California Edison (SCE) serves the project area via two primary substations, and the Southern California Gas Company (SCGC) provides natural gas to the project area. AT&T is the telephone service provider. Cox Communications provides cable video, data, and telephone service to south Orange County, including Irvine.

4.16.2 Impacts Identified in the OCGP FEIR

Potable Water

The OCGP FEIR projected the potable water demand to be less than 1.75 million gallons per day (MGD) calculated for the land uses proposed within the project. As stated in the OCGP FEIR, selected portions

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of the existing potable water facilities are assumed to remain in place and operational through project buildout. The OCGP FEIR stated that the existing system will be expanded and integrated into the IRWD system and thus provide a backbone service to all users on the project site. The OCGP FEIR assumed a potable water system that would follow the routing of existing and proposed roadways.

The SSEIR concluded that even though the 2012 Modified Project would increase water consumption, the 2011 SAMP included a Sensitivity Analysis which considered development of up to 9,500 residential units. Subsequent demand projections for the 2012 Modified Project were not considered significant changes in comparison to the 2011 SAMP. Therefore, no significant changes to the planned on-site water infrastructure were considered necessary to serve the 2012 Modified Project, and it was further indicated that there was sufficient supply capacity to accommodate full buildout through 2032, upon completion of under development supplies.

Recycled Water

The OCGP FEIR stated that on January 27, 2003, the IRWD Board of Directors approved the assessment of water supply for the project. According to the findings of the assessment, the IRWD has determined that a sufficient non-potable water supply is available to serve the project. Since the proposed Modifications to the OCGP Improvement Area do not increase the intensity or change the mix of land uses, the total non-potable water supplies will meet the demand.

The OCGP FEIR stated that the implementation of the project would require the expansion of the recycled water transmission lines to serve the project. It was assumed that selected on-site facilities would remain in place and operational through buildout. The OCGP FEIR stated that the existing system will be expanded and integrated into the IRWD system and provide a backbone service to all users in the project site. The OCGP FEIR assumed a non-potable system that would follow the routing of existing and proposed roadways within the project.

The SSEIR concluded that the demand for recycled water decreased compared to previous projects due to the removal of the golf course. Therefore, no impact related to increased demand was anticipated, and it was further indicated that there was sufficient recycled water supply capacity to accommodate full buildout through 2032, upon completion of under development supplies.

Sewer

The OCGP FEIR stated that the IRWD will continue to provide sewer service to the project. The IRWD has indicated that it would have sufficient capacity to meet the future demand; however, additional wastewater treatment capacity may need to be purchased by project proponents as specific development projects come forward. The OCGP FEIR indicated that projected buildout demand for sewer services based on the land uses in the project were 0.89 MGD and that the project would require an increase of sewer transmission capacity to serve the project. The proposed sewer system would preserve selected, existing on-site facilities in place, remain operational through buildout and expand the system through extension of existing sewer lines. The OCGP FEIR stated that additional IRWD maintenance and equipment could be required to operate and maintain the proposed system.

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The adopted Master Subdivision Map ensured that any projected use of the existing sewer system would be in conformance with all applicable regional and state requirements and the mitigation requirements of the OCGP FEIR and addenda. It included the alignment for the sewer lines throughout the project, which was an additional project design detail and did not change the project description.

The SSEIR indicated that IRWD has adequate wastewater treatment capacity for the 2012 Modified Project's estimate wastewater generation. Therefore, development of the project would not require construction of new or expanded wastewater treatment facilities.

Although the 2012 Modified Project would increase wastewater generation, the 2011 SAMP included a Sensitivity Analysis which considered development of up to 9,500 residential units. Subsequent demand projections for the 2012 Modified Project were not considered significant changes in comparison to the 2011 SAMP. Therefore, no significant changes to the planned on-site sewer infrastructure were considered necessary to serve the 2012 Modified Project.

Solid Waste

As stated in OCGP FEIR, demolition of existing runways, buildings, and structures within Planning Area 51 will generate debris materials that would have to be disposed of at local landfills. Green waste would also be generated as a result of ongoing park and landscaping maintenance. In addition to the City requirement for recycling of construction and demolition material to reduce waste, solid waste reduction would also be achieved through compliance with AB 939, which requires that a minimum of 50 percent of the solid waste generated in cities in California be diverted from landfills. Further, SB 1374 requires that all cities implement measures that would divert 75 percent of all construction and demolition waste from landfills. While the OCGP FEIR identified a potential impact related to solid waste, it concluded that, with the recommended, City-adopted mitigation measures, the impact would be less than significant.

The SSEIR indicated that the 2012 Modified Project would increase the amount of solid waste generated and would increase the demand for solid waste services, there was adequate capacity at the Frank R. Bowerman Landfill to accommodate the 2012 Modified Project and cumulative development.

Energy and Communications

The Overlay Plan has proposed to install the new systems generally along a route that coincides with the existing and proposed roadway within the project. A portion of the routing, (specifically the portion along the "loop road") is not included in the project and would require an adjustment to the routing system for the expansion of the dry utilities system. However, the expansion of the system would generally coincide with the existing and proposed roadways consistent with the OCGP FEIR. The OCGP FEIR further stated that the specific impacts of constructing new energy and communication transmission facilities could not be determined at the program level analysis, as site-specific plans for the installation of the energy and communication transmission backbone system have not been prepared. The general significant impacts associated with the construction and operation of public facilities, including the project's construction and operation of the transmission system, were addressed in the OCGP FEIR.

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The SSEIR concluded that the no impacts related to energy and communications were anticipated and that the energy and communications providers indicated there was adequate capacity to serve the 2012 Modified Project as well as cumulative development in the area.

4.16.3 Impacts Associated with the Modifications to the OCGP Improvement Area

The proposed modifications, consisting of modifications to the OCGP Improvement Area reducing the number of sports courts, expanding passive recreational area, relocating some of the Improvement Area components to optimize visibility, access and efficiency, and assessing adequacy of parking plan further enhance the use and efficiency of the existing features. The proposed Project would not result in new uses that would impact or alter provision of utilities and service systems or create additional demand on existing level of service.

Potable Water

The modifications to the OCGP Improvement Area do not propose additional development intensity. Therefore, the demand projection for potable water is consistent with the OCGP FEIR. No additional mitigation measures or change in any mitigation measure is required. The OCGP FEIR further stated that specific environmental impacts of the proposed Project on the existing and planned MWD facilities, as well as specific impacts of constructing new potable water facilities could not be determined at the program level analysis and project-level environmental review at the time that specific development plans have been prepared would be required. The general significant impacts associated with the proposed Project's construction and operation of public facilities has been addressed in the OCGP FEIR; and therefore, the proposed Project would not demand increased supplies or require construction of new water treatment facilities that would create an impact on the environment.

Recycled Water

The modifications to the Improvement Area do not propose any additional development intensity, and the total non-potable water supplies would meet the project demand, as analyzed in the OCGP FEIR. The OCGP FEIR further stated that the specific environmental impacts of constructing the new recycled water facilities could not be determined at the General Plan level analysis as specific site plans and locations have not been prepared. However, the general significant impacts associated with the proposed Project's construction and operation of public facilities has been addressed in the OCGP FEIR; and therefore, the proposed Project would not demand increased supplies or require construction of new water treatment facilities that would create an impact on the environment.

Sewer

The modifications to the OCGP Improvement Area do not propose any additional development intensity. Therefore, demand projections and proposed system expansion would remain the same. The OCGP FEIR further stated that the specific environmental impact of constructing new sewer facilities to serve the project cannot be determined at the program level analysis, as site-specific plans for the installation of the sewer backbone system had not been prepared. However, the general significant impacts associated with the construction and operation of public facilities, including the project's construction and operation of the sewer system, has been addressed in the OCGP FEIR. Therefore, the proposed Project would not

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result in increased demand for wastewater treatment exceeding the requirements of the applicable Regional water Quality Control Board or require construction of new wastewater treatment facilities that would create an impact on the environment.

Solid Waste

As stated in OCGP FEIR, demolition of existing runways, buildings, and structures within Planning Area 51 would generate debris materials that would have to be disposed of at local landfills. Green waste would also be generated as a result of ongoing park and landscape maintenance. The proposed Project would not change the land uses or intensity of the uses; therefore, no change in impact to solid waste is anticipated as a result of the modifications to the Improvement Area. Additionally, there is adequate capacity at the Frank R. Bowerman Landfill to accommodate the solid waste disposal demand of the proposed Project.

Energy and Communications

The OCGP FEIR stated that the specific impacts of constructing new energy and communication transmission facilities could not be determined at the program level analysis, as site-specific plans for the installation of the energy and communication transmission backbone system have not been prepared. The analysis and conclusions in the OCGP FEIR do not change since the proposed Project does not introduce new land uses that would increase demand on energy and communications infrastructure. Additionally, the proposed Project, consisting of modifications to the OCGP Improvement Area reducing the number of sports courts, expanding passive recreational area, relocating some of the Improvement Area components to optimize visibility, access and efficiency, and assessing adequacy of parking plan would reduce demand on electricity within the proposed Project area. The general significant impacts, associated with the construction and operation of public facilities, were addressed in the OCGP FEIR.

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the changes to the project require a major change to the OCGP FEIR. The proposed Modifications to the OCGP Improvement Area, which do not include any major change to the park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor is there a substantial increase in the severity of impacts from that described in the OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the Modifications to the OCGP Improvement Area or otherwise available indicating substantial changes in circumstances that would require major changes to the OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP EIR or result in a substantial increase in the severity of previously identified effects.

5. Discussion of Checklist and Mitigation Measures

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that; (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant effects identified in and considered by the OCGP FEIR.

4.16.4 Mitigation from the OCGP FEIR and Applicability to the Modifications to the OCGP Improvement Area

The OCGP FEIR determined the mitigation measures identified in other sections of the OCGP FEIR (5.1-5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of facilities for the following types of utilities to serve the project area:

- potable water
- recycled water
- wastewater
- energy and communication transmission facilities

Mitigation Measures SW1 through SW5 apply to future demolition and new construction, and would be carried forward through permit approvals for subsequent development projects.

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

SW1 It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other deconstruction of the aged structures and property, including but not limited to buildings and runways, at MCAS El Toro is contaminated with lead-based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the MCAS El Toro site by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.

4. Discussion of Checklist and Mitigation Measures

If it is determined by the technical evaluation that material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as "waste-to-energy" (WTE) plants.

SW2 For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant must submit a written plan to the City and implement such plan to ensure that 75% of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.

SW3 For that solid waste which the technical study deems to be suitable for recycling, the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75% of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180 ("Recycling" does not include transformation, as defined in Public Resources Code Section 40201).

SW4 To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by "weight ticket" receipts from state-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.

To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.

SW5 For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50% of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.

The SSEIR identified the following measures as existing PPPs that apply to the proposed Project and will help reduce or avoid potential utilities and service system impacts:

Of the PPPs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

5. Discussion of Checklist and Mitigation Measures

Water

PPP 13-1 Requirement to Use Recycled Water: Irvine Ranch Water District (IRWD) will identify areas within the Sub Area Master Plan that are capable of receiving service from the IRWD's recycled water system, and will determine the feasibility of providing recycled water service to these areas. IRWD will also review applications for new permits to determine the feasibility of providing recycled water service to these applicants. If recycled water service is determined by IRWD to be feasible, applicants for new water service shall be required to install on-site facilities to accommodate both potable water and recycled water service in accordance with IRWD's Rules and Regulations.

PPP 13-2 Connection Fees: The Project Applicant shall enter into agreement or agreements as necessary with IRWD to establish the appropriate financial fair share costs to be borne by the project proponent. Fair share costs may include, but are not limited to, those associated with the preparation of studies necessary to analyze the needs of the 2012 Modified Project and infrastructure expansion necessary to serve the 2012 Modified Project.

PPP 13-3 Fire Flow Analysis: In accordance with IRWD requirements, each tentative tract map in the 2012 Modified Project must provide a fire flow analysis. If the analysis identifies any deficiencies, the developer will be responsible for any water system improvements associated with the development project required to rectify the deficiencies and meet IRWD fire flow requirements.

Wastewater

PPP 13-2 is applicable.

Solid Waste

PPP 13-4 The City Construction and Demolition (C&D) Debris Recycling and Reuse ordinance requires that 1) all residential projects of more than one unit, 2) nonresidential developments on 5,000 square feet or larger, and 3) nonresidential demolition/renovations with more than 10,000 square feet of building recycle or reuse a minimum of 75 percent of concrete and asphalt and 50 percent of nonhazardous debris generated.

PPP 13-5 The City adopted a Zero Waste program in 2007 to approach waste management. The City recovers approximately 66 percent of its waste for recycling and composting, which exceeds the state's AB 939 waste diversion goals. Furthermore, waste haulers establish rate schedules according to bin size and frequency of collection. Commercial customers that subscribe to smaller bins (e.g., 2 cubic-yard bins) are routinely charged less by haulers. This pricing structure encourages waste reduction and recycling, and tends to minimize hauler pickups.

PPP 13-6 The Irvine Sustainable Community Initiative (Initiative Ordinance 10-11), adopted by the voters of the City as Initiative Measure S on November 2, 2010, and certified by the City Council on December 14, 2010, became effective December 24, 2010. The ordinance was adopted to ratify and implement policies in support of renewable energy and environmental

4. Discussion of Checklist and Mitigation Measures

programs for a sustainable community. It outlines the City's direction for continuing to develop and implement programs geared towards green building, renewable energy and sustainability. For example, the City would continue to develop and implement recycling, zero waste or other innovative onsite business programs to divert waste from landfills and also continue to develop and implement the use of native, California-friendly and drought-tolerant landscaping.

PPP 13-7 Prior to the issuance of grading permits for a project that involves the demolition of an asphalt or concrete parking lot on site, the applicant shall submit a waste management plan demonstrating compliance with the requirements of Title 6, Division 7 of the City of Irvine Municipal Code relating to recycling and diversion of demolition waste as applicable to said project. Over the course of demolition or construction, the applicant shall ensure compliance with all code requirements related to the use of City-authorized waste haulers (Standard Condition 2.24).

PPP 13-8 Prior to the issuance of building permits for a project that involves new construction or that involves the demolition or renovation of existing buildings on site, the applicant shall comply with requirements of Title 6, Division 7 of the City of Irvine Municipal Code relating to recycling and diversion of construction and demolition waste as applicable to said project. Over the course of demolition or construction, the applicant shall ensure compliance with all code requirements related to the use of City-authorized waste haulers (Standard Condition 3.7).

Energy and Communications

PPP 4-3 California's Building and Energy Efficiency Standards (CCR Title 24): Prior to the issuance of a building permit for residential, commercial, or office structures in the Proposed Project Site, development plans for these structures shall be required to demonstrate that the project meets the Building and Energy Efficiency Standards in place at the time of building permit issuance. Commonly known as Title 24, these standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2008 standards are approximately 15 percent more energy efficient than the 2005 Building and Energy Efficiency Standards. The 2013 Building Energy Efficiency Standards are 25 percent more efficient than previous standards for residential construction and 30 percent more efficient for nonresidential construction. The 2013 Standards, which take effect on January 1, 2014, offer builders more efficient windows, insulation, lighting, ventilation systems and other features that reduce energy consumption in homes and businesses. Plans submitted for building permits shall include written notes demonstrating compliance with the energy standards and shall be reviewed and approved by the Public Utilities Department prior to issuance of building permits. Design strategies to meet this standard may include maximizing solar orientation for daylighting and passive heating/cooling, installing appropriate shading devices and landscaping, utilizing natural ventilation, and installing cool roofs. Other techniques include installing insulation (high R value) and radiant heat barriers, low-e window glazing, or double-paned windows.

5. Discussion of Checklist and Mitigation Measures

PPP 4-4 Title 24 Code Cycles: Net-Zero Buildings (Residential & Non-Residential): The California Public Utilities Commission adopted its Long-Term Energy Efficiency Strategic Plan on September 18, 2008, presenting a roadmap for all new residential and commercial construction to achieve a zero-net energy standard. This Plan outlines the goal of reaching zero net energy in residential construction by 2020 and in commercial construction by 2030. Achieving this goal will require increased stringency in each code cycle of California's Energy Code (Title 24).

PPP 4-5 California Renewable Portfolio Standard: CARB's Renewable Portfolio Standard (RPS) is a foundational element of the State's emissions reduction plan. In 2002, Senate Bill 1078 established the California RPS program, requiring 20 percent renewable energy by 2017. In 2006, Senate Bill 107 advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II. On September 15, 2009, Governor Arnold Schwarzenegger signed Executive Order S-21-09 directing CARB to adopt regulations increasing RPS to 33 percent by 2020. These mandates apply directly to investor-owned utilities, which in the case of the 2012 Modified Project is Southern California Edison.

The SSEIR also identified the following measures as existing PDFs that apply to the proposed Project and will help reduce or avoid potential utilities and service system impacts.

Of the PDFs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

WATER

PDF 4-3 Low-Flow Fixtures: The 2012 Modified Project incorporates low-flow water fixtures that will meet the requirements of the California Green Building Standards Code standards. Prior to issuance of building permit, the Applicant or its successor shall submit evidence to the satisfaction of the Director of Community Development that toilets, urinals, sinks, showers, and other water fixtures installed on-site are low-flow water fixtures that meet the California Green Building Standards Code standard.

PDF 4-4 Landscaping and Irrigation Systems: The 2012 Modified Project incorporates automated, high-efficiency landscaping irrigation systems on all master landscaped areas that reduce water use, such as evapotranspiration "smart" weather-based irrigation controllers, and bubbler irrigation; low-angle, low-flow spray heads; moisture sensors; and use of a California-friendly landscape palette. Prior to approval of landscape plans, the Applicant or its successor shall submit evidence to the satisfaction of the Director of Community Development that such landscaping irrigation systems will be installed so as to make the 2012 Modified Project consistent with the intent of the California Water Conservation in Landscaping Act of 2006 (AB 1881), including provisions to reduce the wasteful, uneconomic, inefficient, and unnecessary consumption of water.

PDF 4-5 Use of Recycled Water on All Master Landscaped Areas: Prior to approval of landscape plans, the Applicant or its successor shall submit evidence to the satisfaction of the Director of Community Development and IRWD that the 2012 Modified Project incorporates the use of

4. Discussion of Checklist and Mitigation Measures

recycled water in all master landscaped areas, including master landscaped commercial, multifamily, common, roadways, and park areas. Master landscapes will also incorporate weather-based controllers and efficient irrigation system designs to reduce overwatering, combined with the application of a California-friendly landscape palette.

Wastewater

PDF 4-3 is applicable.

4.17 DETERMINATION

Based on the information and analysis in this Initial Study/Addendum, and pursuant to Section 15162 of the State CEQA Guidelines, the City has determined that:

1. There are no substantial changes to the project that will require major revisions to the OCGP FEIR due to new, significant environmental effects or a substantial increase in the severity of impacts identified in the OCGP FEIR;
2. Substantial changes have not occurred in the circumstances under which the project is being undertaken that will require major revisions of the OCGP FEIR to disclose new, significant environmental effects or a substantial increase in the severity of the impacts identified in the OCGP FEIR; and
3. There is no new information of substantial importance not known at the time the OCGP FEIR was approved, augmented, and/or updated that shows any of the following:
 - a. The project will have any new significant effects not discussed in the OCGP FEIR;
 - b. There are impacts that were determined to be significant in the OCGP FEIR that will be substantially increased;
 - c. There are additional mitigation measures or alternatives to the project that would substantially reduce one or more of the significant effects identified in the OCGP FEIR; or
 - d. There are additional mitigation measures or alternatives that were rejected by the project proponent that are considerably different from those analyzed in the OCGP FEIR that would substantially reduce any significant impact identified in that EIR.

5. Discussion of Checklist and Mitigation Measures

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5. Organizations and Persons Consulted

5.1 PREPARERS

CITY OF IRVINE (LEAD AGENCY)

Community Development Department

Eric Tolles	Director of Community Development
Barry Curtis, AICP	Manager of Planning Services
Diane Vu	Senior Planner

City Manager's Office

Michael Ellzey	Assistant City Manager, Great Park
Cliff Wallace	Manager of Real Property and Great Park Site Administration
Derek McGregor	Consultant for Great Park

Rutan and Tucker, LLP

Jeffrey Melching	Assistant City Attorney
------------------	-------------------------

AECOM

John Bridges, FAICP	Principal
Alia Hokuki, AICP	Project Manager
Jane Chang	Environmental Analyst
Jason Paukovits	Environmental Scientist
Jeff Goodson	Environmental Engineer

5. Organizations and Persons Consulted

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Appendix A.

OCGP FEIR Mitigation Monitoring and Reporting Program

*(Available at the City of Irvine, Community Development
Department)*

Appendices

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Appendix B.

Air Quality Emissions Reports by AECOM dated July 2014

Appendices

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Orange County Great Park Approved Plan

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	688.00	Acre	688.00	400,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Estimated square footage for buildings in park area

Construction Phase - No construction emission estimates

Off-road Equipment - No construction emission estimates

Vehicle Trips - Trip rates consistent with the OCGP FEIR, as discussed in the 688 Acre Park Development Plan Traffic Study (LSA 2014)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	420.00	0.00
tblLandUse	LandUseSquareFeet	29,969,280.00	400,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblVehicleTrips	ST_TR	1.59	27.74
tblVehicleTrips	SU_TR	1.59	27.74
tblVehicleTrips	WD_TR	1.59	27.74

2.0 Emissions Summary

[illegible]

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.4666	6.8000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1506	0.1506	4.2000e-004		0.1594
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	55.8394	125.3561	606.7935	1.6237	116.0309	1.7749	117.8058	30.9590	1.6347	32.5937		136,586.4629	136,586.4629	5.1988		136,695.6378
Total	66.3060	125.3568	606.8651	1.6238	116.0309	1.7751	117.8061	30.9590	1.6350	32.5940		136,586.6134	136,586.6134	5.1992	0.0000	136,695.7972

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.4666	6.8000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1506	0.1506	4.2000e-004		0.1594
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	55.8394	125.3561	606.7935	1.6237	116.0309	1.7749	117.8058	30.9590	1.6347	32.5937		136,586.4629	136,586.4629	5.1988		136,695.6378
Total	66.3060	125.3568	606.8651	1.6238	116.0309	1.7751	117.8061	30.9590	1.6350	32.5940		136,586.6134	136,586.6134	5.1992	0.0000	136,695.7972

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2015	12/31/2014	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	55.8394	125.3561	606.7935	1.6237	116.0309	1.7749	117.8058	30.9590	1.6347	32.5937		136,586.4629	136,586.4629	5.1988		136,695.6378
Mitigated	55.8394	125.3561	606.7935	1.6237	116.0309	1.7749	117.8058	30.9590	1.6347	32.5937		136,586.4629	136,586.4629	5.1988		136,695.6378

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	19,085.12	19,085.12	19,085.12	54,918,198	54,918,198
Total	19,085.12	19,085.12	19,085.12	54,918,198	54,918,198

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510449	0.057012	0.191854	0.151889	0.041459	0.005887	0.015572	0.014818	0.001440	0.002145	0.004716	0.000509	0.002251

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	10.4666	6.8000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1506	0.1506	4.2000e-004		0.1594
Mitigated	10.4666	6.8000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1506	0.1506	4.2000e-004		0.1594

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5397					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.9200					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9100e-003	6.8000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1506	0.1506	4.2000e-004		0.1594
Total	10.4666	6.8000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1506	0.1506	4.2000e-004		0.1594

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5397					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.9200					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9100e-003	6.8000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1506	0.1506	4.2000e-004		0.1594
Total	10.4666	6.8000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1506	0.1506	4.2000e-004		0.1594

7.0 Water Detail

7.1 Mitigation Measures Water**8.0 Waste Detail**

8.1 Mitigation Measures Waste**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Vegetation

Orange County Great Park

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	688.00	Acre	688.00	400,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Estimated square footage for buildings in park area

Construction Phase - No construction emission estimates

Off-road Equipment - No construction emission estimates

Vehicle Trips - Trip rates consistent with the 688 Acre Park Development Plan Traffic Study (LSA 2014)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	420.00	0.00
tblLandUse	LandUseSquareFeet	29,969,280.00	400,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblVehicleTrips	ST_TR	1.59	14.58
tblVehicleTrips	SU_TR	1.59	14.58
tblVehicleTrips	WD_TR	1.59	14.58

2.0 Emissions Summary

[illegible]

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.4666	6.8000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1506	0.1506	4.2000e-004		0.1594
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	29.3489	65.8865	318.9275	0.8534	60.9853	0.9329	61.9181	16.2719	0.8592	17.1311		71,789.1359	71,789.1359	2.7325		71,846.5176
Total	39.8155	65.8872	318.9991	0.8534	60.9853	0.9331	61.9184	16.2719	0.8595	17.1314		71,789.2864	71,789.2864	2.7329	0.0000	71,846.6770

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.4666	6.8000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1506	0.1506	4.2000e-004		0.1594
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	29.3489	65.8865	318.9275	0.8534	60.9853	0.9329	61.9181	16.2719	0.8592	17.1311		71,789.1359	71,789.1359	2.7325		71,846.5176
Total	39.8155	65.8872	318.9991	0.8534	60.9853	0.9331	61.9184	16.2719	0.8595	17.1314		71,789.2864	71,789.2864	2.7329	0.0000	71,846.6770

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2015	12/31/2014	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	29.3489	65.8865	318.9275	0.8534	60.9853	0.9329	61.9181	16.2719	0.8592	17.1311		71,789.1359	71,789.1359	2.7325		71,846.5176
Mitigated	29.3489	65.8865	318.9275	0.8534	60.9853	0.9329	61.9181	16.2719	0.8592	17.1311		71,789.1359	71,789.1359	2.7325		71,846.5176

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	10,031.04	10,031.04	10031.04	28,864,720	28,864,720
Total	10,031.04	10,031.04	10,031.04	28,864,720	28,864,720

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510449	0.057012	0.191854	0.151889	0.041459	0.005887	0.015572	0.014818	0.001440	0.002145	0.004716	0.000509	0.002251

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	10.4666	6.8000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1506	0.1506	4.2000e-004		0.1594
Mitigated	10.4666	6.8000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1506	0.1506	4.2000e-004		0.1594

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5397					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.9200					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9100e-003	6.8000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1506	0.1506	4.2000e-004		0.1594
Total	10.4666	6.8000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1506	0.1506	4.2000e-004		0.1594

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5397					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.9200					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9100e-003	6.8000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1506	0.1506	4.2000e-004		0.1594
Total	10.4666	6.8000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1506	0.1506	4.2000e-004		0.1594

7.0 Water Detail

7.1 Mitigation Measures Water**8.0 Waste Detail**

8.1 Mitigation Measures Waste**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Vegetation

Appendix C.

*688 Acre Park Development Plan Traffic Study by LSA
Associates, Inc. dated July 2014*

(Electronic copy attached to this Addendum document)

Appendices

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688 Acre Park Development Plan Traffic Study

July 2014



LSA
LSA ASSOCIATES, INC.

Prepared by:
LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, California 92614

LSA Project No.
OGP1301

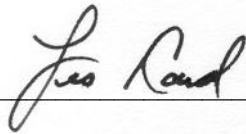
**ORANGE COUNTY GREAT PARK
688 ACRE PARK DEVELOPMENT PLAN
TRAFFIC STUDY**

IRVINE, CALIFORNIA

(CASE NO. 00598937-PMP)

This traffic study has been prepared under the supervision of
Les Card, P.E.

Signed

A handwritten signature in black ink, appearing to read "Les Card", is written over a horizontal line.

L S A

July 8, 2014

ORANGE COUNTY GREAT PARK 688 ACRE PARK DEVELOPMENT PLAN TRAFFIC STUDY

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APPENDIX B – SIGNAL WARRANT ANALYSIS

APPENDIX C – INTERSECTION TURN MOVEMENTS AND LEVEL OF SERVICE

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APPENDIX F – SPECIAL ISSUES – ALTERNATIVE ACCESS TO PARKING AREAS 3 & 4

ORANGE COUNTY GREAT PARK 688 ACRE PARK DEVELOPMENT PLAN PHASE 1 TRAFFIC STUDY

(CASE NO. 00598937-PMP)

I. EXECUTIVE SUMMARY

This Executive Summary presents the findings of a traffic study prepared to determine if there are any potential impacts from the proposed Orange County Great Park (OCGP) 688 Acre Development Plan located in Planning Area 51 in the City of Irvine.

The OCGP is located north of Marine Way, east of future “O” Street, south of Irvine Boulevard, and west of Alton Parkway in the City of Irvine, California. The first phase of development of the OCGP was referred to as the Western Sector Park Development Plan, a majority of which has been constructed and exists today. The proposed 688 Acre Park Development Plan, analyzed here, is the second phase of planned development, which is scheduled for operation within three years of approval and will include sports fields and supportive uses consistent with the approved OCGP Master Plan. Access to the 688 Acre Park Development Plan will be via the existing Marine Way and “C” Street and future access via “O” Street, Trabuco Road, “LV” Street, “LY” Street, and “LQ” Street.

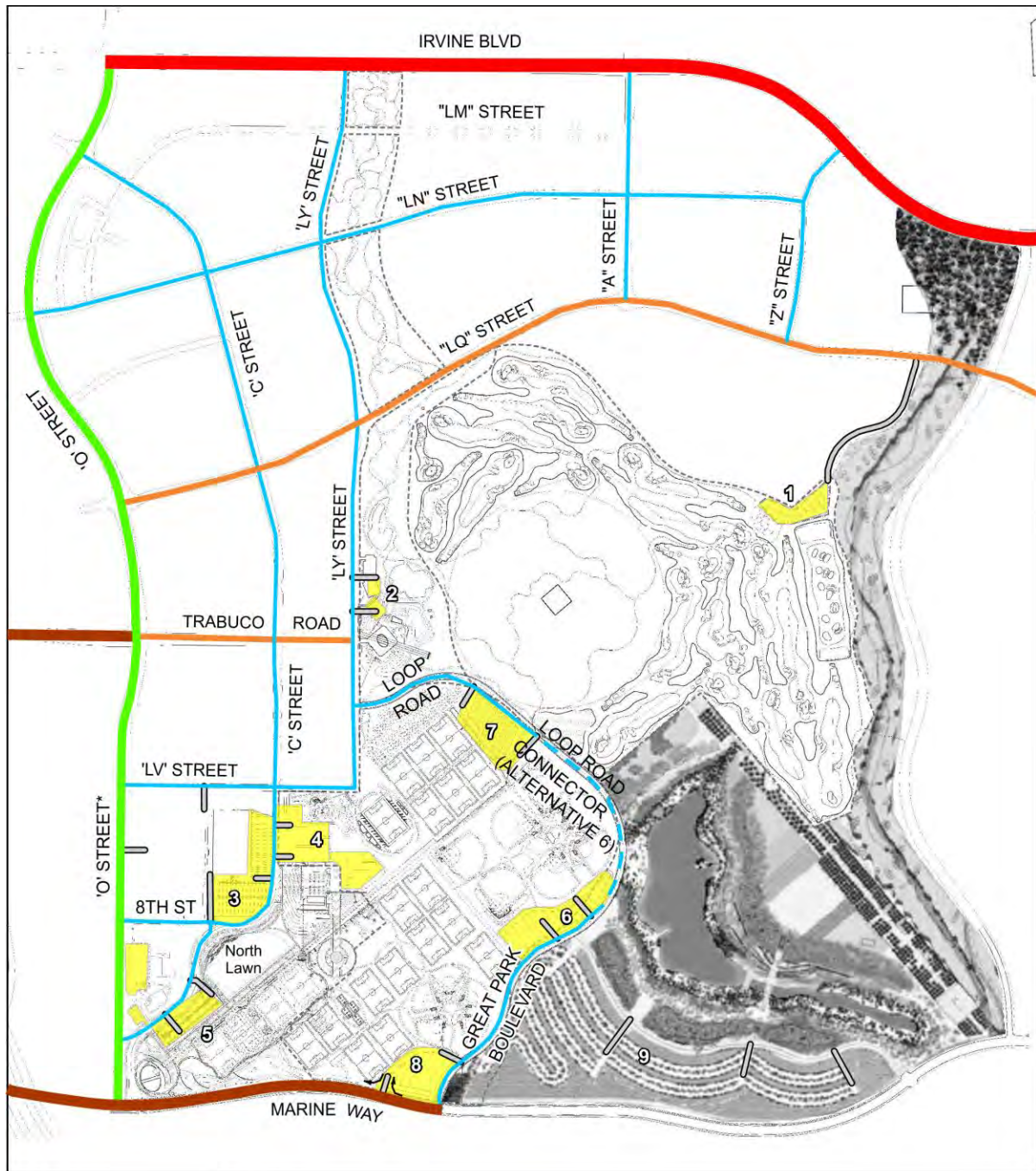
The purpose of the study is to evaluate the potential impacts of the proposed project in general accordance with the North Irvine Transportation Mitigation (NITM) Program per City Council Resolution 03-61 and applicable sections of the City’s Traffic Study Guidelines (updated August 24, 2004) and the City of Irvine Transportation Guidelines (TG) dated July 31, 1993.

This traffic study has been completed per the approved Scope of Work presented in Appendix A. Ongoing communication between the City and LSA staff has occurred throughout this process to assure methodology, ITAM travel demand modeling, and assumptions have been incorporated within this Traffic Study.

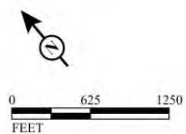
Project Description

The OCGP site is located at the former El Toro Marine Corps Air Station (MCAS). It is bordered by Irvine Boulevard on the north and future Marine Way on the south, “O” Street on the west and the Wildlife Corridor on the east. The project site is illustrated in Figure I-1. It should be noted that the map coverage area does not include the Wildlife Corridor to the east as this use does not generate trips or provide parking access. This figure also includes the roadway hierarchy, access locations, and proposed parking areas within the OCGP.

Figure I-1: Great Park Site Plan and Arterial Street Classification



LSA



LEGEND

Roadway Network

- Major
- Primary
- Secondary
- Commuter
- Local
- Local (Alternative 6)

Parking Areas

1 GP Parking Number

Parking Access

*O' Street between Trabuco Road and Marine Way is currently designated Commuter, but is being designed and constructed as a Secondary Highway.

The first phase of development of the OCGP was the Western Sector Park Development Plan, a majority of which has been constructed and exists today. The proposed OCGP 688 Acre Park Development Plan is the second phase of planned development. The third phase of planned development will be the Cultural Terrace.

The proposed project, this OCGP 688 Acre Park Development Plan, will include sports fields such as soccer fields, baseball/softball fields, an 18-hole golf course and club house, dog park, sand volleyball courts, basketball/sports courts, a mini-amphitheater/stage, tennis courts, spectator seating and support buildings for soccer, baseball and softball events, open space, and other park activities.

Analysis Scope and Methodology

In accordance with the approved Scope of Work (Appendix A), the analysis in this report identifies potential impacts of the proposed project in the project study area based on Existing (2012) and Future Year (2017) traffic conditions using the Irvine Transportation Analysis Model (ITAM 12).

The following summarizes the existing conditions and 2017 base, and the OCGP 688 Acre Park Development Plan alternatives that have been evaluated and included in this traffic study:

1. Existing Conditions
2. Existing plus 688 Acre Park Development Plan
3. 2017 Baseline (No Project) (Assumes Heritage Fields Project Option 2)
4. 2017 Baseline + 688 Acre Park Development Plan
5. 2017 Baseline + 688 Acre Park Development Plan with Heritage Fields Project Option 1
6. 2017 Baseline + 688 Acre Park Development Plan with connector roadway between “LY” Street and Marine Way (Roadway Connection Alternative)

Note that the approved scope of work identified an alternative High School Site B analysis. During the preparation of this document, the Irvine Unified School District closed escrow on the Site A site and has commenced grading operation at this site. Accordingly, Site B is no longer being studied as an alternative to this project.

Summary of Findings

Based on the OCGP 688 Acre Park Development Plan Traffic Study, the following findings are summarized.

- The OCGP 688 Acre Park Development Plan will generate approximately 5,444 daily trips. This trip generation will not result in significant impacts to the local and regional roadway network.
- Under existing conditions, there are six links where the existing traffic volume to capacity ratio exceeds the City Standards. Based on the peak hour volume to capacity ratios, all six

- links are within City level of service standards. The proposed 688 Acre Park Development Plan does not result in any additional links to fail the City volume to capacity ratio standards.
- Based on the Existing Conditions ICU level of service analysis, there are no intersections that exceed the City of Irvine level of service standards. All intersections continue to operate at acceptable conditions with the addition of the OCGP 688 Acre Park Development Plan traffic.
 - Based on Alternative 3, the 2017 Baseline alternative without the OCGP 688 Acre Park Development Plan (i.e., 2017 No Project), there are 23 arterial links which will have volume to capacity ratios which exceed the daily thresholds. Based on the peak hour link analysis, all 23 links will result in acceptable peak hour volume to capacity ratios.
 - There are no additional links that will exceed the daily thresholds with any of the 2017 OCGP 688 Acre Park Development Plan alternatives. All 23 peak hour links will result in acceptable peak hour volume to capacity ratios.
 - Based on the 2017 Conditions ICU level of service analysis, there are no intersection level of service impacts from the proposed project.
 - There are six intersections in which signalization is assumed in the 2017 Base No Project condition: Intersections 558 – Ridge Valley/"O" Street at Irvine Boulevard, Intersection 559 – "O" Street at Trabuco, Intersection 561 – "LY" Street at Irvine Boulevard, Intersection 560 – "O" Street at Marine, Intersection 572 – Modjeska-A Street at Irvine Boulevard and Intersection 577 - Pusan Way-Z Street at Irvine Boulevard. The signalization of these six intersections is similarly identified in the 2011 GPN VTTM traffic study as being needed for interim-year conditions.
 - The OCGP 688 Acre Park does not warrant any additional signals with the Baseline 2017 plus 688 Acre OCGP alternatives. At "O" Street and 8th Street, while a signal is currently not warranted, the permanent location of a future Fire Station in the vicinity will likely require that this intersection be signalized. At "O" Street and "C" Street, while a signal is also currently not warranted, the left in/left out analysis for Post 2035 (see OCGP Access Study) presents left turn volumes that exceed thresholds. A traffic signal would provide the necessary gaps to address the left turn volumes and therefore should be considered. The ultimate determination of traffic signals at these locations is subject to the review and approval of the City Engineer."
 - Marine Way at Great Park Boulevard (562), dual 250-foot eastbound left turn lanes are a design feature of the project..
 - The OCGP 688 Acre Park Development Plan as proposed will accommodate adequate signal spacing between signalized intersections (TG-7), adequate distance between driveways and intersections (TG-8), and adequate corner clearance (TG-9). All proposed left turn in and out intersections and driveways are acceptable.
 - At the Marine Way right in/right out driveway located west of Great Park Boulevard (669), a 250-foot long westbound right turn lane is a design feature of the project.

II. INTRODUCTION

Project Site

The 688 Acre Park Development Plan site is centrally located in the OCGP and is bordered by future Marine Way on the south, Irvine Boulevard to the north, and future “LY” Street on the west. The Wildlife Corridor is located on the easterly edge of the Planning Area 51. The OCGP is surrounded by the Great Park Neighborhoods Development. A project vicinity map is presented in Figure II-1 and a project site plan is presented in Figure II-2.

Traffic Study Boundary

The traffic study boundary is presented in Figure II-1. In general, the traffic study area extends from Jeffrey Road on the west, Bake Parkway on the east, Portola Parkway on the north, and the I-405 freeway to the south. The analysis includes all arterials and major intersections within the study boundary area.

Existing, General Plan, and Proposed Site Uses

The OCGP is within the City of Irvine’s jurisdiction and is owned and being developed by the City of Irvine. The City of Irvine General Plan identifies the land use category for the site as “Orange County Great Park.”

The proposed land uses for the site are consistent with the Orange County Great Park Final Environmental Impact Report (OCGP FEIR) as updated by its prior Addenda and Supplemental EIRs (SEIR and SSEIR). The proposed OCGP 688 Acre Park Development Plan land uses are consistent with the City’s General Plan and Zoning Ordinance.

The first phase of development of the OCGP was the Western Sector Park Development Plan. The proposed OCGP 688 Acre Park Development Plan is the second phase of planned development. The third phase of planned development will be the Cultural Terrace.

The proposed OCGP 688 Acre Park Development Plan will include soccer fields, baseball/softball fields, an 18-hole golf course and club house, dog park, sand volleyball courts, basketball/sports courts, a mini-amphitheater/stage, tennis courts, spectator seating, as well as support buildings for soccer, baseball and softball events, open space and other park activities.

Figure II-1: Project Study Area

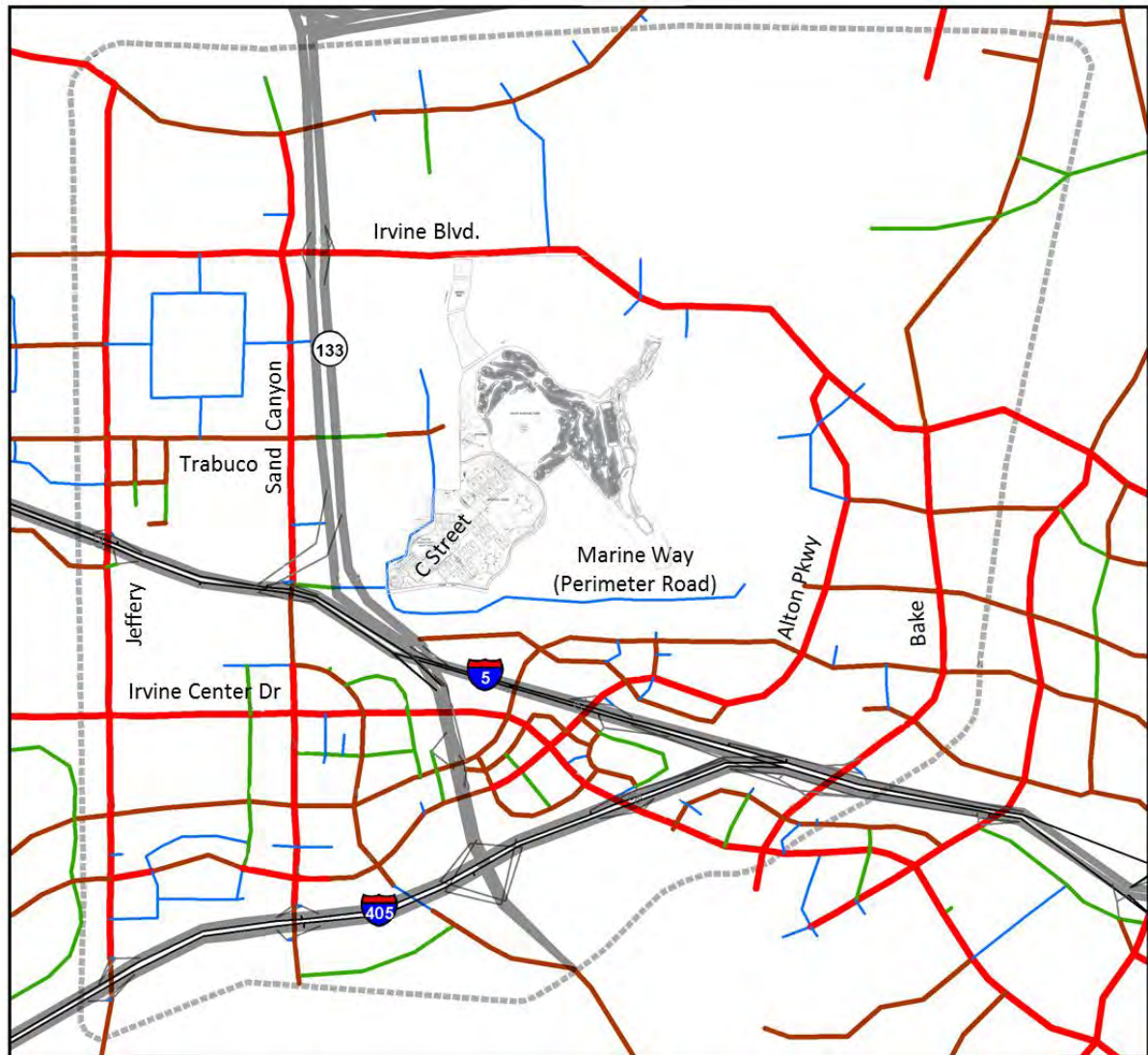
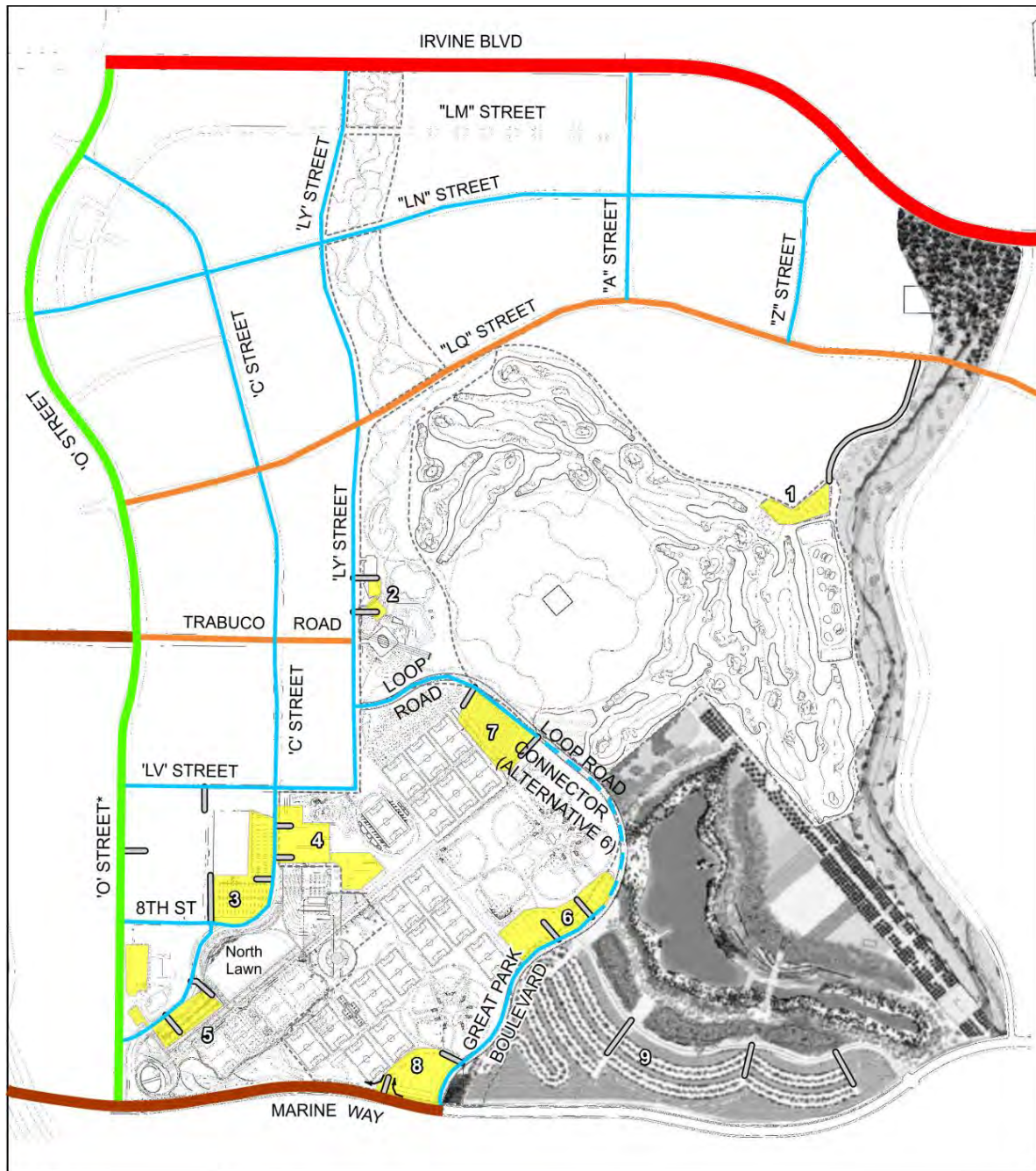
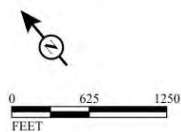


Figure II-2: Project Site Plan



LSA



LEGEND

- Roadway Network
- Major
 - Primary
 - Secondary
 - Commuter
 - Local
 - Local (Alternative 6)

- Parking Areas
- GP Parking Number
- Parking Access

*'O' Street between Trabuco Road and Marine Way is currently designated Commuter, but is being designed and constructed as a Secondary Highway.

III. EXISTING CONDITIONS

Existing Site Uses

In 1993, the El Toro MCAS was listed by the Department of Defense in the Base Realignment and Closure Act for closure by 1999, with the site transferring to civilian control. The OCGP is within the City of Irvine’s jurisdiction and is owned and being developed by the City of Irvine. The Western Sector Park Development Plan area includes the OCGP Balloon, Hangar 244, artist lofts, Central and West Timeline, Farm and Food Lab, the Palm Court, the North Lawn, and parking. In addition, there are existing temporary uses including, Tierra Verde Industries, a composting and electronic recycling operation, special event parking lot, and recreational vehicle storage.

Existing Roadways and Intersections

The existing roadway network which serves the OCGP 688 Acre Park Development Plan is presented in Figure III-1. This figure presents the roadway classification and the existing number of travel lanes. All access to the project connects from Sand Canyon Road and Marine Way. Trabuco Road also connects to the OCGP, however, park uses are not accessible from Trabuco Road at this time. As Marine Way extends east of Sand Canyon, it terminates at the intersection of Marine Way and “C” Street. “C” Street extends north and provides all access to the OCGP 688 Acre Park Development Plan except for some uses which will be accessed via Trabuco Road.

The intersections included in the traffic study are also presented in Figure III-2. These intersections are identified with a three digit intersection identification number. It should be noted that not all intersections currently exist, but will be added as part of the 2017 analysis.

Presented in Figure III-3 are the existing intersection geometrics for each of the intersections included in the traffic study. These figures present the number of left, through, and right turn lanes.

Figure III-1: Existing Roadway Network

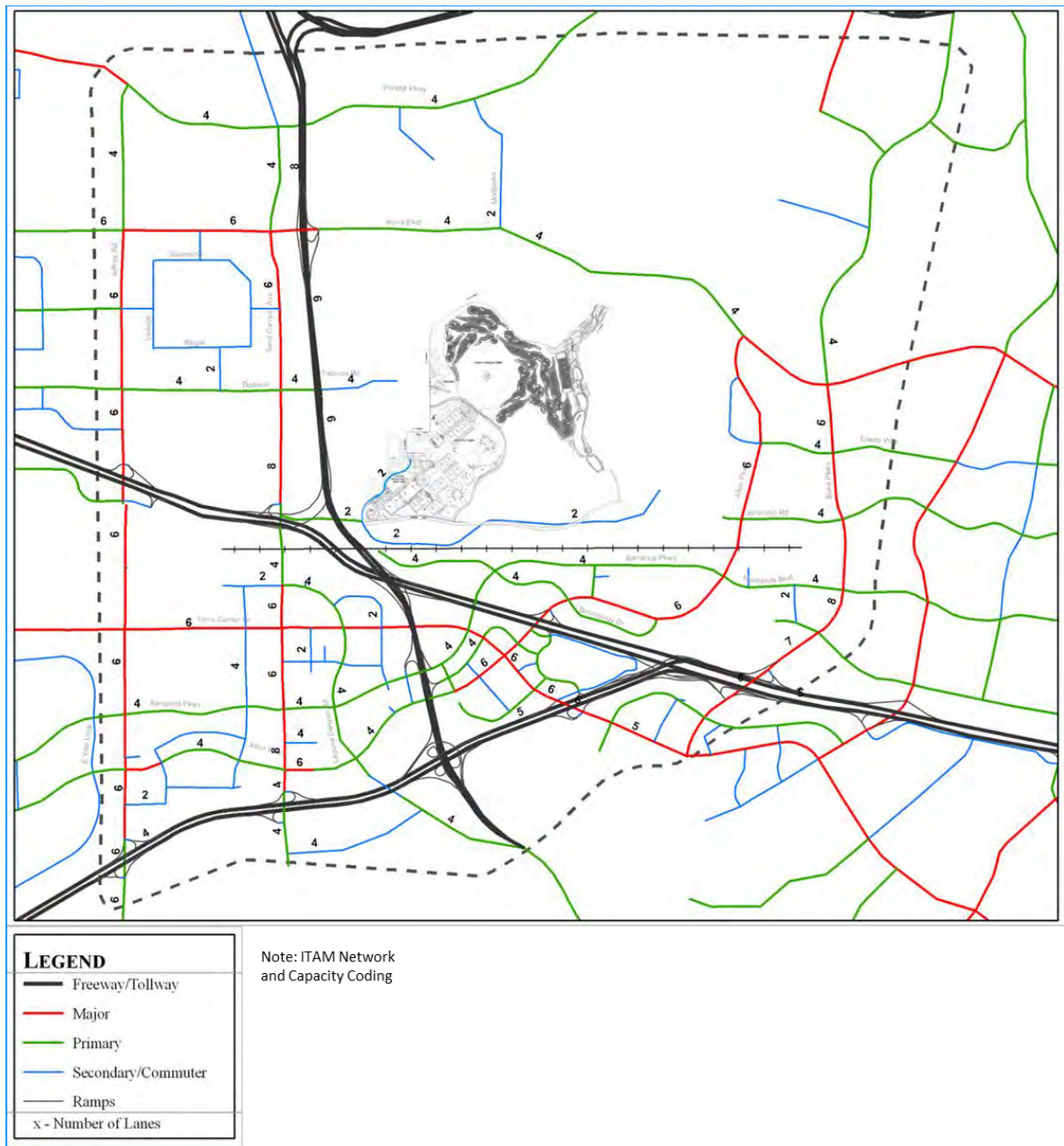


Figure III-2: Traffic Study Area Intersections



Note: Intersections that will exist in 2017.

Figure III-3: Existing Intersection Geometry

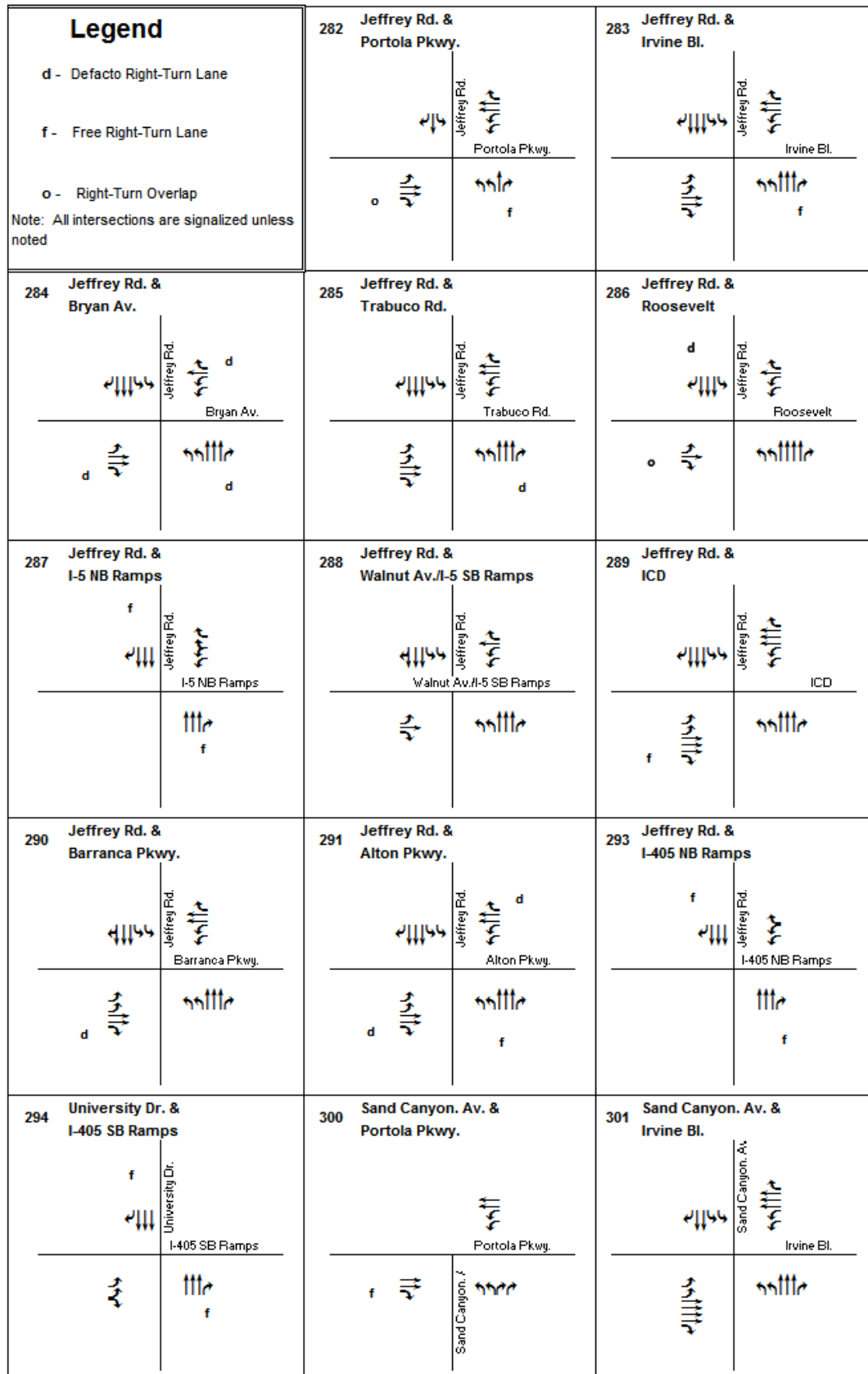


Figure III-3: Existing Intersection Geometry (Continued)

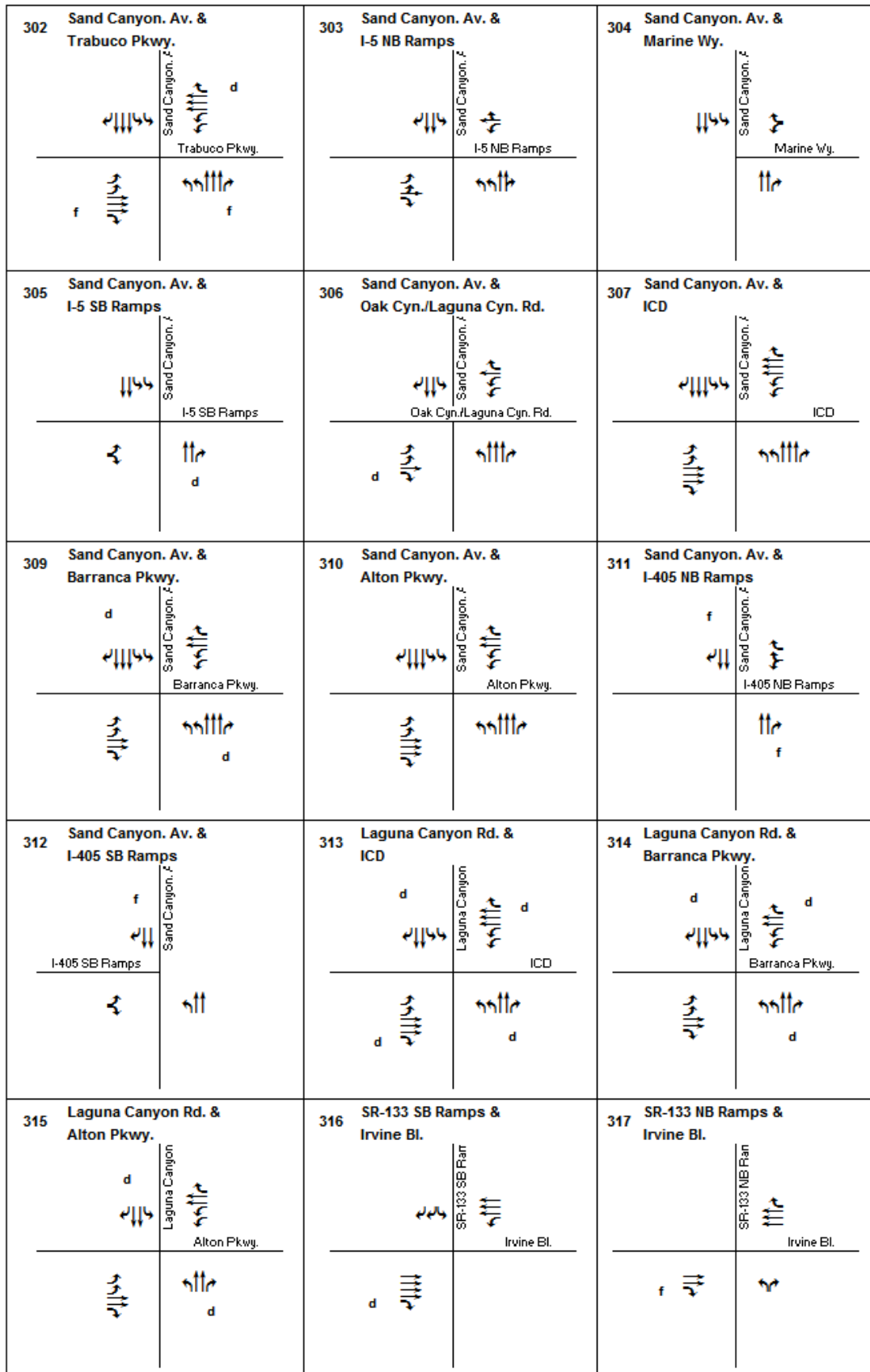


Figure III-3: Existing Intersection Geometry (Continued)

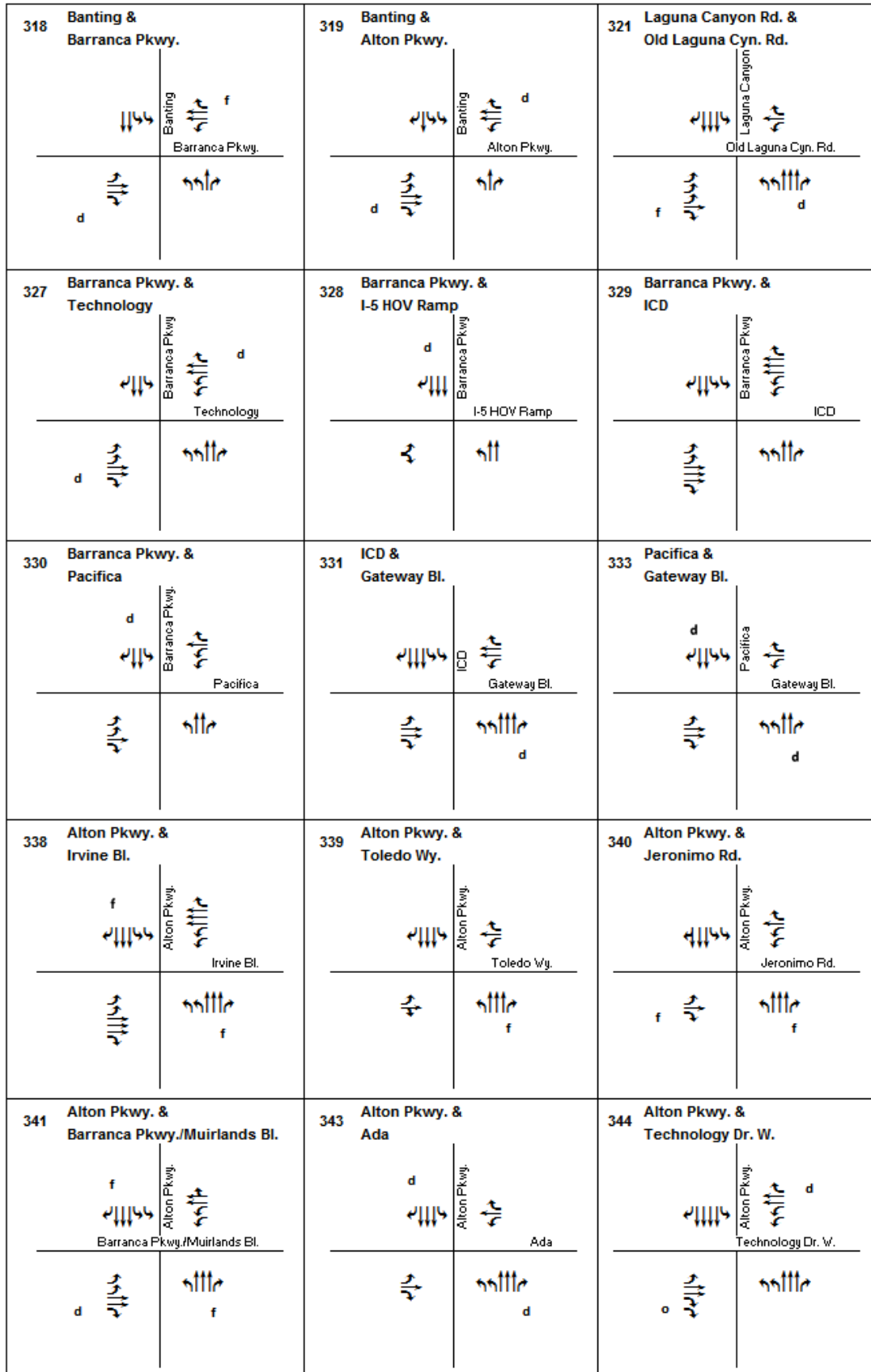


Figure III-3: Existing Intersection Geometry (Continued)

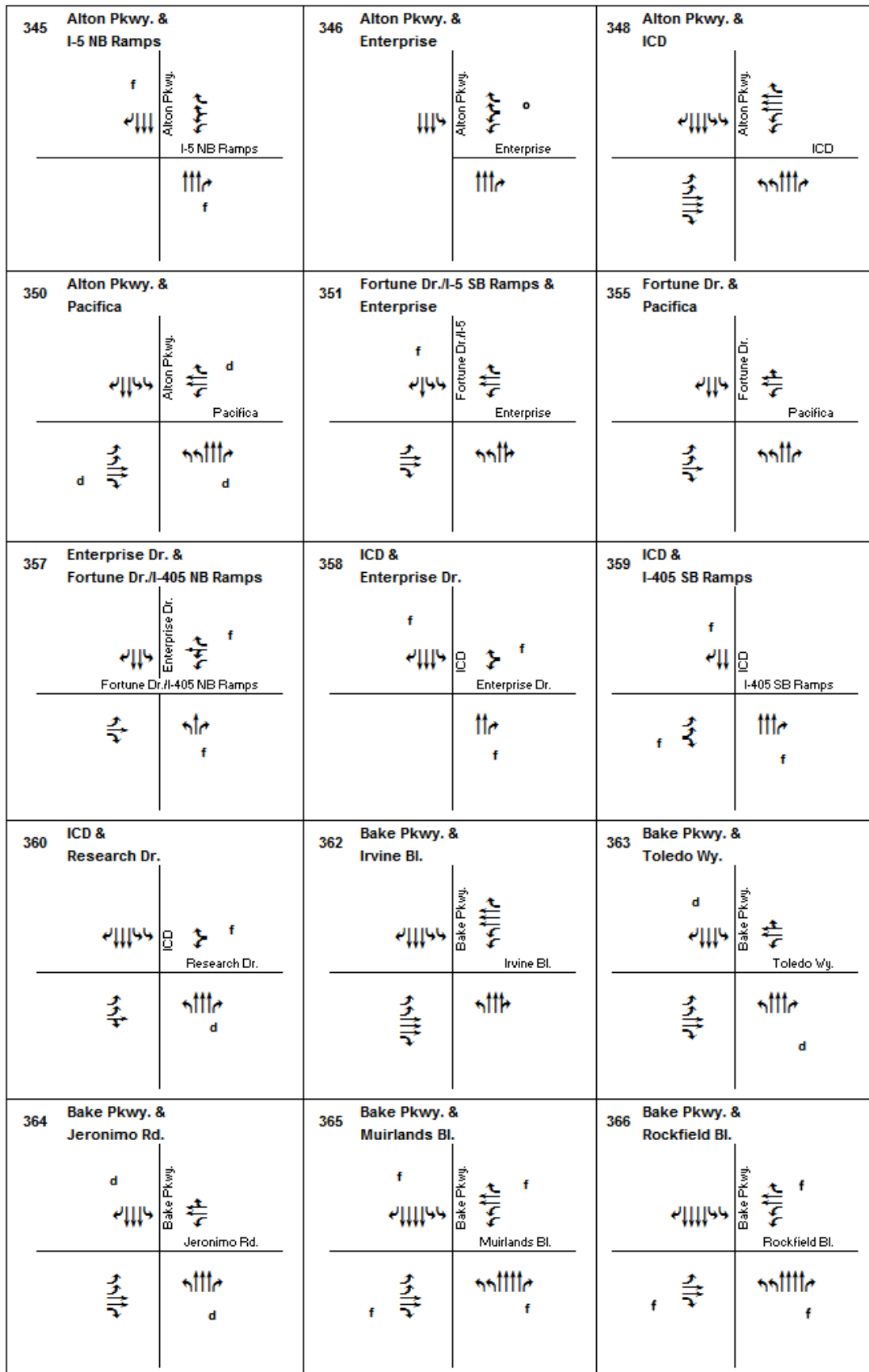
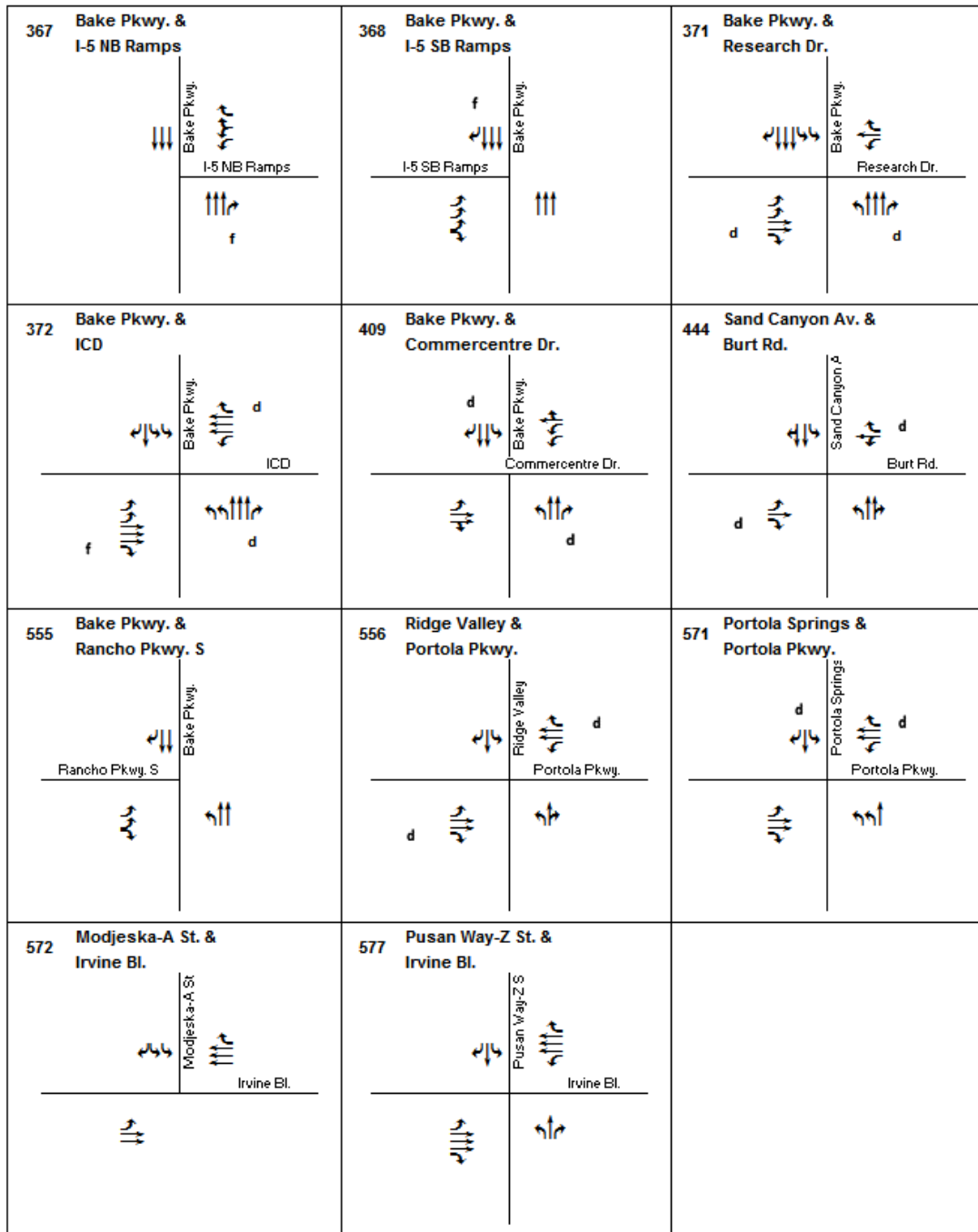


Figure III-3: Existing Intersection Geometry (Continued)



IV. METHODOLOGY AND APPROACH

The OCGP 688 Acre Park Development Plan Traffic Study is based on the latest version of the Irvine Transportation Analysis Model (ITAM 12.3). The analysis reports the Base Year (2012) Existing and the 2017 Baseline without the project. The alternatives analysis then added the project to the Existing and 2017 Baseline alternatives. The 2017 Baseline ITAM model run used for the “No Project” includes approved projects and infrastructure improvements assumed in ITAM 12.3 for interim 2017 conditions.

Alternatives

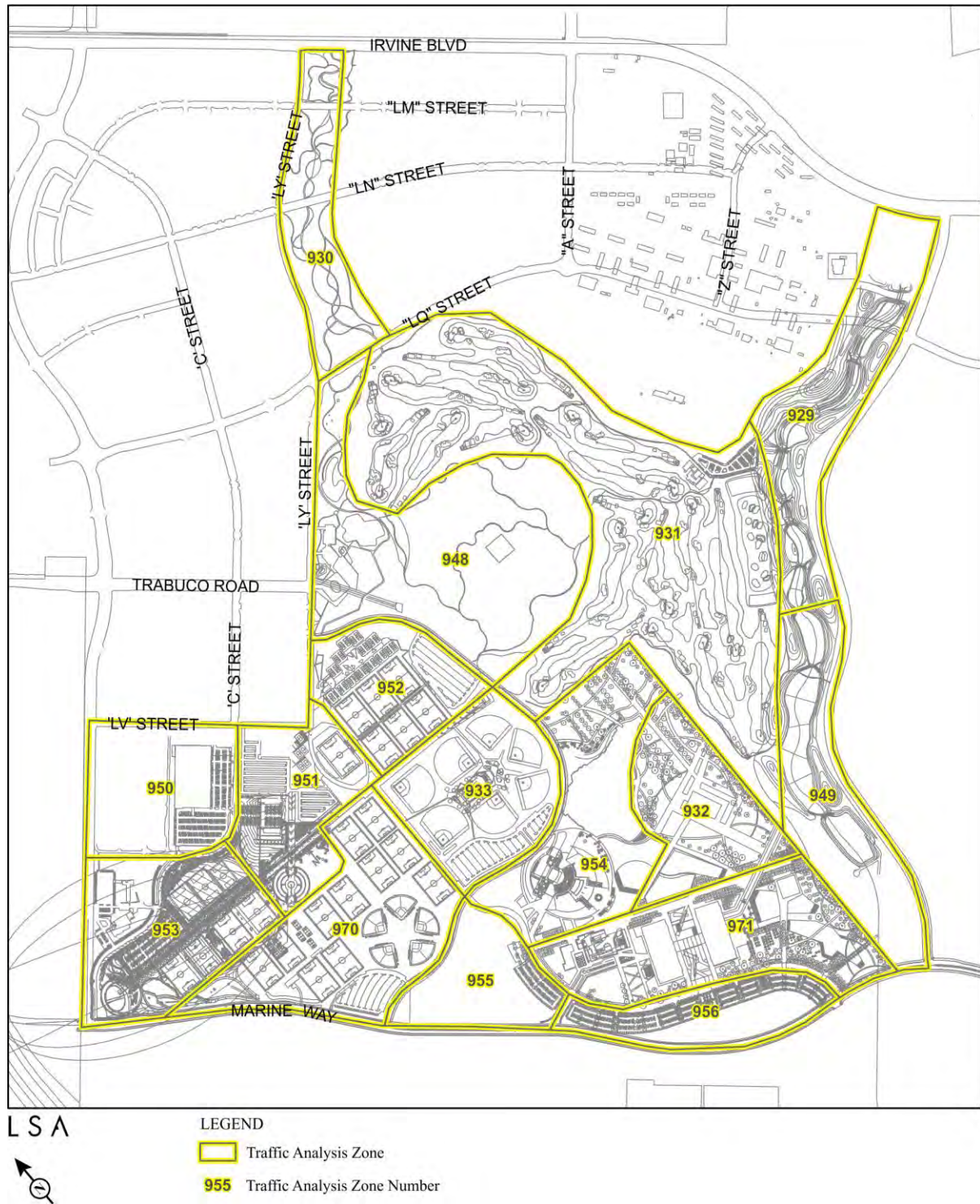
The “With Project” condition adds the OCGP 688 Acre Park Development Plan to the Existing Conditions and the 2017 Baseline plus various alternatives described below.

1. Existing Conditions
2. Existing plus 688 Acre Park Development Plan
3. 2017 Baseline, No Project (Assumes Heritage Fields Project Option 2)
4. 2017 Baseline + 688 Acre Park Development Plan
5. 2017 Baseline + 688 Acre Park Development Plan with Heritage Fields Project Option 1
6. 2017 Baseline + 688 Acre Park Development Plan with connector roadway between “LY” and Great Park Boulevard (Roadway Connection Alternative)

ITAM Traffic Analysis Zones

The daily traffic volumes and peak hour intersection turn movement forecasts were generated using the Irvine Transportation Analysis Model (ITAM 12.3). Project related adjustments include refinement to the traffic analysis zones within the OCGP to better define OCGP trip activity traveling to and from various parking destinations within the park. A map of the updated Traffic Analysis Zones is presented in Figure IV-1.

Figure IV-1: Great Park Traffic Analysis Zones



688 Acre Park Development Plan Trip Generation

The daily and peak hour trip generation forecasts by ITAM Traffic Analysis Zone and parking area for the Western Sector Park Development Plan and the 688 Acre Park Development Plan are presented in Table IV-1. The project land uses and trip generation for the 688 Acre Park Development Plan for the 2012 (existing) + project and the 2017 + project traffic analysis is basically the same, except for one land use. The proposed Community Ice Facility is not included in the 2012 existing baseline, but is included in the 2017 as it was previously approved as part of the Western Sector Park Development Plan.

As presented in Table IV-1, the total OCGP daily trip generation for the Western Sector Park Development Plan and the 688 Acre Park Development Plan is 10,030. This is less than the 19,083, daily trips approved in the OCGP FEIR. The difference between 19,083 and 10,030 is 9,053, which would be available for the future phased development of the OCGP Cultural Terrace.

The 10,030 daily trip generations includes both the Western Sector Park Development Plan and the 688 Acre Park Development Plan area. The Community Ice Facility within the Western Sector Park Development Plan area does not currently exist and was, therefore, not included in Alternative 1: Existing Conditions. The total daily trip generation for the Western Sector Park Development Plan and the 688 Acre Park Development Plan without the Community Ice Facility is 9,310.

The total daily trip generation from the Western Sector Park Development Plan was 4,586. The 688 Acre Park Development Plan will generate an additional 5,444 daily trips for the total of 10,030.

ITAM Assumptions for Alternatives

The Alternative 1 (Existing Conditions Baseline) and Alternative 3 (2017 Baseline No Project) ITAM traffic forecasts were provided by the City of Irvine. The remaining four alternatives required land use and network adjustments to ITAM. All OCGP 688 Acre Park Development Plan model assumptions and model runs for the project alternatives were reviewed and approved by the City of Irvine. They are summarized as follows:

Alternative 2 is the Existing Plus Project alternative that adds the 688 Acre Park Development to the Existing Conditions.

Alternative 4 (i.e., 2017 “With Project”) adds the 688 Acre Park Development Plan to the 2017 Baseline alternative.

Alternatives 5 and 6 are alternatives to Alternative 4, the 2017 Baseline plus 688 Acre Park Development Plan.

Alternative 5 analyzes an alternative Heritage Fields Project Option 1 land use plan. For this alternative, the ITAM land use assumptions for Heritage Fields Project Option 2 TAZ land uses and quantities were replaced with the Option 1 land use and quantities. The Option 1 TAZ land use and quantities were provided by the City of Irvine and presented in Table IV-2.

Table IV-1: Great Park Daily and Peak Hour Trip Generation

Use	Master Plan		Trip Generation				Peak Hour Trip Generation (Note: Based on Effective Auto Trip Generation - No Alternative Modes)						TAZ	Parking Area
			Daily Auto Trip Generation Rate	Daily Auto Trip Generation	Number of Sites Visited	Effective Auto Trip Generation	Peak Hour Volumes							
	Size	Units					AM In	AM Out	AM Total	PM In	PM Out	PM Total		
Upper Bee														
Upper Canyon Open Space - North	18	Acres	4.57	82	2.5	33	0	0	0	3	2	5	930	2
Upper Canyon Open Space - South	18	Acres	4.57	82	2.5	33	0	0	0	3	2	5		
Upper Canyon Open Space Subtotal						66	0	0	0	5	4	9		
Golf Course														
Golf Course	18	Holes	35.74	643	1	643	32	8	40	23	28	50	931	1
Club House (Community Center)	15	ksf GFA	33.82	507	1	507	25	7	31	18	22	40		
Golf Course						1,151	56	15	71	40	49	90		
Bosque + Agriculture														
Agriculture	71.2	Acres	2.01	143	1	143	7	6	13	6	9	14	948	2
Bosque	36	acres	4.57	165	2.5	66	0	0	0	5	4	9		
Farm & Food Lab	400	persons	0.80	320	1.0	320	19	19	38	51	51	102		
Farmer's Market	1.3	acres	375.00	488	2.5	195	6	5	10	9	11	20		
Small Amphitheater / Stage	60	seats	1.33	80	2.5	32	0	0	0	3	3	6		
Great Park Gardens	100	Plots	1.00	100	1.0	100	7	7	14	7	4	11		
Dog Park	2.0	Acres	192	384	1.0	384	18	11	30	16	13	30		
Bosque + Agriculture Total						1,240	58	48	105	97	95	193		
Western Sector (Includes Some Sport Park)														
Community Ice Facility	3.00	Sheets	240.00	720	1.0	720	12	12	24	59	34	93	950	3
Western Picnic Area	6.80	acres	13.71	93	1.0	93	0	0	0	7	4	10		
Balloon Ride, Tent, Misc. Uses	1.00	each	800.00	800	2.5	320	9	2	11	6	9	15	951	4
Artist In Residency Facility (Hangar 242 & 245)	12.80	ksf GFA	18.90	242	2.5	97	3	1	3	2	3	5		
Hanger 244	10.37	ksf GFA	18.90	196	2.5	78	2	0	3	2	2	4		
Palm Court Landscaped	5.80	acres	4.57	27	2.5	11	1	0	1	0	1	2		
Palm Court Hardscape	52.30	ksf GFA	18.90	988	2.5	395	29	1	30	16	54	70		
Soccer Field Seating	150	Seats	0.66	99	1.0	99	0	0	0	10	10	20		
Soccer Fields	1	fields	108.97	109	1.0	109	1.29	0.97	2.26	20.01	9.85	29.86	953	5
Sand Volleyball	5	Courts	45.56	228	1.0	228	4	4	8	14	14	28		
North Lawn	18.50	acres	13.71	254	1.0	254	0	0	0	18	10	28		
Soccer Fields	4	fields	108.97	436	1.0	436	5	4	9	80	39	119		
Promenade/OS	6.40	acres	4.57	29	2.5	12	0	0	0	1	1	2		
Timeline	5.10	acres	4.57	23	2.5	9	0	0	0	1	1	1		
Aqua Chinon	7.5	acres	0	0	2.5	0	0	0	0	0	0	0		
Western Sector Total						2,861	66	24	90	235	191	426		
Sports Park														
Baseball Stadium Seating	500	Seats	0.66	330	1.0	330	0	0	0	33	33	66	933	6
Baseball Fields	7	fields	108.97	763	1.0	763	9	7	16	140	69	209		
Timeline	3	acres	4.57	14	2.5	5	0	0	0	0	0	1	952	7
Soccer Fields	6	fields	108.97	654	1.0	654	8	6	14	120	59	179		
Tennis Courts	24	each	31.04	745	1.0	745	13	13	25	47	47	93	970	8
Soccer Fields	11	fields	108.97	1,199	1.0	1,199	14	11	25	220	108	328		
Softball / Baseball Seating	300	Seats	0.66	198	1.0	198	0	0	0	20	20	40		
Softball / Baseball	5	field	108.97	545	1.0	545	6	5	11	100	49	149		
Basketball / Sports Courts	4	Courts	62.08	248	1.0	248	4	4	8	16	16	31		
Splash Park	1.00	acres	25.8	26	1.0	26	0	0	0	2	2	4		
Sports Park Total						4,713	54	45	99	698	402	1,100		
Total Great Park						10,030	234	132	366	1,076	743	1,818		

Table IV-2: Alternative 5 – FivePoint Option 1 Land Use and Quantities

ITAM TAZ	ITAM Code	ITAM Units	ITAM Land Use Description	Quantity
591	235	DU	Multi-Family	24
591	272	TSF	Multi-Use	44
600	254	TSF	Retail	75
600	254	TSF	Retail	75
600	272	TSF	Multi-Use	125
943	272	TSF	Multi-Use	86.3
323	139	ACRE	Park	2.1
325	235	DU	Multi-Family	72
326	235	DU	Multi-Family	87
604	139	ACRE	Park	4.8
604	139	ACRE	Park	3.4
604	235	DU	Multi-Family	36
604	235	DU	Multi-Family	122
605	235	DU	Multi-Family	112

All alternatives include a high school in TAZ 606, which is south of Irvine Boulevard referred to as High School Site A.

Alternative 6 is identical to Alternative 4, the 2017 ITAM Baseline plus the proposed 688 Acre Park Development, except for a roadway network change that provides a loop connection between “LY” Street and Great Park Boulevard along the eastern edge of the Sports Park ball fields. All land use, trip generation and network changes for Alternatives 2, 4, 5 and 6 were reviewed and approved by the City of Irvine.

2017 Baseline Roadway Network Updates

Presented in Chapter III is the Existing Roadway Geometry for the intersections within the region. The committed 2017 intersection geometry includes improvements assumed in place by 2017 that will be required by others and the OCGP 688 Acre Park Development Plan. The resulting 2017 Intersection Geometry is presented in Figure IV-2.

Figure IV-2: 2017 Intersection Geometry

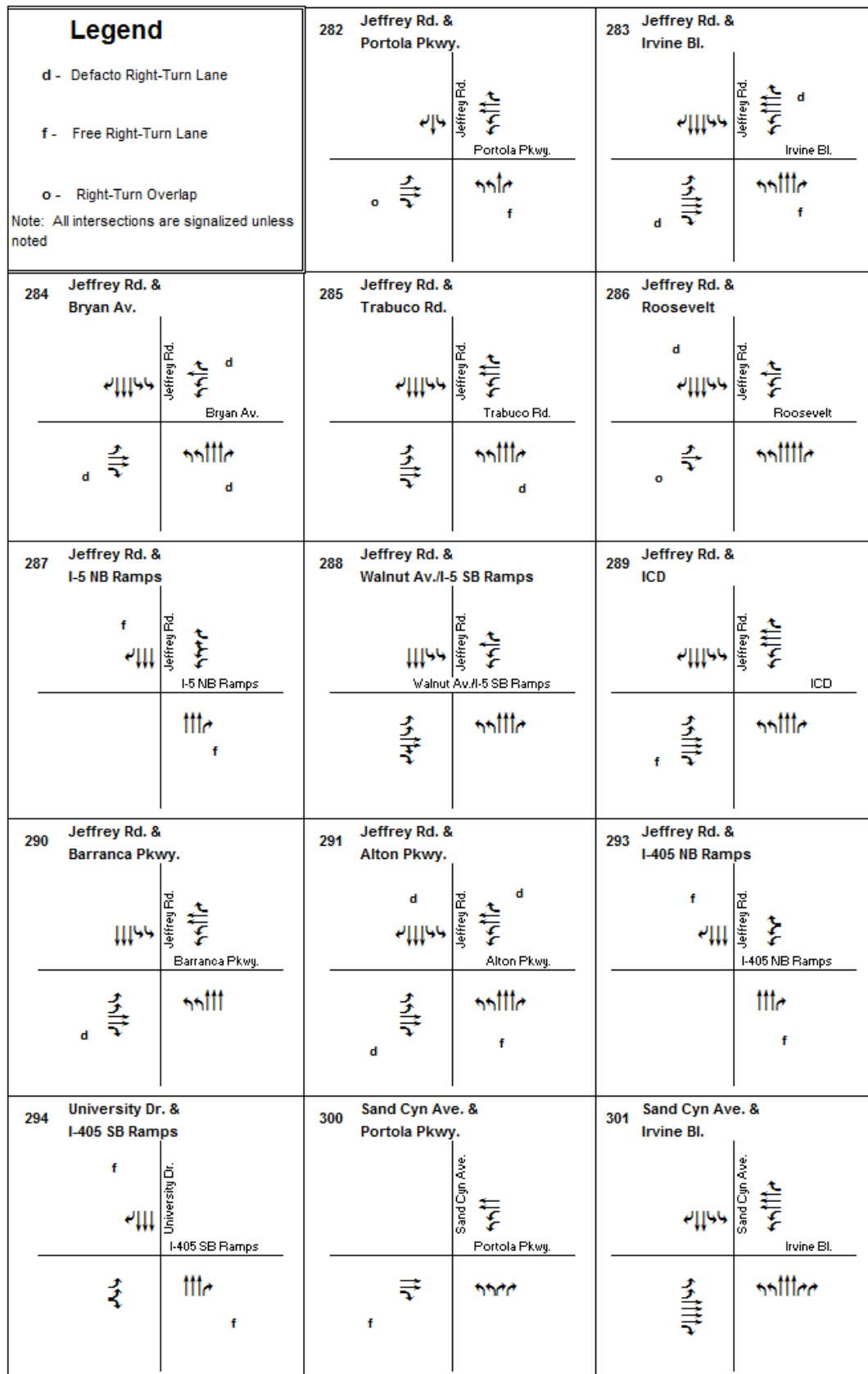


Figure IV-2: 2017 Intersection Geometry (Continued)

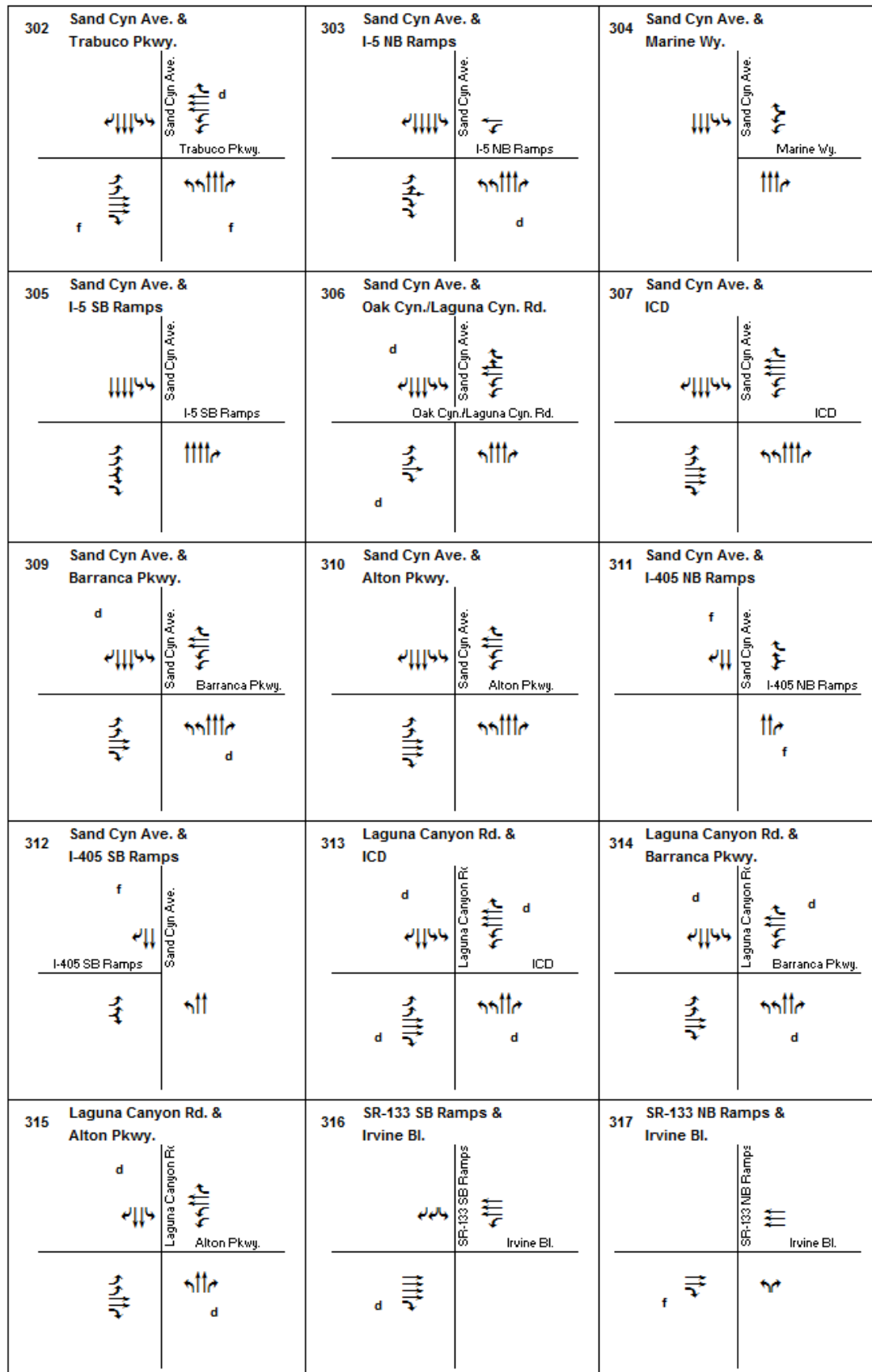


Figure IV-2: 2017 Intersection Geometry (Continued)

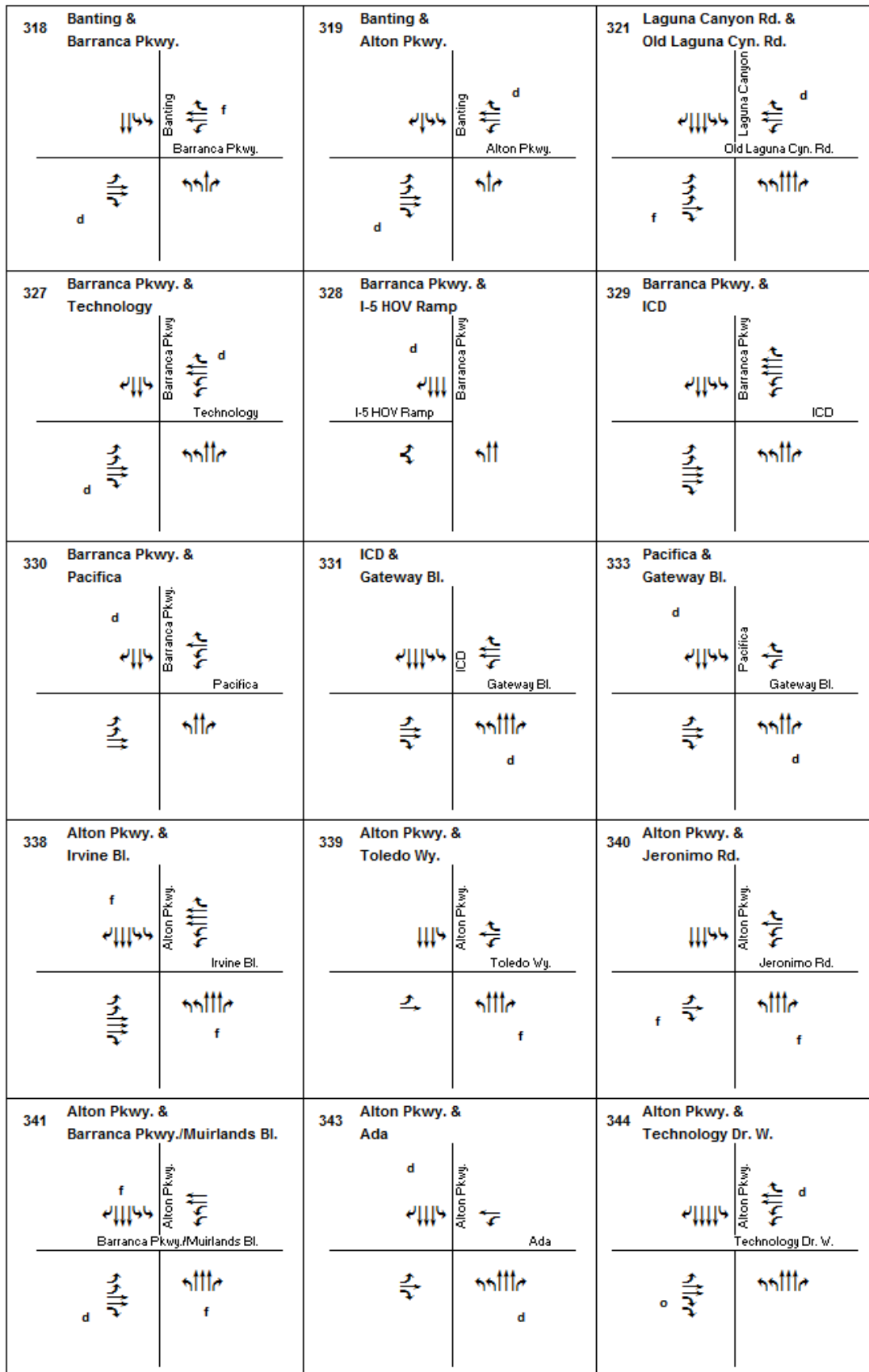


Figure IV-2: 2017 Intersection Geometry (Continued)

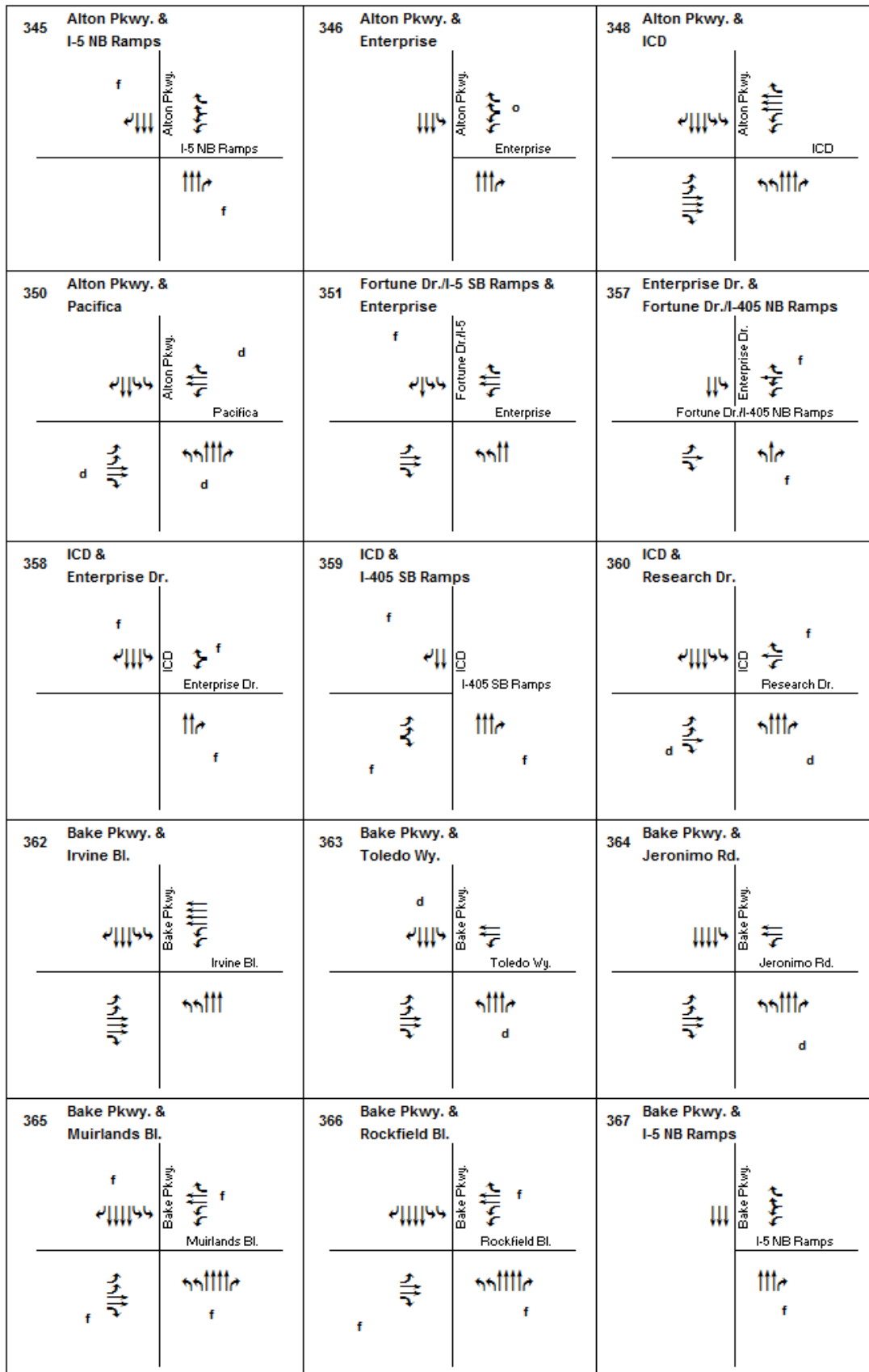


Figure IV-2: 2017 Intersection Geometry (Continued)

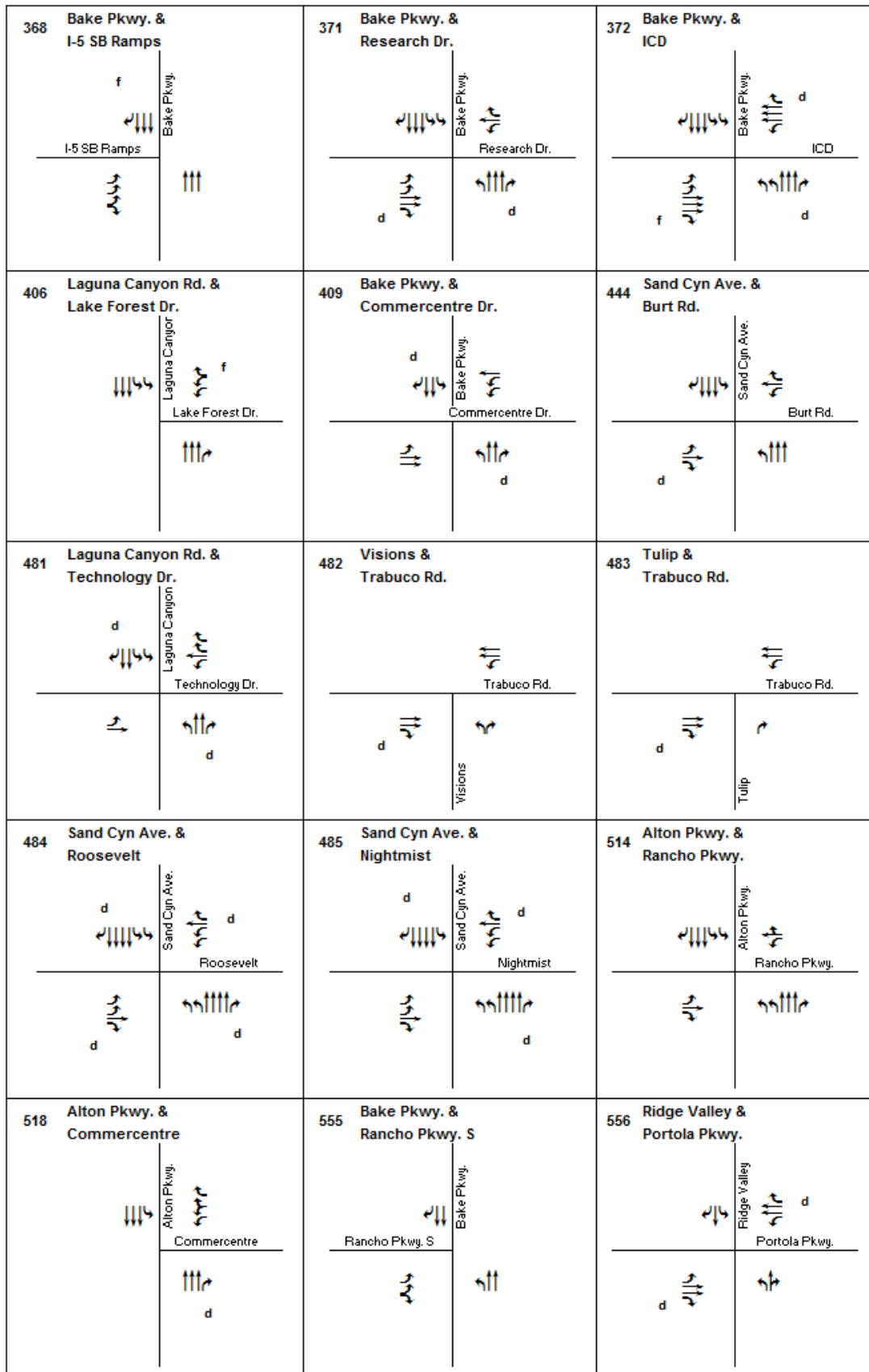


Figure IV-2: 2017 Intersection Geometry (Continued)

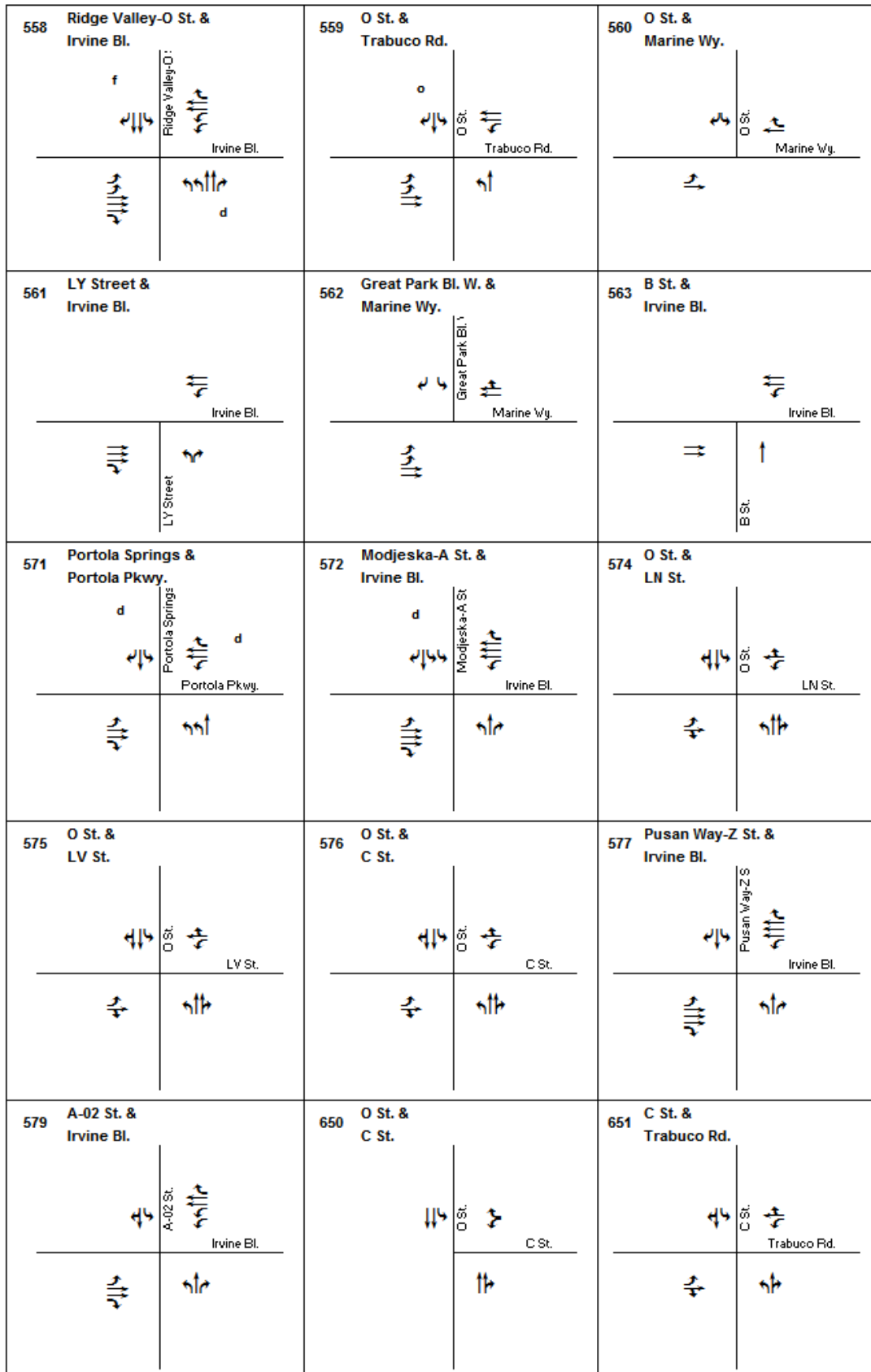
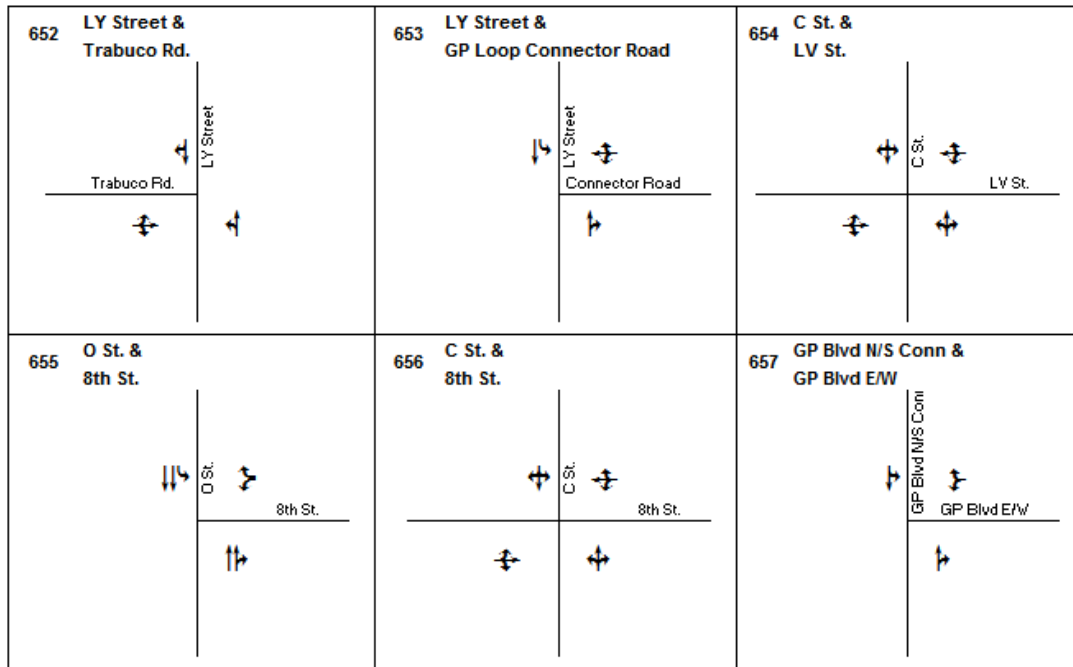


Figure IV-2: 2017 Baseline Intersection Geometry (Continued)



Note: The recommended lane configurations are based on technical traffic analysis and are subject to concurrence and approval by the City Engineer. Changes to these technical recommendations may occur from modifications of future buildout of the OCGP and Planning Area 40.

V. PERFORMANCE CRITERIA

Two levels of traffic analysis were conducted consistent with the approved Scope of Work (see Appendix A). These are: 1) daily and peak hour arterial link volume to capacity ratio level of service analysis and peak hour Intersection Capacity Utilization (ICU – for signalized intersections) or Highway Capacity Manual (HCM – for unsignalized intersections); and 2) intersection design analysis per the City’s Transportation Guidelines (TG). The following section describes the performance measures.

Daily Arterial Volume to Capacity Level of Service Analysis

For each arterial link within the study area a daily link level of service is based on the average daily traffic (ADT) volume/capacity (V/C) ratios, based on the following capacities:

City of Irvine

Major Arterial	8-lane	72,000
	6-lane	54,000
Primary Arterial	4-lane	32,000
Secondary Arterial	4-lane	28,000
Commuter	2-lane	13,000

Outside City of Irvine

Major Arterial	8-lane	75,000
	6-lane	56,300
Primary Arterial	4-lane	37,500
Secondary Arterial	4-lane	25,000 (24,000 – City of Orange)
Commuter	2-lane	12,500 (12,000 – City of Orange)

The performance standards for the daily volume to capacity ratios for all links is LOS D or a V/C ratio less than or equal to 0.90 except arterials in Irvine Planning Area 33 (Spectrum I) and Planning Area 36 (Irvine Business Complex/IBC), and Congestion Management Plan arterials outside the City of Irvine where the threshold is LOS E where daily volume to capacity ratio must be less than or equal to 1.00.

Daily and Peak Hour Arterial Volume to Capacity Level of Service Analysis

As required by the City of Irvine Peak Hour Link Capacity Analysis guidelines, arterial links that exceed the daily volume to capacity ratio level of service analysis thresholds must conduct a peak hour link volume to capacity ratio analysis.

AM and PM Peak Hour Intersection Capacity Utilization

To determine significant impacts at signalized intersections, the ICU methodology was used for intersections within the study area. The ICU methodology compares the volume-to-capacity (v/c) ratios of conflicting turn movements at an intersection, sums these critical conflicting v/c ratios for

each intersection approach, and determines the overall ICU. The resulting ICU is expressed in terms of level of service (LOS), where LOS A represents free-flow activity and LOS F represents overcapacity operation. Parameters set by the City for ICU calculations, including lane capacity, right-turn treatment, and clearance interval, which are included in the analysis. According to the City Traffic Impact Analysis Guidelines (adopted by City Council on August 24, 2004), level of service at an intersection or roadway is considered to be unsatisfactory when the ICU exceeds 0.90 (LOS D). In addition, the City General Plan has identified intersection locations in which an ICU is acceptable when less than or equal to 1.0 (LOS E) in Planning Area 33, Planning Area 36, CMP intersections outside the City of Irvine, intersections of Bake Parkway/I-5 northbound and southbound ramps, Alton Parkway/Irvine Boulevard, Bake Parkway/Irvine Boulevard, Lake Forest Drive /I-5 southbound ramps-Avenida de la Carlotta and Lake Forest Drive/Irvine Center Drive.

A project impact is identified if the project results in an ICU greater than the acceptable level of service, the project contribution is required to bring the intersection back to acceptable level of service, or when the projects results in an ICU of 0.02 or greater for an already deficient location, the project contribution is required back to no-project conditions.

The intersection turn movements and level of service is presented in Appendix C. The ICU level of service calculation sheets are presented in the Appendix D.

AM and PM Peak Hour Unsignalized Intersection Level of Service Analysis

To determine adequacy of peak-hour operations at unsignalized intersections, the HCM methodology was used. The HCM methodology evaluates conflicting flows and applies gap acceptance criteria to determine delay and level of service for stop controlled unsignalized intersection. The Unsignalized Intersection Level of Service calculation sheets are presented in Appendix E.

VI. ALTERNATIVES ANALYSIS

The following chapter provides an evaluation of each of the six alternatives. This analysis includes:

1. OCGP Project Trip Distribution
2. Daily Traffic Link Volume Forecasts and Volume/Capacity Level of Service Analysis
3. Peak Hour Link Analysis (for those alternatives and links which exceeded the daily thresholds)
4. Signal Warrant Analysis to determine which intersections warrant signalization and will be evaluated with Intersection Capacity Utilization level of service and which intersections will be stop controlled and evaluated per the Highway Capacity Manual unsignalized intersection level of service analysis.
5. Peak Hour Intersection Level of Service Analysis

The Transportation Guidelines (TG) analyses are presented in Section VII.

Project Trip Distribution

The forecast OCGP 688 Acre Park Development Plan trip distribution percentages provide an understanding as to where trips traveling to and from the OCGP will travel and which roadways and intersections might be affected. A select zone analysis was conducted that aggregated all of the affected TAZs associated with the proposed OCGP 688 Acre Park Development Plan to determine how traffic is distributed throughout the roadway network. The OCGP 688 Acre Park Development Plan trip distribution is presented in Figure VI-1.

Daily Traffic Forecasts and Volume/Capacity Ratio Level of Service Analysis

Based on the ITAM, daily traffic forecasts were prepared for each alternative. Utilizing these daily forecasts and daily threshold capacities from Chapter V, the daily volume to capacity ratio level of service analysis was performed.

Figures VI-2 through VI-13 presents the average daily traffic and the resulting daily volume to capacity level of service for each of the six alternatives. The links, which were identified as over the daily threshold, are highlighted on the volume to capacity level of service maps.

Figure VI-1: Great Park 688 Acre Park Development Plan Trip Distribution

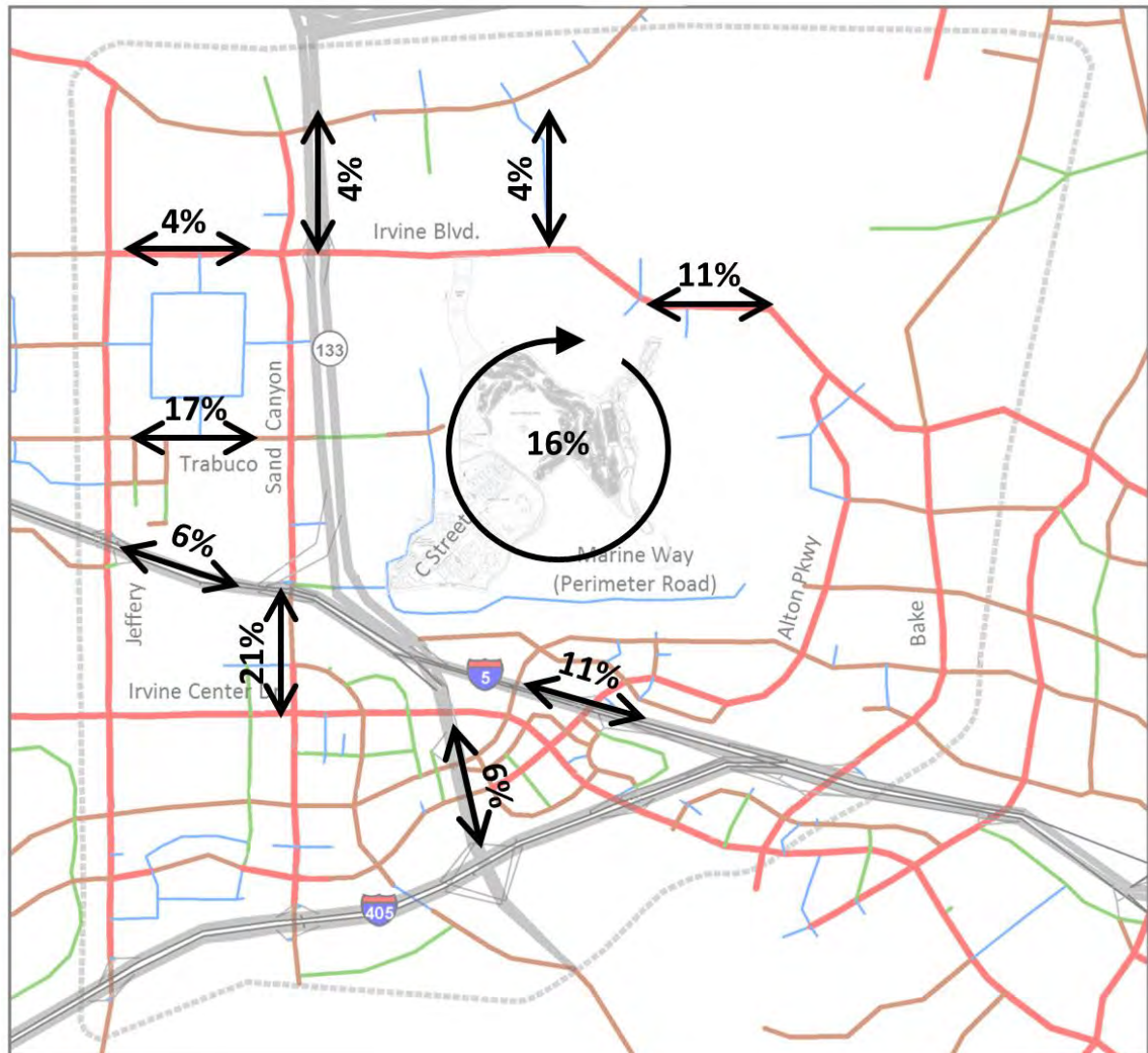


Figure VI-2: Alternative 1 - Existing Conditions Average Daily Traffic

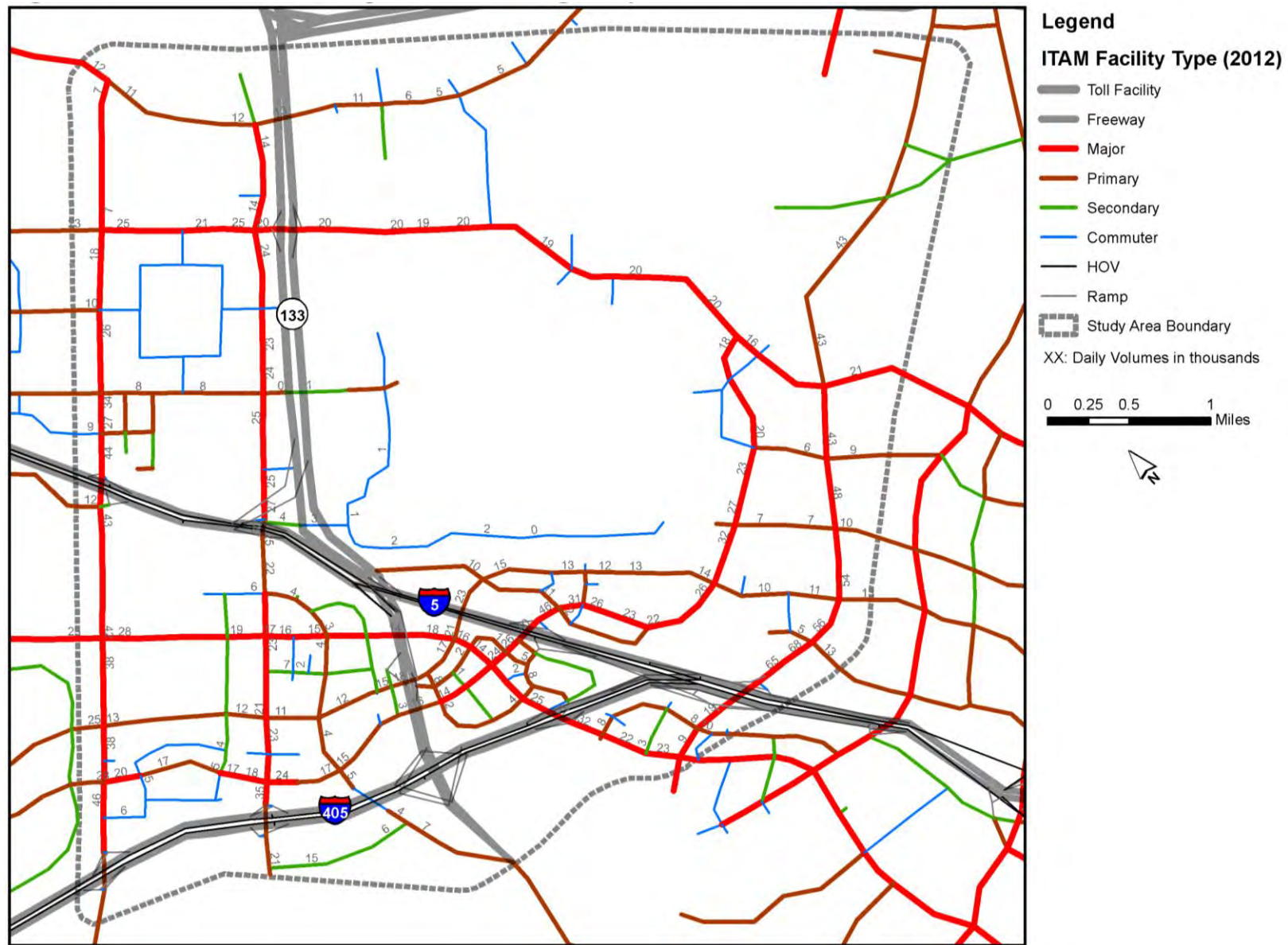


Figure VI-3: Alternative 1 - Existing Conditions Daily V/C Level of Service

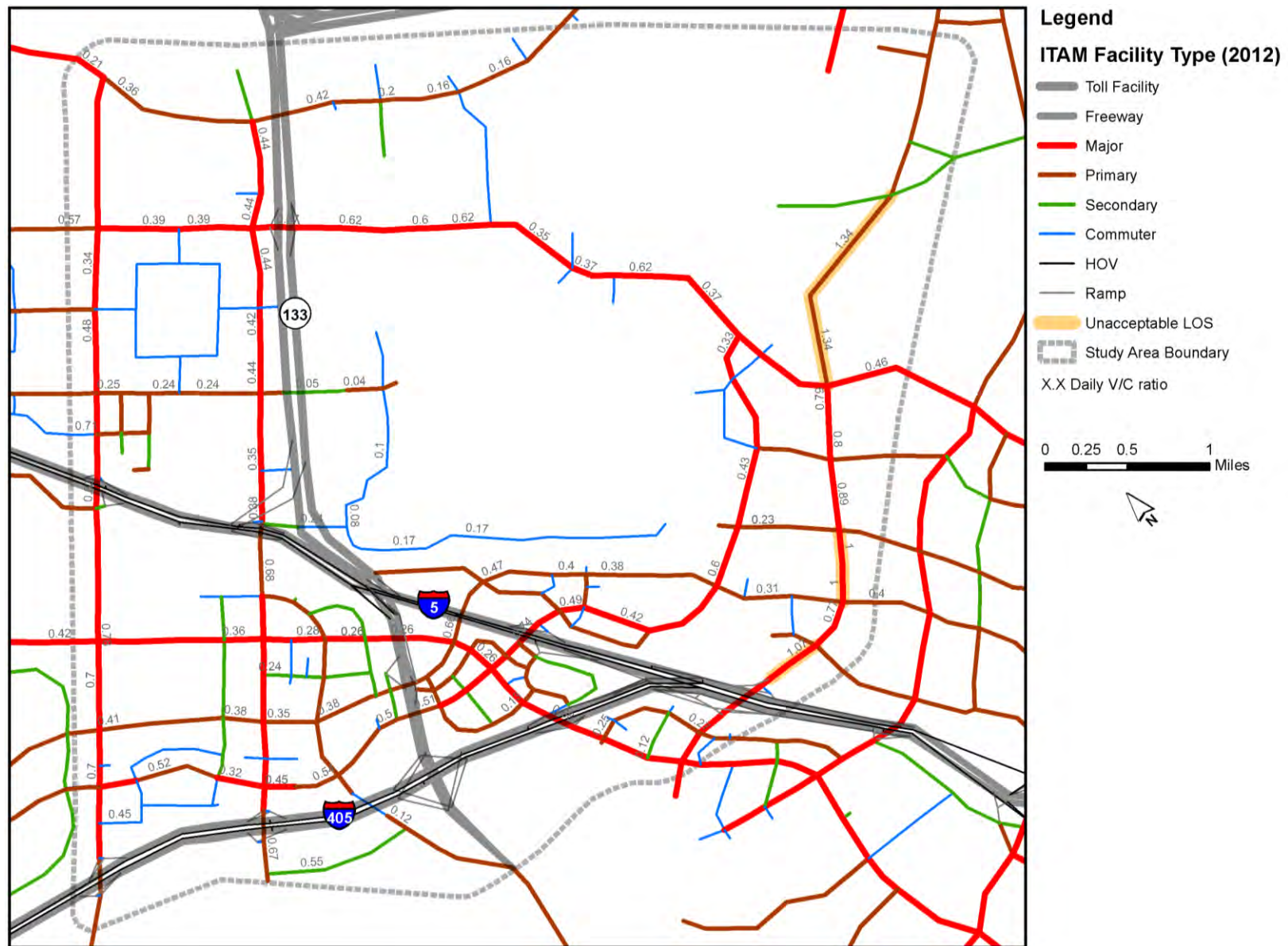


Figure VI-4: Alternative 2 - Existing plus 688 Acre Park Development Plan Average Daily Traffic

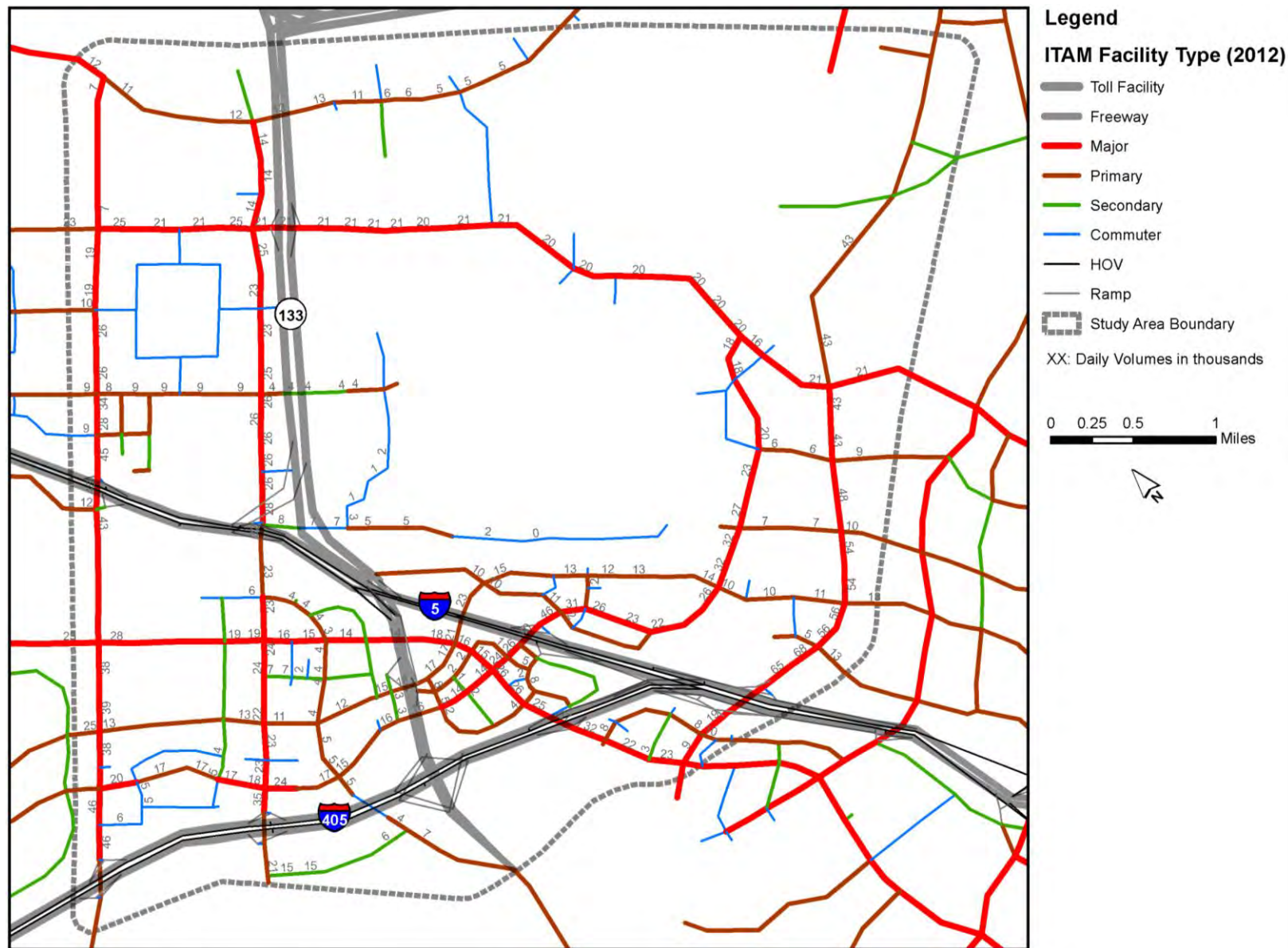


Figure VI-5: Alternative 2 - Existing plus 688 Acre Park Development Plan Daily V/C Level of Service

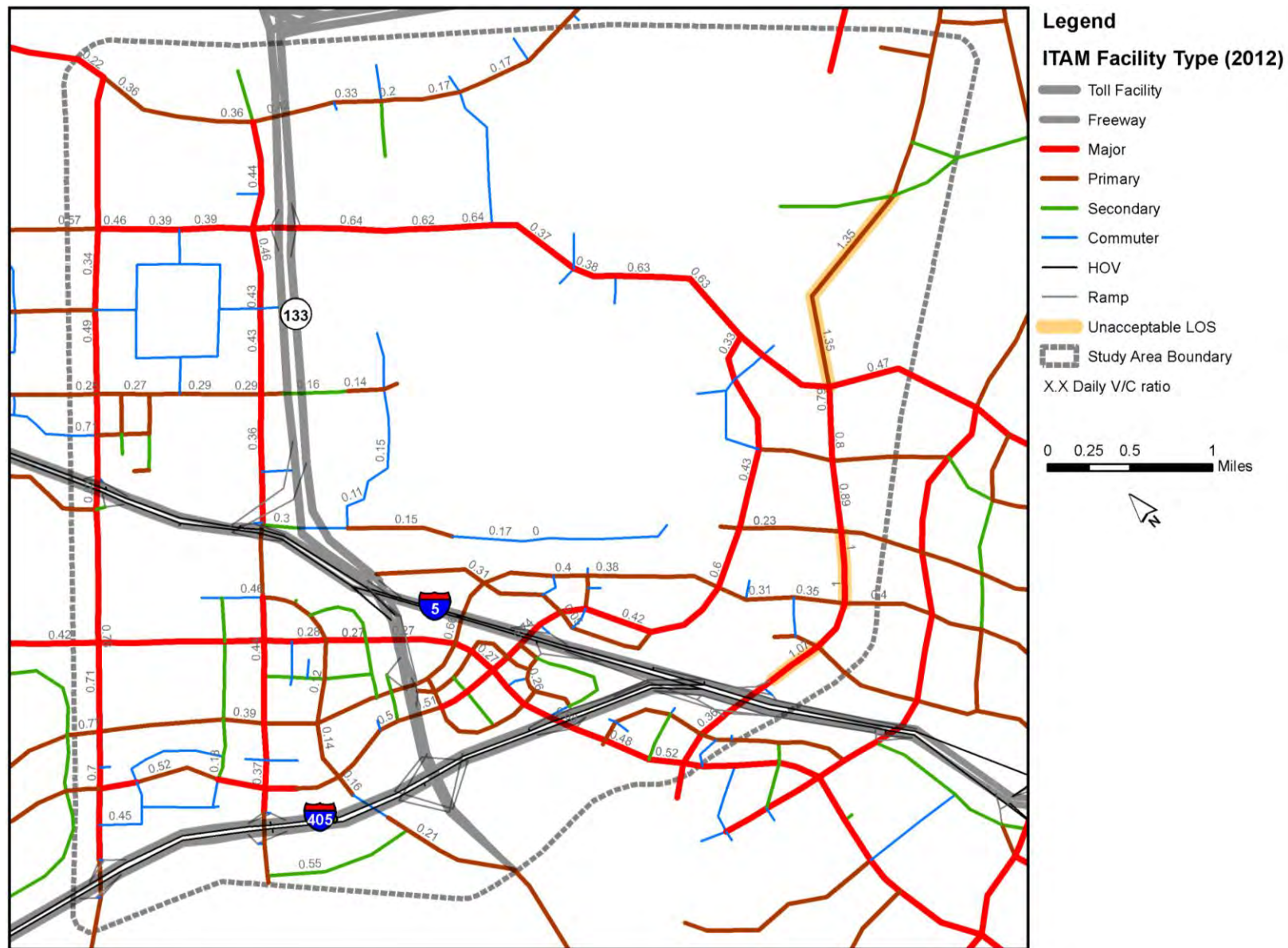


Figure VI-6: Alternative 3 - 2017 Baseline No Project Average Daily Traffic

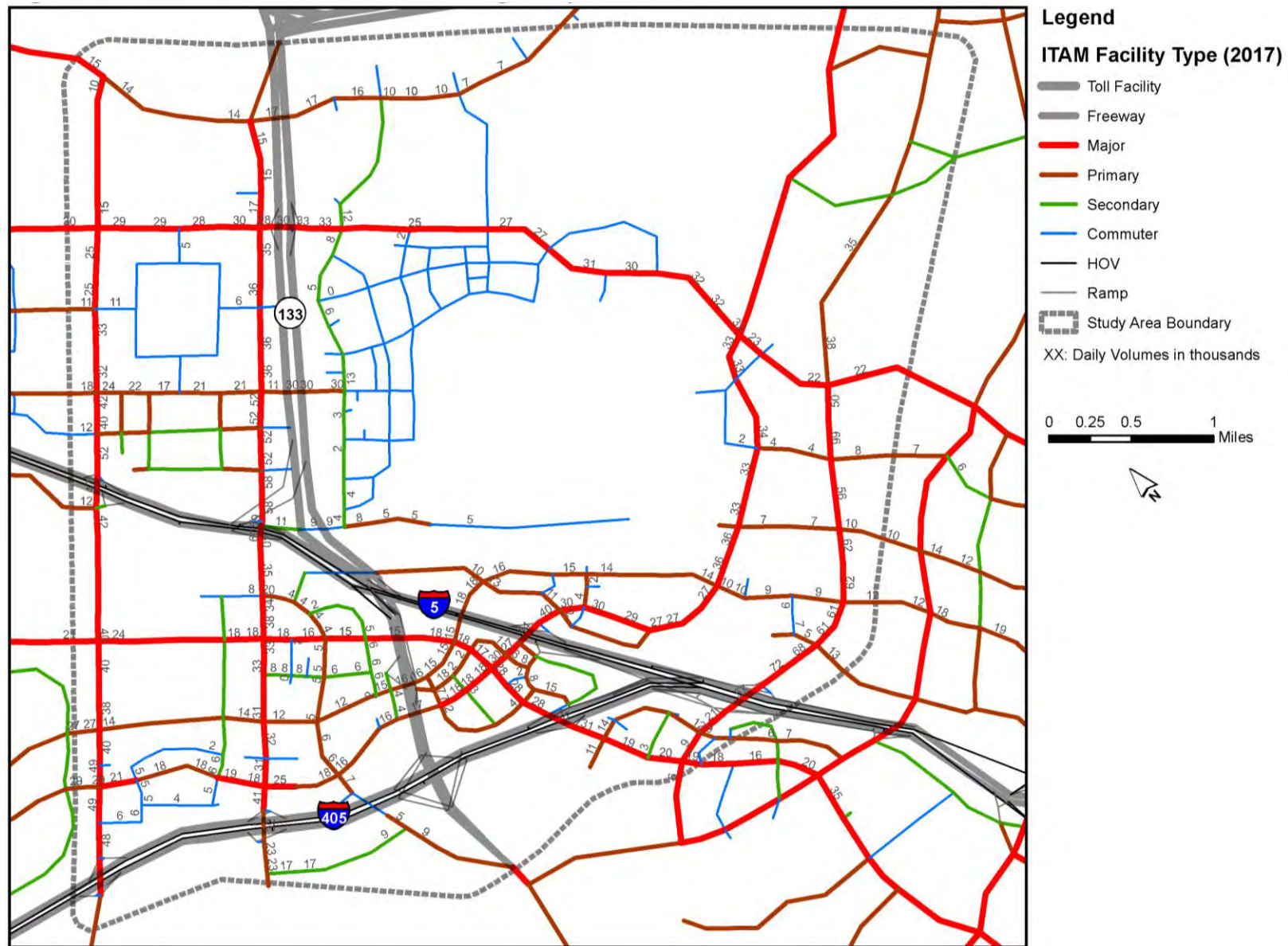


Figure VI-7: Alternative 3 - 2017 Baseline No Project Daily V/C Level of Service

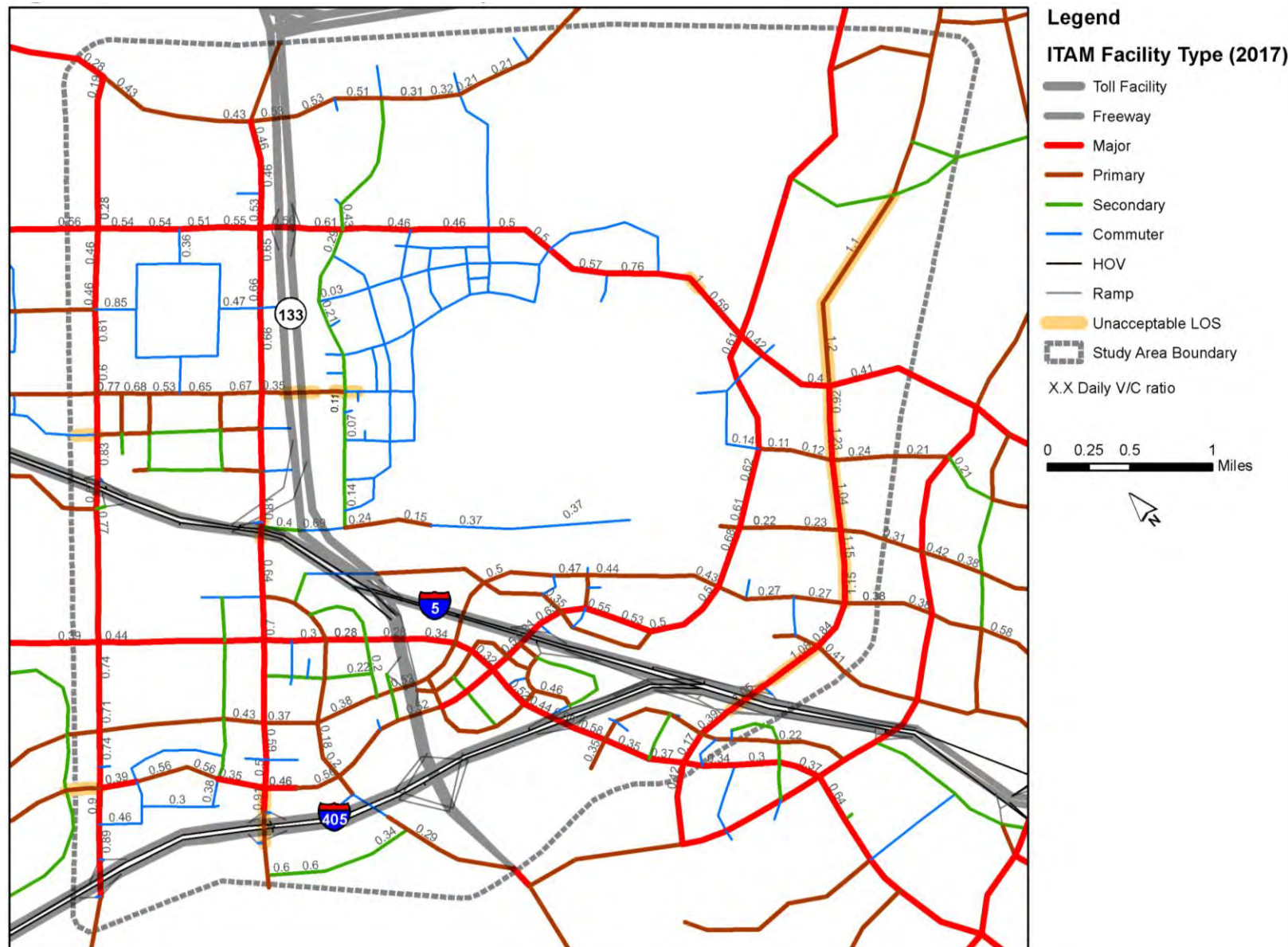


Figure VI-8: Alternative 4 - 2017 Baseline + 688 Acre Park Development Plan Average Daily Traffic

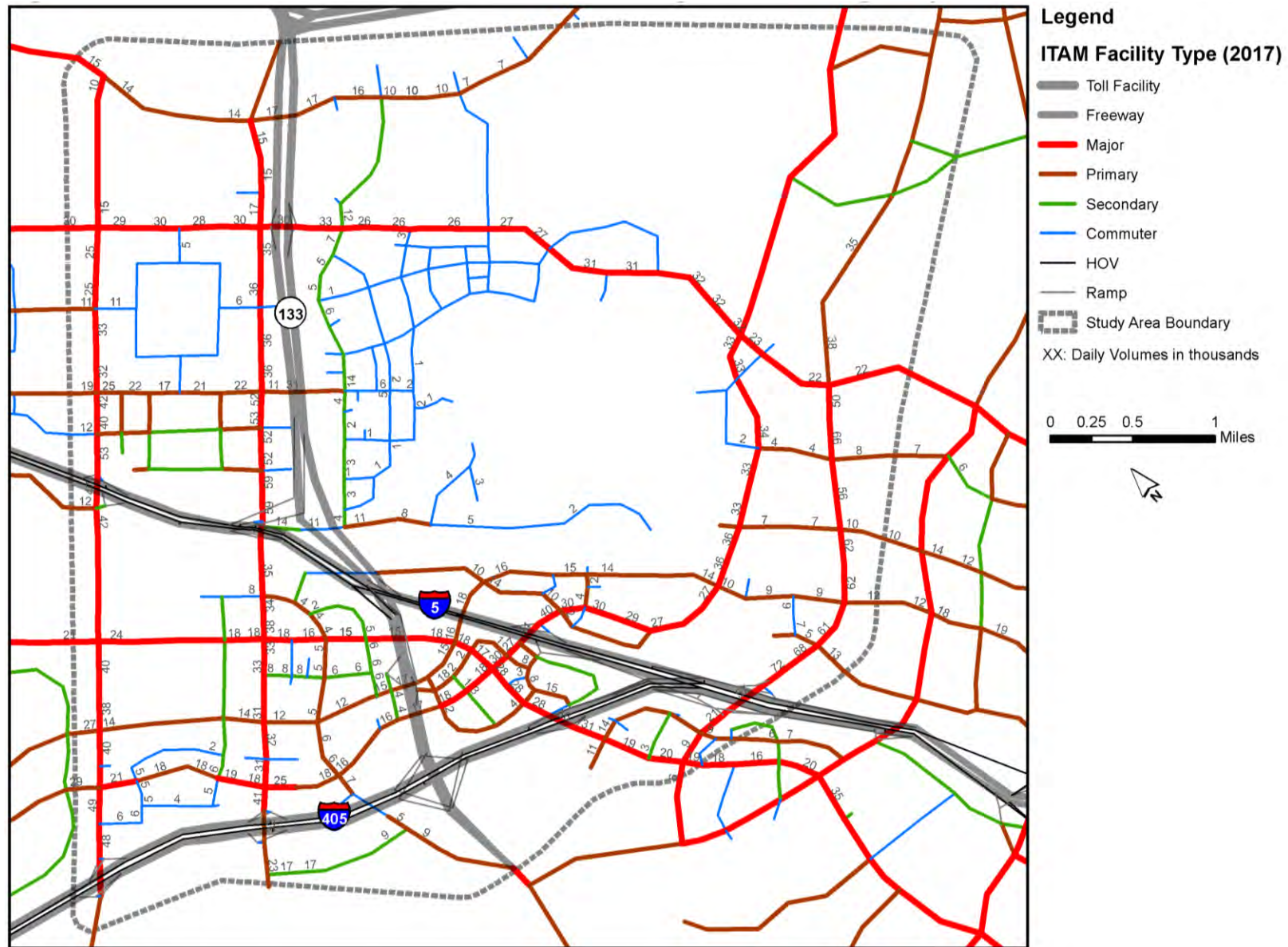


Figure VI-9: Alternative 4 - 2017 Baseline + 688 Acre Park Development Plan Daily V/C Level of Service

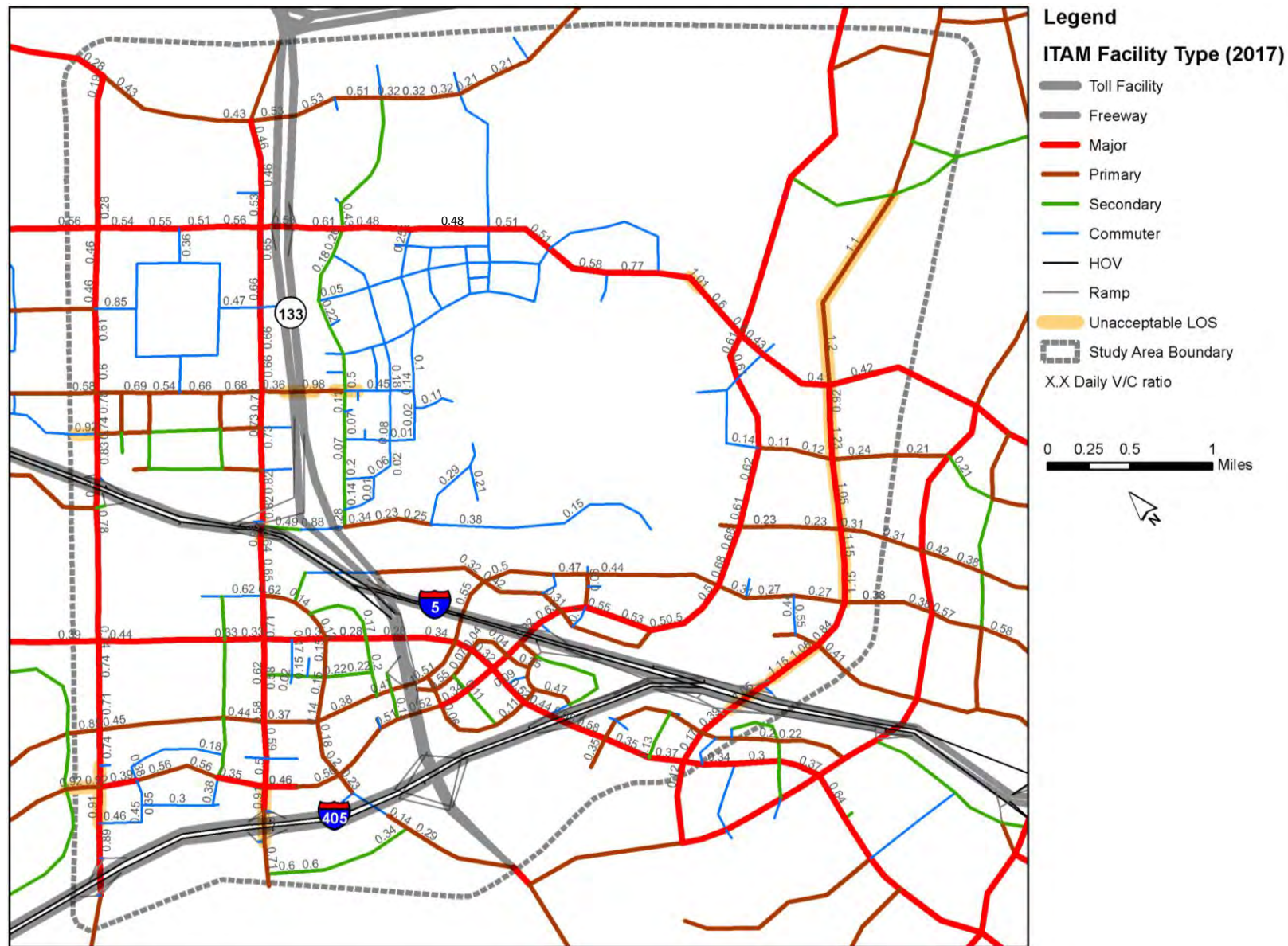


Figure VI-10: Alternative 5 - 2017 Baseline + 688 Acre Park Development Plan with FivePoint Option 1 Average Daily Traffic

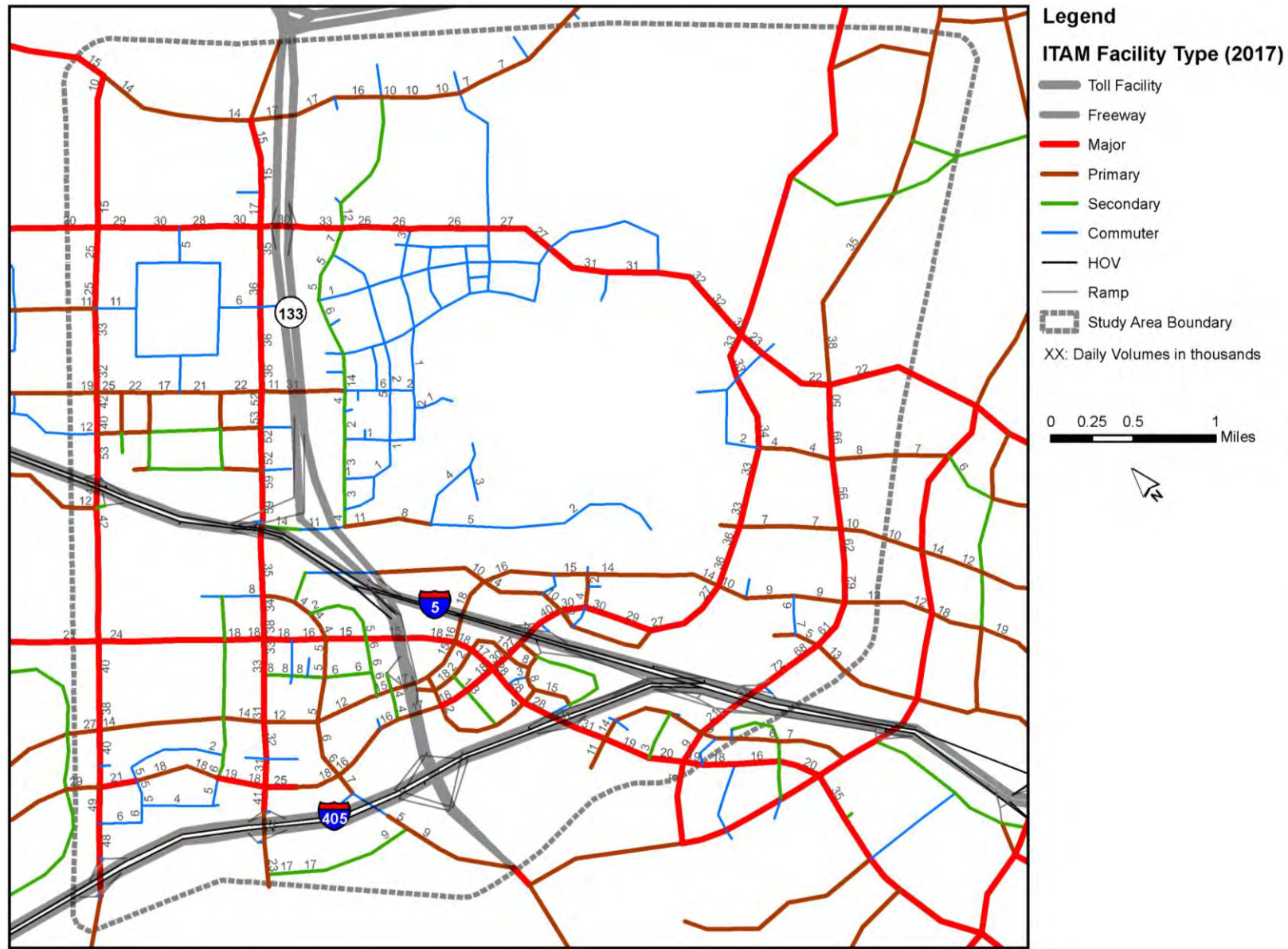


Figure VI-11: Alternative 5 - 2017 Baseline + 688 Acre Park Development Plan with FivePoint Option 1 Daily V/C Level of Service

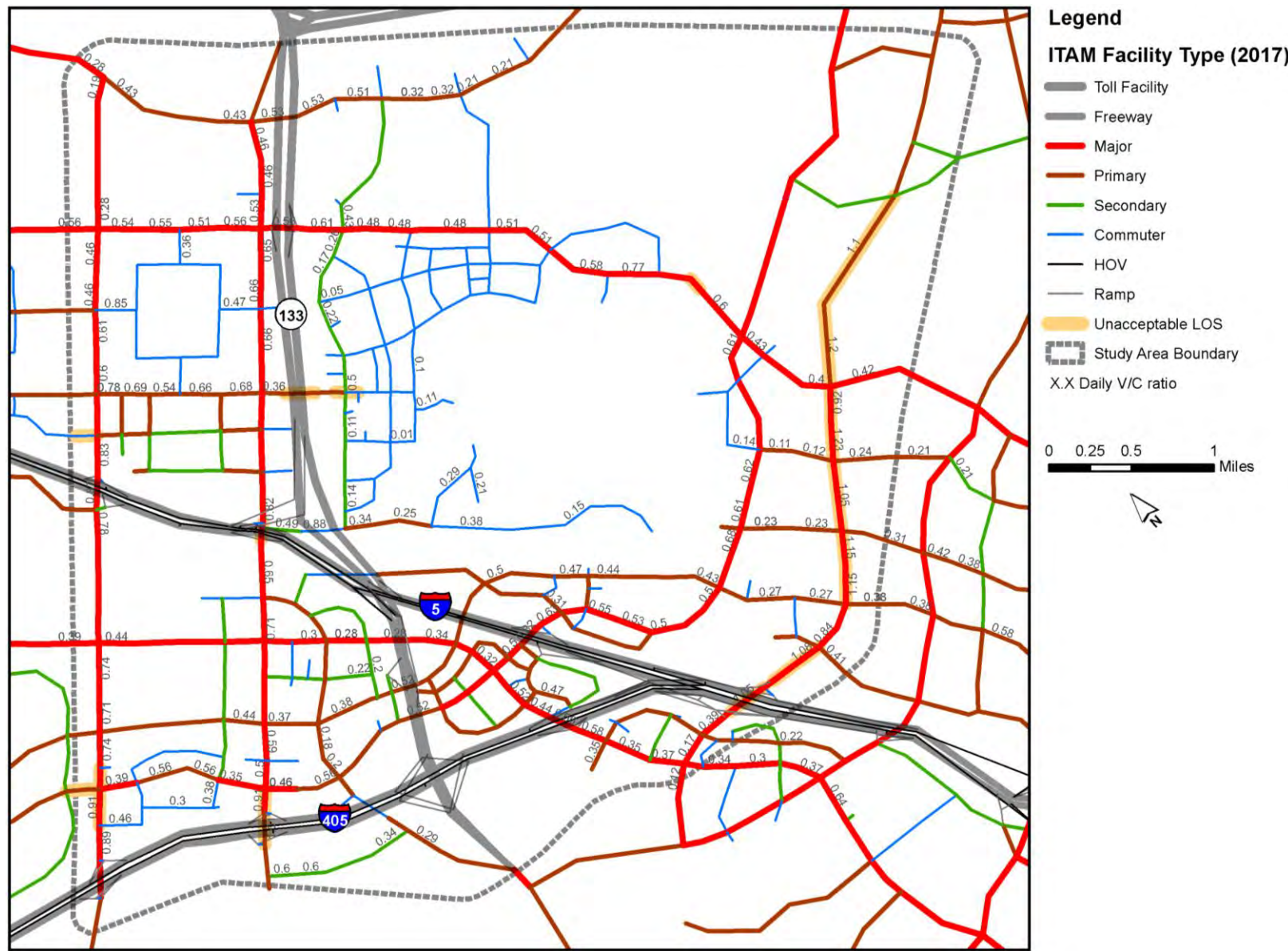


Figure VI-12: Alternative 6 - 2017 Baseline + 688 Acre Park Development Plan with N/S Connector Road Average Daily Traffic

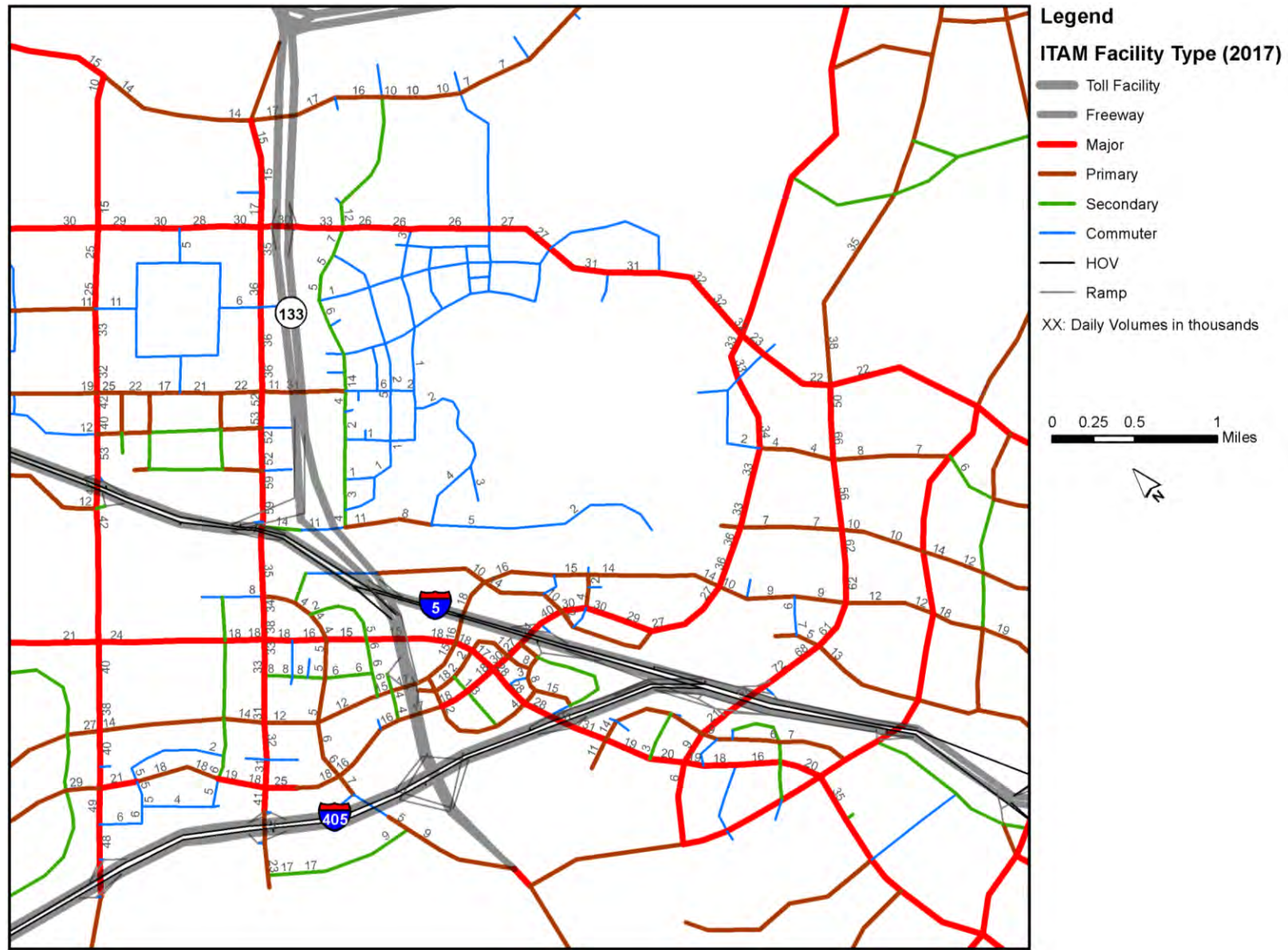
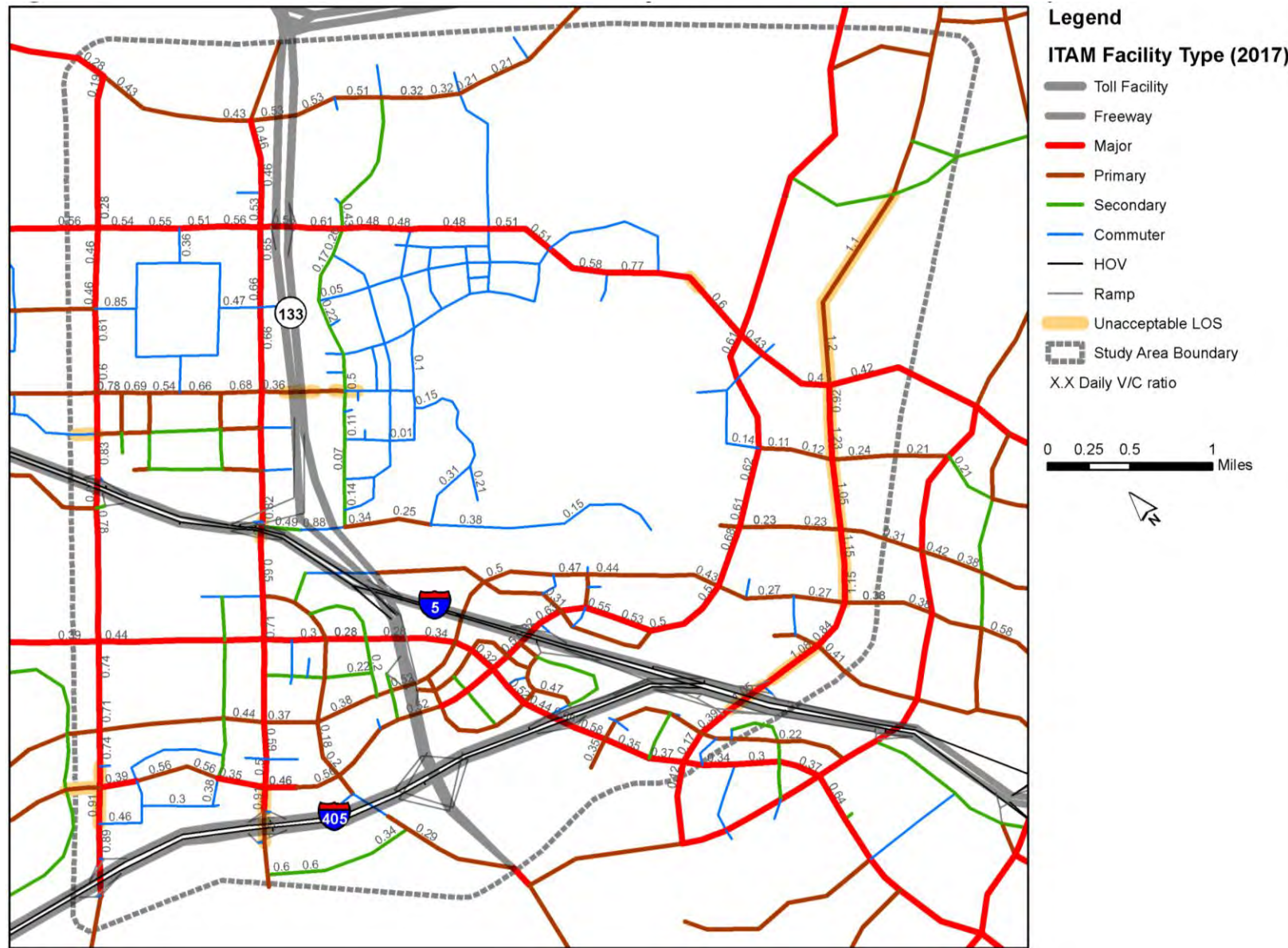


Figure VI-13: Alternative 6 - 2017 Baseline + 688 Acre Park Development Plan with N/S Connector Road Daily V/C Level of Service



As presented in the Figures VI-2 through VI-13, there were six links for Alternative 1: Existing Conditions and Alternative 2: Existing plus OCGP 688 Acre Park Development Plan, which exceeded the City of Irvine's daily capacity thresholds. The addition of the OCGP traffic to the existing traffic volumes did not result in any additional links being impacted.

There were 23 links for Alternative 3: 2017 Baseline which exceeded the daily threshold. There were no project alternatives (Alternative 4 through 6), which resulted in additional links being impacted.

AM and PM Peak Hour Link Analysis

The City of Irvine's Traffic Impact Analysis Guidelines requires an AM and PM Peak Hour level of service link analysis for links which exceed the daily threshold. Presented in Table VI-1 and VI-2 are the AM and PM peak hour link analysis for the six roadway links for all six alternatives. Based on this analysis, all six links of the Existing and the Existing plus OCGP 688 Acre Park Development Plan resulted in acceptable AM and PM peak hour link levels of service.

In addition, all 23 links for the 2017 Baseline and all 2017 OCGP alternatives also resulted in acceptable AM and PM peak hour link levels of service.

Signal Warrant Analysis

The traffic impact analysis requires that each intersection identified in the Scope of Work be evaluated as to whether the intersection will result in acceptable levels of service. The methodology to evaluate peak hour intersection traffic for signalized intersections is Intersection Capacity Utilization. If an intersection is not signalized, then the peak hour intersection level of service analysis is based on the Highway Capacity Manual Unsignalized Intersection Level of Service analysis.

The majority of the intersections that were included in the Scope of Work for evaluation are existing intersections and already signalized. However, the project intersections included as part of the 688-Acre Park Design Plan are either currently not signalized or they have not been constructed. Therefore, to determine which, if any, of these intersections will warrant signalization, an unsignalized intersection level of service analysis was first required for all project or future intersections.

The signal warrant analysis is based on peak hour traffic volumes on the major street and the approaching minor street. Presented in Table VI-3 is the resulting signal warrant analysis. As presented in this table, there are six intersections that warrant signalization based on forecast 2017 Base No Project traffic: Intersections 558 – Ridge Valley/"O" Street at Irvine Boulevard, Intersection 559 - "O" Street at Trabuco, Intersection 560 – "O" Street at Marine, Intersection 561 – "LY" Street at Irvine Boulevard, Intersection 572 – Modjeska-A Street at Irvine Boulevard and Intersection 577 - Pusan Way-Z Street at Irvine Boulevard. The signalization of these six intersections is similarly identified in the 2011 GPN VTTM traffic study as being needed for interim-year conditions. Intersection 562: Marine Way and Great Park Boulevard warrants a signal with the addition of the 688 Acre OCGP. The remaining intersections in the study area will not warrant signalization and the peak hour intersection level of service analysis is based on the Highway Capacity Manual unsignalized intersection level of service methodology. The signal warrant analysis by alternative is presented in Appendix B.

Table VI-1: AM Peak Hour Existing and 2017 Link Analysis

AM Peak Hour Link Analysis					Alternative 1 Existing			Alternative 2 Existing + 688 Acre PDP			Alternative 3 2017 Baseline			Alternative 4 2017 Baseline + 688 Acre PDP			Alternative 5 2017 Baseline + 688 Acre PDP + FivePoint Option 1			Alternative 6 2017 Baseline + 688 Acre PDP + Connector Road		
ADT ID	Roadway	Directional Lanes	Peak Hour Capacity	Max LOS	Highest Directional Volume	V/C	LOS	Highest Directional Volume	V/C	LOS	Highest Directional Volume	V/C	LOS	Highest Directional Volume	V/C	LOS	Highest Directional Volume	V/C	LOS	Highest Directional Volume	V/C	LOS
299	Jeffrey Rd.(b/w Alton Pkwy.and Quailcre)	3	4,800	D							2,970	0.62	B	2,970	0.62	B	2,970	0.62	B	2,970	0.62	B
321	Sand Canyon. Av.(b/w Alton Pkwy.and I-405 N)	3	4,800	D							2,034	0.42	A	2,037	0.42	A	2,029	0.42	A	2,030	0.42	A
419	Bake Pkwy. (n/o Irvine Bl.)	2	3,200	D	2,487	0.78	C	2,369	0.74	C	2,210	0.69	B	2,210	0.69	B	2,210	0.69	B	2,210	0.69	B
420	Bake Pkwy.(s/o Irvine Bl.)	3	4,800	D							2,282	0.48	A	2,282	0.48	A	2,277	0.47	A	2,279	0.47	A
421	Bake Pkwy. (b/w Toledo Wy. And Jeronim)	3	4,800	D							2,596	0.54	A	2,602	0.54	A	2,595	0.54	A	2,594	0.54	A
422	Bake Pkwy. (s/o Jeronimo Rd)	3	4,800	D	2,779	0.58	A	2,739	0.57	A	2,901	0.60	B	2,903	0.60	B	2,901	0.60	B	2,894	0.60	B
423	Bake Pkwy. (n/o Muirlands Bl.)	3	4,800	D	2,628	0.55	A	2,739	0.57	A	2,978	0.62	B	2,983	0.62	B	2,983	0.62	B	2,973	0.62	B
425	Bake Pkwy. (n/o I-5 NB Slip Ramp)	4	6,400	D	3,436	0.54	A	2,822	0.44	A	3,790	0.59	A	3,801	0.59	A	3,791	0.59	A	3,791	0.59	A
524	Irvine Bl.(w/o Alton Pkwy.)	3	4,800	D							2,150	0.45	A	2,156	0.45	A	2,150	0.45	A	2,156	0.45	A
567	Trabuco Rd.(e/o SR-133 SB Ramps)	2	3,200	D							1,380	0.43	A	1,401	0.44	A	1,373	0.43	A	1,392	0.44	A
568	Trabuco Rd.(w/o SR-133 SB Ramps)	2	3,200	D							1,380	0.43	A	1,401	0.44	A	1,373	0.43	A	1,392	0.44	A
583	Roosevelt(w/o Jeffrey Rd.)	1	1,600	D							473	0.30	A	479	0.30	A	480	0.30	A	480	0.30	A
647	Sand Canyon. Av.(b/w I-5 NB Ramps and Marin)	3	4,800	D							3,460	0.72	C	3,489	0.73	C	3,476	0.72	C	3,481	0.73	C
791	Alton Pkwy.(e/o E. Yale Lp.)	2	3,200	D							1,459	0.46	A	1,450	0.45	A	1,451	0.45	A	1,461	0.46	A
792	Alton Pkwy.(w/o Jeffrey Rd.)	2	3,200	D							1,459	0.46	A	1,450	0.45	A	1,451	0.45	A	1,461	0.46	A
961	Sand Canyon. Av.(b/w I-405 NB and SB Ramps)	2	3,200	D							2,123	0.66	B	2,130	0.67	B	2,123	0.66	B	2,123	0.66	B
1400	Bake Pkwy.(s/o Commercentre Dr.)	2	3,200	D	2,487	0.78	C	2,369	0.74	C	2,210	0.69	B	2,210	0.69	B	2,210	0.69	B	2,210	0.69	B
1639	Bake Pkwy.(n/o Toledo Wy.)	3	4,800	D							2,245	0.47	A	2,255	0.47	A	2,245	0.47	A	2,234	0.47	A
1641	Sand Canyon. Av.(n/o I-5 SB Ramps)	4	6,400	D							3,440	0.54	A	3,450	0.54	A	3,440	0.54	A	3,450	0.54	A
1661	Bake Pkwy.(b/w I-5 SB On and Off Ramp)	3	4,800	D							3,335	0.69	B	3,335	0.69	B	3,335	0.69	B	3,332	0.69	B
2014	Trabuco Rd.(e/o O St.)	1	1,600	D							655	0.41	A	663	0.41	A	652	0.41	A	664	0.42	A
2015	Trabuco Rd.(w/o O St.)	2	3,200	D							1,370	0.43	A	1,389	0.43	A	1,365	0.43	A	1,386	0.43	A
2061	Bake Pkwy.(s/o Rockfield Bl.)	4	6,400	D	3,436	0.54	A	2,765	0.43	A	3,790	0.59	A	3,801	0.59	A	3,791	0.59	A	3,791	0.59	A

Table VI-2: PM Peak Hour Existing and 2017 Link Analysis

PM Peak Hour Link Analysis					Alternative 1 Existing			Alternative 2 Existing + 688 Acre PDP			Alternative 3 2017 Baseline			Alternative 4 2017 Baseline + 688 Acre PDP			Alternative 5 2017 Baseline + 688 Acre PDP + FivePoint Option 1			Alternative 7 2017 Baseline + 688 Acre PDP + Connector Road		
ADT ID	Roadway	Directional Lanes	Peak Hour Capacity	Max LOS	Highest Directional Volume	V/C	LOS	Highest Directional Volume	V/C	LOS	Highest Directional Volume	V/C	LOS	Highest Directional Volume	V/C	LOS	Highest Directional Volume	V/C	LOS	Highest Directional Volume	V/C	LOS
299	Jeffrey Rd.(b/w Alton Pkwy.and Quailcre)	3	4,800	D							2,539	0.53	A	2,549	0.53	A	2,553	0.53	A	2,560	0.53	A
321	Sand Canyon. Av.(b/w Alton Pkwy.and I-405 N)	3	4,800	D							2,197	0.46	A	2,197	0.46	A	2,196	0.46	A	2,200	0.46	A
419	Bake Pkwy. (n/o Irvine Bl.)	2	3,200	D	2,317	0.72	C	2,365	0.74	C	2,064	0.65	B	2,065	0.65	B	2,066	0.65	B	2,066	0.65	B
420	Bake Pkwy.(s/o Irvine Bl.)	3	4,800	D							2,125	0.44	A	2,135	0.44	A	2,134	0.44	A	2,134	0.44	A
421	Bake Pkwy. (b/w Toledo Wy. And Jeronim)	3	4,800	D							2,601	0.54	A	2,610	0.54	A	2,610	0.54	A	2,601	0.54	A
422	Bake Pkwy. (s/o Jeronimo Rd)	3	4,800	D	2,628	0.55	A	2,670	0.56	A	2,757	0.57	A	2,770	0.58	A	2,770	0.58	A	2,756	0.57	A
423	Bake Pkwy. (n/o Muirlands Bl.)	3	4,800	D	2,298	0.48	A	2,539	0.53	A	2,901	0.60	B	2,901	0.60	B	2,905	0.61	B	2,906	0.61	B
425	Bake Pkwy. (n/o I-5 NB Slip Ramp)	4	6,400	D	3,224	0.50	A	2,495	0.39	A	3,690	0.58	A	3,700	0.58	A	3,690	0.58	A	3,690	0.58	A
524	Irvine Bl.(w/o Alton Pkwy.)	3	4,800	D							2,428	0.51	A	2,490	0.52	A	2,483	0.52	A	2,511	0.52	A
567	Trabuco Rd.(e/o SR-133 SB Ramps)	2	3,200	D							1,220	0.38	A	1,320	0.41	A	1,300	0.41	A	1,350	0.42	A
568	Trabuco Rd.(w/o SR-133 SB Ramps)	2	3,200	D							1,220	0.38	A	1,320	0.41	A	1,300	0.41	A	1,350	0.42	A
583	Roosevelt(w/o Jeffrey Rd.)	1	1,600	D							710	0.44	A	721	0.45	A	719	0.45	A	720	0.45	A
647	Sand Canyon. Av.(b/w I-5 NB Ramps and Marin)	3	4,800	D							2,990	0.62	B	3,010	0.63	B	3,000	0.63	B	3,000	0.63	B
791	Alton Pkwy.(e/o E. Yale Lp.)	2	3,200	D							1,660	0.52	A	1,672	0.52	A	1,670	0.52	A	1,666	0.52	A
792	Alton Pkwy.(w/o Jeffrey Rd.)	2	3,200	D							1,660	0.52	A	1,672	0.52	A	1,670	0.52	A	1,666	0.52	A
961	Sand Canyon. Av.(b/w I-405 NB and SB Ramps)	2	3,200	D							1,242	0.39	A	1,262	0.39	A	1,265	0.40	A	1,260	0.39	A
1400	Bake Pkwy.(s/o Commercentre Dr.)	2	3,200	D	2,317	0.72	C	2,365	0.74	C	2,064	0.65	B	2,065	0.65	B	2,066	0.65	B	2,066	0.65	B
1639	Bake Pkwy.(n/o Toledo Wy.)	3	4,800	D							2,240	0.47	A	2,250	0.47	A	2,250	0.47	A	2,250	0.47	A
1641	Sand Canyon. Av.(n/o I-5 SB Ramps)	4	6,400	D							2,950	0.46	A	3,185	0.50	A	3,180	0.50	A	3,171	0.50	A
1661	Bake Pkwy.(b/w I-5 SB On and Off Ramp)	3	4,800	D							3,748	0.78	C	3,757	0.78	C	3,756	0.78	C	3,746	0.78	C
2014	Trabuco Rd.(e/o O St.)	1	1,600	D							760	0.48	A	782	0.49	A	801	0.50	A	790	0.49	A
2015	Trabuco Rd.(w/o O St.)	2	3,200	D							1,201	0.38	A	1,303	0.41	A	1,271	0.40	A	1,313	0.41	A
2061	Bake Pkwy.(s/o Rockfield Bl.)	4	6,400	D	3,224	0.50	A	2,495	0.39	A	3,690	0.58	A	3,700	0.58	A	3,690	0.58	A	3,690	0.58	A

Table VI-3: Signal Warrant Analysis

Int. ID	Intersection Name	Alternative 3 2017 Baseline (No Project)	Alternative 4 2017 Baseline + 688 Acre PDP	Alternative 5 2017 Baseline + 688 Acre PDP + Five Point Option 1	Alternative 6 2017 Baseline + 688 Acre PDP + Connector Road
558	Ridge Valley-O St./Irvine Bl.*	Yes (AM/PM)	Yes (AM/PM)	Yes (AM/PM)	Yes (AM/PM)
559	O St./Trabuco Rd.*	Yes (AM/PM)	Yes (AM/PM)	Yes (AM/PM)	Yes (AM/PM)
560	O St./Marine Wy.*	Yes (PM)	Yes (PM)	Yes (PM)	Yes (PM)
561	LY Street/Irvine Bl.*	Yes (AM/PM)	Yes (AM/PM)	Yes (PM)	Yes (AM/PM)
562	Great Park Bl. W./Marine Wy.	No	No	No	No
572	Modjeska-A St./Irvine BL.*	Yes (AM/PM)	Yes (AM/PM)	Yes (AM/PM)	Yes (AM/PM)
575	O St./LV St.	No	No	No	No
576	O St./C St.	No	No	No	No
577	Pusan Way-Z St./Irvine Bl.*	Yes (AM/PM)	Yes (AM/PM)	Yes (AM/PM)	Yes (AM/PM)
651	C St./Trabuco Rd.	No	No	No	No
652	LY Street/Trabuco Rd.	No	No	No	No
653	LY Street/Loop Road	No	No	No	No
654	C St./LV St.	No	No	No	No
655	O St./8th St.	No	No	No	No
656	C St./8th St.	No	No	No	No
657	GP Blvd N/S Conn/GP Blvd E/W	--	No	No	No

Notes: *Intersections where signals are warranted are shown in bold.*

* The 2011 GPN VTTM traffic study identified six intersections as warranting a signal in interim year conditions and is reflected in the baseline conditions

Peak Hour Intersection Level of Service Analysis

An AM and PM peak hour intersection level of service analysis was conducted for all intersections identified in the approved scope of work. The majority of these intersections are signalized and were evaluated based on the Intersection Capacity Utilization methodology. Intersections which did not warrant signalization were evaluated based on the High Capacity Manual unsignalized intersection level of service methodology.

The results of this analysis for all alternatives are presented in Table VI-4. Intersections which either exceeds the AM and PM peak hour level of service threshold and intersections that are impacted by the OCGP 688 Acre Park Development Plan are highlighted. The calculation sheets for the signalized intersections are presented in Appendix D, and for unsignalized in Appendix E.

As presented in Table VI-4, there are no existing intersections which were found to exceed the City of Irvine's acceptable level of service threshold.

In review of the 2017 alternatives, Alternative 3: 2017 Baseline (No Project), there were two intersections which were found to exceed the City of Irvine's peak hour level of service threshold. These intersections are at Jeffrey Road and Alton Parkway (#291) and at Laguna Canyon Road and Lake Forest Drive (#406). The City of Irvine's criteria for determining project impacts is whether the forecast Intersection Capacity Utilization for intersections exceeding the acceptable LOS threshold is increased by 0.02 or more with the addition of project traffic or if the LOS goes from acceptable to unacceptable LOS. Based on the Intersection Capacity Utilization analysis, there were no OCGP 688 Acre Park Development Plan alternatives (Alternatives 4-6) which added to existing deficiencies at either of these two intersections. Therefore, there are no intersection level of service impacts from the proposed project.

Table VI-4: AM and PM Peak Hour Intersection Level of Service


Intersection ID	Intersection Name	Alternative 1 Existing		Alternative 2 Existing + 688 Acre PDP		Alternative 3 2017 Baseline		Alternative 4 2017 Baseline + 688 Acre PDP		Alternative 5 2017 Baseline + 688 Acre PDP + Five Point Option 1		Alternative 6 2017 Baseline + 688 Acre PDP + Connector Road	
		ICU ¹ or Delay ² (AM/PM)	LOS	ICU ¹ or Delay ² (AM/PM)	LOS	ICU ¹ or Delay ² (AM/PM)	LOS	ICU ¹ or Delay ² (AM/PM)	LOS	ICU ¹ or Delay ² (AM/PM)	LOS	ICU ¹ or Delay ² (AM/PM)	LOS
282	Jeffrey Rd./Portola Pkwy.	0.34/0.35	A/A	0.34 /0.35	A/A	0.53 /0.43	A/A	0.52 /0.43	A/A	0.51/0.43	A/A	0.52 /0.43	A/A
283	Jeffrey Rd./Irvine Bl.	0.49/0.55	A/A	0.47 /0.55	A/A	0.61 /0.59	B/A	0.61 /0.6	B/A	0.61/0.6	B/A	0.61 /0.6	B/A
284	Jeffrey Rd./Bryan Av.	0.45/0.37	A/A	0.44 /0.38	A/A	0.62 /0.5	B/A	0.61 /0.5	B/A	0.61/0.51	B/A	0.61 /0.5	B/A
285	Jeffrey Rd./Trabuco Rd.	0.45/0.42	A/A	0.44 /0.44	A/A	0.66 /0.62	B/B	0.66 /0.65	B/B	0.66/0.65	B/B	0.66 /0.65	B/B
286	Jeffrey Rd./Roosevelt	0.58/0.43	A/A	0.58 /0.43	A/A	0.76 /0.65	C/B	0.76 /0.67	C/B	0.76/0.67	C/B	0.76 /0.67	C/B
287	Jeffrey Rd./I-5 NB Ramps	0.58/0.59	A/A	0.59 /0.6	A/A	0.62 /0.77	B/C	0.62 /0.79	B/C	0.62/0.78	B/C	0.62 /0.79	B/C
288	Jeffrey Rd./Walnut Av./I-5 SB Ramps	0.71/0.78	C/C	0.71 /0.79	C/C	0.67 /0.84	B/D	0.67 /0.84	B/D	0.67/0.85	B/D	0.67 /0.84	B/D
289	Jeffrey Rd./ICD	0.6/0.75	A/C	0.59 /0.78	A/C	0.63 /0.8	B/C	0.63 /0.8	B/C	0.63/0.8	B/C	0.63 /0.8	B/C
290	Jeffrey Rd./Barranca Pkwy.	0.72/0.81	C/D	0.73 /0.82	C/D	0.81 /0.77	D/C	0.81 /0.77	D/C	0.81/0.77	D/C	0.81 /0.77	D/C
291	Jeffrey Rd./Alton Pkwy.	0.77/0.78	C/C	0.77 /0.79	C/C	0.93 /0.86	E/D	0.92 /0.86	E/D	0.92/0.86	E/D	0.92 /0.86	E/D
293	Jeffrey Rd./I-405 NB Ramps	0.66/0.72	B/C	0.66 /0.72	B/C	0.8 /0.79	C/C	0.79 /0.79	C/C	0.79/0.8	C/C	0.79 /0.79	C/C
294	University Dr./I-405 SB Ramps	0.61/0.57	B/A	0.61 /0.58	B/A	0.69 /0.64	B/B	0.69 /0.64	B/B	0.69/0.64	B/B	0.69 /0.64	B/B
300	Sand Canyon. Av./Portola Pkwy.	0.27/0.29	A/A	0.27 /0.31	A/A	0.33 /0.38	A/A	0.35 /0.39	A/A	0.35/0.39	A/A	0.35 /0.39	A/A
301	Sand Canyon. Av./Irvine Bl.	0.5/0.49	A/A	0.5 /0.53	A/A	0.68 /0.63	B/B	0.68 /0.64	B/B	0.69/0.64	B/B	0.68 /0.64	B/B
302	Sand Canyon. Av./Trabuco Pkwy.	0.39/0.37	A/A	0.4 /0.41	A/A	0.75 /0.76	C/C	0.75 /0.78	C/C	0.75/0.79	C/C	0.75 /0.78	C/C
303	Sand Canyon. Av./I-5 NB Ramps	0.65/0.52	B/A	0.66 /0.54	B/A	0.63 /0.7	B/B	0.64 /0.74	B/C	0.64/0.75	B/C	0.64 /0.74	B/C
304	Sand Canyon. Av./Marine Wy.	0.5/0.5	A/A	0.5 /0.73	A/C	0.73 /0.75	C/C	0.74 /0.8	C/C	0.74/0.79	C/C	0.74 /0.8	C/C
305	Sand Canyon. Av./I-5 SB Ramps	0.57/0.54	A/A	0.57 /0.63	A/B	0.69 /0.68	B/B	0.69 /0.74	B/C	0.69/0.74	B/C	0.69 /0.74	B/C
306	Sand Canyon. Av./Oak Cyn./Laguna Cyn. Rd.	0.47/0.4	A/A	0.47 /0.44	A/A	0.56 /0.69	A/B	0.57 /0.73	A/C	0.57/0.73	A/C	0.57 /0.73	A/C
307	Sand Canyon. Av./ICD	0.37/0.46	A/A	0.37 /0.48	A/A	0.59 /0.58	A/A	0.6 /0.6	A/A	0.6/0.6	A/A	0.6 /0.6	A/A
309	Sand Canyon. Av./Barranca Pkwy.	0.39/0.45	A/A	0.39 /0.46	A/A	0.6 /0.56	A/A	0.6 /0.57	A/A	0.6/0.56	A/A	0.6 /0.57	A/A
310	Sand Canyon. Av./Alton Pkwy.	0.54/0.65	A/B	0.54 /0.65	A/B	0.68 /0.7	B/B	0.68 /0.7	B/B	0.68/0.72	B/C	0.68 /0.7	B/B
311	Sand Canyon. Av./I-405 NB Ramps	0.46/0.43	A/A	0.46 /0.44	A/A	0.63 /0.48	B/A	0.62 /0.48	B/A	0.63/0.48	B/A	0.62 /0.48	B/A
312	Sand Canyon. Av./I-405 SB Ramps	0.68/0.4	B/A	0.68 /0.42	B/A	0.78 /0.59	C/A	0.78 /0.59	C/A	0.78/0.59	C/A	0.78 /0.59	C/A
313	Laguna Canyon Rd./ICD	0.21/0.3	A/A	0.21 /0.32	A/A	0.24 /0.31	A/A	0.24 /0.31	A/A	0.24/0.31	A/A	0.24 /0.31	A/A
314	Laguna Canyon Rd./Barranca Pkwy.	0.29/0.3	A/A	0.29 /0.3	A/A	0.34 /0.34	A/A	0.35 /0.34	A/A	0.34/0.35	A/A	0.35 /0.34	A/A
315	Laguna Canyon Rd./Alton Pkwy.	0.54/0.38	A/A	0.54 /0.38	A/A	0.48 /0.42	A/A	0.48 /0.42	A/A	0.48/0.42	A/A	0.48 /0.42	A/A
316	SR-133 SB Ramps/Irvine Bl.	0.39/0.43	A/A	0.4 /0.45	A/A	0.64 /0.51	B/A	0.65 /0.53	B/A	0.64/0.53	B/A	0.65 /0.53	B/A
317	SR-133 NB Ramps/Irvine Bl.	0.46/0.48	A/A	0.46 /0.49	A/A	0.57 /0.71	A/C	0.58 /0.74	A/C	0.58/0.73	A/C	0.58 /0.74	A/C
318	Banting/Barranca Pkwy.	0.47/0.75	A/C	0.47 /0.76	A/C	0.67 /0.49	B/A	0.67 /0.5	B/A	0.67/0.5	B/A	0.67 /0.5	B/A
319	Banting/Alton Pkwy.	0.4/0.48	A/A	0.4 /0.48	A/A	0.58 /0.45	A/A	0.58 /0.44	A/A	0.58/0.45	A/A	0.58 /0.44	A/A
321	Laguna Canyon Rd./Old Laguna Cyn. Rd.	0.66/0.56	B/A	0.66 /0.56	B/A	0.89 /0.88	D/D	0.89 /0.89	D/D	0.89/0.89	D/D	0.89 /0.89	D/D
327	Barranca Pkwy./Technology	0.5/0.58	A/A	0.5 /0.59	A/A	0.46 /0.54	A/A	0.46 /0.55	A/A	0.46/0.54	A/A	0.46 /0.55	A/A
328	Barranca Pkwy./I-5 HOV Ramp	0.54/0.41	A/A	0.55 /0.39	A/A	0.43 /0.32	A/A	0.42 /0.32	A/A	0.42/0.32	A/A	0.42 /0.32	A/A
329	Barranca Pkwy./ICD	0.4/0.4	A/A	0.42 /0.41	A/A	0.47 /0.54	A/A	0.47 /0.54	A/A	0.47/0.55	A/A	0.47 /0.54	A/A
330	Barranca Pkwy./Pacifica	0.4/0.44	A/A	0.4 /0.44	A/A	0.53 /0.63	A/B	0.53 /0.63	A/B	0.53/0.63	A/B	0.53 /0.63	A/B
331	ICD/Gateway Bl.	0.39/0.33	A/A	0.39 /0.34	A/A	0.39 /0.43	A/A	0.39 /0.44	A/A	0.39/0.43	A/A	0.39 /0.44	A/A
333	Pacifica/Gateway Bl.	0.49/0.61	A/B	0.51 /0.65	A/B	0.59 /0.61	A/B	0.6 /0.62	A/B	0.59/0.61	A/B	0.6 /0.62	A/B
338	Alton Pkwy./Irvine Bl.	0.45/0.49	A/A	0.45 /0.49	A/A	0.73 /0.8	C/C	0.74 /0.81	C/D	0.74/0.81	C/D	0.74 /0.81	C/D
339	Alton Pkwy./Toledo Wy.	0.38/0.36	A/A	0.38 /0.36	A/A	0.49 /0.53	A/A	0.49 /0.53	A/A	0.49/0.53	A/A	0.49 /0.53	A/A
340	Alton Pkwy./Jeronimo Rd.	0.35/0.34	A/A	0.36 /0.34	A/A	0.49 /0.46	A/A	0.49 /0.46	A/A	0.49/0.46	A/A	0.49 /0.46	A/A
341	Alton Pkwy./Barranca Pkwy./Muirlands Bl.	0.44/0.5	A/A	0.44 /0.49	A/A	0.51 /0.71	A/C	0.52 /0.71	A/C	0.52/0.71	A/C	0.52 /0.71	A/C

Table VI-4: AM and PM Peak Hour Intersection Level of Service (Continued)

Intersection ID	Intersection Name	Alternative 1 Existing		Alternative 2 Existing + 688 Acre PDP		Alternative 3 2017 Baseline		Alternative 4 2017 Baseline + 688 Acre PDP		Alternative 5 2017 Baseline + 688 Acre PDP + Five Point Option 1		Alternative 6 2017 Baseline + 688 Acre PDP + Connector Road	
		ICU ¹ or Delay ² (AM/PM)	LOS	ICU ¹ or Delay ² (AM/PM)	LOS	ICU ¹ or Delay ² (AM/PM)	LOS	ICU ¹ or Delay ² (AM/PM)	LOS	ICU ¹ or Delay ² (AM/PM)	LOS	ICU ¹ or Delay ² (AM/PM)	LOS
343	Alton Pkwy./Ada	0.36/0.49	A/A	0.37 /0.5	A/A	0.39 /0.49	A/A	0.38 /0.51	A/A	0.38/0.5	A/A	0.38 /0.51	A/A
344	Alton Pkwy./Technology Dr. W.	0.47/0.63	A/B	0.48 /0.64	A/B	0.43 /0.58	A/A	0.43 /0.58	A/A	0.43/0.58	A/A	0.43 /0.58	A/A
345	Alton Pkwy./I-5 NB Ramps	0.66/0.44	B/A	0.66 /0.44	B/A	0.65 /0.42	B/A	0.65 /0.42	B/A	0.65/0.42	B/A	0.65 /0.42	B/A
346	Alton Pkwy./Enterprise	0.63/0.58	B/A	0.63 /0.58	B/A	0.6 /0.6	A/A	0.6 /0.6	A/A	0.6/0.6	A/A	0.6 /0.6	A/A
348	Alton Pkwy./ICD	0.67/0.67	B/B	0.67 /0.66	B/B	0.62 /0.55	B/A	0.63 /0.55	B/A	0.63/0.55	B/A	0.63 /0.55	B/A
350	Alton Pkwy./Pacifica	0.37/0.34	A/A	0.38 /0.34	A/A	0.6 /0.44	A/A	0.6 /0.43	A/A	0.61/0.42	B/A	0.6 /0.43	A/A
351	Fortune Dr./I-5 SB Ramps/Enterprise	0.32/0.61	A/B	0.33 /0.61	A/B	0.5 /0.61	A/B	0.5 /0.6	A/A	0.5/0.6	A/A	0.5 /0.6	A/A
357	Enterprise Dr./Fortune Dr./I-405 NB Ramps	0.29/0.17	A/A	0.29 /0.18	A/A	0.41 /0.55	A/A	0.41 /0.54	A/A	0.41/0.55	A/A	0.41 /0.54	A/A
358	ICD/Enterprise Dr.	0.6/0.56	A/A	0.61 /0.57	B/A	0.63 /0.56	B/A	0.63 /0.57	B/A	0.63/0.57	B/A	0.63 /0.57	B/A
359	ICD/I-405 SB Ramps	0.57/0.57	A/A	0.57 /0.57	A/A	0.63 /0.65	B/B	0.63 /0.65	B/B	0.63/0.65	B/B	0.63 /0.65	B/B
360	ICD/Research Dr.	0.34/0.38	A/A	0.34 /0.38	A/A	0.59 /0.6	A/A	0.59 /0.6	A/A	0.59/0.6	A/A	0.59 /0.6	A/A
362	Bake Pkwy./Irvine Bl.	0.73/0.72	C/C	0.73 /0.72	C/C	0.75 /0.74	C/C	0.74 /0.75	C/C	0.74/0.75	C/C	0.74 /0.75	C/C
363	Bake Pkwy./Toledo Wy.	0.68/0.61	B/B	0.68 /0.62	B/B	0.83 /0.61	D/B	0.83 /0.61	D/B	0.83/0.61	D/B	0.83 /0.61	D/B
364	Bake Pkwy./Jeronimo Rd.	0.81/0.76	D/C	0.82 /0.76	D/C	0.74 /0.76	C/C	0.74 /0.77	C/C	0.74/0.77	C/C	0.74 /0.77	C/C
365	Bake Pkwy./Muirlands Bl.	0.57/0.6	A/A	0.57 /0.6	A/A	0.61 /0.67	B/B	0.61 /0.67	B/B	0.61/0.67	B/B	0.61 /0.67	B/B
366	Bake Pkwy./Rockfield Bl.	0.52/0.61	A/B	0.52 /0.61	A/B	0.57 /0.68	A/B	0.58 /0.67	A/B	0.57/0.68	A/B	0.58 /0.67	A/B
367	Bake Pkwy./I-5 NB Ramps	0.82/0.53	D/A	0.81 /0.54	D/A	0.86 /0.66	D/B	0.86 /0.67	D/B	0.86/0.67	D/B	0.86 /0.67	D/B
368	Bake Pkwy./I-5 SB Ramps	0.64/0.72	B/C	0.63 /0.71	B/C	0.73 /0.77	C/C	0.73 /0.77	C/C	0.73/0.77	C/C	0.73 /0.77	C/C
371	Bake Pkwy./Research Dr.	0.34/0.62	A/B	0.34 /0.62	A/B	0.44 /0.48	A/A	0.44 /0.48	A/A	0.44/0.48	A/A	0.44 /0.48	A/A
372	Bake Pkwy./ICD	0.28/0.26	A/A	0.3 /0.26	A/A	0.33 /0.36	A/A	0.33 /0.36	A/A	0.33/0.36	A/A	0.33 /0.36	A/A
406	Laguna Canyon Rd./Lake Forest Dr.	N/A		N/A		0.95 /0.83	E/D	0.94 /0.83	E/D	0.95/0.83	E/D	0.94 /0.83	E/D
409	Bake Pkwy./Commercentre Dr.	0.56/0.56	A/A	0.56 /0.56	A/A	0.69 /0.77	B/C	0.69 /0.77	B/C	0.69/0.78	B/C	0.69 /0.77	B/C
444	Sand Canyon Av./Burt Rd.	0.58/0.48	A/A	0.58 /0.52	A/A	0.74 /0.62	C/B	0.74 /0.65	C/B	0.74/0.65	C/B	0.74 /0.65	C/B
481	Laguna Canyon Rd./Technology Dr.	N/A		N/A		0.27 /0.24	A/A	0.27 /0.25	A/A	0.27/0.25	A/A	0.27 /0.25	A/A
482	Road A/Trabuco Rd.	N/A		N/A		0.32 /0.28	A/A	0.32 /0.3	A/A	0.32/0.29	A/A	0.32 /0.3	A/A
483	Road C/Trabuco Rd.	N/A		N/A		0.25 /0.27	A/A	0.25 /0.29	A/A	0.24/0.28	A/A	0.25 /0.29	A/A
484	Sand Canyon Av./Roosevelt	N/A		N/A		0.44 /0.48	A/A	0.45 /0.49	A/A	0.45/0.48	A/A	0.45 /0.49	A/A
485	Sand Canyon Av./Nightmist	0.3/0.29	A/A	0.3 /0.29	A/A	0.75 /0.45	C/A	0.75 /0.45	C/A	0.75/0.45	C/A	0.75 /0.45	C/A
514	Alton Pkwy./Rancho Pkwy.	N/A		N/A		0.48 /0.38	A/A	0.49 /0.38	A/A	0.48/0.38	A/A	0.49 /0.38	A/A
518	Alton Pkwy./Commercentre	N/A		N/A		0.51 /0.58	A/A	0.51 /0.58	A/A	0.51/0.59	A/A	0.51 /0.58	A/A
555	Bake Pkwy./Rancho Pkwy. S	0.5/0.55	A/A	0.5 /0.55	A/A	0.66 /0.66	B/B	0.66 /0.66	B/B	0.66/0.66	B/B	0.66 /0.66	B/B
556	Ridge Valley/Portola Pkwy.	0.26/0.16	A/A	0.26 /0.16	A/A	0.38 /0.39	A/A	0.38 /0.41	A/A	0.39/0.41	A/A	0.38 /0.41	A/A
558	Ridge Valley-O St./Irvine Bl.	N/A		N/A		0.58 /0.79	A/C	0.59 /0.81	A/D	0.6/0.8	A/C	0.59 /0.81	A/D
559	O St./Trabuco Rd.	N/A		N/A		0.5 /0.44	A/A	0.51 /0.46	A/A	0.5/0.46	A/A	0.51 /0.46	A/A
560	O St./Marine Wy.	N/A		N/A		0.18 /0.26	A/A	0.18 /0.34	A/A	0.19/0.33	A/A	0.18 /0.34	A/A
561	LY Street/Irvine Bl.	N/A		N/A		0.42 /0.57	A/A	0.43 /0.6	A/A	0.43/0.6	A/A	0.18 /0.34	A/A
562	Great Park Bl. W./Marine Wy.	N/A		N/A		N/A		9.4/11.7 Sec	A/B	9.4/11.7 Sec.	A/B	10.1/11.1 Sec.	B/B
563	B St./Irvine Bl.	N/A		N/A		0.64 /0.72	B/C	0.66 /0.75	B/C	0.65/0.75	B/C	0.66 /0.75	B/C
571	Portola Springs/Portola Pkwy.	N/A		N/A		0.39 /0.32	A/A	0.39 /0.32	A/A	0.39/0.32	A/A	0.39 /0.32	A/A
572	Modjeska-A St./Irvine Bl.	0.44/0.43	A/A	0.44 /0.44	A/A	0.47 /0.59	A/A	0.32 /0.61	A/B	0.33/0.61	A/B	0.32 /0.61	A/B
574	O St./LN St.	N/A		N/A		0.22 /0.18	A/A	0.24 /0.19	A/A	0.26/0.2	A/A	0.24 /0.19	A/A
575	O St./LV St.	N/A		N/A		9.3/9.6 Sec.	A/A	9.4/10.4 Sec.	A/B	9.5/10.3 Sec.	A/B	9.2/9.8 Sec.	A/A

Table VI-4: AM and PM Peak Hour Intersection Level of Service (Continued)

Intersection ID	Intersection Name	Alternative 1 Existing		Alternative 2 Existing + 688 Acre PDP		Alternative 3 2017 Baseline (No Project)		Alternative 4 2017 Baseline + 688 Acre PDP		Alternative 5 2017 Baseline + 688 Acre PDP + Five Point Option 1		Alternative 6 2017 Baseline + 688 Acre PDP + Connector Road	
		ICU ¹ or Delay ² (AM/PM)	LOS	ICU ¹ or Delay ² (AM/PM)	LOS	ICU ¹ or Delay ² (AM/PM)	LOS	ICU ¹ or Delay ² (AM/PM)	LOS	ICU ¹ or Delay ² (AM/PM)	LOS	ICU ¹ or Delay ² (AM/PM)	LOS
576	O St./C St.	N/A		N/A		9.7/10.5 Sec.	A/B	9.6/11.2 Sec	A/B	9.6/11.0 Sec.	A/B	9.3/10.6 Sec	A/B
577	Pusan Way-Z St./Irvine Bl.	N/A		N/A		0.64 /0.51	B/A	0.64 /0.52	B/A	0.63/0.52	B/A	0.64 /0.51	B/A
579	A-02 St./Irvine Bl.	N/A		N/A		0.78 /0.81	C/D	0.78 /0.83	C/D	0.78/0.83	C/D	0.78 /0.84	C/D
650	O St./C St.	N/A		N/A		6.7/5.74 Sec.	A/A	6.34/5.44 Sec.	A/A	6.8/6.43 Sec.	A/A	6.39/7.99 Sec.	A/A
651	C St./Trabuco Rd.	N/A		N/A		10.4/11.3 Sec.	B/B	9.3/12 Sec.	A/B	8.2/10 Sec.	A/B	9.3/12.2 Sec.	A/B
652	LY Street/Trabuco Rd.	N/A		N/A		9.3/9.8 Sec.	A/A	9/10 Sec.	A/A	8.8/9.7 Sec.	A/A	9.3/11 Sec.	A/B
653	LY Street/GP Blvd N/S Conn	N/A		N/A		N/A		8.6/8.9 Sec.	A/A	8.5/8.9 Sec.	A/A	8.5 /9.3 Sec.	A/A
654	C St./LV St.	N/A		N/A		7.4/7.6 Sec.	A/A	7.1/7.5 Sec.	A/A	7.1/7.4 Sec.	A/A	7.1/7.4 Sec.	A/A
655	O St./8th St.	N/A		N/A		9.6/10.7 Sec.	A/B	9.3/10.3 Sec.	A/B	9.2/10.1 Sec.	A/B	9.1/9.7 Sec.	A/A
656	C St./8th St.	N/A		N/A		7.3/7.6 Sec.	A/A	7/7.1 Sec.	A/A	6.9/7.1 Sec.	A/A	7/7.1 Sec.	A/A
657	GP Blvd N/S Conn/GP Blvd E/W	N/A		N/A		N/A		8.6/9.5 Sec.	A/A	8.6/10.1 Sec.	A/B	9.3/10.2 Sec.	A/B

Notes:*Italics* indicates that LOS E is considered acceptable operation at these intersections. Indicates unsatisfactory LOS during the AM or PM peak hour.¹ At signalized intersections the intersection ICU is reported and used to determine peak hour levels of service.² At unsignalized intersections the intersection delay is reported and used to determine peak hour levels of service. At two-way stop controlled intersections, the worse case approach delay is reported.

VII. SPECIAL ISSUES – TRANSPORTATION GUIDELINES

Transportation Guidelines (TG)

The analysis includes the evaluation of project intersections based on the Transportation Guidelines (TGs), July 30, 1993, to determine consistency with the City's design requirements. Specific design elements to be evaluated include turn-pocket lengths (TG-1), signal spacing (TG-7), distance between driveways and intersections (TG-8), corner clearance (TG-9), left-turn in/out access (TG-10), right turn lanes at driveways (TG-11), signal warrants (TG-13), and driveway length (TG-15).

As previously presented, the signal warrant analysis (TG-13) was conducted for project intersections for each alternative and intersection to determine whether the intersection warranted being signalized and evaluated with the ICU capacity analysis methodology, or unsignalized, HCM methodology. Therefore, the following presents the analysis of the remaining Transportation Guidelines.

TG-1 Turn Lane Pocket Lengths

The lengths of left-turn pockets at signalized intersections are based on several parameters, including traffic control, turn volume, and cycle length.

The purpose of the turn pocket length is to allow the turning vehicle to exit the through movement and decelerate into the turn pocket without impacting the through movement. The minimum single-turn pocket length for Commuter and Local streets is 90 feet. For Major, Primary, and Secondary arterials, the minimum allowed left turn pocket is 150 feet. The maximum length of a single left turn pocket is 300 feet. For purposes of this analysis, a conservative 120-second cycle length, 10% truck mix, and 95% confidence level have been assumed.

For each intersection, the required left turn bay length was identified according to TG guidelines. Consistent with NITM Program traffic studies, where pocket lengths exceed the standard 150 feet for public arterials or 90 feet for commuter and local roadways, the recommended length is based on 1-foot per peak hour left-turn volume (highest of AM and PM) and rounded into increments of 10 feet. The resulting left turn pocket storage requirement for each signalized intersection and alternative is presented in Table VII-1.

At Great Park Boulevard (West) and Marine Way (562), dual 250-foot eastbound turn lanes are a design feature of the project.

Table VII-1: Turn Lane Pocket Lengths

Alternative	ID	Intersection Name	NBL			SBL			EBL			WBL		
			Lanes ¹	Vol. ²	Recom- mended Length ³	Lanes ¹	Vol. ²	Recom- mended Length ³	Lanes ¹	Vol. ²	Recom- mended Length ³	Lanes ¹	Vol. ²	Recom- mended Length ³
Alternative 3 2017 Base (No Project)	558	Ridge Valley-O St./Irvine Blvd	2	179	<u>180</u>	1	121	<u>130</u>	2	439	<u>440</u>	2	47	150
	559	O St./Trabuco Rd.	2	94	150	1	56	150	2	497	<u>500</u>	1	26	90
	560	O St./Marine Wy.		N/A		2	71	150	1	147	150		N/A	
	561	LY Street/Irvine Blvd	1	58	90		N/A			N/A		1	44	150
	562	GP Blvd (West)/Marine Wy.		N/A			N/A			N/A			N/A	
	572	Modjeska-A St./Irvine Blvd	1	8	90	2	454	<u>460</u>	1	166	<u>170</u>	1	51	150
	575	"O" Str./"LV" St.	1	1	150	1	11	150	1	11	90	1	11	90
	577	Pusan Way-Z St./Irvine Blvd	1	97	<u>100</u>	1	93	<u>100</u>	1	18	150	1	231	<u>240</u>
	651	"C" St./Trabuco Rd.	1	195	<u>200</u>	1	4	90	1	59	90	1	16	90
	652	"LY" St./Trabuco Road	1	5	90		N/A		1	140	<u>140</u>		N/A	
	653	"LY" St./Loop Road		N/A		1	0	90		N/A			N/A	
	655	"O" St./8th St.	1	0	150	1	19	150	1	0	90	1	119	90
	656	"C" St./8th St.		N/A			N/A			N/A			N/A	
Alternative 4 2017 Base + 688 Acre GP	558	Ridge Valley-O St./Irvine Blvd	2	174	<u>180</u>	1	130	<u>130</u>	2	445	<u>460</u>	2	45	150
	559	O St./Trabuco Rd.	2	111	150	1	64	150	2	571	<u>580</u>	1	45	90
	560	O St./Marine Wy.		N/A		2	103	150	1	145	150		N/A	
	561	LY Street/Irvine Blvd	1	86	90		N/A			N/A		1	58	150
	562	GP Blvd (West)/Marine Wy.		N/A		1	6	90	2 ⁴	485	<u>490</u>		N/A	
	572	Modjeska-A St./Irvine Blvd	1	9	90	2	453	<u>460</u>	1	176	<u>180</u>	1	60	150
	575	"O" Str./"LV" St.	1	1	150	1	16	150	1	1	90	1	16	90
	577	Pusan Way-Z St./Irvine Blvd	1	97	<u>100</u>	1	90	90	1	14	150	1	280	<u>280</u>
	651	"C" St./Trabuco Rd.	1	175	<u>180</u>	1	9	90	1	39	90	1	24	90
	652	"LY" St./Trabuco Road	1	80	90		N/A		1	73	90		N/A	
	653	"LY" St./Loop Road		N/A		1	163	<u>170</u>		N/A			N/A	
	655	"O" St./8th St.	1	0	150	1	5	150	1	0	90	1	32	90
	656	"C" St./8th St.		N/A			N/A			N/A			N/A	
Alternative 5 2017 Base + 688 Acre GP + FivePoint Option 1	558	Ridge Valley-O St./Irvine Blvd	2	175	<u>180</u>	1	125	<u>130</u>	2	442	<u>450</u>	2	48	150
	559	O St./Trabuco Rd.	2	92	150	1	64	150	2	516	<u>520</u>	1	44	90
	560	O St./Marine Wy.		N/A		1	96	150	1	140	150		N/A	
	561	LY Street/Irvine Blvd	1	85	90		N/A			N/A		1	60	90
	562	GP Blvd (West)/Marine Wy.		N/A		1	6	90	2 ⁴	485	<u>490</u>		N/A	
	572	Modjeska-A St./Irvine Blvd	1	9	90	2	457	<u>460</u>	1	172	250	1	61	150
	575	"O" Str./"LV" St.	1	3	150	1	13	150	1	17	90	1	15	90
	577	Pusan Way-Z St./Irvine Blvd	1	101	<u>110</u>	1	88	90	1	13	150	1	280	<u>280</u>
	651	"C" St./Trabuco Rd.	1	68	90	1	10	90	1	25	90	1	17	90
	652	"LY" St./Trabuco Road	1	75	90		N/A		1	0	90		N/A	
	653	"LY" St./Loop Road		N/A		1	166	<u>170</u>		N/A			N/A	
	655	"O" St./8th St.	1	0	90	1	8	150	1	0	150	1	23	90
	656	"C" St./8th St.		N/A			N/A			N/A			N/A	
Alternative 6 2017 Base + 688 Acre GP + Connector Road	558	Ridge Valley-O St./Irvine Blvd	2	174	<u>180</u>	1	130	<u>130</u>	2	446	<u>540</u>	2	45	150
	559	O St./Trabuco Rd.	2	95	150	1	54	150	2	555	<u>700</u>	1	31	90
	560	O St./Marine Wy.		N/A		1	48	150	1	148	150		N/A	
	561	LY Street/Irvine Blvd	1	84	150		N/A			N/A		1	61	90
	562	GP Blvd (West)/Marine Wy.		N/A		1	33	90	2 ⁴	382	<u>390</u>		N/A	
	572	Modjeska-A St./Irvine Blvd	1	10	90	2	454	<u>460</u>	1	173	<u>180</u>	1	60	90
	575	"O" Str./"LV" St.	1	1	150	1	19	150	1	1	150	1	15	150
	577	Pusan Way-Z St./Irvine Blvd	1	97	<u>100</u>	1	89	90	1	13	150	1	322	<u>330</u>
	651	"C" St./Trabuco Rd.	1	171	<u>180</u>	1	10	90	1	41	90	1	21	90
	652	"LY" St./Trabuco Road	1	64	90		N/A		1	77	90		N/A	
	653	"LY" St./Loop Road		N/A		1	280	<u>280</u>		N/A			N/A	
	655	"O" St./8th St.	1	0	90	1	7	150	1	0	90	1	31	90
	656	"C" St./8th St.		N/A			N/A			N/A			N/A	

Legend / Notes:

XXX

Locations where left turn lane recommendations exceed 150 feet for arterials or 90 feet for collector/local streets.

Locations where a dual left-turn lanes was not proposed in ITAM, but the volumes recommend a second left-turn lane.

¹ Proposed Lane Geometry.² The higher left-turn peak hour volume was used to determine the required left-turn storage length.³ All storage lengths are reported in feet.⁴ A project design feature of dual 250 foot left turn lanes is proposed by OCGP.

Based on the 2017 analysis, there was one left turn pocket length demand which exceeded the 300-foot threshold. This was the westbound left turn lane from Irvine Boulevard to “Z” Street/Pusan Way (577). This left turn lane is not recommended to be widened to two lanes because this intersection will operate at an acceptable LOS (LOS A/B) with a single westbound left-turn lane. Additionally, the OCGP Access Study indicates that the westbound left turn demand drops significantly at Post 2030 buildout with additional anticipated network improvements, and a single westbound left turn lane will operate acceptably.

TG-7 Distance Between Signalized Intersections

Adequate separation between signalized intersections along highways is a key parameter for maintaining signal progression. Marine Way is a Primary Highway with a desirable spacing of one mile between signalized intersections and a minimum of one-half mile between signalized intersections.

The intersection of “O” Street and Trabuco Road (#559) warrants a signal in the 2017 Baseline No Project Alternative as well as in all With Project alternatives. The distance between these two future signalized intersections exceed the minimum thresholds as presented in Table VII-2.

It should also be noted that based on the Post 2035 analysis performed as part of the Orange County Great Park Access Study, there are three signals proposed along Marine Way: at “O” Street, Great Park Boulevard (West), and Great Park Boulevard (East). As presented in Table VII-2, the distances between both sets of signals exceed the minimum spacing requirements.

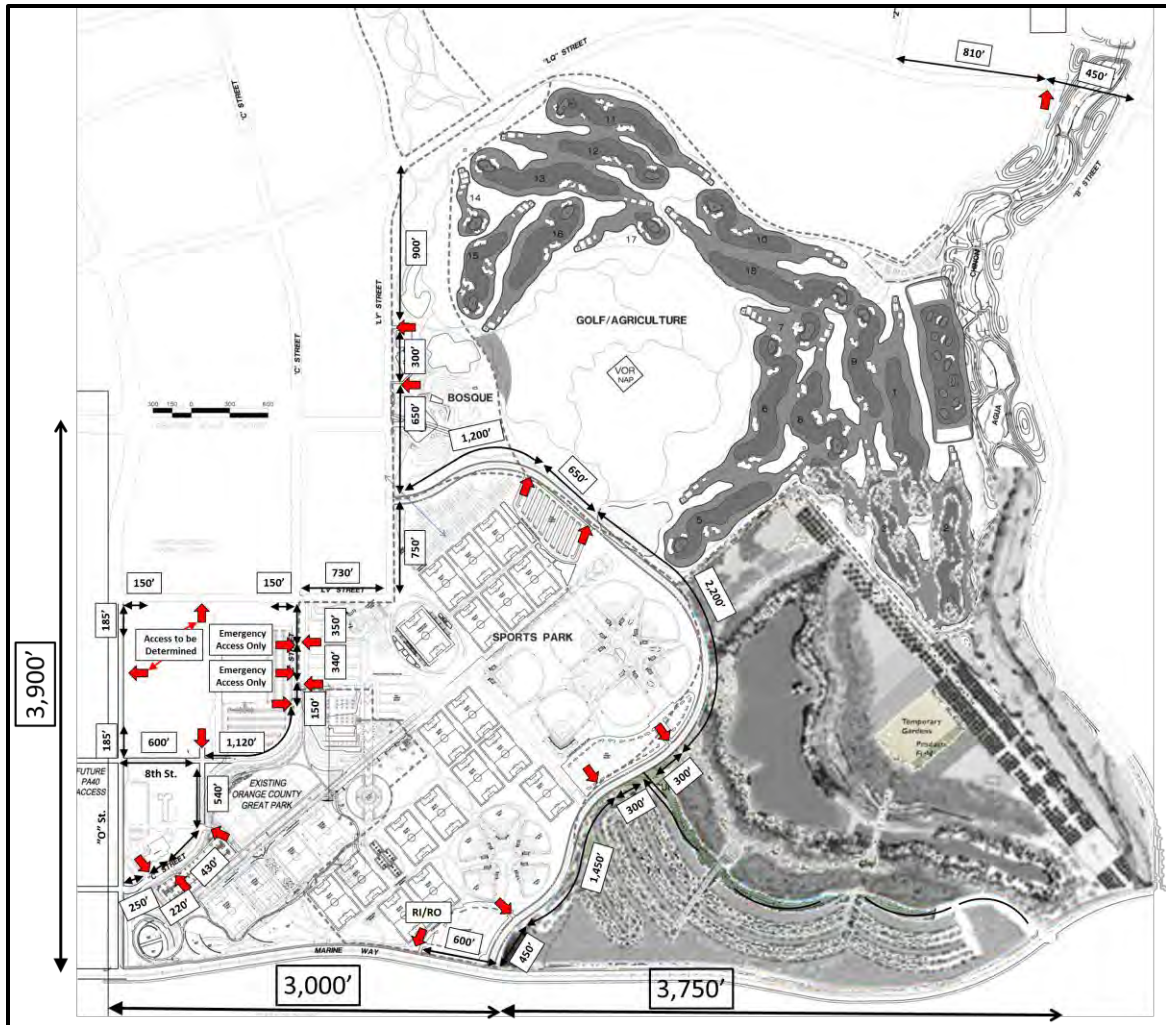
Table VII-2: Distances between Signalized Intersections

Street	From	To	Desirable	Minimum Distance	Measured Distance	Exceeds Minimum Spacing
Marine Way	“O” Street	Great Park Boulevard West	2,640	1,320	3,000	Yes
	Great Park Boulevard West	Great Park Boulevard East (build-out condition)	2,640	1,320	3,750	Yes
“O” Street	Marine Way	Trabuco Road	1,320	400	3,900	Yes

TG-8 Distance Between Driveways and Intersections

Driveway and intersection spacing requirements are provided in TG-8. The minimum separation for Primary Highways is 230 feet (Marine Way), for Secondary Highways is 185 feet (“O” Street), for Commuter Streets is 150 feet, and for Local Streets is 105 feet. As presented in Figure VII-1, all driveways equal or exceed the minimum TG-8 requirement for distances between intersections and driveways.

Figure VII-1: Driveway Spacing



TG-9 Corner Clearance

TG-9 ensures that access driveways do not interfere with nearby signalized intersections. The following items are considered for each unsignalized driveway that is adjacent to one or more signalized intersections:

1. Downstream right turn considerations (right turns at the nearest adjacent intersection must not back up as to the unsignalized driveway);
2. Downstream left turn considerations (right turning vehicles must be able to adequately maneuver into the left turn lane at the nearest adjacent intersection); and
3. Sufficient spacing for major street left turn bays.

There is only one stop controlled driveway that could potentially impact a future signal. This is the proposed right-in and right-out access at driveway 669, which is 600 feet west of the future proposed intersection of Marine Way and Great Park Boulevard West (562). The 600 feet between this driveway and the intersection of Great Park Boulevard West allows sufficient distance to avoid right turn queue interference and adequate distance to merge to the left turn lane, if needed.

TG-10 Left Turn In / Left Turn Out Access

TG-10 provides procedures to determine whether left-in only or left-in/left-out access at unsignalized intersection locations will be considered along Major, Primary, Secondary, and Commuter streets. This procedure has been used along with Highway Capacity Manual unsignalized level of service analysis to determine the appropriate configurations.

Presented in Table VII-3 is the Left Turn In and Left Turn Out access analysis for project intersections for Alternatives 4 through 6, which include the 2017 plus Great Park 688 Acre Park Development Plan alternatives. As presented in Table VII-3, left turn in and out movements can be accommodated for all alternatives and intersections.

Table VII-3: Left Turn In and Out Access Analysis

Alternatives	Int. ID	Intersection Name	Conflicting Left In Volume AM (PM)	Left In Volume AM (PM)	Conflicting Left Out Volume AM (PM)	Left Out Volume AM (PM)	Left In & Out Acceptable
Alternative 4 2017 Base + 688 Acre GP	576	O St./C St. (South)	70 (282)	6 (16)	221 (489)	5 (40)	Yes / Yes
	653	LY Street/GP Blvd (N/S)	10 (30)	21 (163)	50 (200)	5 (3)	Yes / Yes
	655	O St./8th St.	63 (212)	28 (32)	189 (349)	28 (32)	Yes / Yes
	656	C St./8th St.	20 (30)	4 (12)	60 (78)	5 (2)	Yes / Yes
Alternative 5 2017 Base + 688 Acre GP + Five Point Option 1	576	O St./C St. (South)	55 (294)	5 (14)	215 (469)	7 (39)	Yes / Yes
	653	LY Street/GP Blvd (N/S)	11 (20)	20 (166)	39 (192)	4 (4)	Yes / Yes
	655	O St./8th St.	39 (213)	8 (5)	183 (479)	18 (23)	Yes / Yes
	656	C St./8th St.	19 (48)	2 (17)	37 (40)	4 (1)	Yes / Yes
Alternative 6 2017 Base + 688 Acre GP + Connector Road	576	O St./C St. (South)	111 (237)	6 (14)	168 (311)	6 (31)	Yes / Yes
	653	LY Street/GP Blvd (N/S)	11 (29)	67 (280)	96 (307)	2 (4)	Yes / Yes
	655	O St./8th St.	47 (162)	4 (7)	130 (231)	29 (31)	Yes / Yes
	656	C St./8th St.	21 (41)	4 (11)	56 (97)	5 (3)	Yes / Yes

TG-11 Right Turn Lanes at Driveways

Right turn lanes are required at unsignalized driveways on Major, Primary, and Secondary roadways when the turn volumes and through volumes could conflict and increase the potential for accidents. TG-11 provides guidelines for when right turn lanes are required at unsignalized driveways. TG-11 does not require right turn lanes on Commuter roadways.

Ideally, TG-11 should be based on buildout conditions and not interim year 2017 conditions as future year additional traffic might result in a threshold to be exceeded. Therefore, the ultimate improvement should be provided when the project is constructed as presented in Table VII-4. This Post 2035 data is utilized from the OCGP Access Study for which the Post 2035 data was developed.

Table VII-4: Right Turn Lanes at Driveways (Post 2035 Forecasts)

	Int. ID	Intersection Name	Right Turn In Bound Volume AM/ PM	Peak Hour Volume Threshold	Threshold Exceeded
Alternative 2 Post 2035 Base + 688 Acre Great Park	576	O St./C St. (South)	8 / 73	200	No
	655	O St./8th St.	10 / 38	200	No
	663	O St./Ice Rink/Picnic Area	2 / 4	200	No
	669	Marine Way & Parking Area 8 RIRO	10 / 170	100	No*
Alternative 3 Post 2035 Base + 688 Acre Great Park + FivePoint Option 1	576	O St./C St. (South)	4 / 72	200	No
	655	O St./8th St.	8 / 29	200	No
	663	O St./Ice Rink/Picnic Area	17 / 35	200	No
	669	Marine Way & Parking Area 8 RIRO	10 / 170	100	No*
Alternative 4 Post 2035 Base + 688 Acre Great Park + Connector Road	576	O St./C St. (South)	8 / 65	200	No
	655	O St./8th St.	8 / 29	200	No
	663	O St./Ice Rink/Picnic Area	13 / 36	200	No
	669	Marine Way & Parking Area 8 RIRO	10 / 170	100	No*

* A project design feature of a 250-foot right turn pocket is proposed.

There are three project driveways/intersections along “O” Street. “O” Street is designed as a Secondary Highway which requires a right turn lane if either the AM or PM peak hour volumes exceeds 200. Based on Post 2035 plus OCGP traffic developed for the OCGP Access Study, right turn volumes are below the threshold and a right turn lane is not required.

At the Marine Way right in/right out driveway (669) located west of Great Park Boulevard that provides access to Parking Area 8, a 250-foot long westbound right turn lane will be provided as a design feature of the project..

TG-15 Driveway Length

Primary driveways should be of sufficient length to allow vehicles to enter the parking area without causing subsequent vehicles to back out onto City streets. Driveways should be measured from the back of the sidewalk or the stop bar exiting the site to the near curb line of the first intersection parking stall or traffic control measure (internal drive aisle or pedestrian crosswalk) located on site. The minimum driveway length is based on one foot per entering vehicle rounded up to the next 25-foot.

Similar to TG-11 Right Turn Lanes at Driveways, TG-15 utilizes Post 2035 buildout traffic volumes from the OCGP Access Study. The Post 2035 traffic forecasts and resulting driveway lengths for each project access are presented in Table VII-5.

Table VII-5: Driveway Length Requirements

Int. ID	Intersection Name	Alternative 4 Post 2035 Base + 688 Acre GP		Alternative 5 Post 2035 Base + 688 Acre GP + FivePoint Option 1		Alternative 6 Post 2035 Base + 688 Acre GP + Connector Road	
		Entering AM (PM) Peak Hour Volumes	Minimum Driveway Length	Entering AM (PM) Peak Hour Volumes	Minimum Driveway Length	Entering AM (PM) Peak Hour Volumes	Minimum Driveway Length
653	LY Street/GP Blvd (N/S)	20 (170)	175	20 (170)	175	110 (210)	225
658	Golf Course/LQ St.	50 (50)	50	50 (50)	50	50 (50)	50
659	LY Street/Parking Area 2	56 (102)	125	58 (91)	100	54 (104)	125
660	Parking Area 7 North/GP Blvd (N/S)	21 (171)	175	21 (172)	175	20 (150)	150
661	Parking Area 7 South/GP Blvd (N/S)	2 (2)	25	2 (2)	25	2 (21)	25
662	Ice Rink/Picnic Area/LV St.	6 (8)	25	7 (6)	25	6 (7)	25
663	O St./Ice Rink/Picnic Area	50 (70)	75	50 (70)	75	50 (70)	75
664	C St./Picnic Area 4 (North)	36 (37)	50	37 (85)	100	35 (37)	50
665	C St./Parking Area 4 (South)	20 (42)	50	4 (34)	50	20 (40)	50
666	GP Blvd (N/S)/Parking Area 6	11 (181)	200	11 (181)	200	10 (180)	200
667	C St./Parking Area 5 (North)	1 (3)	25	2 (2)	25	2 (2)	25
668	C St./Parking Area 5 (South)	10 (80)	100	9 (80)	100	9 (90)	100
670	GP Blvd (N/S)/Parking Area 8	20 (200)	200	20 (200)	200	20 (200)	200
671	Parking Area 9 (West)/GP Blvd (E/W)	120 (132)	150	120 (130)	150	120 (130)	150
672	Parking Area 9 (Middle)/GP Blvd (E/W)	125 (132)	150	125 (131)	150	123 (140)	150
673	Parking Area 9 (East)/GP Blvd (E/W)	120 (140)	150	120 (140)	150	124 (130)	150

VIII. SPECIAL ISSUES – ALTERNATIVE ACCESS TO PARKING AREAS 3 & 4

The Orange County Great Park Access Study analyzed four Post 2035 Alternatives, a base Post 2035 alternative without the Great Park 688 Acre Park Development Plan (No Project), a Post 2035 Base with the project, and two additional OCGP alternatives, one with a Heritage Fields Option 1 and second with a loop connector road between “LY” and Marine Way.

All three of the OCGP alternatives evaluated had two “T” intersection access locations on “C” Street to Parking Area 4 (664 and 665) and one access to Parking Area 3 (675). As identified in the Access Analysis, none of the three intersections warranted a signal, all had acceptable levels of service, and all met each of the Transportation Guidelines (TG).

As part of the design process for the OCGP, an alternative has been proposed to create two full access intersections along “C” at 664 and 665 that would provide access to both Parking Area 3 and 4. With this alternative, the intersection at 675 would be eliminated.

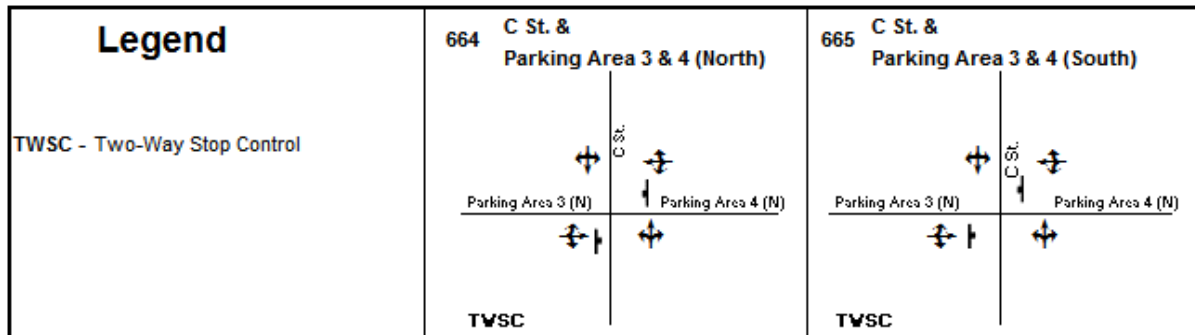
To determine if the proposed access alternative would result in any impacts, a sensitivity analysis was conducted which includes the following:

1. Post 2035 Project Intersection and Driveway Geometry
2. Signal Warrant Analysis (TG-13)
3. Intersection Level of Service Analysis
4. TG-1: Turn Lane Pocket Lengths
5. TG-8: Distance Between Driveways and Intersections
6. TG-10: Left Turn In/Out Access
7. TG-11: Right Turn Lanes at Driveways.
8. TG- 15: Driveway Length

This analysis was based on Alternative 2: Post 2035 ITAM Base Condition + 688 Acre Park Development Plan as it was identified as being the worst case alternative.

Post 2035 Project Intersection and Driveway Geometry

The proposed project intersection and driveway geometry for the “C” Street north intersection (664) and south intersection (665) is presented in Figure VIII-1. As presented, these intersections would include one lane for all approaches that provide for left, through and right turn movements. “C” Street would not be stop controlled, but all driveway approaches from Parking Area 3 and 4 would be stop controlled.

Figure VIII-1: Special Issue - Parking Areas 3 and 4 Intersection and Driveway Geometry**Signal Warrant Analysis (TG-13)**

A signal warrant analysis was conducted for both intersections based on Post 2035 peak hour volumes as presented in Appendix F and intersection lane geometrics as presented in Figure VIII-1. The Signal Warrant worksheets for each alternative and intersection are included in Appendix F. As presented in Table VIII-1, neither intersection warrants a signal.

Table VIII-1: Special Issue – “C” Street and Parking Area 3 & 4 Signal Warrant Analysis

Int. ID	Intersection Name	AM Peak Hour Volumes		PM Peak Hour Volumes		Signal Warrant
		(Dir)	(Dir)	(Dir)	(Dir)	
664	C St./Parking Area 3 & 4 North	120 (NB/SB)	7 (WB)	126 (NB/SB)	69 (WB)	No
665	C St./Parking Area 3 & 4 South	100 (NB/SB)	5 (EB)	114 (NB/SB)	46 (WB)	No

Intersection Level of Service Analysis

An unsignalized intersection level of service analysis was conducted for each of the two intersections. The Level of Service work sheets are presented in Appendix F and the resulting intersection level of service at each intersection is presented in Table VIII-2.

Table VIII-2: Special Issue – “C” Street and Parking Area 3 & 4 Intersection LOS

Int. ID	Intersection Name	Control	Special Issue - Parking Area 3 & 4 Intersection Level of Service Analysis	
			Delay (AM/PM)	LOS
664	C St./Parking Area 3 & 4 (North)	TWSC	9.7 / 10.0 Seconds	A /B
665	C St./Parking Area 3 & 4 (South)	TWSC	9.4 / 9.3 Seconds	A /A

As presented, both intersections will operate at acceptable level of service.

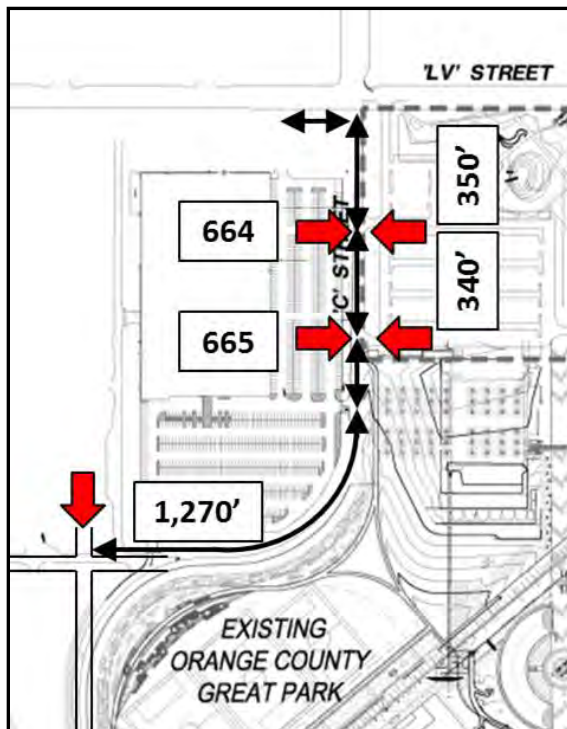
TG-1 Turn Lane Pocket Lengths

The length of left turn lanes is based on peak hour left turn volumes for intersections which warrant left turn lanes. The aligned intersections of 664 and 665 along “C” Street operate with acceptable levels of service with single lane that serves left, through and right turns. Therefore, determining the length of the turn lane is not required.

TG-8 Distance Between Driveways and Intersections

Driveway and intersection spacing requirements are provided in TG-8. The minimum separation for driveways and intersections on Commuter Streets is 150 feet and for Local Streets is 105 feet. As presented in Figure VIII-2, the distances between the “C” Street and Parking Area 3 & 4 North and Parking Area 3 & 4 South exceeds the minimum requirements for a Commuter or Local Street. These two driveways also exceed the minimum distance requirements between “C” Street and “LV” Street and “C” Street and 8th Street.

Figure VIII-2: Special Issue – Driveway Spacing



TG-10 Left Turn In/Out Access

TG-10 determines whether left-in only or left-in/left-out access at unsignalized intersection locations will be considered along Major, Primary, Secondary, and Commuter streets.

Presented in Table VIII-3 is the Left Turn In and Left Turn Out access analysis for the “C” Street driveways and Parking Area 3 and 4 North and Parking Area 3 and 4 South. As presented, both intersections will accommodate forecast left in and out turn movements.

Table VIII-3: Special Issue –TG-10: Left Turn In/Out Access

Int. ID	Intersection Name	Conflicting Left In Volume AM (PM)	Left In Volume AM (PM)	Conflicting Left Out Volume AM (PM)	Left Out Volume AM (PM)	Left In & Out Acceptable
664	C St./ Parking Area 3 (North)	67 / 34	- / -	113 / 182	1 / 1	Yes / Yes
	C St./ Parking Area 4 (North)	18 / 25	33 / 35	114 / 120	2 / 5	Yes / Yes
665	C St./Parking Area 3 (South)	60 / 23	2 / 1	99 / 154	1 / 5	Yes / Yes
	C St./Parking Area 4 (South)	31 / 88	7 / 2	100 / 113	1 / 2	Yes / Yes

TG-11 Right Turn Lanes at Driveways

Right turn lanes are required on major, primary and secondary roadways if peak hour right turn volumes exceed the TG’s minimum volume warrant. “C” Street is a Commuter roadway and right turn lanes are not required.

TG-15 Driveway Length

Primary driveways should be of sufficient length to allow vehicles to enter the parking area without causing subsequent vehicles to back out onto City streets. The minimum driveway length is based on one foot per entering vehicle rounded up to the next 25-foot. The resulting driveway lengths for the Parking Area 3 and 4 North and the Parking Area 3 and 4 South on “C” Street are presented in Table VIII-4.

Table VIII-4: Special Issue –TG-15: Drive Length

Int. ID	Intersection Name	Entering AM (PM) Peak Hour Volumes	Minimum Driveway Length
664	C St./ Parking Area 3 (North)	12 (18)	25
	C St./ Parking Area 4 (North)	39 (39)	50
665	C St./Parking Area 3 (South)	9 (12)	25
	C St./Parking Area 4 (South)	23 (44)	50

IX. SPECIAL ISSUES – ALTERNATIVE TRAVEL MODES

Pedestrian and Bicycle Circulation

When complete, the OCGP will include a comprehensive trail network for bicyclist and pedestrians. The proposed bicycle and pedestrian connectivity plan is illustrated in Figure VIII-1. As presented, the project will include an internal trail network, Class I (Off-Street) trails, as well as other off-street trails.

Pedestrian and bicycle connections are also available along the Timeline. Bicycles are considered as part of the mixed-flow on the Timeline and are not intended to be confined to a specified bicycle lane. Pedestrian connections are provided between existing uses in the Western Sector Park Development Plan and to future development areas in the OCGP.

Almost the entire pedestrian network provides the user the ability to walk without having to cross any major roadways.

POLICIES A, B, AND C OF GENERAL PLAN OBJECTIVE B-3 (PEDESTRIAN CIRCULATION) AND OBJECTIVE B-4 (BICYCLE CIRCULATION): The following discusses how Policies A, B, and C of General Plan Objective B-3 and applicable policies of Objective B-4 will be met with implementation of this project.

It should be noted that at buildout, the OCGP will provide a comprehensive trail network for pedestrians and bicyclists. In the interim condition, with the development of the OCGP 688 Acre Park Development Plan, the initial elements of the plan framework will be developed.

Objective B-3, Pedestrian Circulation

- **Policy (a):** *Link residences with schools, shopping centers, and other public facilities, both within a planning area and to adjacent planning areas, through an internal system of trails.*

Bicycle connections between the OCGP and neighborhood residences, schools, shopping centers, and other public facilities are important. The project includes an extensive internal trail network and will provide connections to regional trails, as well as the surrounding Great Park Neighborhoods development.

- **Policy (b):** *Require development to provide safe, convenient, and direct pedestrian access to surrounding land uses and transit stops. Issues such as anticipated interaction between pedestrians and vehicles, proposed infrastructure improvements and design standards shall be considered.*

Presented in the Connectivity Plan (Figure IX-1) are locations of pedestrian entry points and potential transit stops. These entry points and transit stops are connected to the park through the extensive hierarchy of pedestrian and bicycle trails.

Figure IX-1: Great Park Connectivity Plan



Legend

	11' REGIONAL CLASS I BICYCLE AND PEDESTRIAN TRAIL
	11' CLASS I BIKE TRAIL (PRIMARY)
	11' OR 8' SIDEWALK
	5' SIDEWALK
	5' SIDEWALK AND MODERATE SINGLE TRACK TRAIL
	MODERATE SINGLE TRACK TRAIL
	EXISTING O.C.G.P. SIDEWALKS
	V.O.R. ACCESS
	EXISTING MODERATE SINGLE TRACK TRAIL
	PEDESTRIAN ENTRY POINTS
	POTENTIAL TRANSIT STOPS

- **Policy (c):** *Design and locate land uses to encourage access to them by non-automotive means.*

The project proposes an extensive internal pedestrian and bicycle system, which will provide easy pedestrian and bicycle connections from one area of the park and another. Several large parking areas are provided rather than many smaller lots, allowing visitors to park and access various uses through other non-automotive means. Non-automotive access is facilitated by regional transit opportunities via the Irvine Station and OCTA will be encouraged to provide direct drop offs to the park, additionally the City's trail system will provide multiple points of access to park uses.

Objective B-4, Bicycle Circulation

Similar the discussion above, the OCGP has an extensive system of all types of bicycle trails and paths for bicyclist. The OCGP 688 Acre Park Development Plan provides the second phase of the improvements along with the Western Sector Park Development Plan area, and will be complemented with the future Cultural Terrace.

- **Policy (a):** *Use the Trails Network diagram as a basis for detailed planning of the bicycle trail system. Detailed planning shall occur though the development process outlined in the City's Zoning and Subdivision Ordinances.*

The internal bicycle and pedestrian system provides connections to Class I (Off-Street) and Class II (On-Street) trails consist with the City of Irvine trail network.

- **Policy (b):** *Require a system of bicycle trails, both on and off street, in each planning area. Such trails shall be linked to the system shown in Figure B-4. The on street trails shall be designed for the safety of the cyclist.*

The internal trail system is consistent with trail network shown on General Plan Figure B-4 (Trails Network). The internal bicycle trails within the OCGP has minimal vehicle conflicts for increased level of safety. These paths are integrated with the existing development from the Western Sector Park Development Plan. Where bicycle trails interact with vehicles, appropriate classification design will be implemented.

- **Policy (c):** *The trail system shall be designed to accommodate cyclists of all levels of experience and shall provide for both recreation and transportation.*

The bicycle paths and trails will provide opportunities for all levels of experience from the easy and safe cycling along a Class I Trail.

- **Policy (d):** *Require bicycle trail linkages between residential areas, employment areas, schools, parks, community facilities, commercial centers and transit facilities.*

Class I (Off-Street) Trails as well as other pedestrian trails will be provided as a part of the development of the OCGP. These trails provide linkages connecting to the City's existing

trail system and expanded trail network for future development areas such as the Irvine Station, surrounding Great Park Neighborhoods development and commercial uses nearby.

- **Policy (e):** *Require pedestrian and bicycle circulation plans detailing access to the subject property and adjacent properties in conjunction with new development.*

The OCGP Pedestrian and Bicycle network will provide connections to the Great Park Neighborhoods development and to the future Marine Way improvements.

- **Policy (f):** *Require the bicycle trip destinations, including community facilities, commercial centers, and transit facilities to be equipped with appropriate bicycle facilities, including but not limited to the provision of showers and bike racks.*

The OCGP is a recreational destination with extensive bike trail connectivity to the park and trails within the park for bike use, therefore, it will include bicycle facilities, including bike racks within the park. In addition, the OCGP will participate in the future “Orange Bike Program” which emphasizes connecting the Great Park Neighborhoods to the OCGP.

- **Policy (g):** *Require traffic control devices and traffic signal phasing for bicycle crossing, turning and through movements.*

No traffic control devices, such as traffic signals, are proposed within the OCGP 688 Acre Park Development Plan.

- **Policy (h):** *Require grade separated crossing for Class I bikeways at major intersections, wherever feasible, to increase safety and efficiency.*

No grade separated crossings are proposed.

- **Policy (i):** *Provide off-street bicycle trails in areas with minimal cross traffic, such as open space spine, flood control and utility easements where possible.*

As stated previously, the entire OCGP will provide a comprehensive off-street bicycle path and trails network with very limited cross traffic.

- **Policy (j):** *Support programs to increase public awareness of bicycle safety and bicycling as an alternative mode of transportation.*

A wide-variety of programs will be offered through the OCGP to educate the public on alternative mode of transportation. Bicycling and bicycling safety will be an important topic, which will be available at various events and kiosks located around the park as well as a bike sharing program.

- **Policy (k):** *Incorporate, where appropriate, school and park locations within the design of the bikeway system.*

The OCGP is a park and incorporates a comprehensive bikeway system.

Transit

Transit is an important element of the transportation mobility opportunities for the OCGP. With buildout of the OCGP, transit will provide regional and local access to and from the park. Yet to be established, OCTA bus transit service will be both permitted and encouraged to enter the OCGP and provide passenger drop-offs and pick-ups at the various sites. Surrounding the OCGP with convenient access to many of the amenities, potential transit service has been identified at a conceptual level. The identified network is comparable to the recommended Preferred Alternative and Complementary OCTA Services scenarios evaluated in the citywide Irvine Transit Vision report. Special transit service for key events is also anticipated.

Riding and Hiking

There are no proposed riding or hiking trails within the OCGP 688 Acre Park Development Plan. However, these facilities are proposed in subsequent phases of development.

X. CONCLUSIONS AND RECOMMENDATIONS

Based on the OCGP 688 Acre Park Development Plan Traffic Study, the following findings are summarized.

<p>The 2017 Base No Project assumes signals at six locations:</p> <ul style="list-style-type: none"> - Intersections 558 – Ridge Valley/"O" Street at Irvine Boulevard, - Intersection 559 - "O" Street at Trabuco, - Intersection 560 – "O" Street at Marine Way, - Intersection 561 – "LY" Street at Irvine Boulevard, - Intersection 572 – Modjeska-A Street at Irvine Boulevard, and - Intersection 577 - Pusan Way-Z Street at Irvine Boulevard.
<p>As a design feature of the project dual 250-foot long eastbound left-turn pockets will be provided at Marine Way and Great Park Boulevard West (562).</p>
<p>As a design feature of the project, a 250-foot long westbound right turn lane will be provided at the Marine Way right in/right out driveway (669), located west of Great Park Boulevard (West).</p>

- The OCGP 688 Acre Park Development Plan will generate approximately 5,444 daily trips. This trip generation will not result in significant impacts to the local and regional roadway network.
- Under existing conditions, there are six links where the existing traffic volume to capacity ratio exceeds the City Standards. Based on the peak hour volume to capacity ratios, all six links are within City level of service standards. The proposed OCGP 688 Acre Park Development Plan does not result in any additional links to fail the City volume to capacity ratio standards.
- Based on the Existing Conditions ICU level of service analysis, there are no intersections that exceed the City of Irvine level of service standards. All intersections continue to operate at acceptable conditions with the addition of the OCGP 688 Acre Park Development Plan traffic.
- Based on Alternative 3, the 2017 Baseline alternative without the OCGP 688 Acre Park Development Plan (i.e., 2017 No Project), there are 23 arterial links which will have volume to capacity ratios which exceed the daily thresholds. Based on the peak hour link analysis, all 23 links will result in acceptable peak hour volume to capacity ratios.
- There are no additional links that will exceed the daily thresholds with any of the 2017 OCGP 688 Acre Park Development Plan alternatives. All 23 peak hour links will result in acceptable peak hour volume to capacity ratios.
- Based on the 2017 Conditions ICU level of service analysis, there are no intersection level of service impacts from the proposed project.

- There are six intersections in which signalization is assumed in the 2017 Base No Project condition: Intersections 558 – Ridge Valley/"O" Street at Irvine Boulevard, Intersection 559 – "O" Street at Trabuco, Intersection 561 – "LY" Street at Irvine Boulevard, Intersection 560 – "O" Street at Marine, Intersection 572 – Modjeska-A Street at Irvine Boulevard and Intersection 577 - Pusan Way-Z Street at Irvine Boulevard. The signalization of these six intersections is previously identified in the 2011 GPN VTTM traffic study as being needed for interim-year conditions.
- The OCGP 688 Acre Park does not warrant any additional signals with the Baseline 2017 plus 688 Acre OCGP alternatives. At "O" Street and 8th Street, while a signal is currently not warranted, the permanent location of a future Fire Station in the vicinity will likely require that this intersection be signalized. At "O" Street and "C" Street, while a signal is also currently not warranted, the left in/left out analysis for Post 2035 (see OCGP Access Study) presents left turn volumes that exceed thresholds. A traffic signal would provide the necessary gaps to address the left turn volumes and therefore should be considered. The ultimate determination of traffic signals at these locations is subject to the review and approval of the City Engineer."
- For Marine Way at Great Park Boulevard (562), dual 250-foot eastbound left turn lanes are a design feature of the project.
- The OCGP 688 Acre Park Development Plan as proposed will accommodate adequate signal spacing between signalized intersections (TG-7), adequate distance between driveways and intersections (TG-8), and adequate corner clearance (TG-9). All proposed left turn in and out intersections and driveways are acceptable.
- At the Marine Way right in/right out driveway located west of Great Park Boulevard (669), a 250-foot long westbound right turn lane is a design feature of the project.

APPENDIX A

APPROVED SCOPE OF WORK

**ORANGE COUNTY GREAT PARK
688 ACRE PARK DEVELOPMENT PLAN (PDP) TRAFFIC STUDY
DRAFT SCOPE OF WORK
(CASE NO. 00598938-PPD)**

The Orange County Great Park site is located north of Marine Way, east of "O" Street, south of Irvine Boulevard and the proposed FivePoint Communities development, and west of Alton Parkway in the City of Irvine (City), California. The project proposes the construction of a multi-activity super regional park at the former location of the El Toro Marine Corp Air Station.

The proposed 688 Acre Park Development Plan (PDP) traffic study will be developed in general accordance with the North Irvine Transportation Mitigation (NITM) Program requirements per City Council Resolution 03-61, applicable sections of the City's Transportation Guidelines (1993), and the City of Irvine Traffic Impact Analysis Guidelines (2004).

The traffic study will analyze the potential impacts of the proposed project on the circulation system and will identify appropriate improvements where needed. The analysis will assess the potential impacts of the project based on the Irvine Transportation Analysis Model (ITAM) short-range horizon year scenario (ITAM – 2017).


The traffic study will be developed in general accordance with the requirements of the NITM Traffic Study Scope of Work with a limited study area to reflect the size of the project and relationship to prior studies and will include the following key elements.

I. EXECUTIVE SUMMARY

This section will provide a short, clear, and concise description of the project and the traffic study findings. The proposed study recommendations will also be included in this section. A discussion will be included to indicate that for purposes of this traffic analysis the Western Sector Park Development Plan and the proposed 688 Acre Park Development Plan will be fully built-out in the short range horizon year (Interim Year - 2017), however, future improvements for the Great Park Cultural Area will not be included.

II. INTRODUCTION

This section of the report will include a comprehensive description of the 688 Acre Park Development Plan and key elements of the proposed project. The following elements are identified for the purpose of conducting the traffic study.

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A. Project Site

The 688 Acre Park Development Plan (PDP) site is generally bounded by Marine Way on the south, the future "O" Street on the west, and the FivePoint Communities Great Park Neighborhoods on the north and west. A project vicinity map and a project site plan will be included in this section of the report.

B. Traffic Study Boundary

The traffic study boundary, as presented in Exhibit A, reflects the scale and magnitude of the project. If there are project impacts at the boundaries of the proposed study area, the boundary will be expanded until no impacts are revealed.

C. Existing, General Plan and Proposed Site Uses

Existing site uses and zoning, as included in the Orange County Great Park Environmental Impact Report and associated addenda, shall be described. The existing Great Park uses include both those currently existing and in operation and uses as defined in the Western Sector Park Development Plan previously approved. Proposed future uses are those defined in the 688 Acre Park Development Plan.

III. EXISTING CONDITIONS

A. Existing Site Uses

Existing land uses on-site and in the vicinity of the project site will be identified.

B. Existing Roadways and Intersections

The characteristics of the site's surrounding roadway network will be documented and mapped to include existing number of lanes, traffic signal locations, intersection configurations, and other visible factors that may have to be analyzed, such as medians, turn pockets, curbside parking, and sight visibility concerns (i.e., horizontal or vertical curvature). This section will provide a summary of site characteristics.

Existing roadway volumes, volume/capacity (V/C), and Level of Service (LOS) at intersections will be included for the existing roadways and intersections within the study area.

Exhibit A provides a map of all roadways and intersections to be included in the traffic study.

IV. METHODOLOGY/APPROACH

The 688 Acre Park Development Plan (PDP) Traffic Study will be based on the latest version of the Interim Year 2017 Irvine Transportation Analysis Model (ITAM). The analysis will report the "No Project" (2017 Baseline) and "With Project" conditions. The 2017 Baseline ITAM model run that will be used for the "No Project" includes approved project improvements and infrastructure backbone improvements assumed in ITAM for the 2017 interim conditions. The "With Project" conditions will add the 688 Acre Park Development Plan (PDP) uses which have not been constructed or approved. The

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analysis will include, an alternative high school site location, two options for the FivePoint development and an option for a new road that would connect LY through the Great Park and connect with Marine Way.

The following summarizes the alternatives to be evaluated:

1. Existing Conditions
2. Existing plus 688 Acre Park Development Plan
3. 2017 Baseline (Assumes FivePoint Option 2 and High School Site A)
4. 2017 Baseline + 688 Acre Park Development Plan
5. 2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1
6. 2017 Baseline + 688 Acre Park Development Plan with High School Site B
7. 2017 Baseline + 688 Acre Park Development Plan with connector roadway between LY and Marine Way.

A table summarizing the intersection and roadway network assumptions will be provided for all 2017 alternatives, including the known funding source, project or jurisdictional response.

The ITAM model might be modified to reflect changes to the network and traffic analysis zones for the Great Park 688 Acre Park Development Plan to better reflect the proposed plan. These changes will only be made with approval of the City of Irvine's Transportation Modeling staff.

The Great Park peak hour trips will be based on an updated Trip Generation and Parking Demand Analysis that will be concurrently prepared with this study and will reflect the current proposed Great Park Master Plan and the 688 Acre Park Development Plan.

Traffic distribution, assignment, peak hour intersection forecasts and Intersection Capacity Utilization will be based on ITAM. The study will include a figure representing the project trip distribution.

LSA will prepare an AM and PM peak hour intersection capacity utilization (ICU) analysis for each of the alternatives listed above per the City of Irvine's most recent release of the ITAM model.

The baseline data for traffic forecasts from the Lake Forest Traffic Analysis Model (LFTAM) will be provided by the City of Irvine. This will be used as a basis for analyzing intersection and link levels of service within the City of Lake Forest.

The 688 Acre Park Development Plan access and internal circulation analysis will ensure that the proposed intersections and points of access will meet or exceed the requirements within the City's Transportation Guidelines (1993). The operation of the un-signalized access locations will be reviewed and will be subject to comparison to applicable TGs and signal warrants. This includes the need for turn-lane pocket lengths, distance between driveways and intersections, corner clearance, left-turn in/out access, acceleration/deceleration lanes, and driveway lengths.

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V. PERFORMANCE CRITERIA

The City of Irvine Transportation Guidelines (1993) will be used as the performance criteria to evaluate the design features of the proposed 688-Acre Park Development Plan.

The performance criteria to determine the project impact and mitigation will be consistent with the City's criteria as utilized in the NITM Program analysis, which are consistent with the criteria used in Environmental Impact Reports (EIR) for Northern Sphere, and the City's Great Park. The traffic analysis performance criteria are further detailed in Exhibit B, attached. For non-signalized intersections, a Highway Capacity Manual (HCM) analysis may be warranted to determine the level of service (LOS) at stop-controlled intersections.

VI. PROPOSED PROJECT IMPACTS

LSA will identify the potential impacts of the project using an ICU analysis for all signalized intersections identified in the project study area as reflected in Exhibit C. This will include the scenarios noted in IV.

Intersections and points of access to the 688 Acre Park Development Plan will be evaluated using the **City's Transportation Guidelines (1993)** to determine consistency with the City's design requirements (with the exception of roundabouts which will be evaluated per the Transportation Design Procedures (TDP-17) with appropriate software). Specific design features to be evaluated include turn-pocket lengths (TG-1), left-turn in/out access (TG-10), signal spacing (TG-7), distance between points of access and intersections (TG-8), corner clearance (TG -9), right turn lanes at driveways (TG-11), signal warrants (TG-13), and driveway length (TG -15).

- Where significant volumes of u-turns are anticipated due to raised medians, left-turn lengths will be sized according to TG-1.
- If access points to the park are designed to have right-in/right-out and left-turn in access, TG-10 will be consulted to determine feasibility. In order for staff to determine the benefits of allowing the left-in access, an alternative restricted right-in/right-out only will be included in the analysis for these access points as well.
- Intersections meeting signal warrants will be subject to review based on TG-7 signal spacing. Where requested by City staff, a signal progression analysis will be prepared.
- Un-signalized intersections will be evaluated using the Highway Capacity Manual (HCM) two-way stop-controlled intersection methodology.
- Any one- or two-way stop-controlled intersections that have significant delay per HCM or do not meet the criteria for in or out access should also be evaluated using TG-13, signal warrant.

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VII. SPECIAL ISSUES

A. Transit

LSA will provide a discussion of existing transit service and a description of any proposed transit improvements by 2017 and any shuttle system (if proposed) including alignment, explanation of operation, schedule (day/hours), and location of stops.

B. Pedestrian

Pedestrian circulation on-site and connections to adjacent public facilities (such as public sidewalks, trails and bus stops) will be documented, discussed, and evaluated in this section. The traffic study will include a discussion of how Policies A, B, and C of General Plan Objectives B-3 will be met with implementation of this project.

LSA will review the site plan and label areas wherever there are raised medians wider than 24 feet. If pedestrians are allowed to use these areas for recreation or congregation, the study will identify the appropriate pedestrian access and crosswalks. If these areas are for recreational use, appropriate barriers will need to be provided to prevent accidental interaction between objects hit or thrown by recreation users from the median into the travel lanes (such as Frisbees and croquet balls, etc.).

C. Bicycle

Bicycle connections to adjacent bicycle facilities will be discussed in this section. LSA will document how the project will conform to applicable policies of Objective B-4 of the City's General Plan, an exhibit depicting the bicycle network shall be provided, and the connections to the Great Park shown.

D. Riding and Hiking

Riding and Hiking circulation on-site and connection to adjacent trails will be discussed in this section. LSA will document how the project will conform to applicable policies of Objective B-5 of the City's General Plan. An exhibit depicting the riding and hiking trail networks shall be provided and the connections to the Great Park will be shown.

VII. PROJECT DESIGN FEATURES AND/OR RECOMMENDATIONS

Project design features will be identified for the analysis horizon year (2017). Based upon the results of the analysis, physical and/or operational improvements required in order to address any potentially adverse project impacts will be identified in the traffic study. If NITM Improvements are proposed to be constructed as part of the project, the analysis shall be performed to identify the Level of Service at the location of the NITM Improvement both with and without the proposed NITM Improvement. If applicable, fair share responsibility shall be determined consistent with NITM fair share methodology.

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If the analysis identifies any design feature impacts at a location where there are no proposed NITM Improvements, then the project must implement the required improvement.

Conceptual details, striping or layout sheets for proposed improvements will be provided. An improvement implementation phasing plan will be prepared based on the traffic analysis to identify the timing of each identified improvement and the responsible development area/or the level of development in the project area, which will be required to implement the improvement.

A summary of the proposed project and results of the analysis will be prepared. Based upon these results, recommendations will be presented for the design of internal circulation, project access driveways, and intersections identified in the traffic analysis. These recommendations will be consistent with the City's TG's.

VIII. CONCLUSIONS

A summary of the results of the analysis and recommended improvements will be prepared.

IX. REVISIONS TO TRAFFIC STUDY

Revisions to the traffic study will be provided to respond to City of Irvine comments regarding the analysis contained in the study.

X. SIGNATURE

The traffic study will be prepared under the supervision of, and signed, stamped, and dated by, a registered traffic engineer or a registered professional civil engineer with appropriate engineering and/or planning credentials.


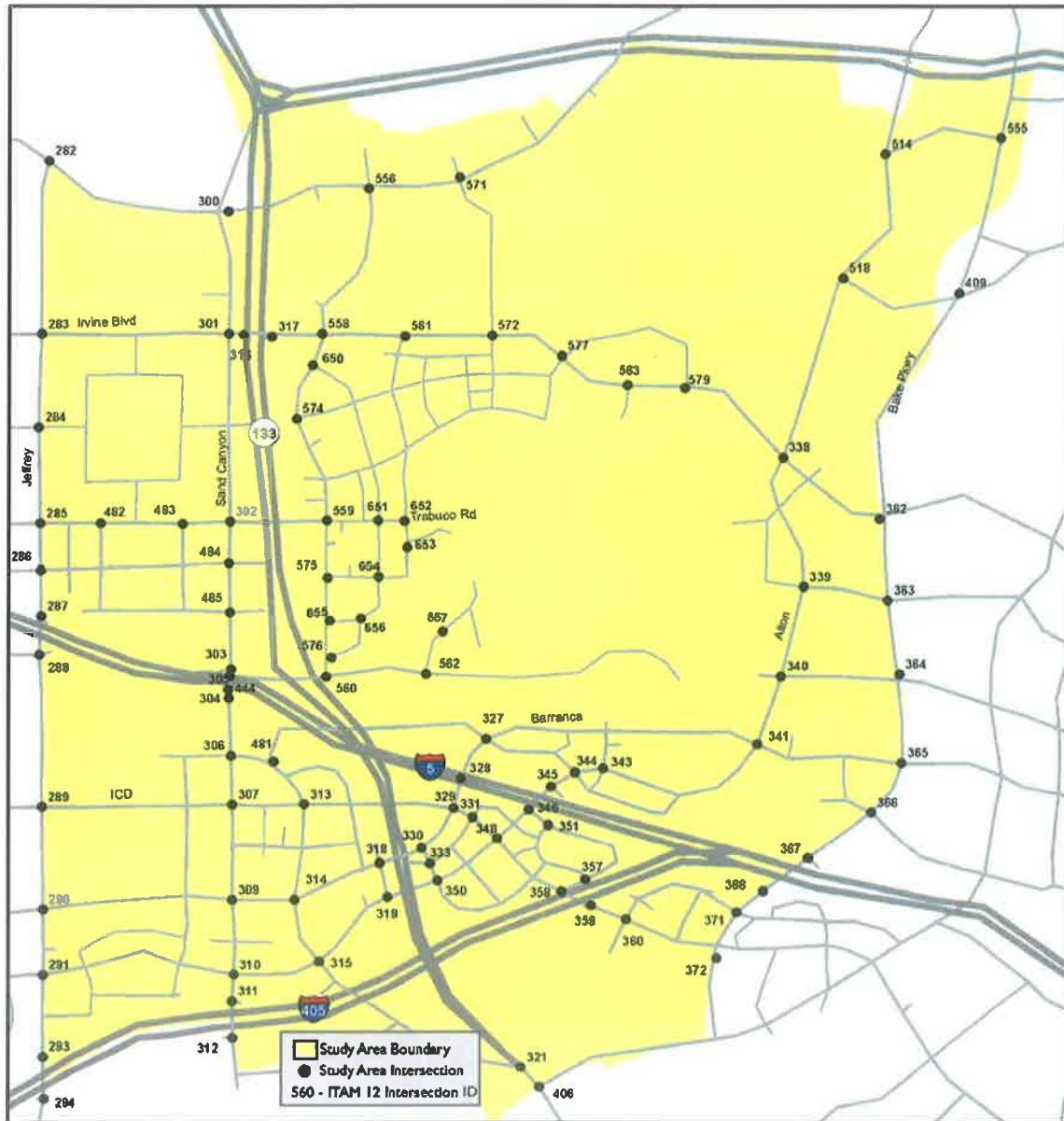
Approved 
Date 4/3/14

EXHIBIT A
TRAFFIC STUDY AREA




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Date 4/3/14

EXHIBIT B

PERFORMANCE CRITERIA FOR LOCATIONS ANALYZED WITHIN THE STUDY AREA

I. Arterial Roads

V/C Calculation Methodology

Level of service to be based on average daily traffic (ADT) volume/capacity (V/C) ratios calculated using the following capacities:

City of Irvine

Major Arterial	8 lane	72,000
	6 lane	54,000
Primary Arterial	4 lane	32,000
Secondary Arterial	4 lane	28,000
Commuter	2 lane	13,000

Outside City of Irvine

Major Arterial	8 lane	75,000
	6 lane	56,300
Primary Arterial	4 lane	37,500
Secondary Arterial	4 lane	25,000 (24,000 – City of Orange)
Commuter	2 lane	12,500 (12,000 – City of Orange)

As required by the City of Irvine Link Capacity Analysis guidelines, arterial deficiencies identified based on ADT V/C ratios are to be further examined using peak hour data.

Performance Standard

Arterials in Irvine Planning Area 33 (Spectrum I) and Planning Area 36 (Irvine Business Complex/IBC) and CMP arterials outside the City of Irvine: Level of Service E (peak hour V/C less than or equal to 1.00).

All other arterials: Level of Service D (peak hour V/C less than or equal to .90).

Mitigation Requirement

For V/C greater than the acceptable level of service, mitigation of the project contribution is required to bring link location back to acceptable level of service or to no-project conditions if project contribution is greater than .03 for CMP roadways outside the City of Irvine (the impact threshold specified in the CMP), 0.01 or greater for locations in the County of Orange, or 0.02 or greater for all other arterial roads in the study area.

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PERFORMANCE CRITERIA FOR LOCATIONS ANALYZED WITHIN THE STUDY AREA

II. Intersections

V/C Calculation Methodology

Level of service to be based on peak hour intersection capacity utilization (ICU) values calculated using the following assumptions:

Saturation Flow Rate: 1,700 vehicles/hour/lane

Clearance Interval: .05

Right-Turn-On-Red Utilization Factor*: .00 for County of Orange Intersections, 0.75 for intersection in all other jurisdictions.

*"De-facto" right-turn lane is assumed in the ICU calculation if 19 feet from edge to outside of through-lane exists and parking is prohibited during peak periods.

Performance Standard

Intersections in Irvine Planning Area 33 (Spectrum I) and Planning Area 36 (Irvine Business Complex/IBC), CMP Intersections outside the City of Irvine, the intersections of Bake Parkway/I-5 northbound and southbound ramps, Alton Parkway/Irvine Boulevard, Bake Parkway/Irvine Boulevard, Lake Forest Drive/I-5 southbound ramps-Avenida de la Carlota and Lake Forest Drive/Irvine Center Drive: Level of Service E (peak hour ICU less than or equal to 1.00)."

All other intersections: Level of Service D (peak hour ICU less than or equal to .90).

Mitigation Requirement

For ICU greater than the acceptable level or service, mitigation of this project contribution is required to bring intersection back to acceptable level of service or to no-project conditions if project contribution is greater than .03 at CMP locations outside the City of Irvine (the impact threshold specified in the CMP), 0.01 or greater for location in the County of Orange, or 0.02 or greater for all other intersections in the study area.

III. Freeway Tollway Ramps

V/C Calculation Methodology

Level of service to be based on peak hour V/C ratios calculated using the following capacities:

Metered On-Ramps

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A maximum capacity of 900 vehicles per hour (vph) for a one-lane metered on-ramp with only one mixed-flow lane at the meter.

A maximum capacity of 1,080 (20 percent greater than 900) vph for a one-lane metered on-ramp with one mixed-flow lane at the meter plus one high occupancy vehicle (HOV) preferential lane at the meter.

A maximum capacity of 1,500 vph for a one-lane metered on-ramp with two mixed-flow lanes at the meter.

A maximum capacity of 1,800 vph for a two-lane metered on-ramp with two mixed-flow lanes at the meter.

Toll Ramps (On-Ramps and Off-Ramps)

A maximum capacity of 1,500 vph for a one-lane toll ramp with one cash (stopped) lane and one FasTrak (unstopped) lane.

Non-Metered and Non-tolled On-Ramps and Off-Ramps

A maximum capacity of 1,500 vph for a one-lane ramp.

A maximum capacity of 2,250 (50% greater than 1,500) vph for a two-lane onramp that tapers to one merge lane at or beyond the freeway mainline gore point and for a two-lane off-ramp with only one auxiliary lane.

A maximum capacity of 3,000 for a two-lane on-ramp that does not taper to one merge lane and for a two-lane off-ramp with two auxiliary lanes.

Freeway to Freeway and Freeway to Tollway interchanges

A maximum capacity of 2,000 vph for 1-lane ramp


A maximum capacity of 4,000 vph for 2-lane ramp

Performance Standard

Level of Service E (peak hour V/C less than or equal to 1.00).

Mitigation Requirement

For V/C greater than the acceptable level of service, mitigation of the project contribution is required to bring ramp back to acceptable level or service or to no-project conditions if project contribution is greater than .03 for ramps at CMP intersections outside the City of Irvine (the

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impact threshold specified in the CMP), 0.01 for ramps at County of Orange intersections, 0.02 or greater for all other ramps at intersections in the study area.

IV. Freeway/Tollway Mainline Segments

V/C Calculation Methodology

Level of service to be based on peak hour V/C ratios calculated using the following capacities:

2,000 vehicles per hour per lane (vphpl) for mixed-flow (general purpose) lanes
1,600 vphpl for a one-lane buffer-separated HOV facility
1,750 vphpl for a two-lane buffer-separated HOV facility

Performance Standard

Level of Service E (peak hour V/C less than or equal to 1.00).

Mitigation Requirement

For V/C greater than the acceptable level or service, mitigation of the project contribution is required to bring freeway/tollway mainline location back to acceptable level of service or to no project conditions if project contribution is greater than .03 (the impact threshold specified in the CMP).

Abbreviations: CMP - Orange County Congestion Management Program

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APPENDIX B

SIGNAL WARRANT ANALYSIS

**Table 3: Signal Warrant Analysis - 2017 Baseline (Assumes FivePoint Option 2 and High School Site A)
(Alternative 3)**

Int. ID	Intersection Name	AM Peak Hour Volumes		PM Peak Hour Volumes		Signal Warrant
		Major Street (Dir)	Minor Street (Dir)	Major Street (Dir)	Minor Street (Dir)	
558	Ridge Valley-O St./Irvine Bl.	2765 (EB/WB)	1091 (SB)	3540 (EB/WB)	448 (NB)	Yes (AM/PM)
559	O St./Trabuco Rd.	1612 (EB/WB)	789 (SB)	1703 (EB/WB)	716 (SB)	Yes (AM/PM)
560	O St./Marine Wy.	639 (NB/SB)	161 (SB)	867 (EB/WB)	173 (SB)	No
561	LY Street/Irvine Bl.	2529 (NB/SB)	91 (NB)	2760 (EB/WB)	90 (NB)	Yes (AM/PM)
562	Great Park Bl. W./Marine Wy.	4 (EB/WB)	2 (SB)	4 (EB/WB)	2 (SB)	No
572	Modjeska-A St./Irvine Bl.	2477 (EB/WB)	763 (SB)	3105 (EB/WB)	434 (SB)	Yes (AM/PM)
575	O St./LV St.	144 (NB/SB)	11 (WB)	210 (NB/SB)	43 (WB)	No
576	O St./C St.	234 (NB/SB)	3 (EB)	404 (NB/SB)	3 (EB)	No
577	Pusan Way-Z St./Irvine Bl.	3055 (EB/WB)	444 (NB)	3388 (EB/WB)	391 (NB)	Yes (AM/PM)
651	C St./Trabuco Rd.	419 (EB/WB)	190 (SB)	429 (NB/SB)	319 (EB)	No
652	LY Street/Trabuco Rd.	214 (NB/SB)	86 (EB)	164 (NB/SB)	146 (EB)	No
654	C St./LV St.	90 (NB/SB)	50 (WB)	189 (NB/SB)	41 (EB)	No
655	O St./8th St.	169 (NB/SB)	81 (WB)	299 (NB/SB)	151 (WB)	No
656	C St./8th St.	112 (EB/WB)	4 (NB)	202 (EB/WB)	4 (NB)	No
657	GP Blvd N/S Conn/GP Blvd E/W	--	--	--	--	--

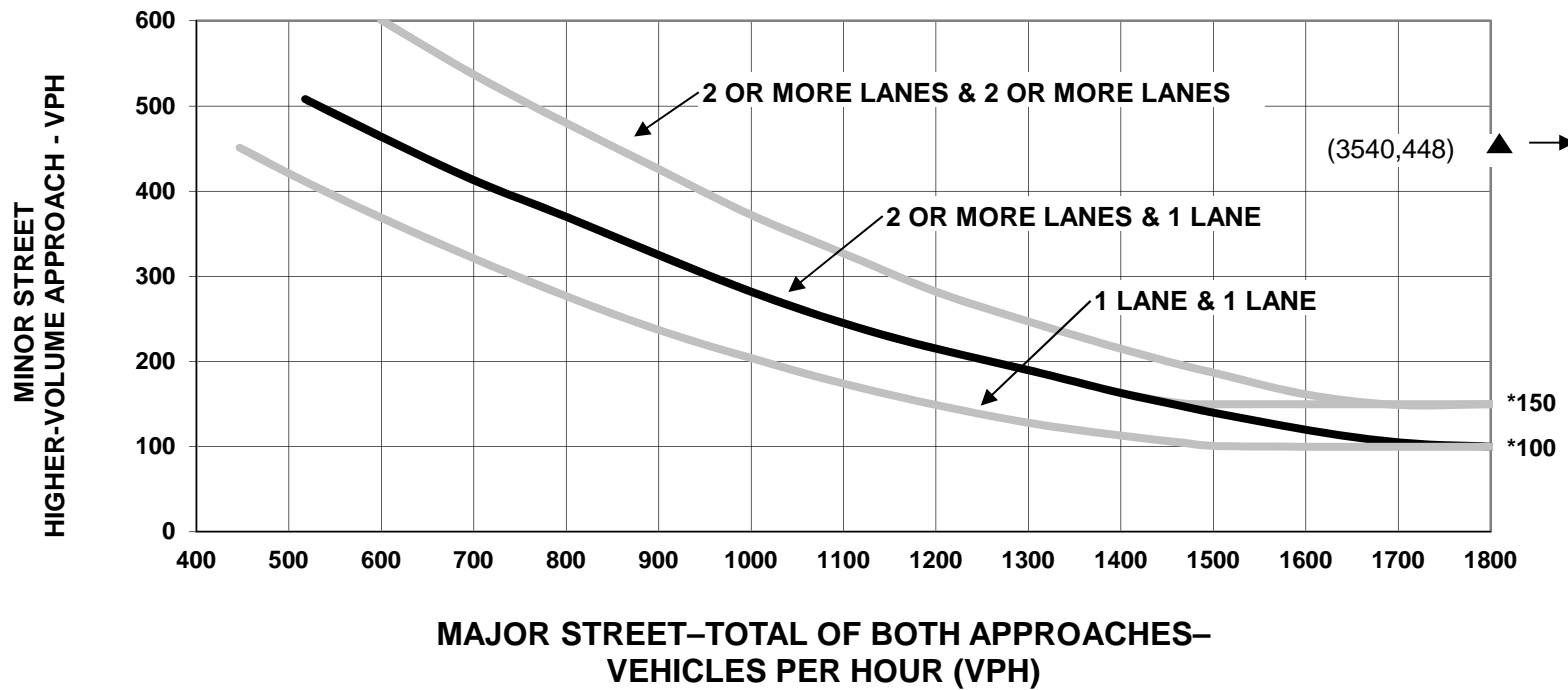
Notes: Intersections where signals are warranted are shown in **bold**.

Figure 1 - Signal Warrant Analysis

Intersection 558: Ridge Valley-O St./Irvine Bl.

2017 Baseline (Assumes FivePoint Option 2 and High School Site A)

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

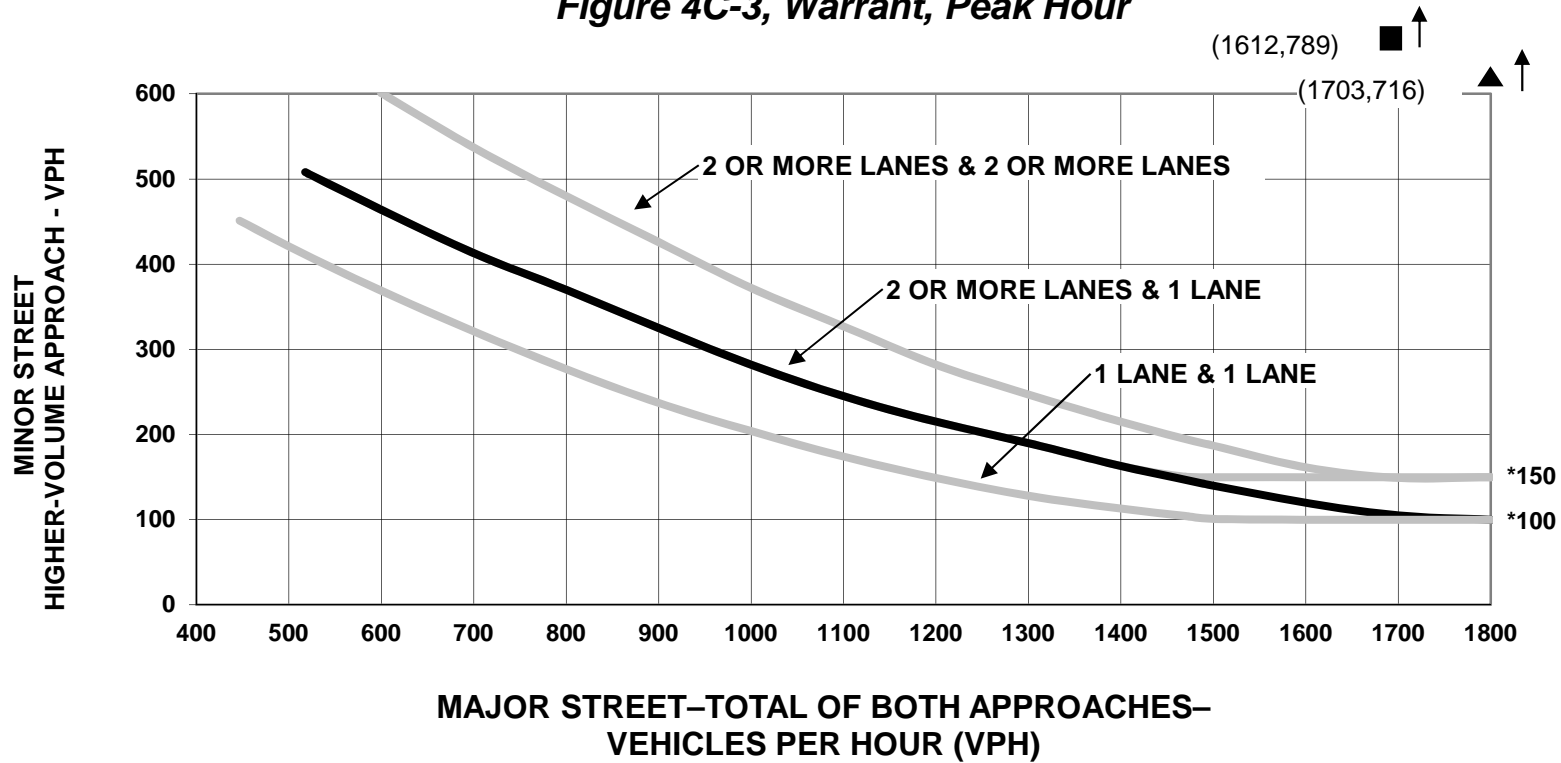
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 2 - Signal Warrant Analysis

Intersection 559: O St./Trabuco Rd.

2017 Baseline (Assumes FivePoint Option 2 and High School Site A)

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

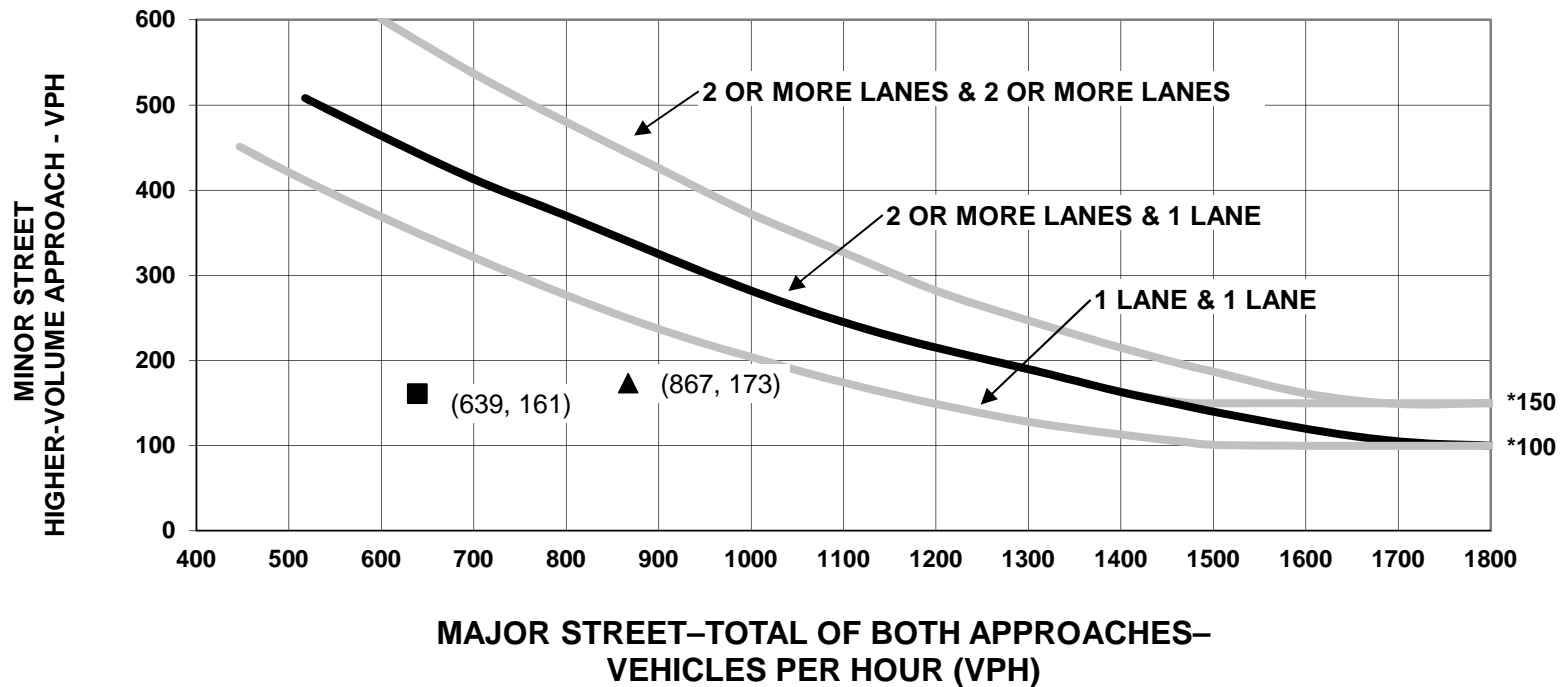
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 3 - Signal Warrant Analysis

Intersection 560: O St./Marine Wy.

2017 Baseline (Assumes FivePoint Option 2 and High School Site A)

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

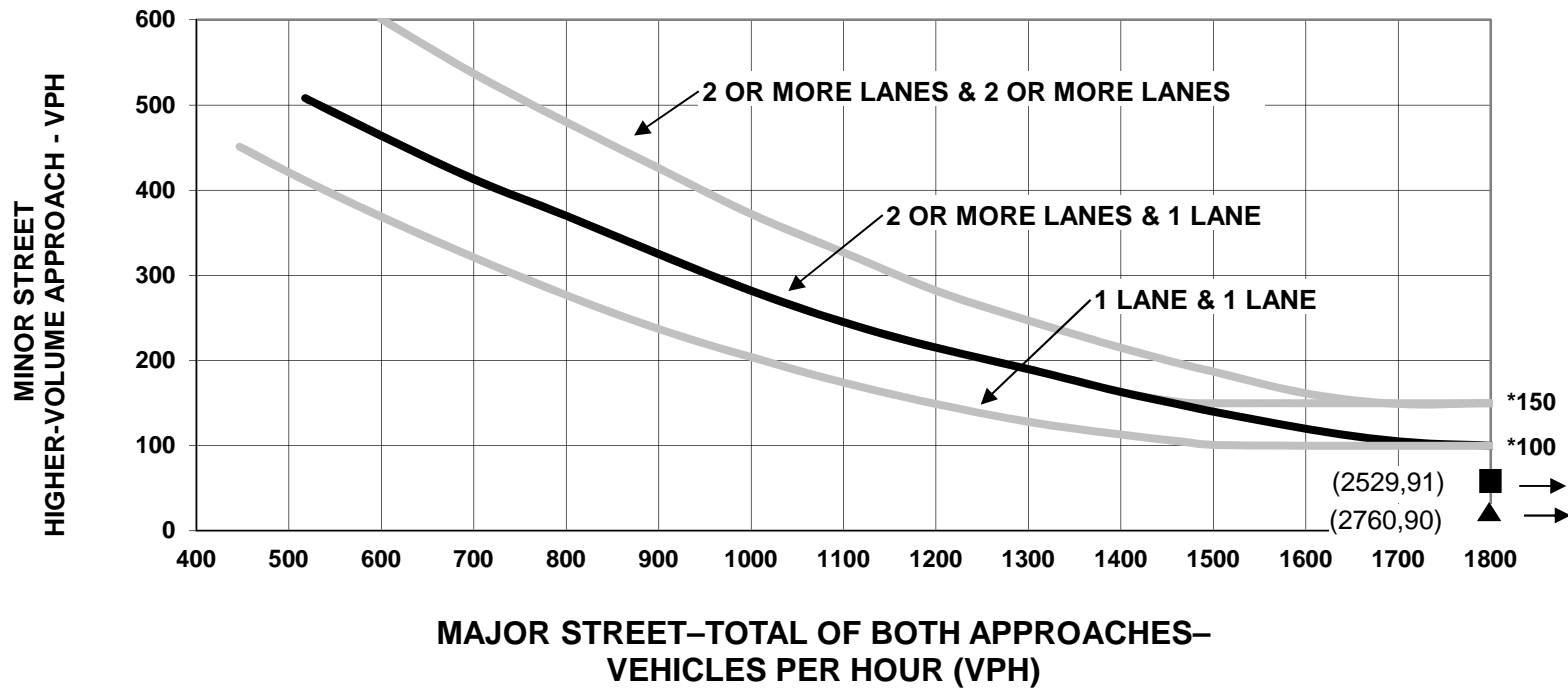
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 4 - Signal Warrant Analysis

Intersection 561: LY Street/Irvine Bl.

2017 Baseline (Assumes FivePoint Option 2 and High School Site A)

Figure 4C-3, Warrant, Peak Hour



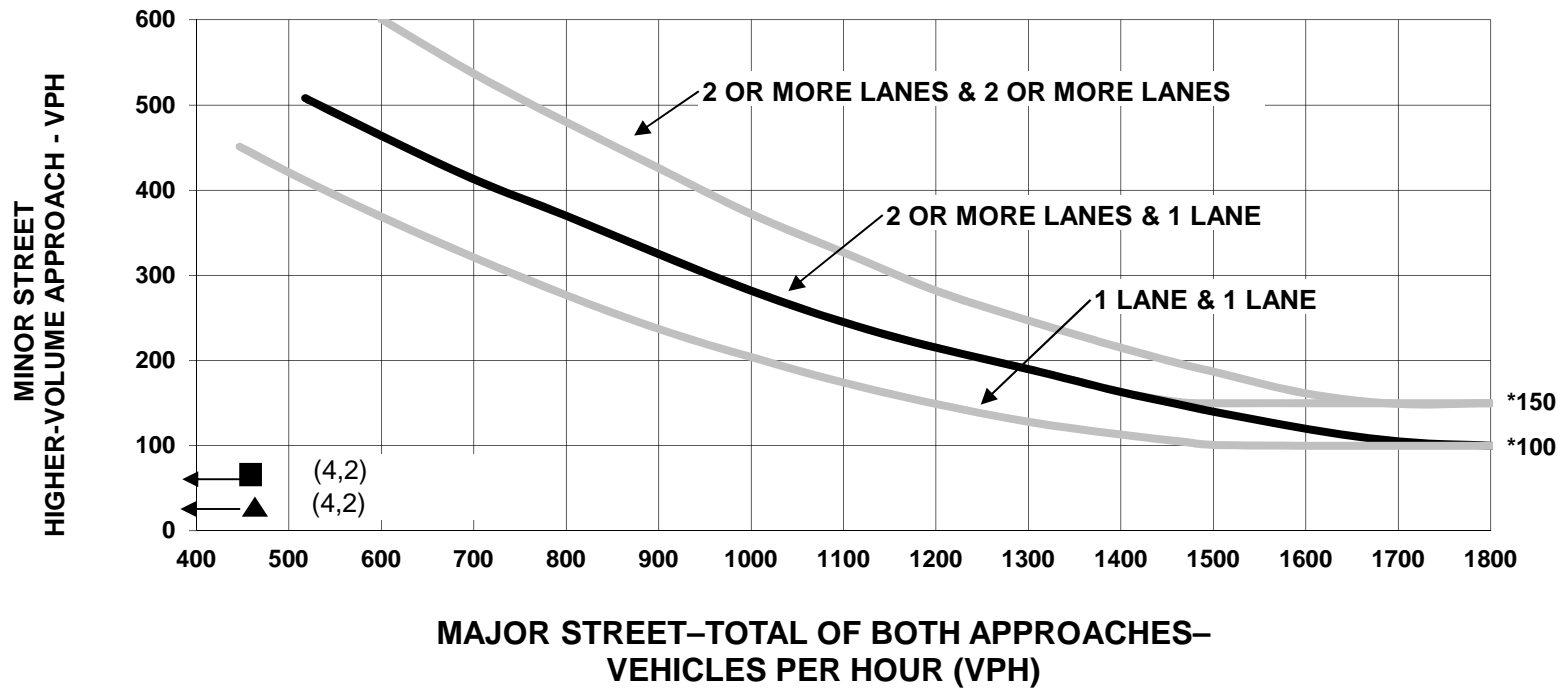
* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 5 - Signal Warrant Analysis

Intersection 562: Great Park Bl. W./Marine Wy.

2017 Baseline (Assumes FivePoint Option 2 and High School Site A)

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

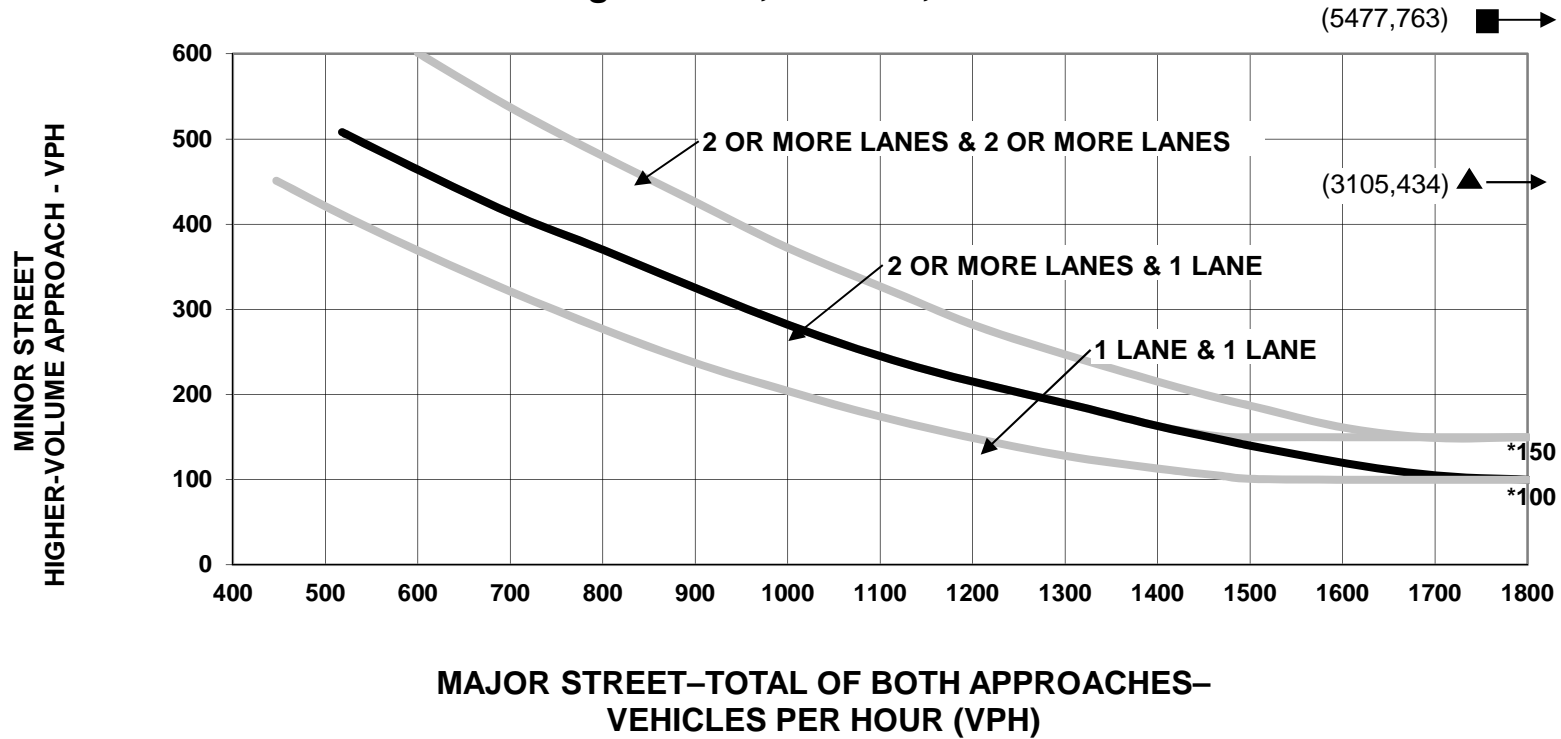
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 6 - Signal Warrant Analysis

Intersection 572: Modjeska-A St./Irvine Bl.

2017 Baseline (Assumes FivePoint Option 2 and High School Site A)

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

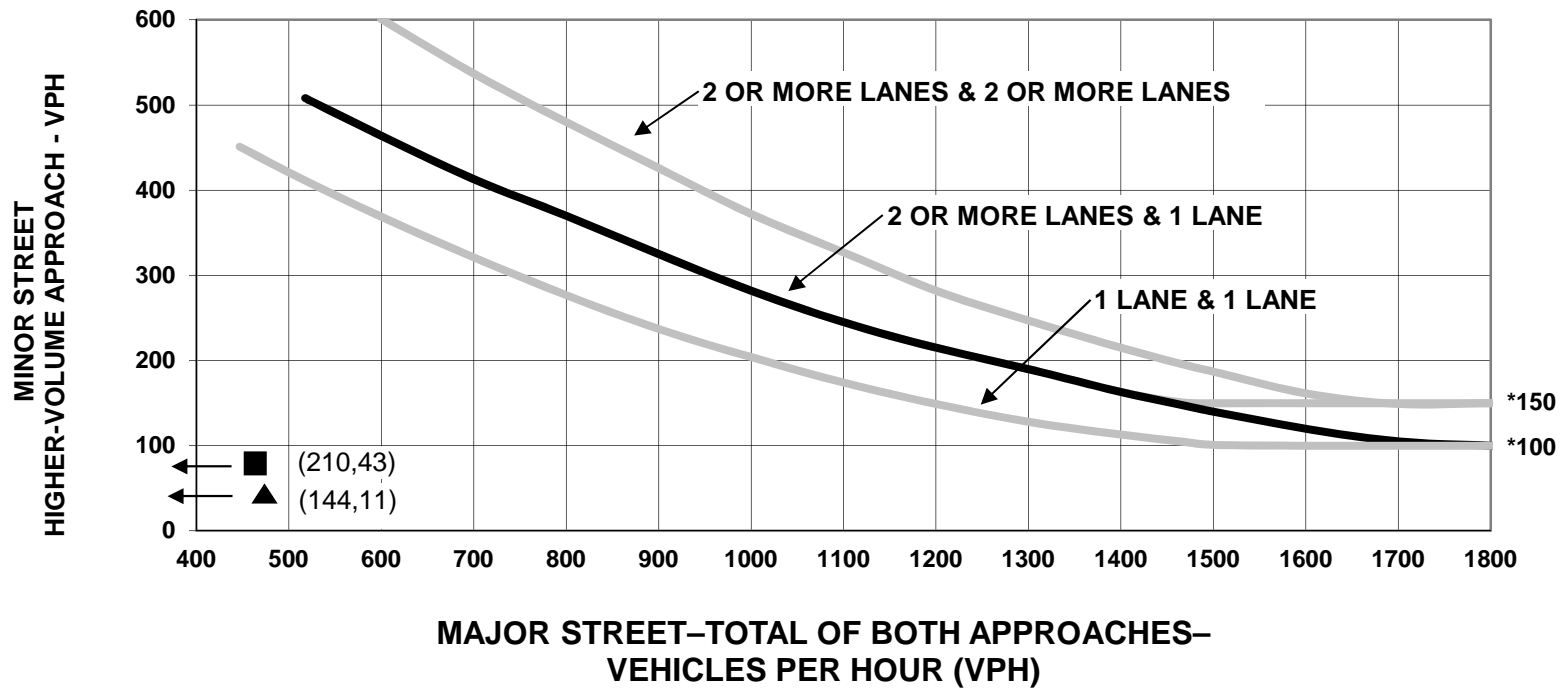
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 7 - Signal Warrant Analysis

Intersection 575: O St./LV St.

2017 Baseline (Assumes FivePoint Option 2 and High School Site A)

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

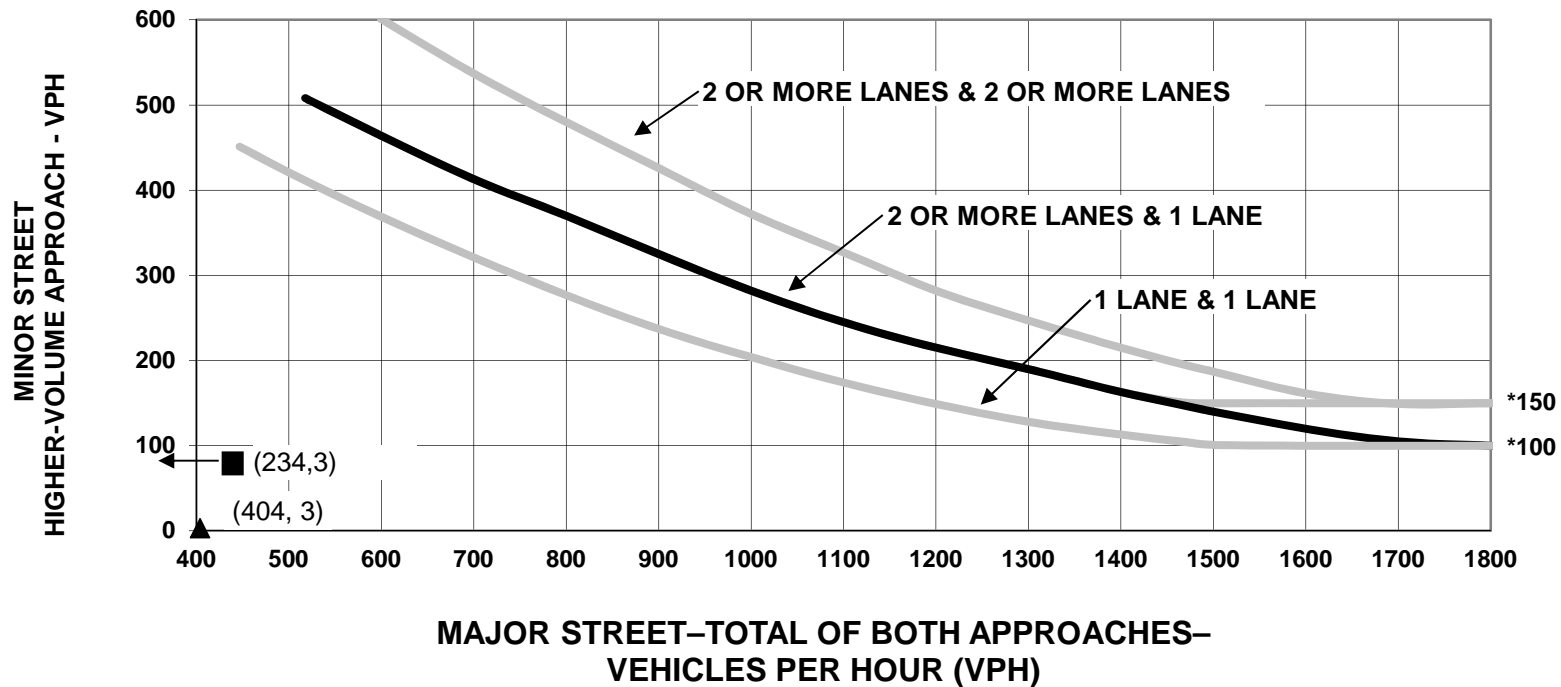
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 8 - Signal Warrant Analysis

Intersection 576: O St./C St.

2017 Baseline (Assumes FivePoint Option 2 and High School Site A)

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

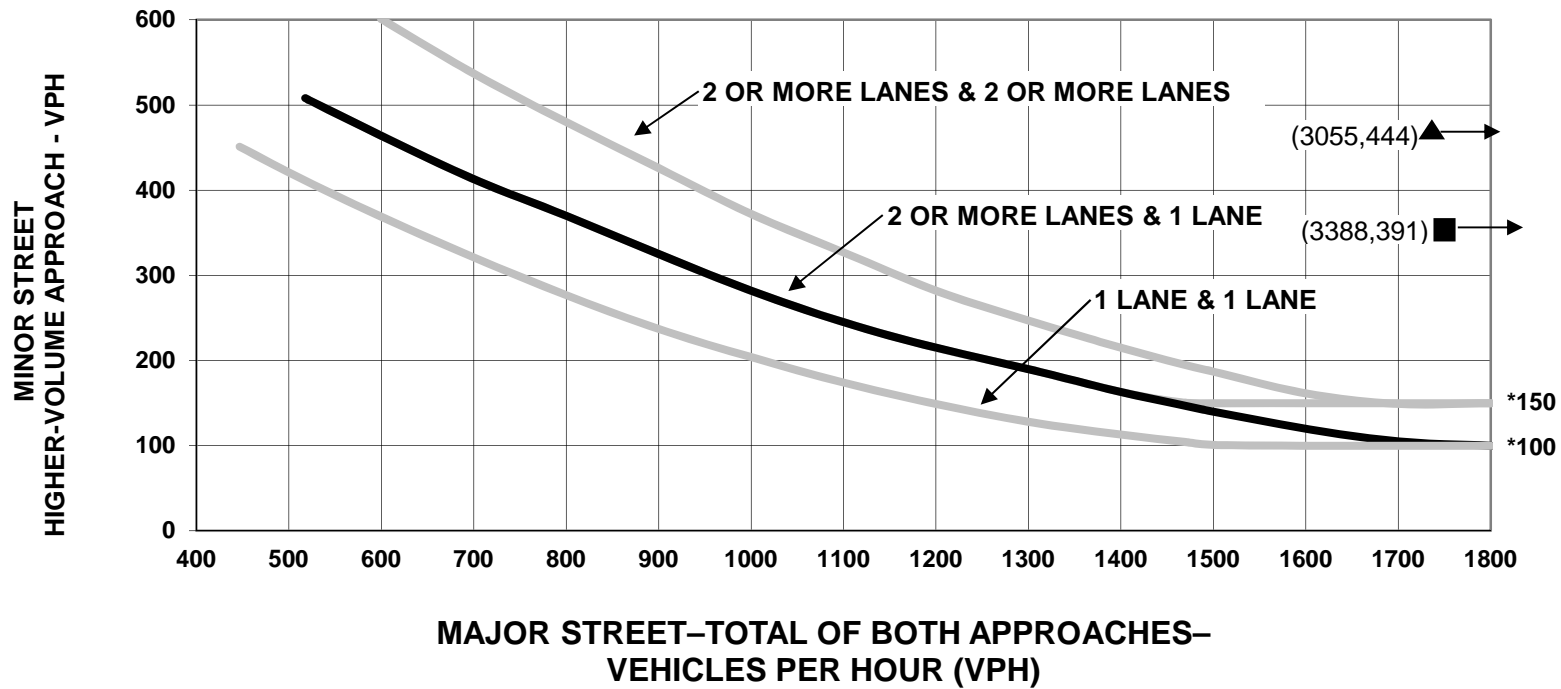
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 9 - Signal Warrant Analysis

Intersection 577: Pusan Way-Z St./Irvine Bl.

2017 Baseline (Assumes FivePoint Option 2 and High School Site A)

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

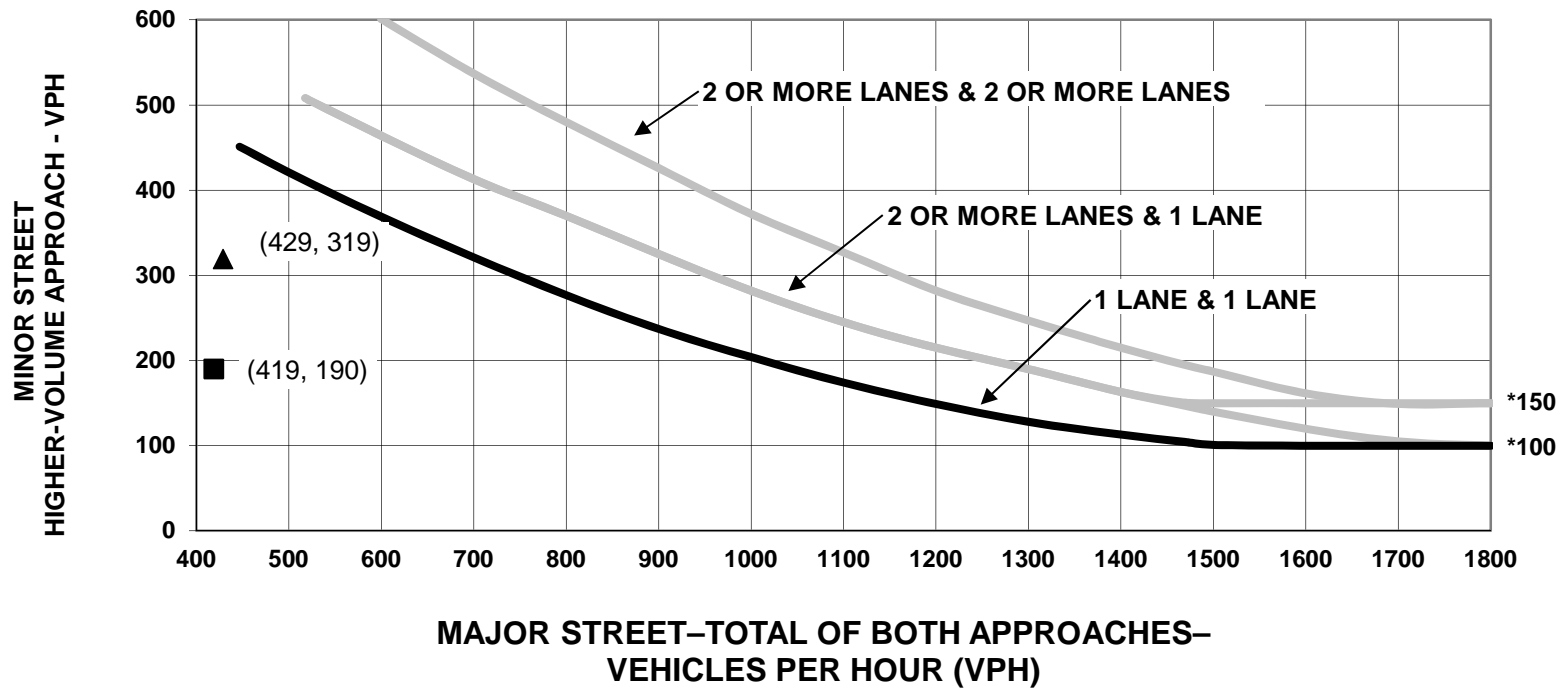
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 10 - Signal Warrant Analysis

Intersection 651: C St./Trabuco Rd.

2017 Baseline (Assumes FivePoint Option 2 and High School Site A)

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

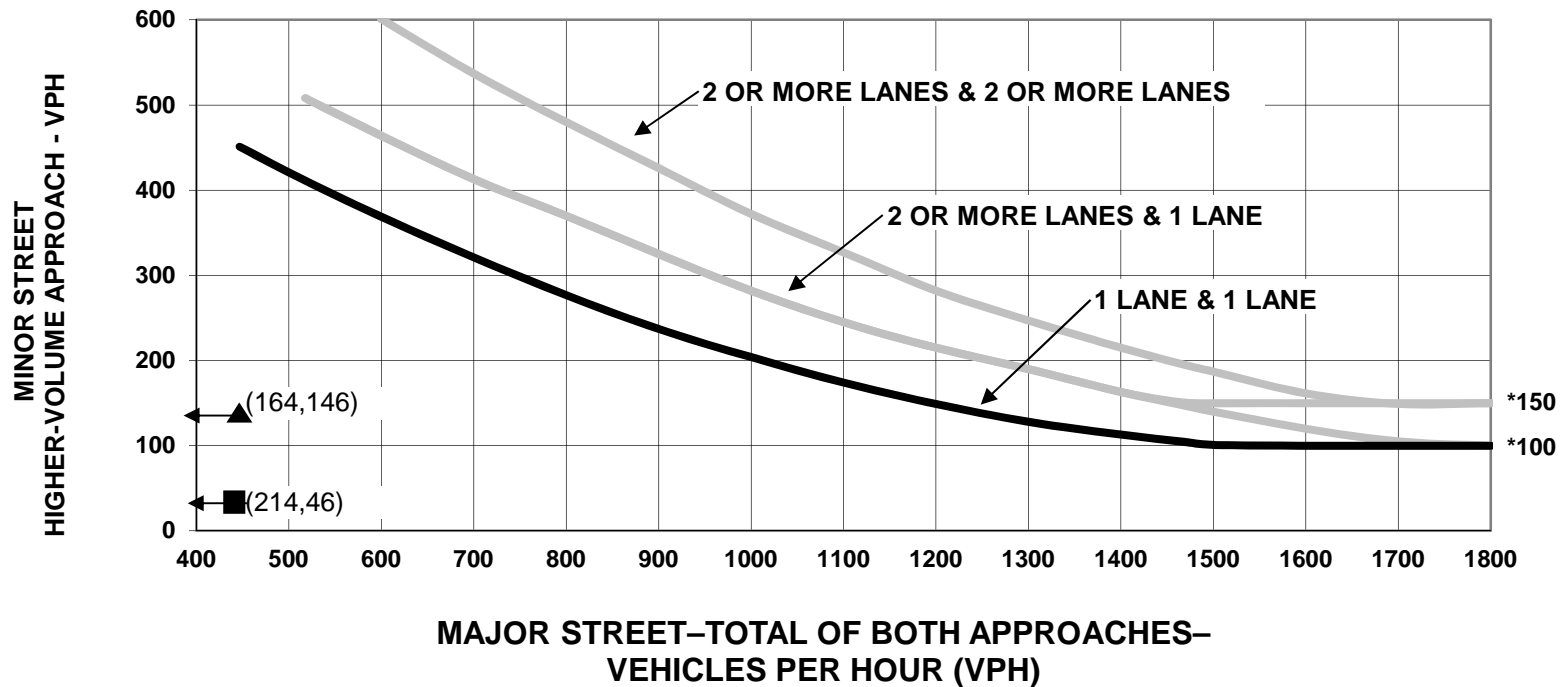
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 11 - Signal Warrant Analysis

Intersection 652: LY Street/Trabuco Rd.

2017 Baseline (Assumes FivePoint Option 2 and High School Site A)

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

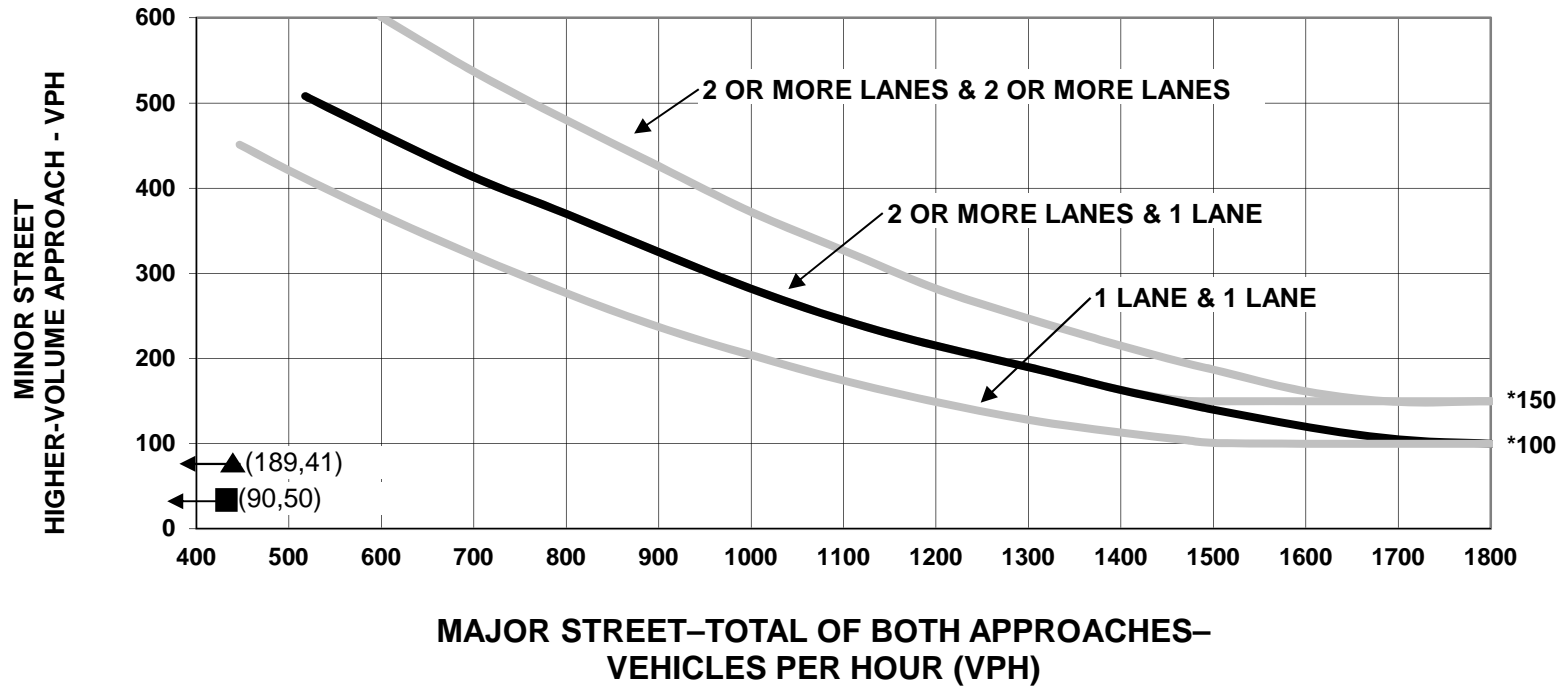
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 12 - Signal Warrant Analysis

Intersection 654: C St./LV St.

2017 Baseline (Assumes FivePoint Option 2 and High School Site A)

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

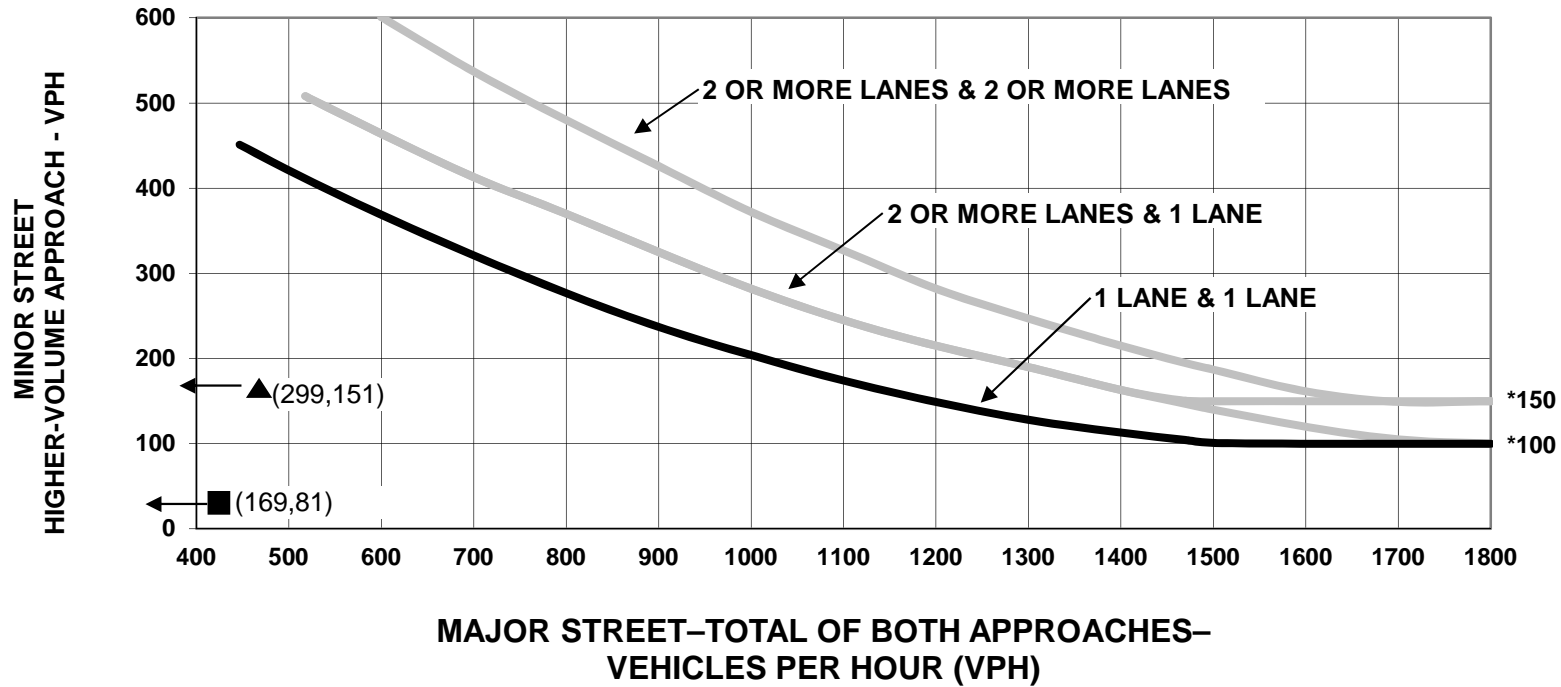
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 13 - Signal Warrant Analysis

Intersection 655: O St./8th St.

2017 Baseline (Assumes FivePoint Option 2 and High School Site A)

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

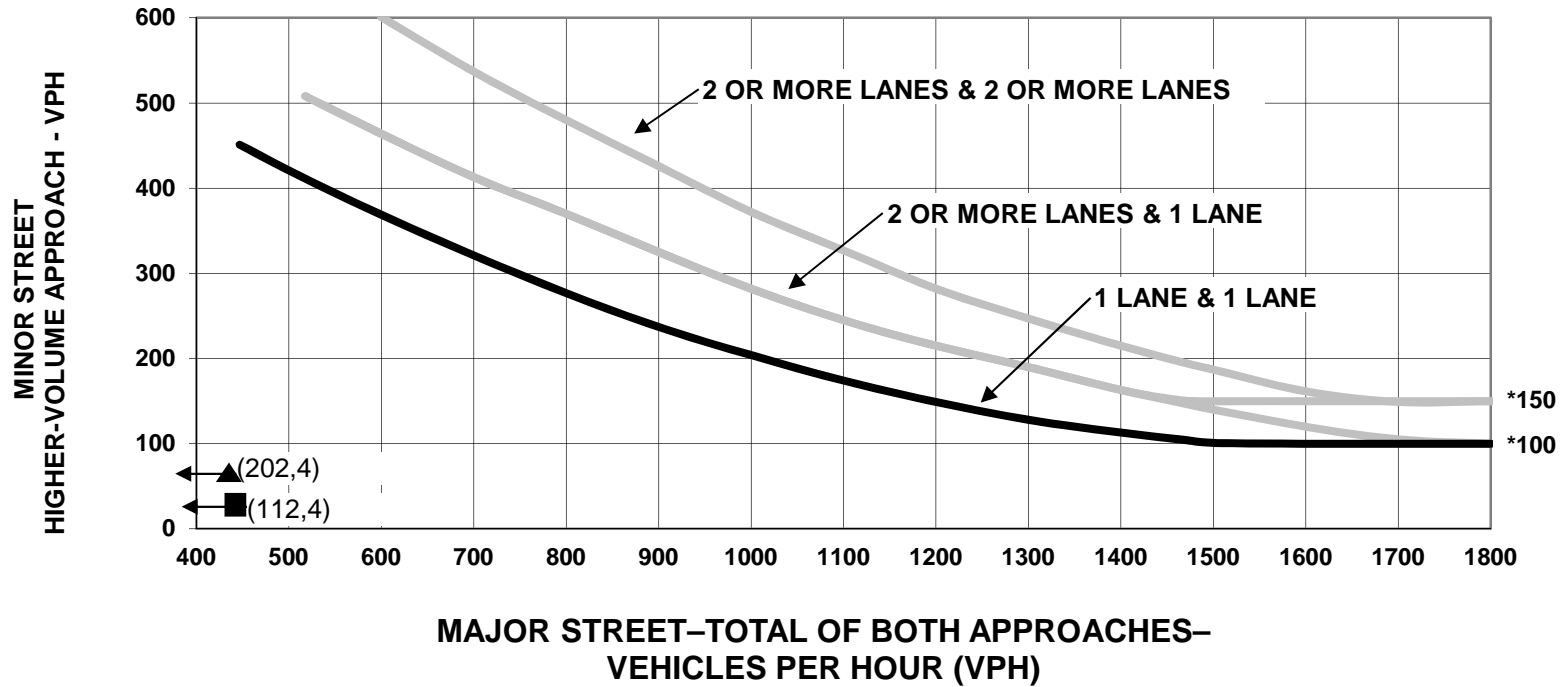
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 14 - Signal Warrant Analysis

Intersection 656: C St./8th St.

2017 Baseline (Assumes FivePoint Option 2 and High School Site A)

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

- A.M. Peak Hour
- ▲ P.M. Peak Hour

**Table 4: Signal Warrant Analysis - 2017 Baseline + 688 Acre Park Development Plan
(Alternative 4)**

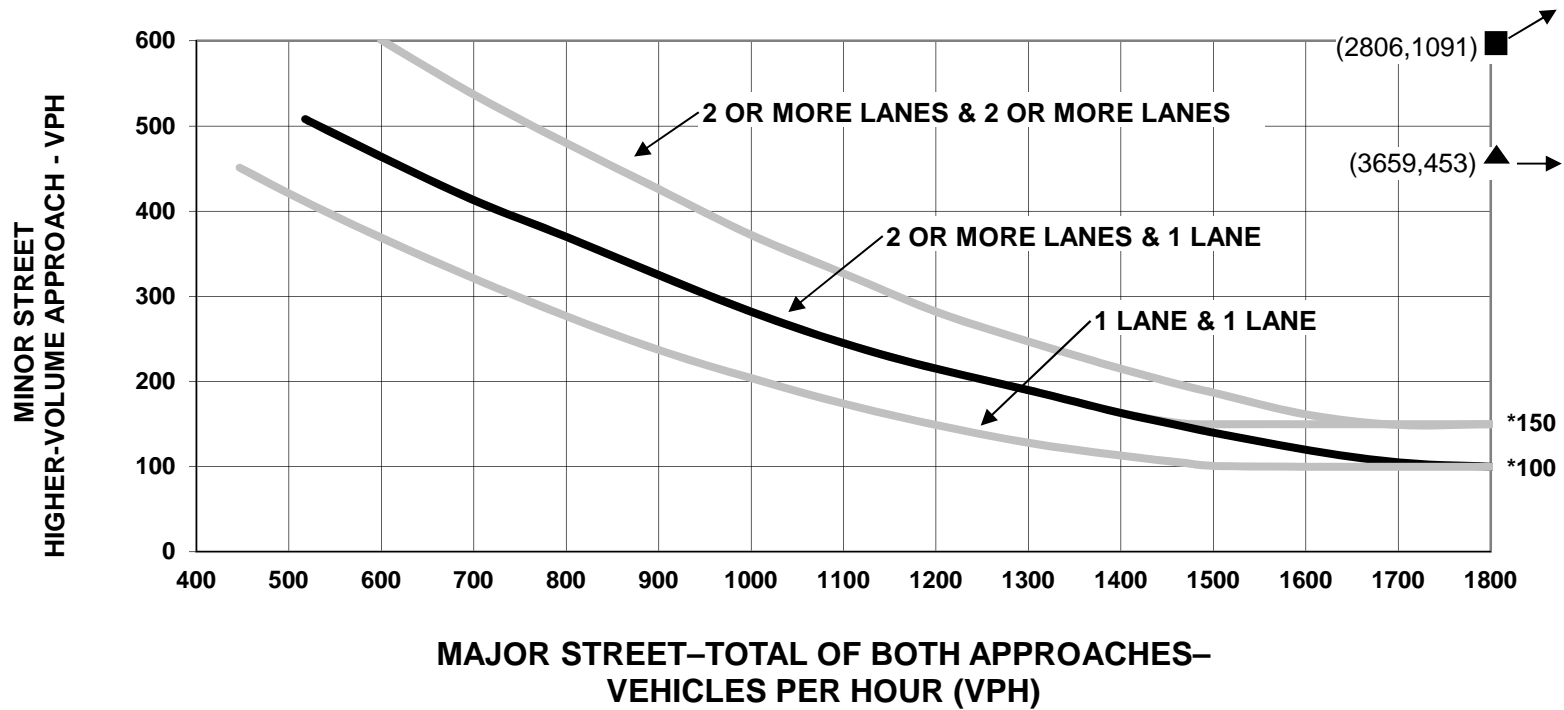
Int. ID	Intersection Name	AM Peak Hour Volumes		PM Peak Hour Volumes		Signal Warrant
		Major Street (Dir)	Minor Street (Dir)	Major Street (Dir)	Minor Street (Dir)	
558	Ridge Valley-O St./Irvine Bl.	2806 (EB/WB)	1091 (SB)	3659 (EB/WB)	453 (SB)	Yes (AM/PM)
559	O St./Trabuco Rd.	1643 (EB/WB)	836 (SB)	1851 (EB/WB)	779 (SB)	Yes (AM/PM)
560	O St./Marine Wy.	671 (NB/SB)	150 (SB)	1570 (EB/WB)	190 (SB)	Yes (PM)
561	LY Street/Irvine Bl.	2579 (EB/WB)	101 (NB)	2889 (EB/WB)	121 (NB)	Yes (AM/PM)
562	Great Park Bl. W./Marine Wy.	490 (EB/WB)	10 (SB)	1012 (EB/WB)	118 (SB)	No
572	Modjeska-A St./Irvine Bl.	919 (EB/WB)	494 (SB)	3236 (EB/WB)	454 (SB)	Yes (AM/PM)
575	O St./LV St.	171 (EB/WB)	22 (WB)	351 (NB/SB)	42 (WB)	No
576	O St./C St.	223 (EB/WB)	10 (WB)	450 (NB/SB)	53 (WB)	No
577	Pusan Way-Z St./Irvine Bl.	3084 (EB/WB)	445 (NB)	3444 (EB/WB)	434 (NB)	Yes (AM/PM)
651	C St./Trabuco Rd.	332 (EB/WB)	145 (SB)	465 (EB/WB)	325 (NB)	No
652	LY Street/Trabuco Rd.	121 (EB/WB)	50 (EB)	259 (NB/SB)	191 (EB)	No
653	LY Street/Loop Road	50 (NB/SB)	20 (WB)	200 (NB/SB)	109 (WB)	No
654	C St./LV St.	72 (NB/SB)	11 (EB)	179 (NB/SB)	10 (EB)	No
655	O St./8th St.	189 (NB/SB)	31 (WB)	349 (NB/SB)	41 (WB)	No
656	C St./8th St.	53 (EB/WB)	12 (NB)	80 (EB/WB)	21 (NB)	No
657	GP Blvd N/S Conn/GP Blvd E/W	24 (NB/SB)	4 (WB)	294 (NB/SB)	4 (WB)	No

Notes: Intersections where signals are warranted are shown in **bold**.

Figure 1 - Signal Warrant Analysis

Intersection 558: Ridge Valley-O St./Irvine Bl.
2017 Baseline + 688 Acre Park Development Plan

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

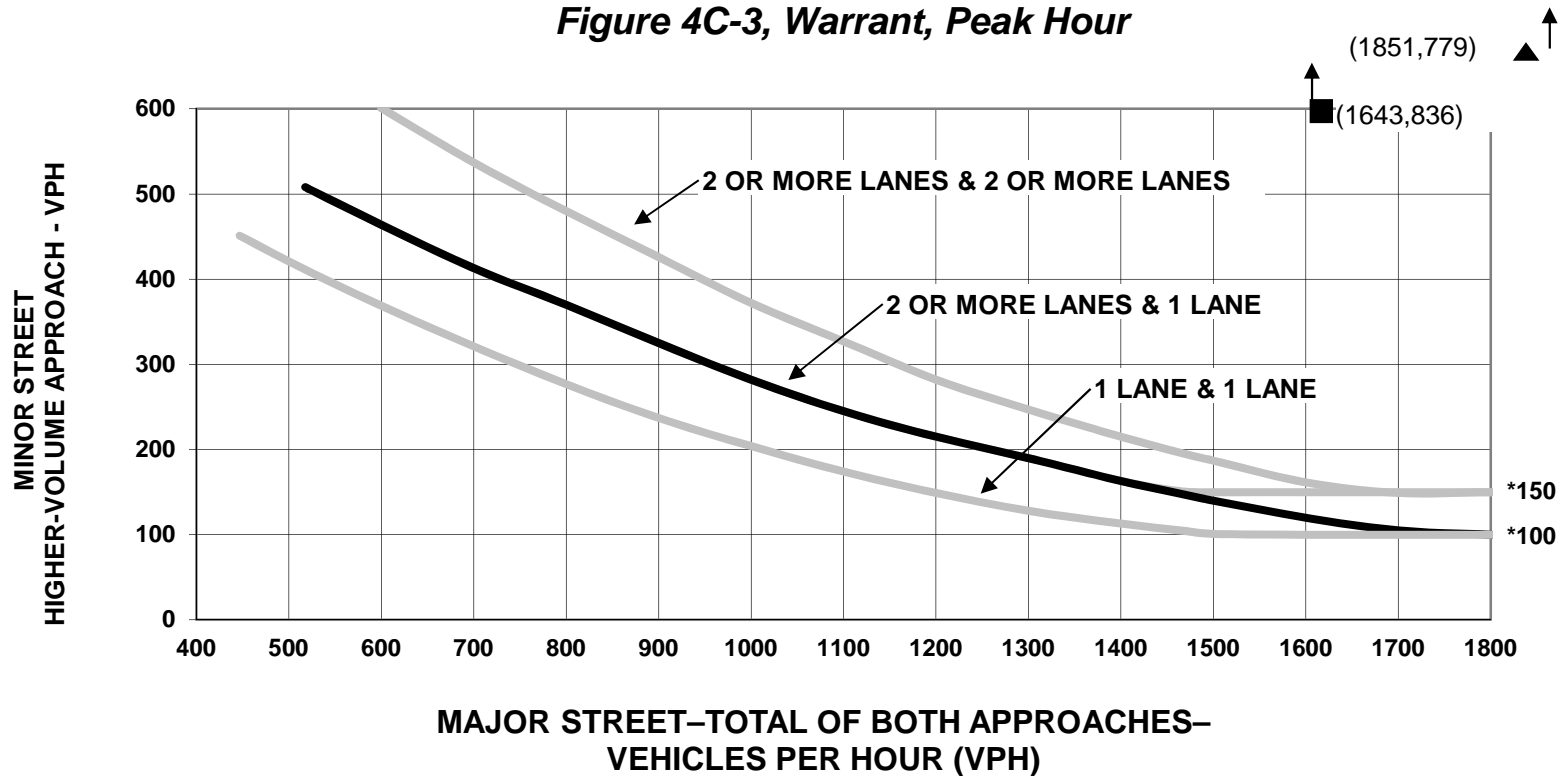
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 2 - Signal Warrant Analysis

Intersection 559: O St./Trabuco Rd.

2017 Baseline + 688 Acre Park Development Plan

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

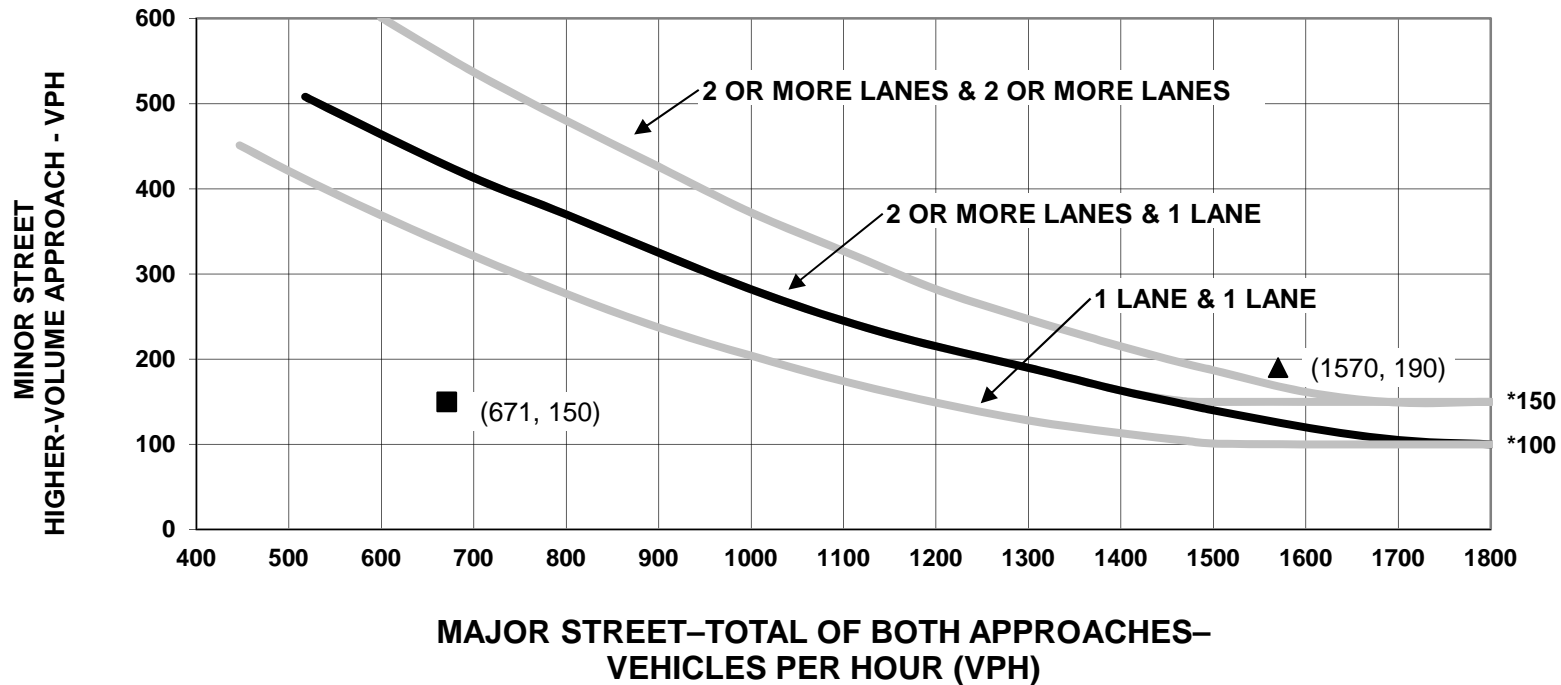
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 3 - Signal Warrant Analysis

Intersection 560: O St./Marine Wy.

2017 Baseline + 688 Acre Park Development Plan

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

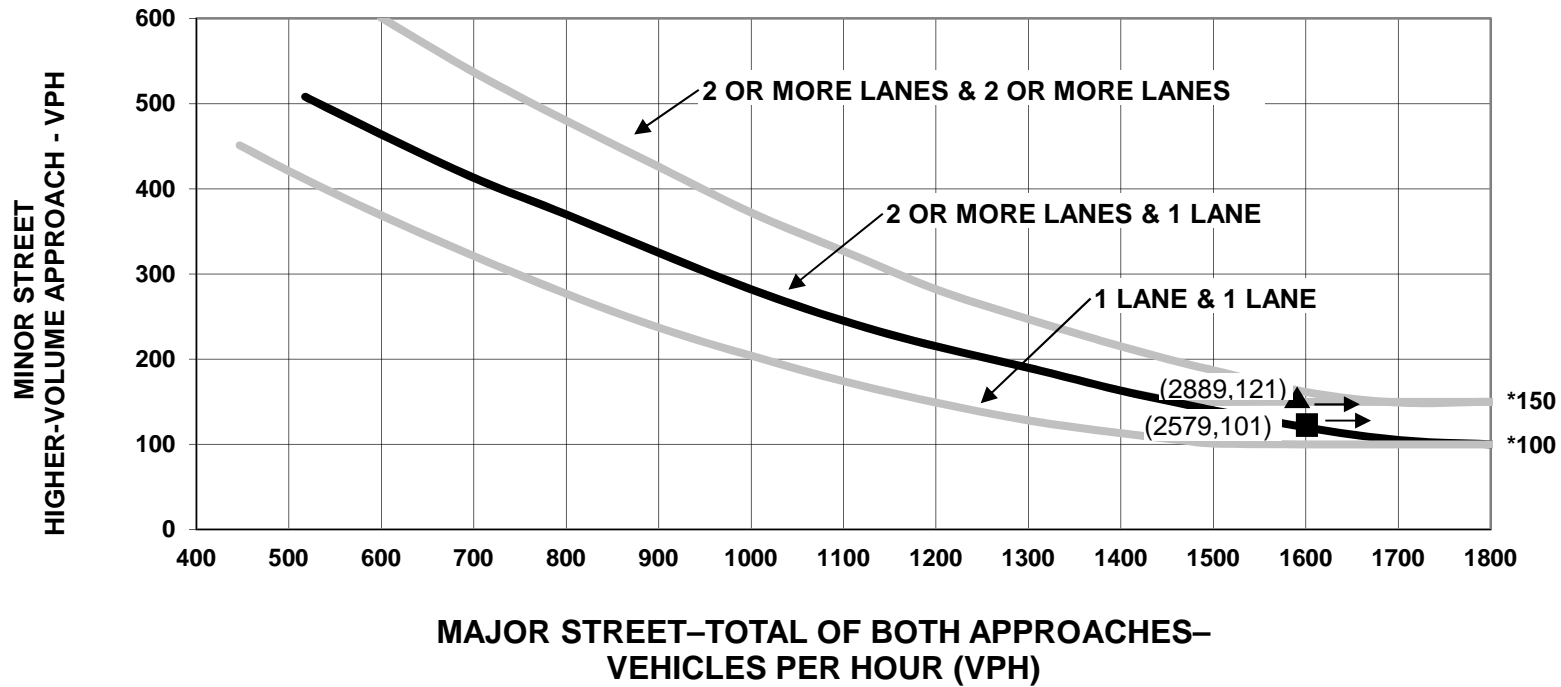
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 4 - Signal Warrant Analysis

Intersection 561: LY Street/Irvine Bl.

2017 Baseline + 688 Acre Park Development Plan

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

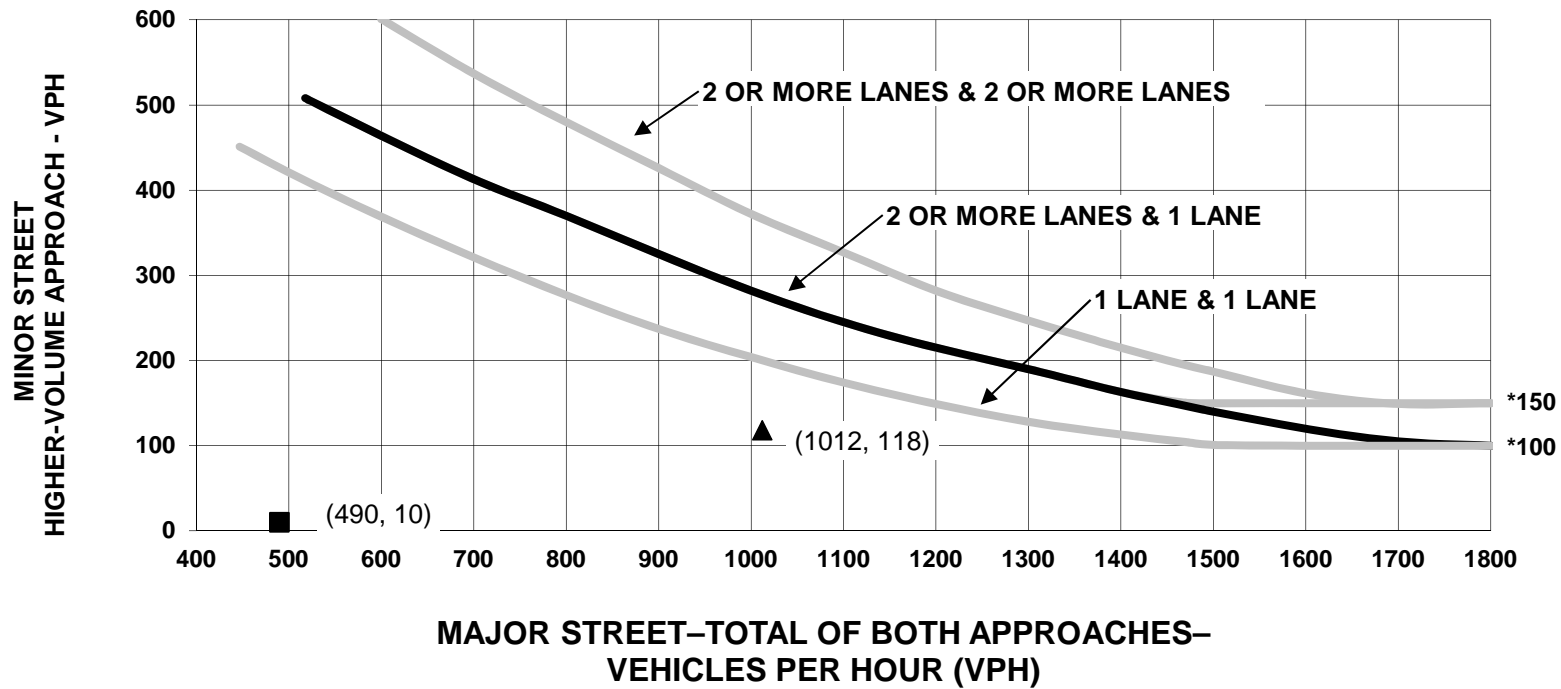
Legend

- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 5 - Signal Warrant Analysis

Intersection 562: Great Park Bl. W./Marine Wy.
2017 Baseline + 688 Acre Park Development Plan

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

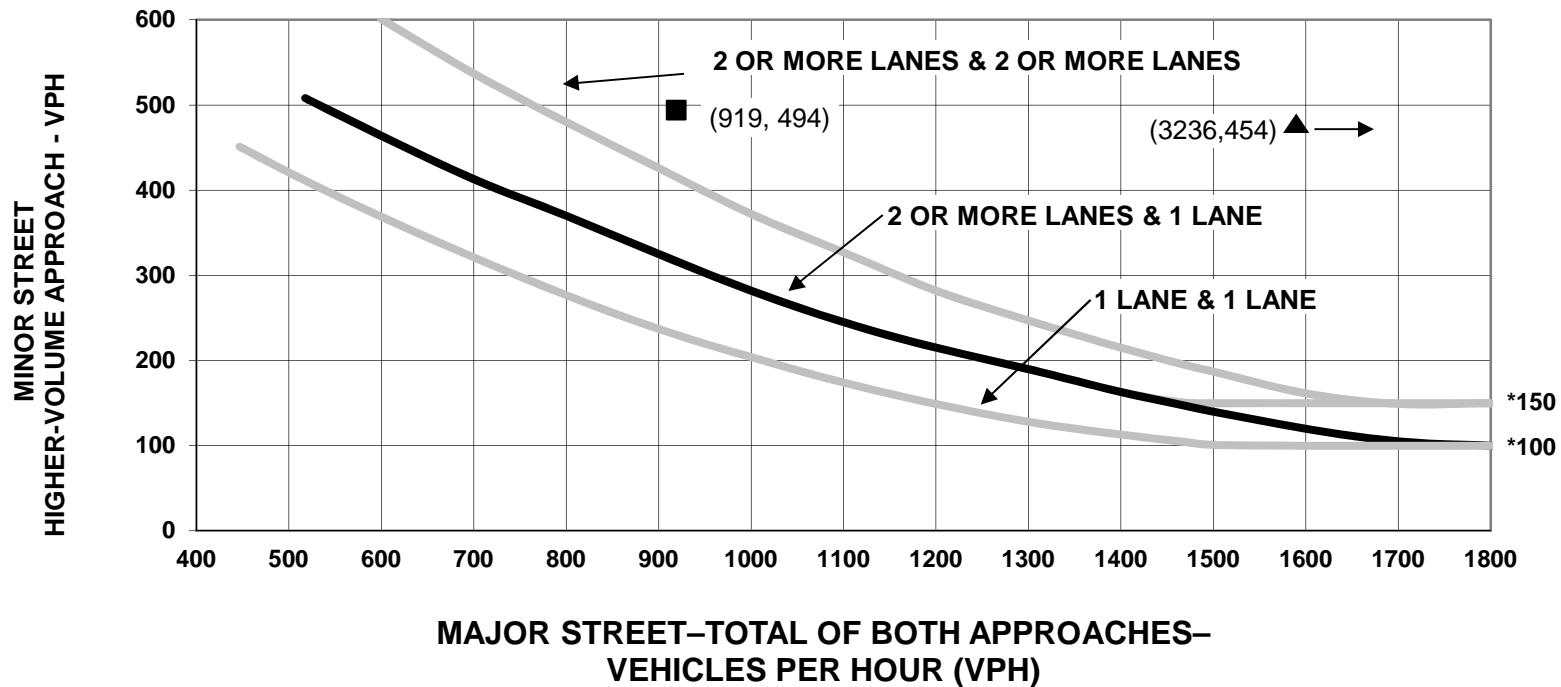
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 6 - Signal Warrant Analysis

Intersection 572: Modjeska-A St./Irvine Bl.

2017 Baseline + 688 Acre Park Development Plan

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

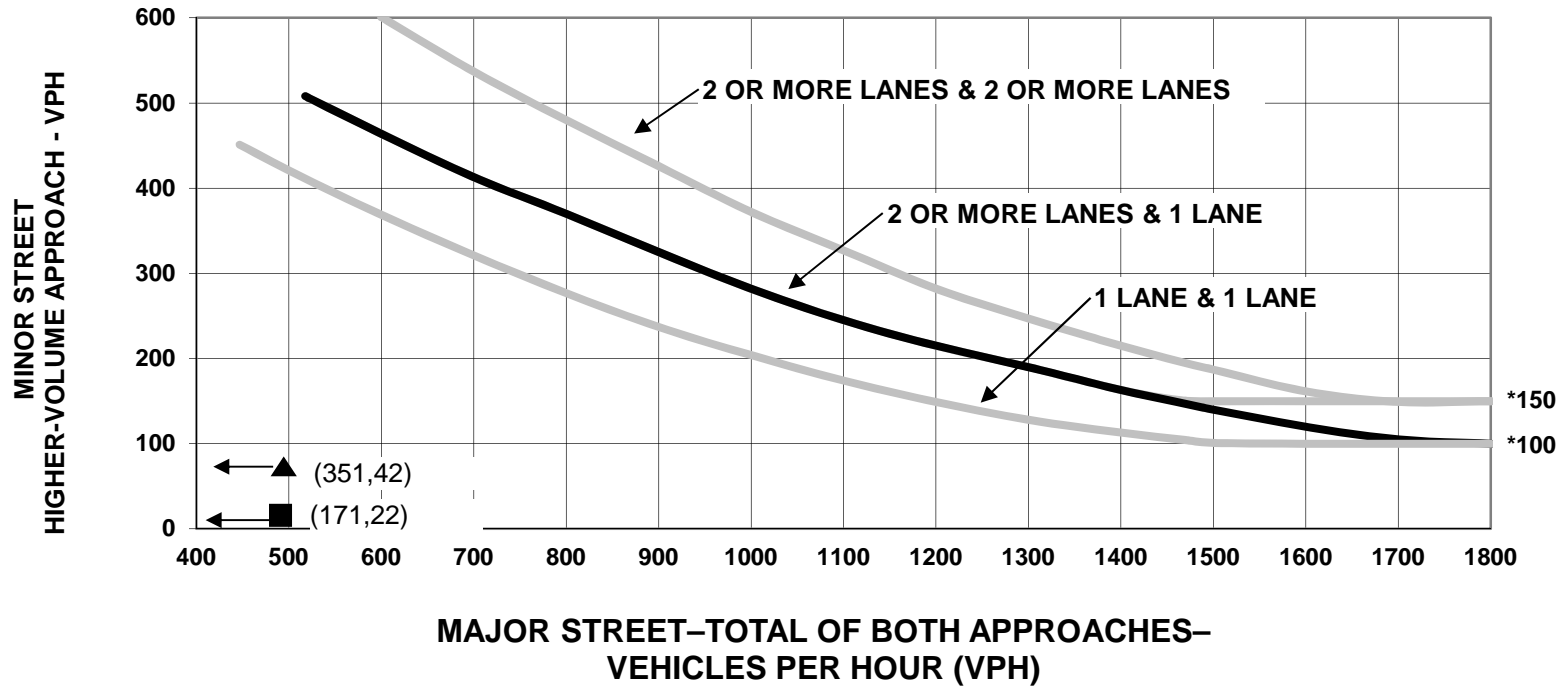
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 7 - Signal Warrant Analysis

Intersection 575: O St./LV St.

2017 Baseline + 688 Acre Park Development Plan

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

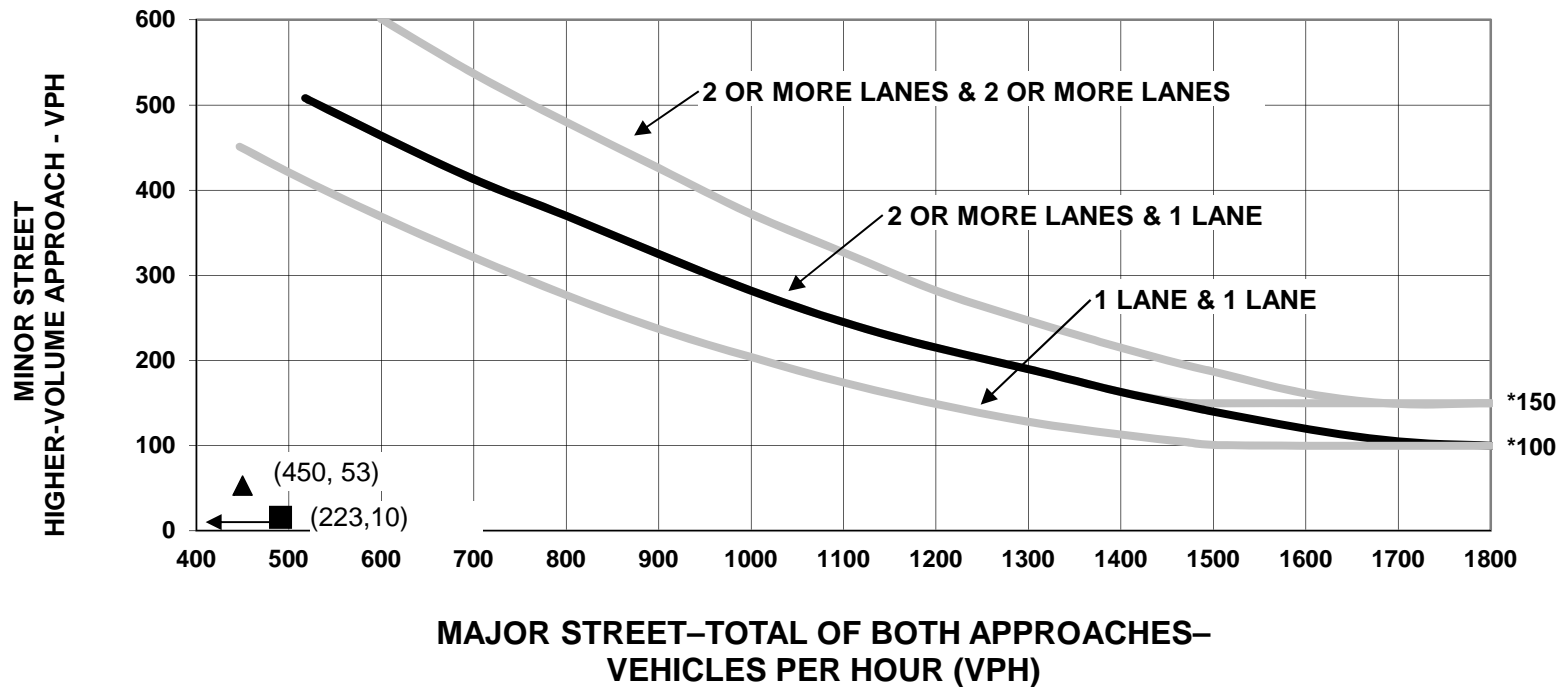
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 8 - Signal Warrant Analysis

Intersection 576: O St./C St.

2017 Baseline + 688 Acre Park Development Plan

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

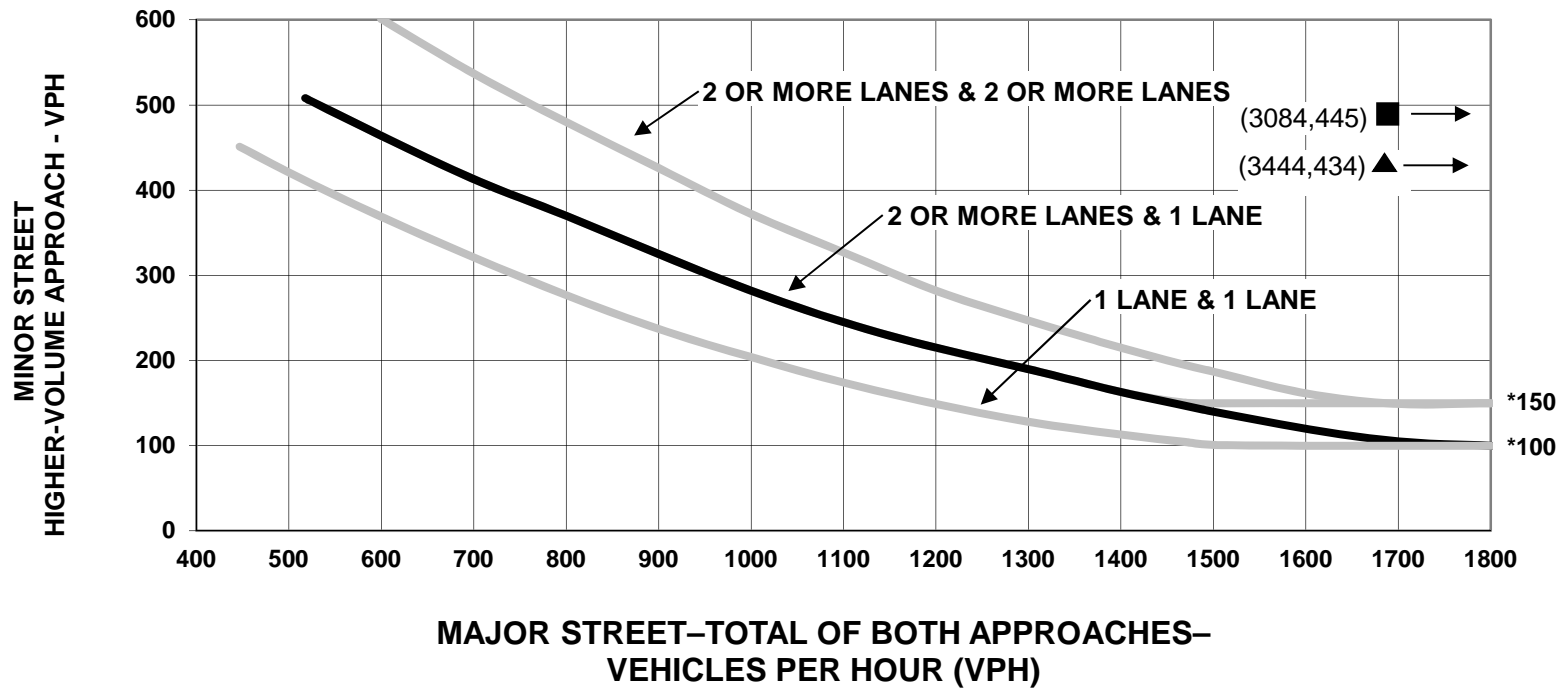
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 9 - Signal Warrant Analysis

Intersection 577: Pusan Way-Z St./Irvine Bl.

2017 Baseline + 688 Acre Park Development Plan

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

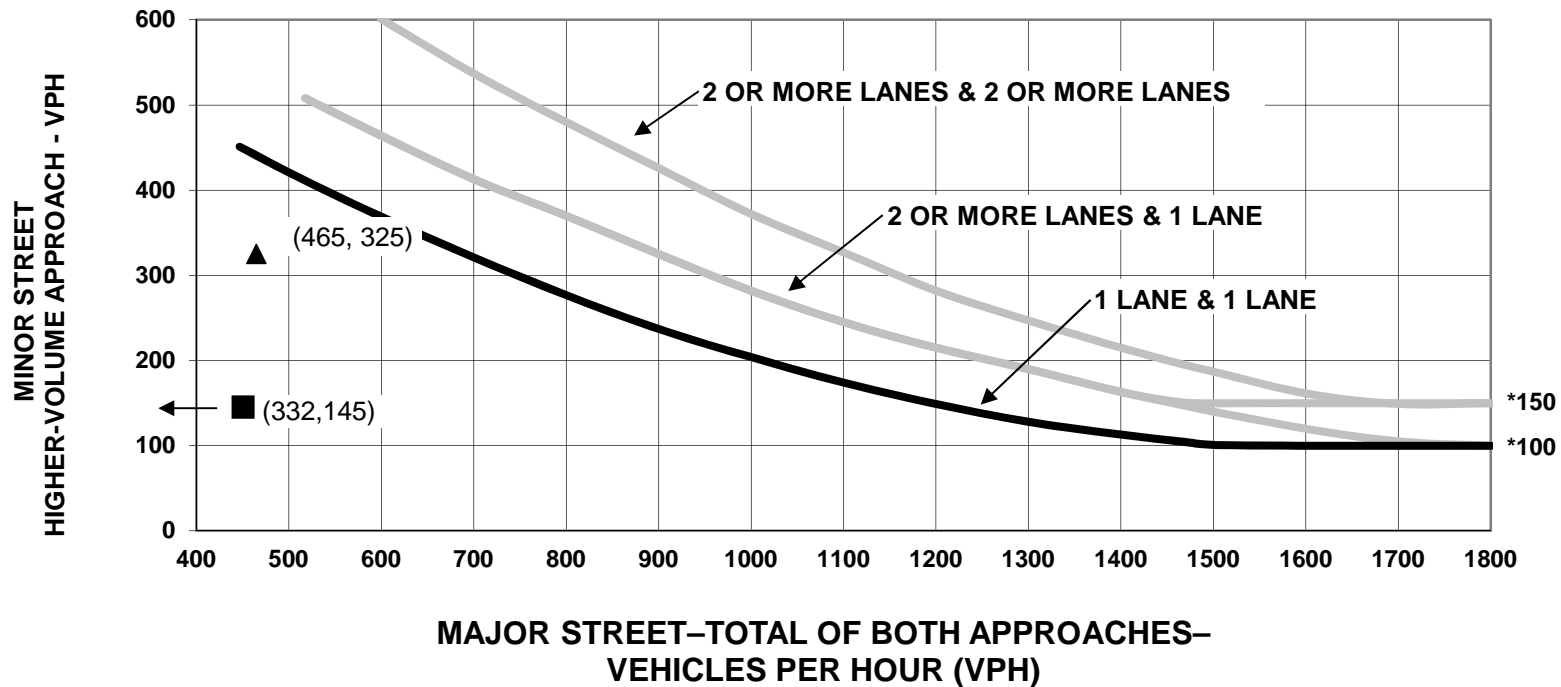
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 10 - Signal Warrant Analysis

Intersection 651: C St./Trabuco Rd.

2017 Baseline + 688 Acre Park Development Plan

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

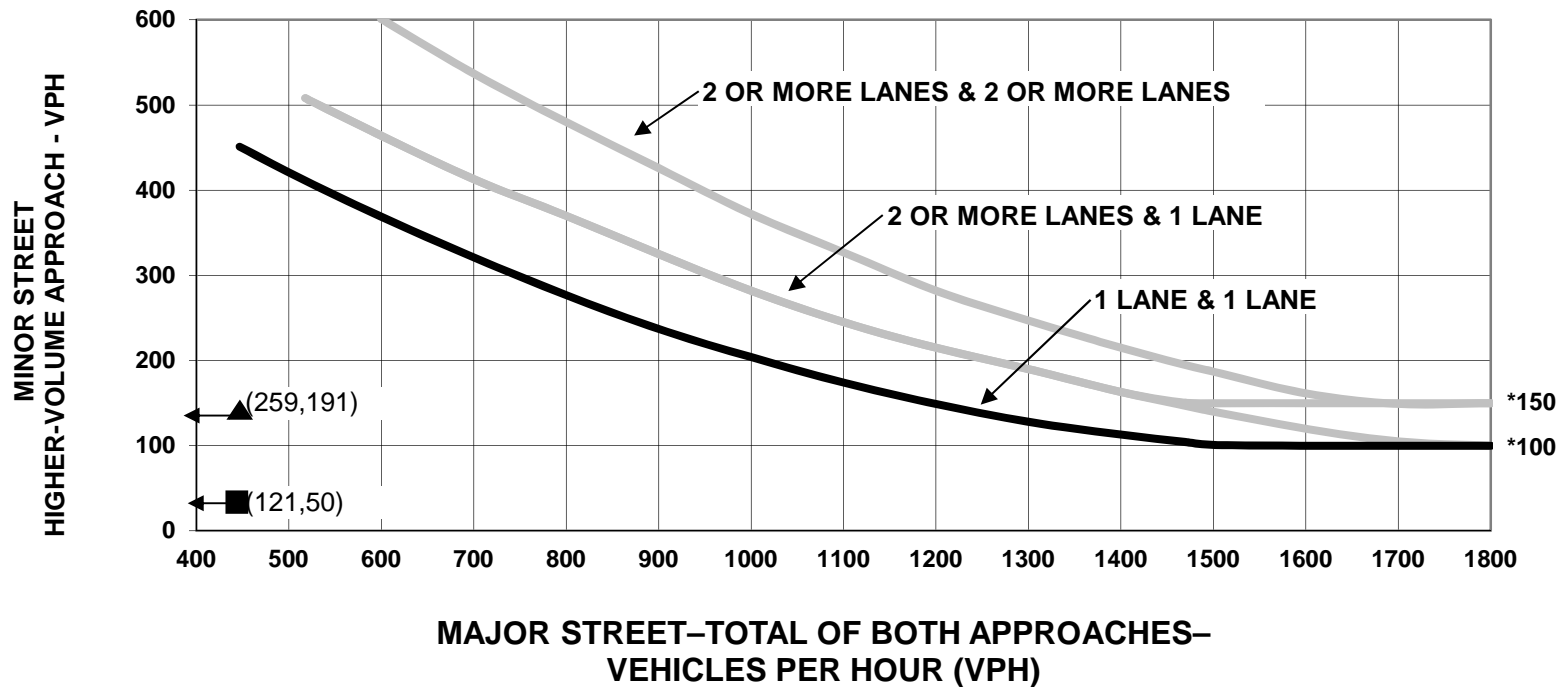
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 11 - Signal Warrant Analysis

Intersection 652: LY Street/Trabuco Rd.

2017 Baseline + 688 Acre Park Development Plan

Figure 4C-3, Warrant, Peak Hour



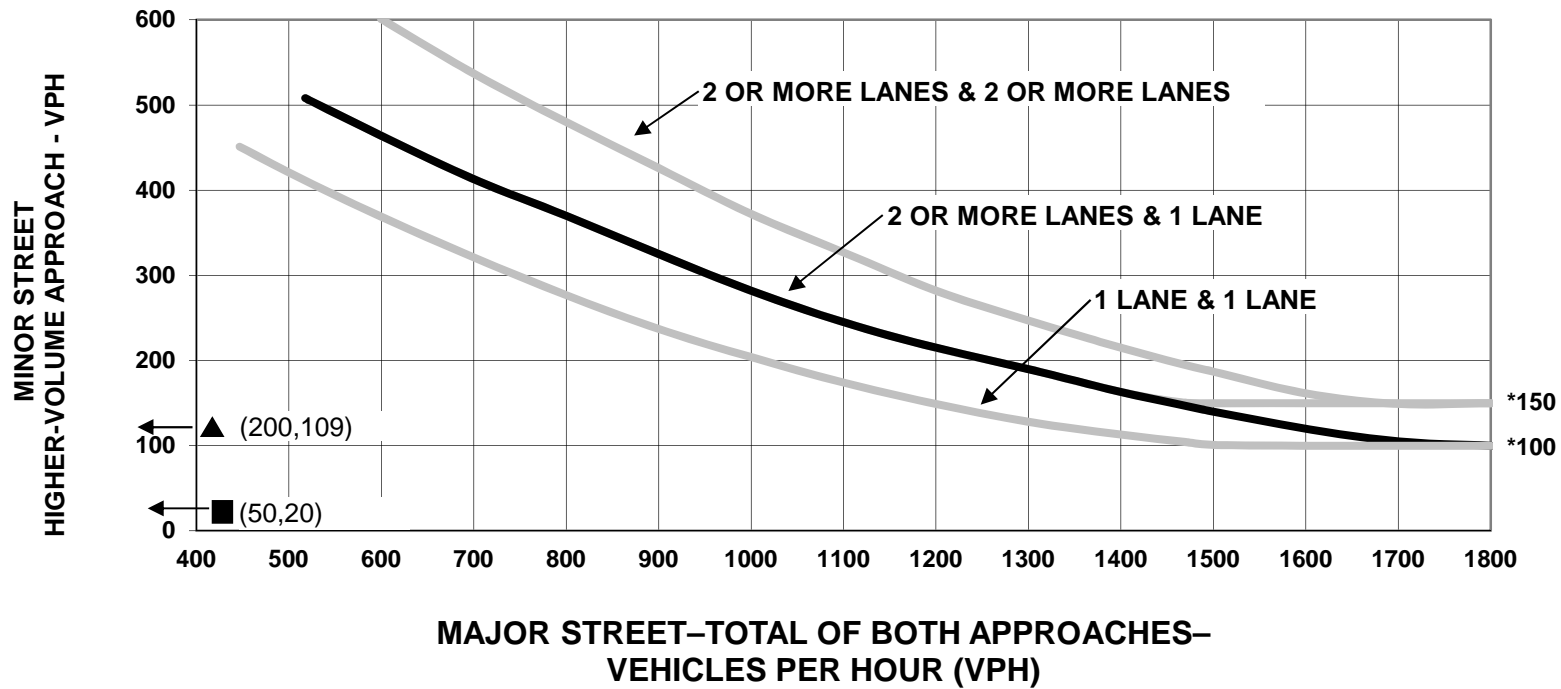
* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 12 - Signal Warrant Analysis
Intersection 653: LY Street/Loop Road
2017 Baseline + 688 Acre Park Development Plan

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

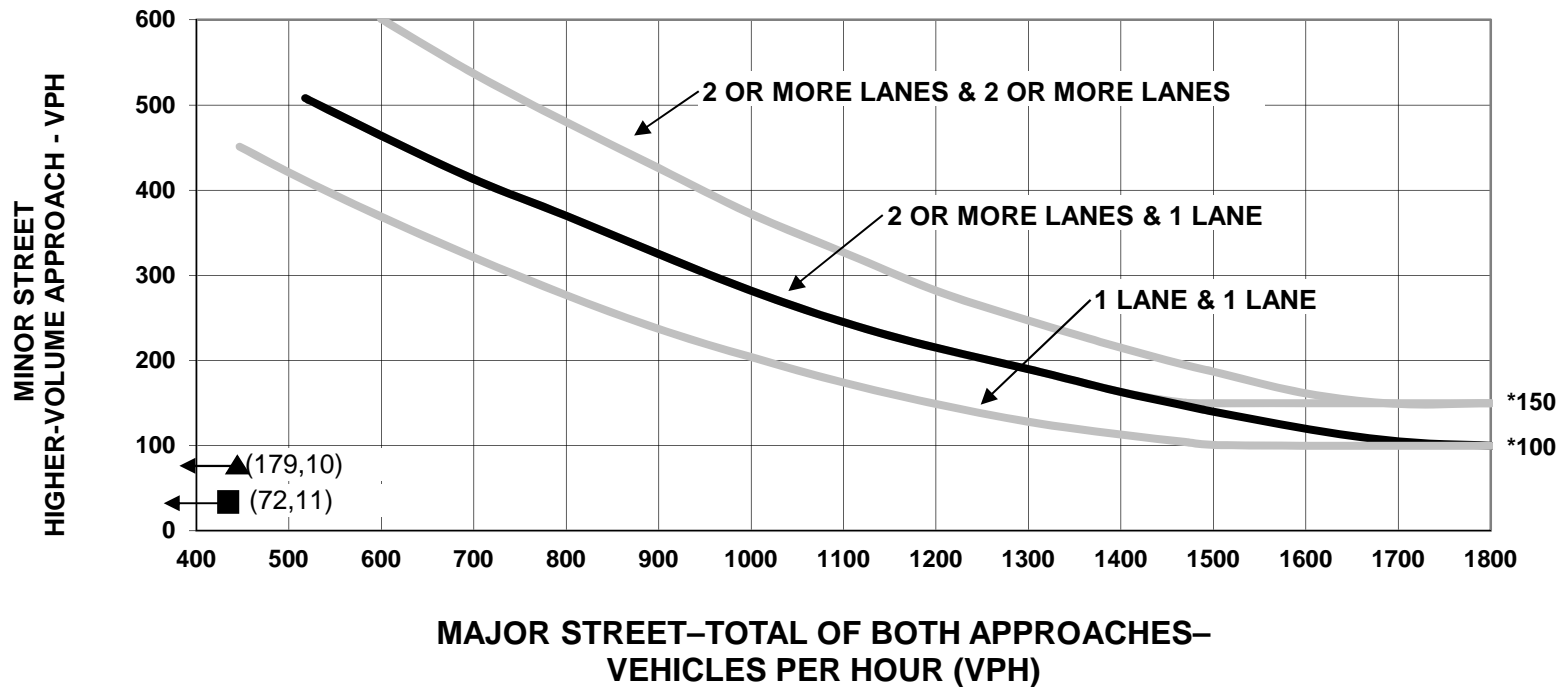
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 12 - Signal Warrant Analysis

Intersection 654: C St./LV St.

2017 Baseline + 688 Acre Park Development Plan

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

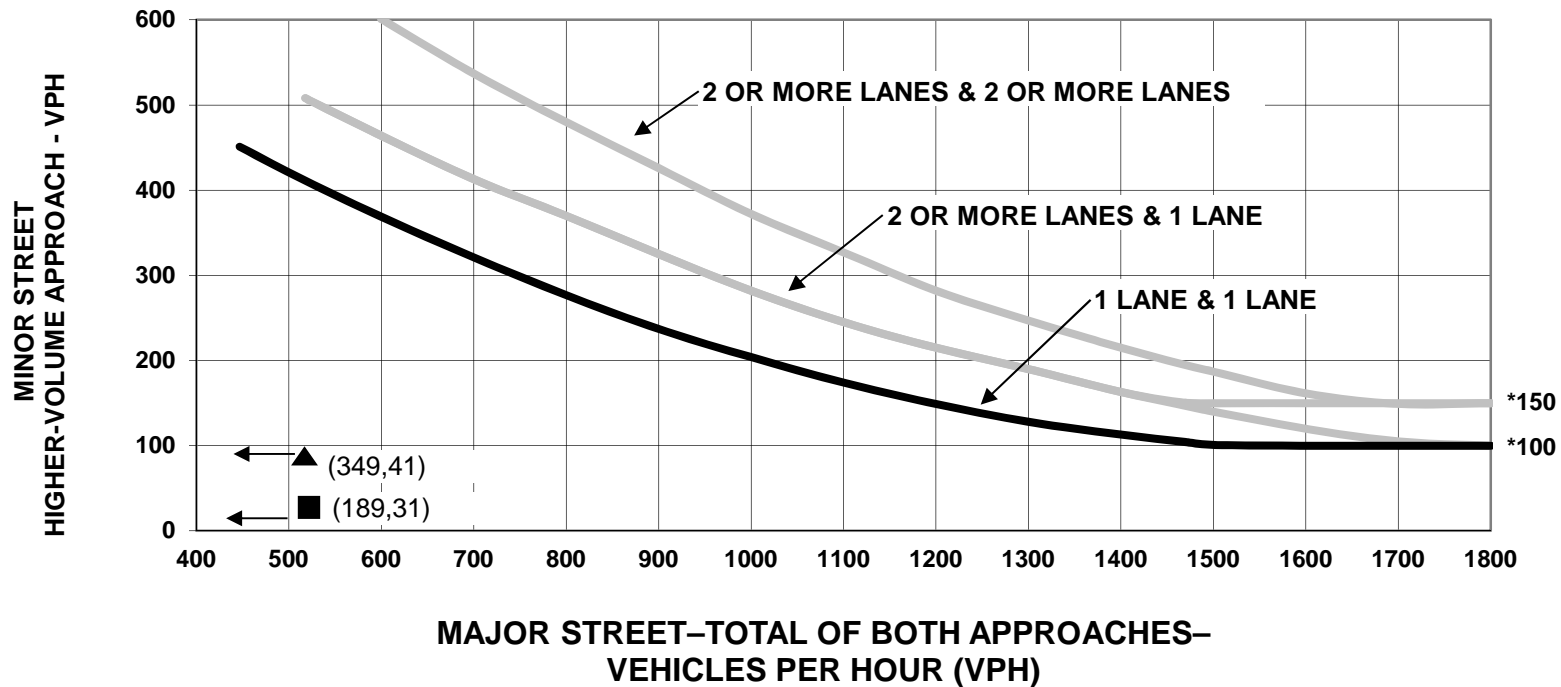
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 13 - Signal Warrant Analysis

Intersection 655: O St./8th St.

2017 Baseline + 688 Acre Park Development Plan

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

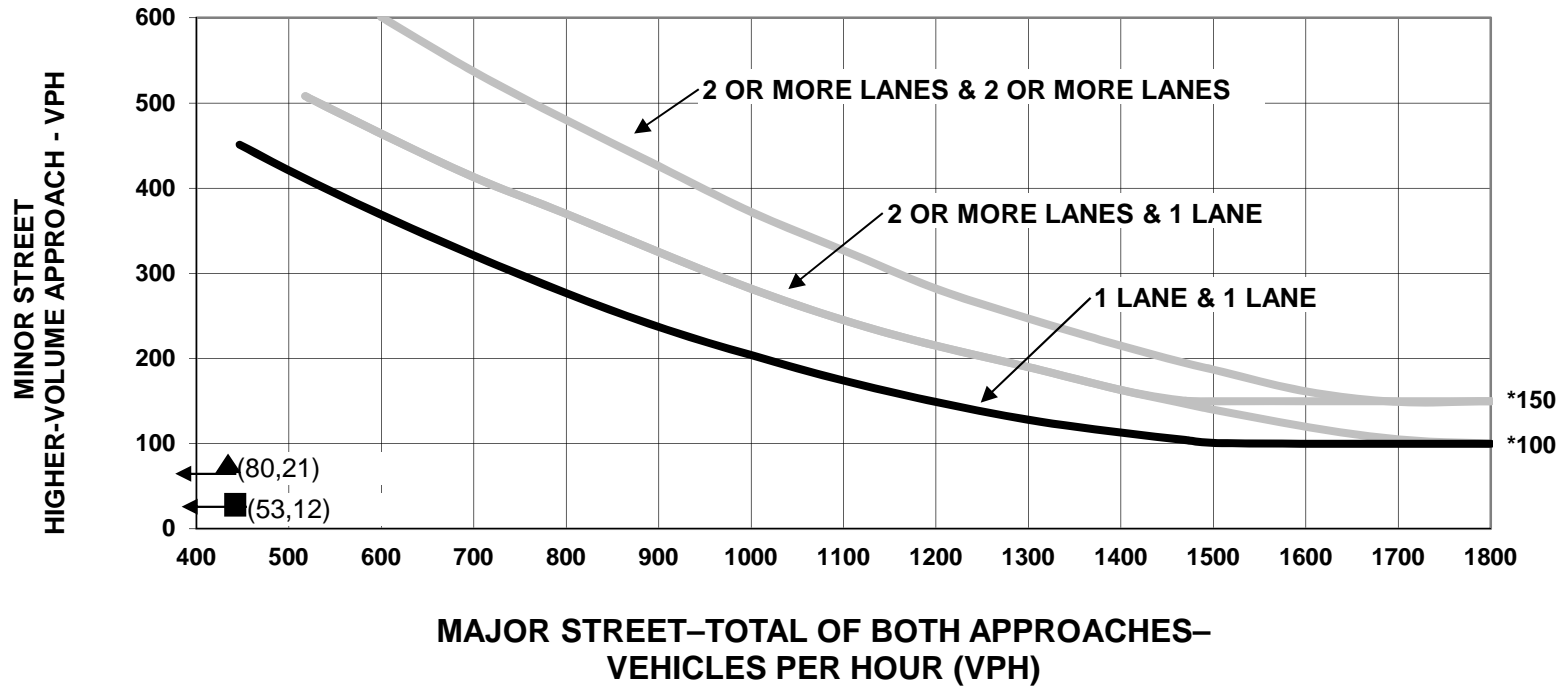
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 14 - Signal Warrant Analysis

Intersection 656: C St./8th St.

2017 Baseline + 688 Acre Park Development Plan

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

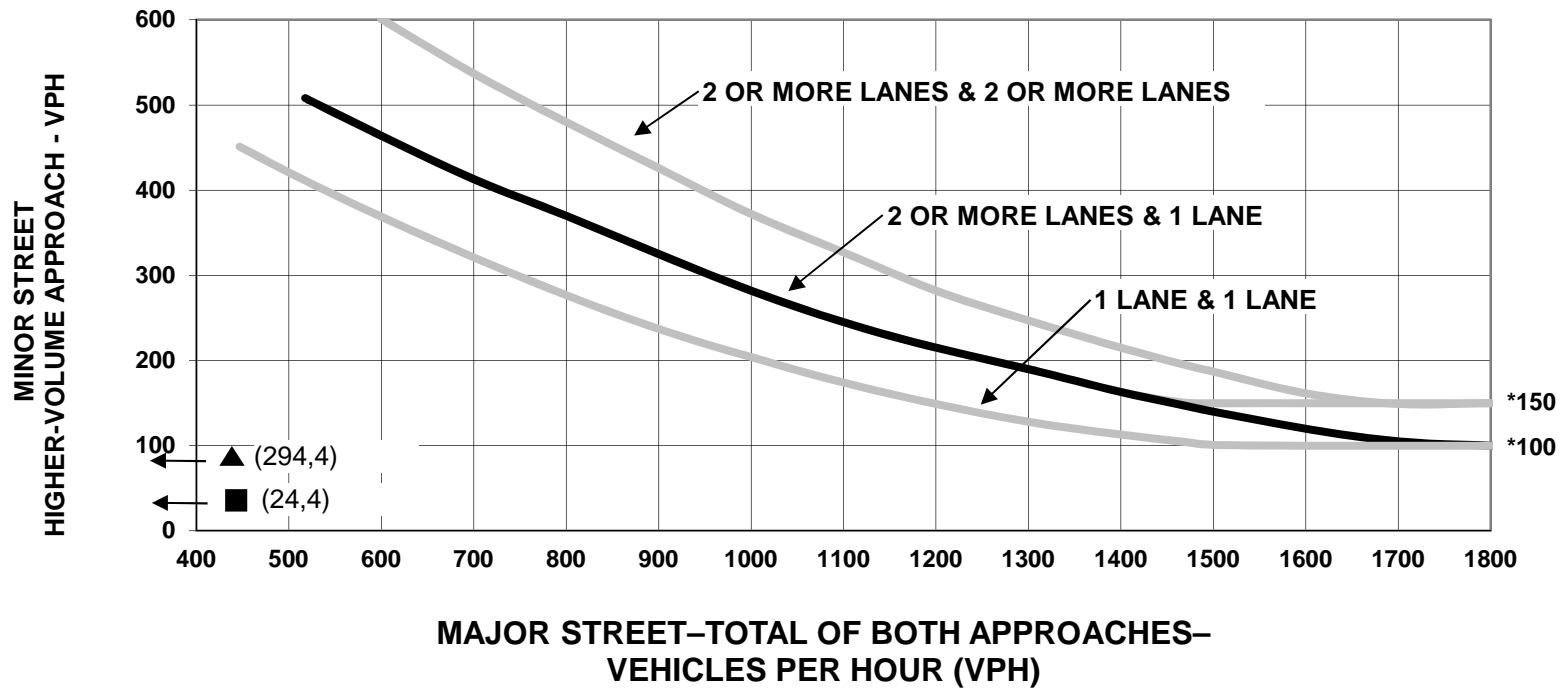
Legend

- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 15 - Signal Warrant Analysis

Intersection 657: GP Blvd N/S Conn/GP Blvd E/W
2017 Baseline + 688 Acre Park Development Plan

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

- A.M. Peak Hour
- ▲ P.M. Peak Hour

**Table 5: Signal Warrant Analysis - 2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1
(Alternative 5)**

Int. ID	Intersection Name	AM Peak Hour Volumes		PM Peak Hour Volumes		Signal Warrant
		Major Street (Dir)	Minor Street (Dir)	Major Street (Dir)	Minor Street (Dir)	
558	Ridge Valley-O St./Irvine Bl.	2826 (EB/WB)	1091 (SB)	3649 (EB/WB)	457 (NB)	Yes (AM/PM)
559	O St./Trabuco Rd.	1622 (EB/WB)	796 (SB)	1861 (EB/WB)	741 (SB)	Yes (AM/PM)
560	O St./Marine Wy.	661 (NB/SB)	150 (SB)	1570 (EB/WB)	170 (SB)	Yes (PM)
561	LY Street/Irvine Bl.	2559 (EB/WB)	101 (NB)	2889 (EB/WB)	121 (NB)	Yes (PM)
562	Great Park Bl. W./Marine Wy.	480 (EB/WB)	10 (SB)	1012 (EB/WB)	118 (SB)	No
572	Modjeska-A St./Irvine Bl.	915 (EB/WB)	497 (SB)	3234 (EB/WB)	455 (SB)	Yes (AM/PM)
575	O St./LV St.	189 (NB/SB)	21 (WB)	339 (NB/SB)	31 (WB)	No
576	O St./C St.	42 (EB/WB)	11 (SB)	82 (EB/WB)	22 (NB)	No
577	Pusan Way-Z St./Irvine Bl.	24 (NB/SB)	4 (WB)	294 (NB/SB)	4 (WB)	Yes (AM/PM)
651	C St./Trabuco Rd.	199 (EB/WB)	70 (SB)	449 (EB/WB)	120 (NB)	No
652	LY Street/Trabuco Rd.	80 (NB/SB)	50 (EB)	215 (NB/SB)	195 (EB)	No
653	LY Street/Loop Road	60 (NB/SB)	10 (EB)	169 (NB/SB)	11 (EB)	No
654	C St./LV St.	39 (NB/SB)	21 (WB)	192 (NB/SB)	107 (WB)	No
655	O St./8th St.	189 (NB/SB)	21 (WB)	339 (NB/SB)	31 (WB)	No
656	C St./8th St.	42 (EB/WB)	11 (SB)	82 (EB/WB)	22 (NB)	No
657	GP Blvd N/S Conn/GP Blvd E/W	24 (NB/SB)	4 (WB)	294 (NB/SB)	4 (WB)	No

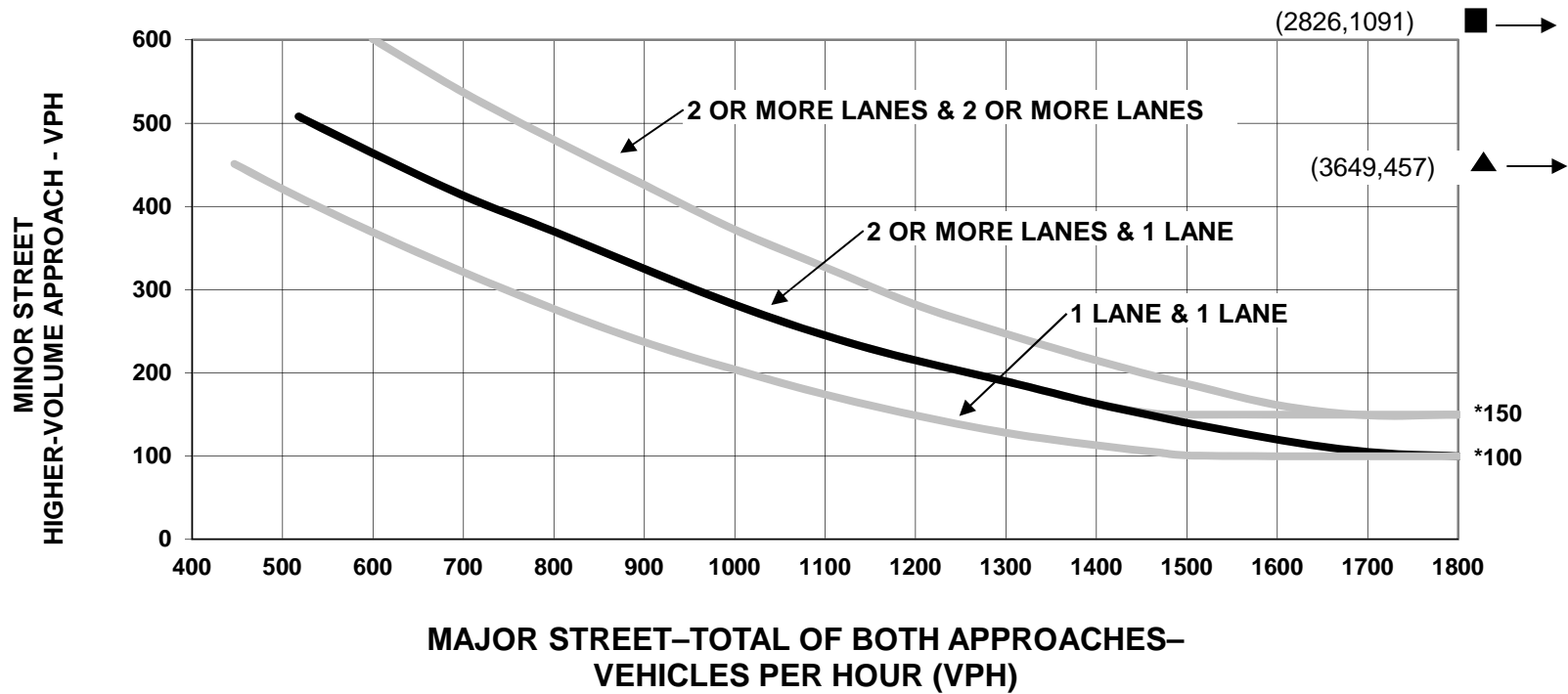
Notes: Intersections where signals are warranted are shown in **bold**.

Figure 1 - Signal Warrant Analysis

Intersection 558: Ridge Valley-O St./Irvine Bl.

2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

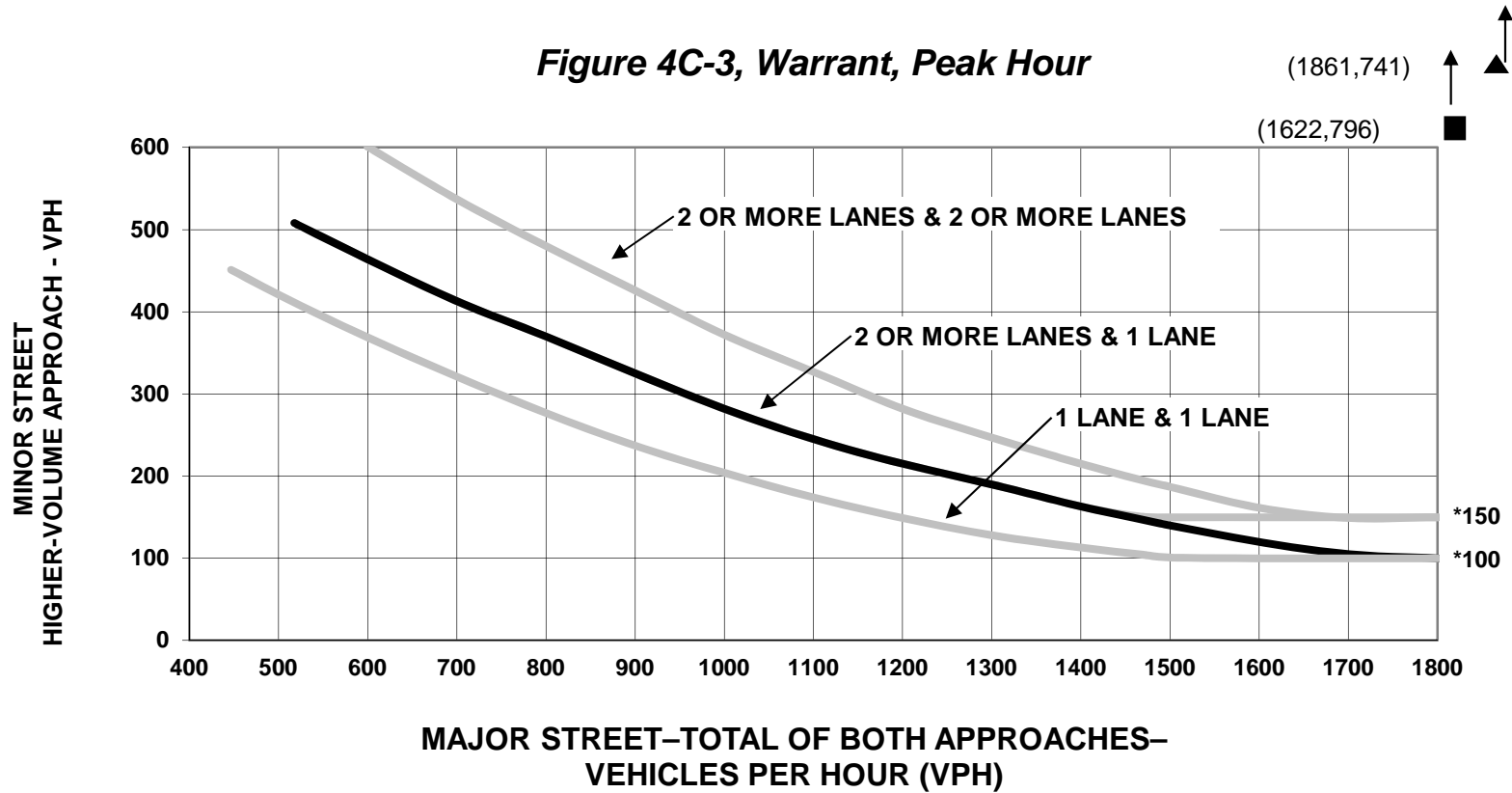
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 2 - Signal Warrant Analysis

Intersection 559: O St./Trabuco Rd.

2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

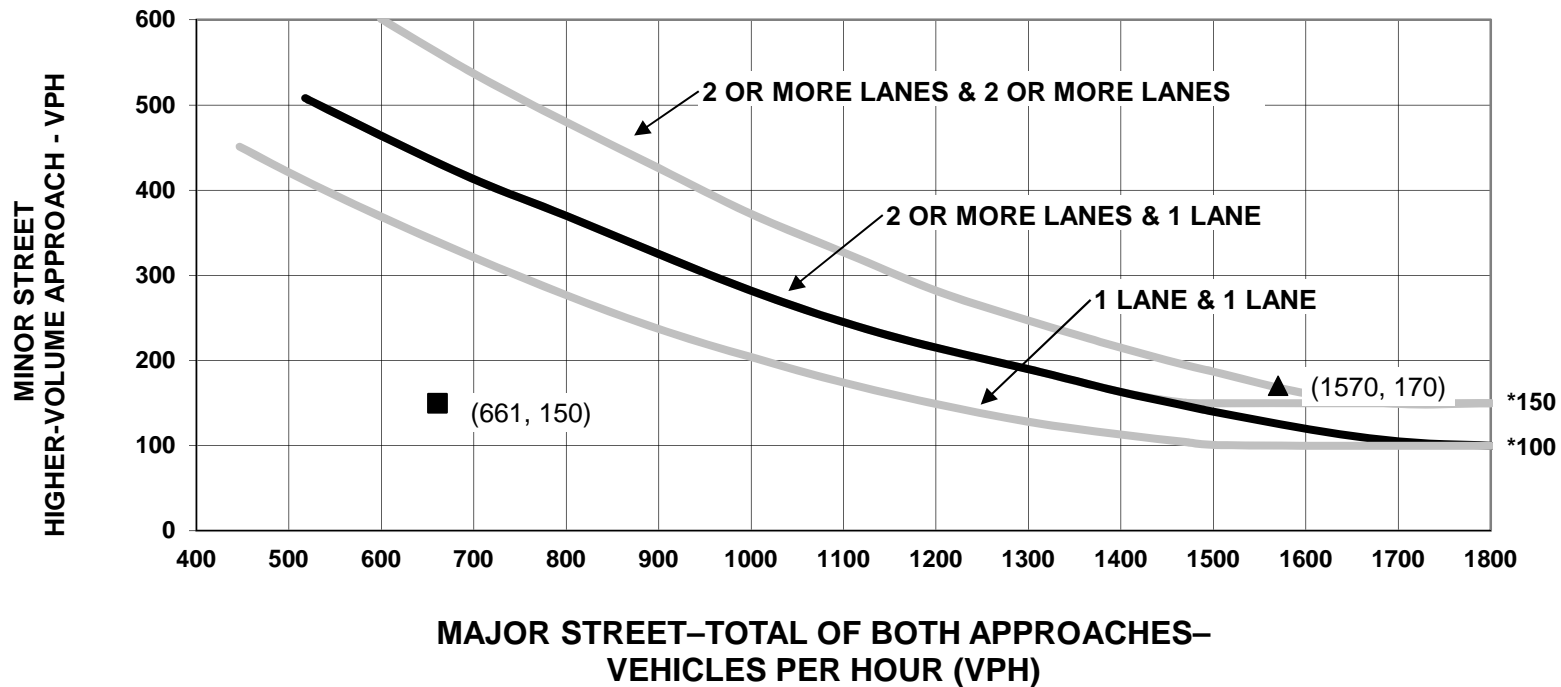
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 3 - Signal Warrant Analysis

Intersection 560: O St./Marine Wy.

2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

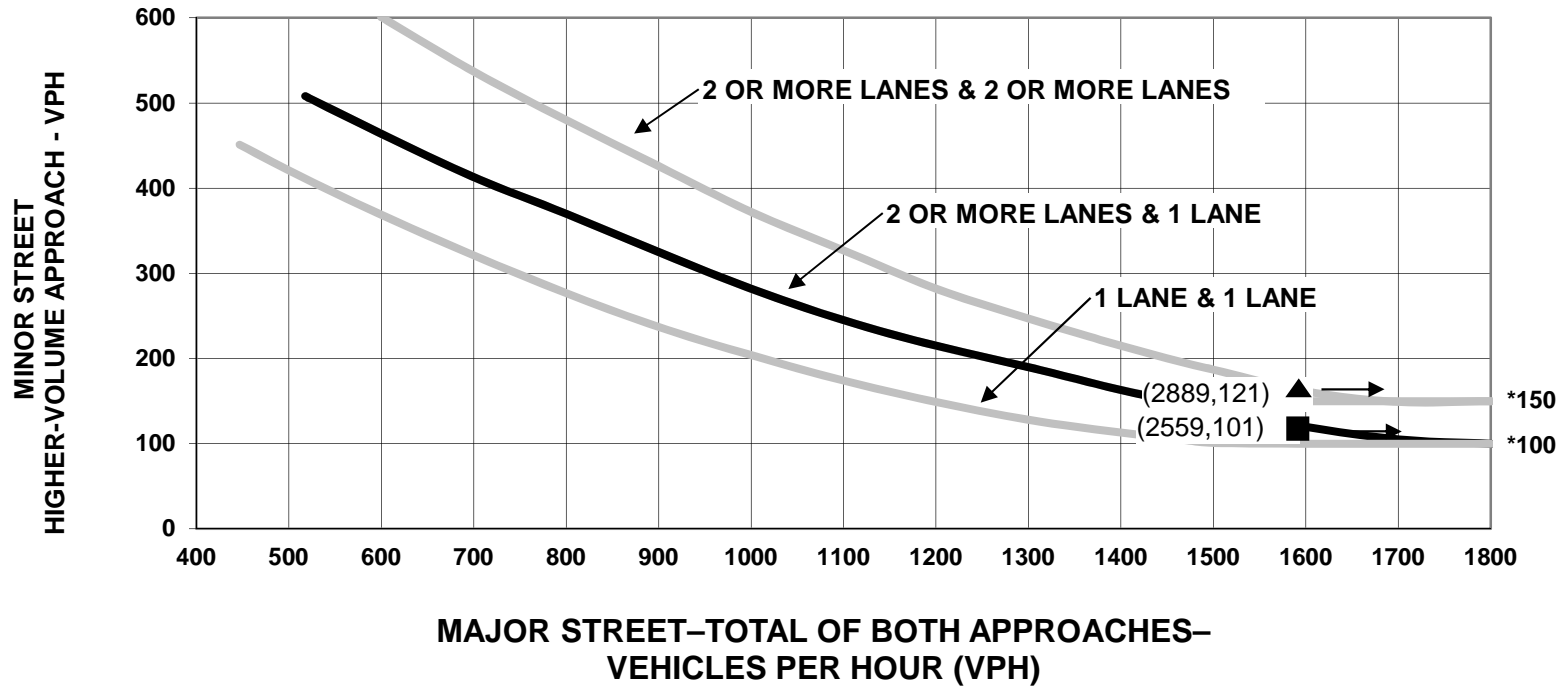
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 4 - Signal Warrant Analysis

Intersection 561: LY Street/Irvine Bl.

2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

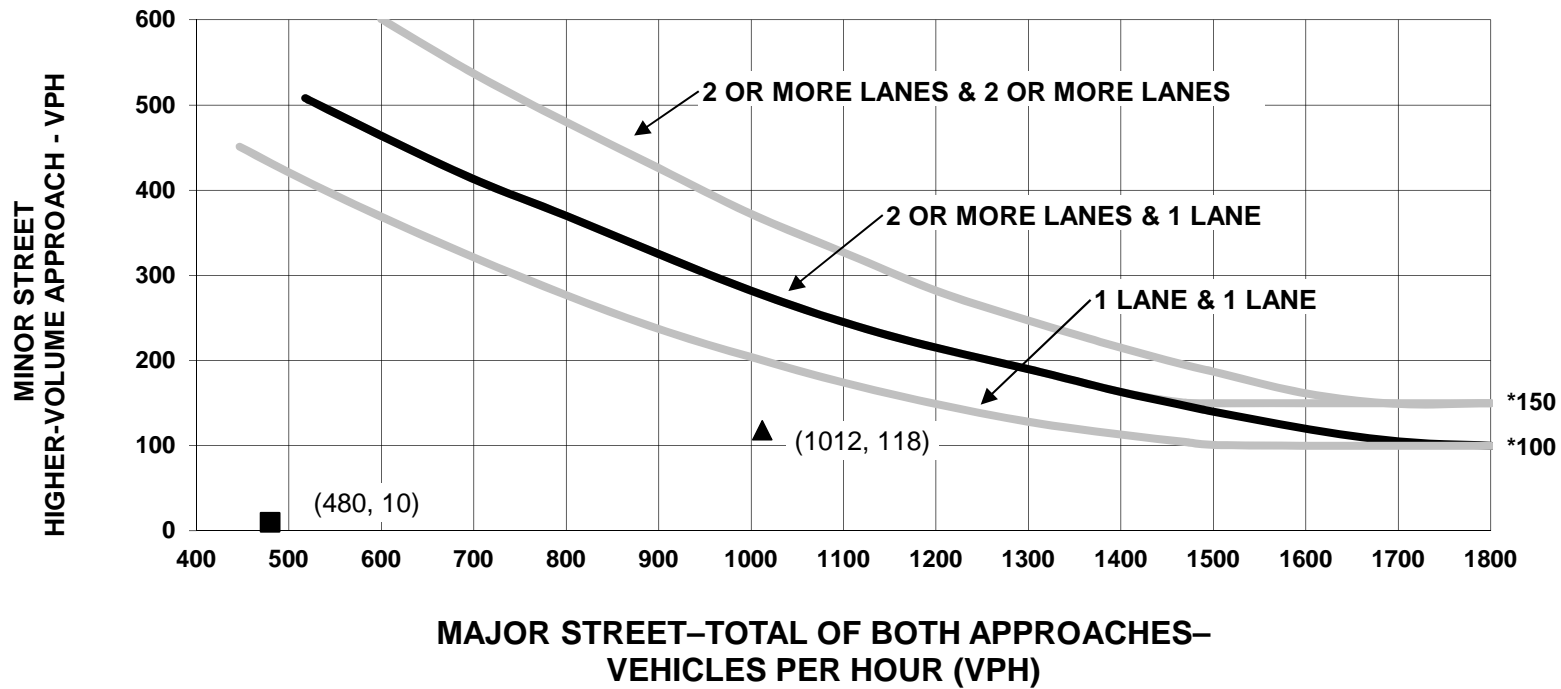
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 5 - Signal Warrant Analysis

Intersection 562: Great Park Bl. W./Marine Wy.

2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

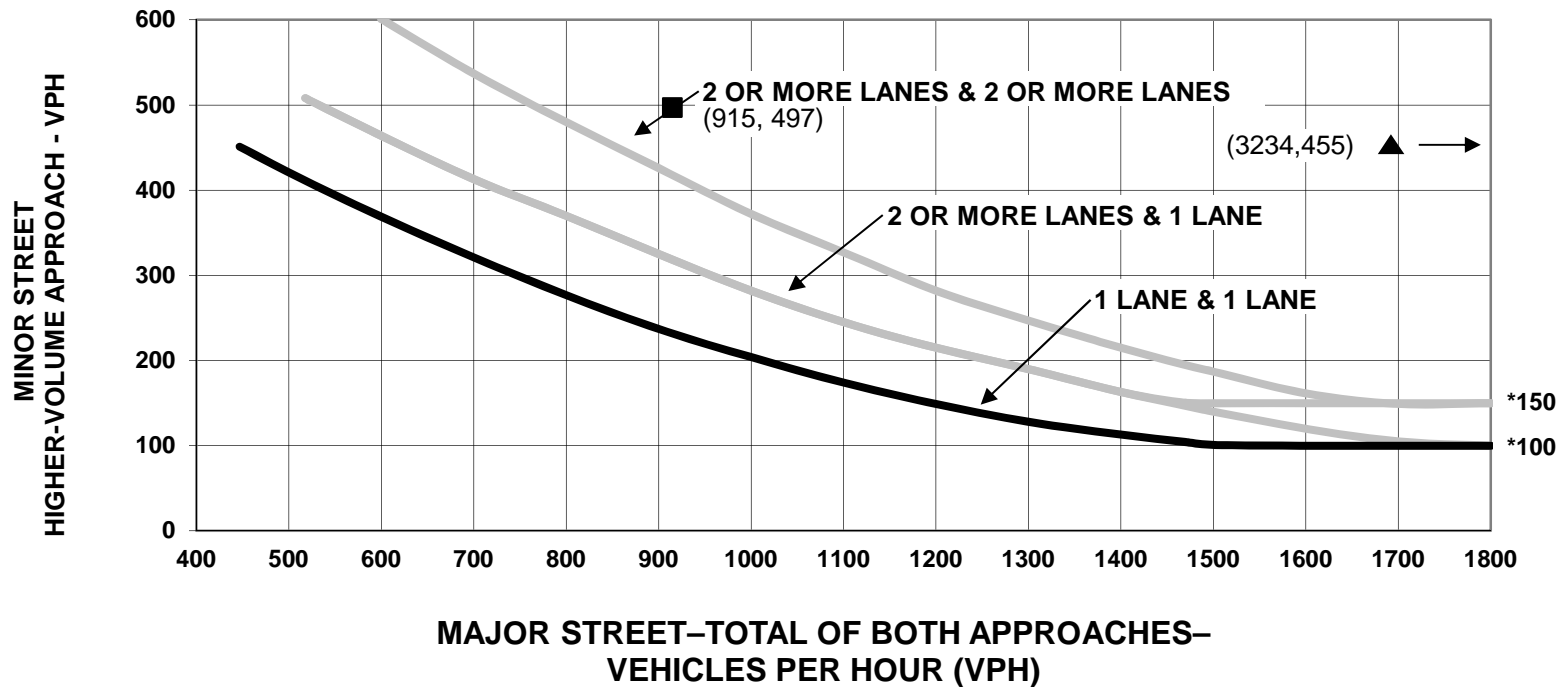
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 6 - Signal Warrant Analysis

Intersection 572: Modjeska-A St./Irvine Bl.

2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

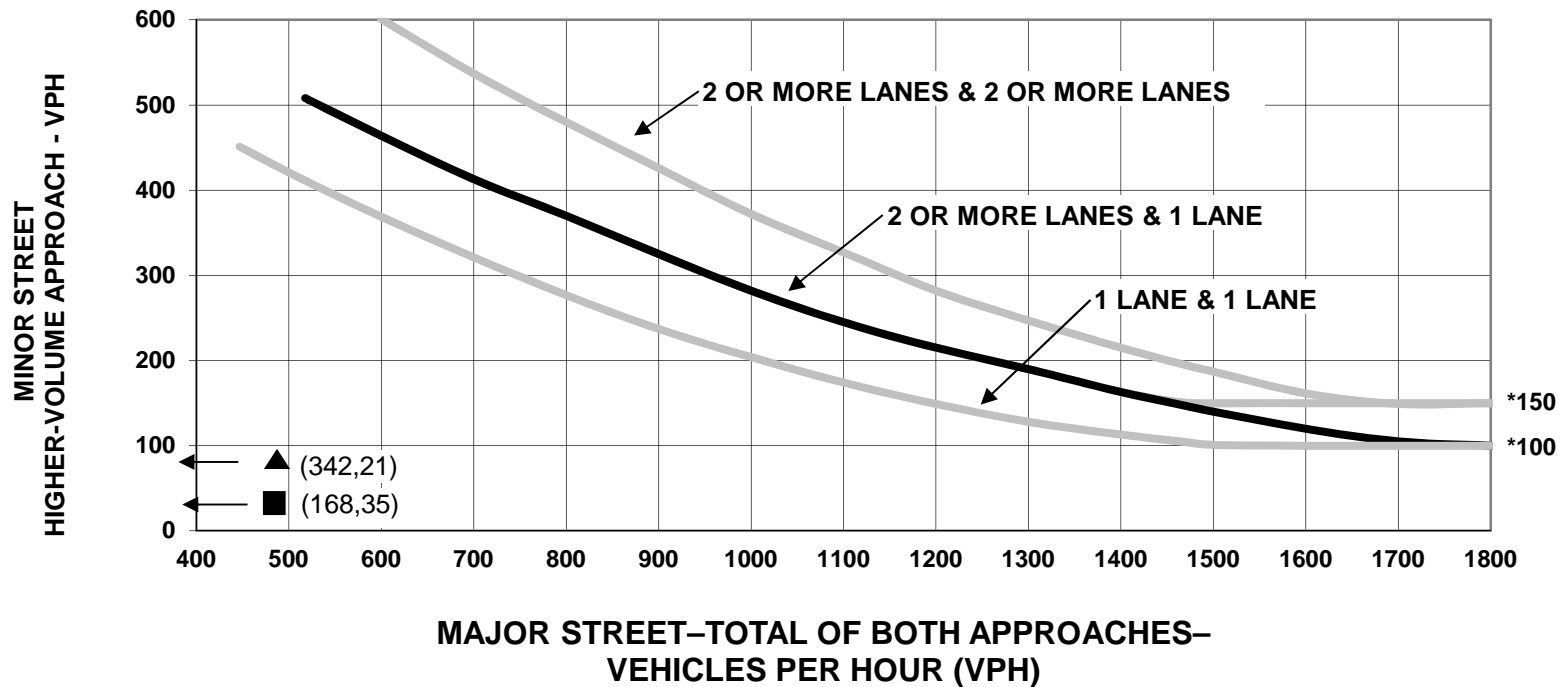
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 7 - Signal Warrant Analysis

Intersection 575: O St./LV St.

2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

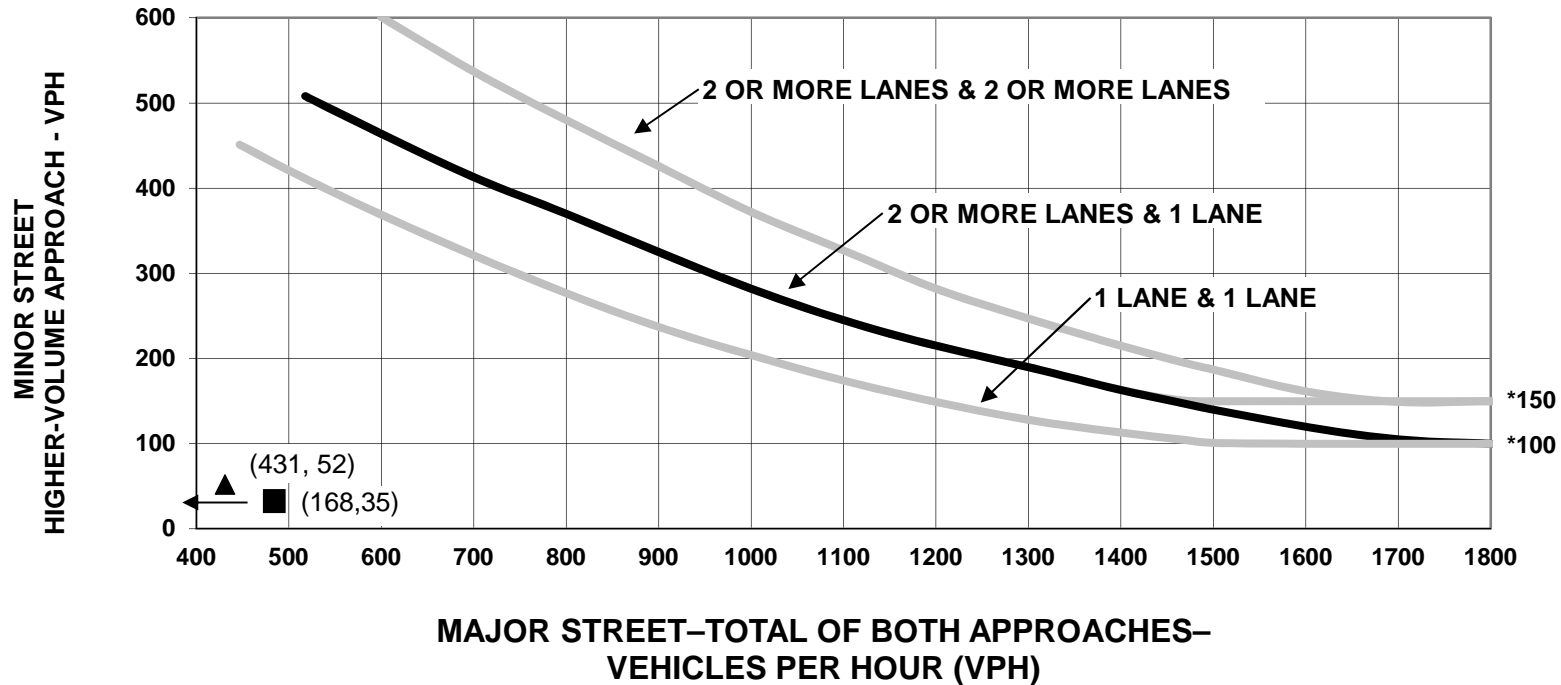
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 8 - Signal Warrant Analysis

Intersection 576: O St./C St.

2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

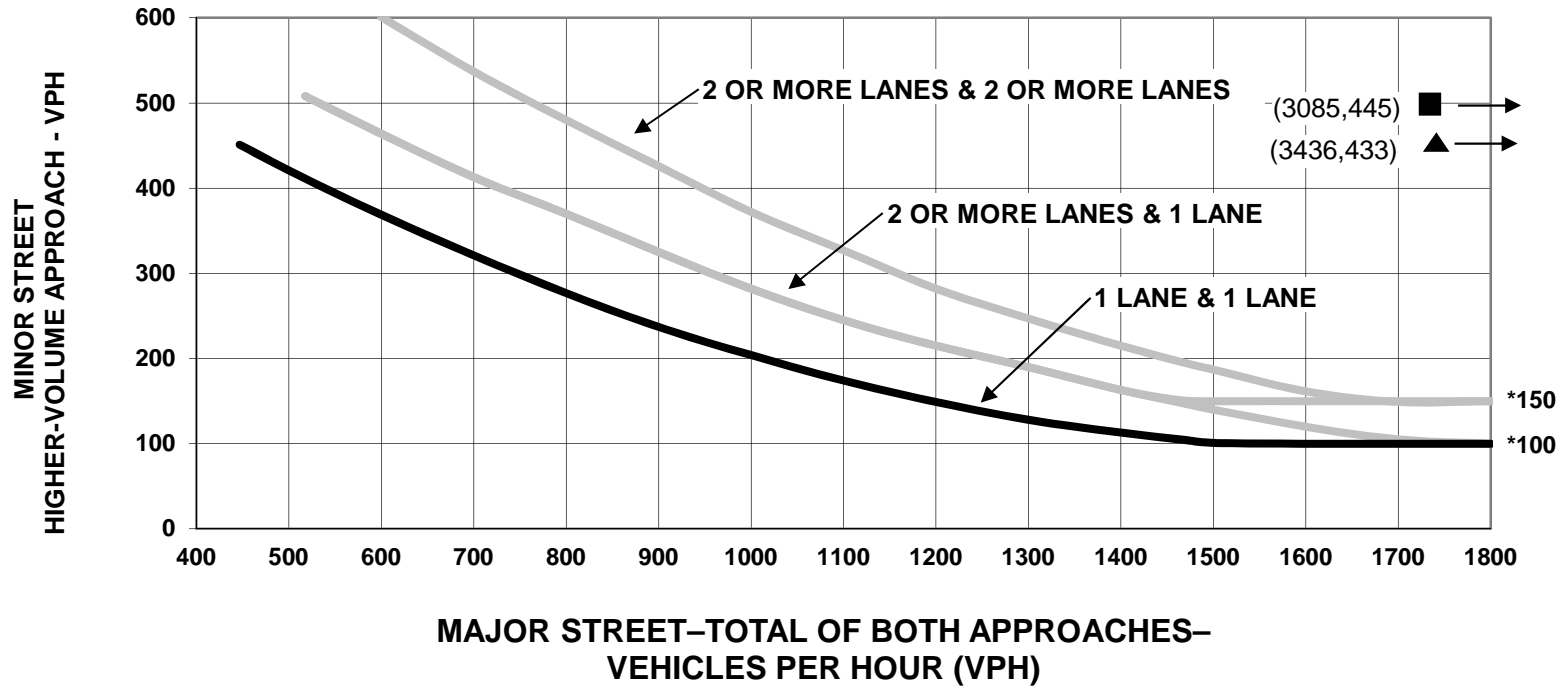
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 9 - Signal Warrant Analysis

Intersection 577: Pusan Way-Z St./Irvine Bl.

2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

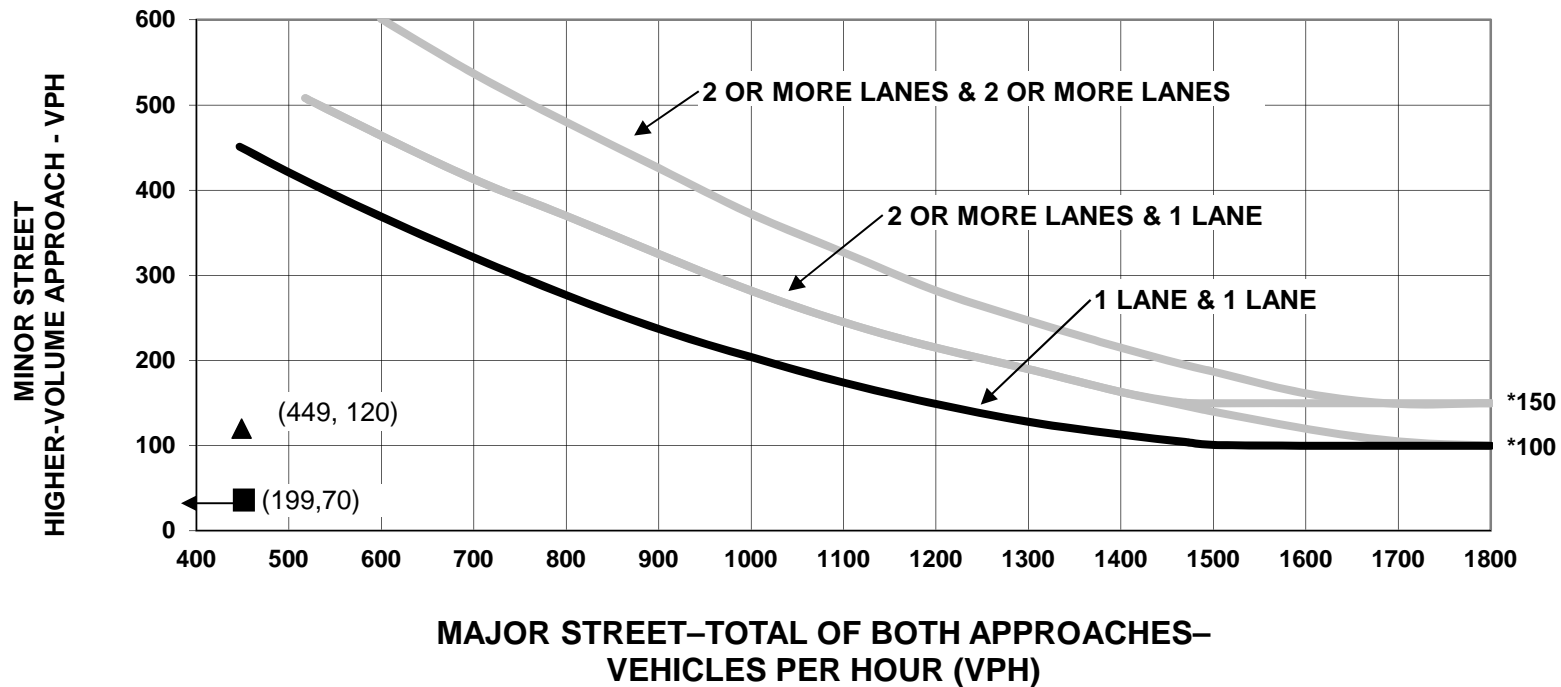
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 10 - Signal Warrant Analysis

Intersection 651: C St./Trabuco Rd.

2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

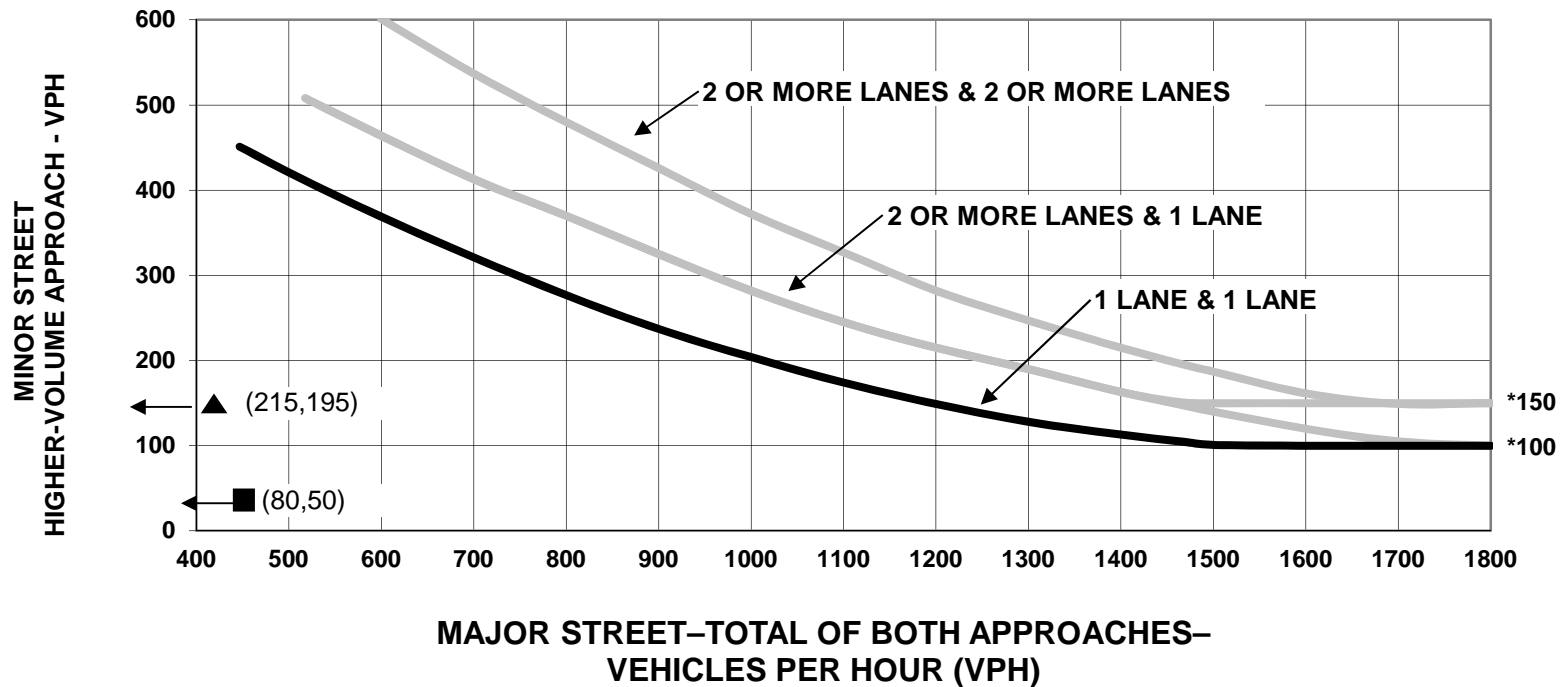
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 11 - Signal Warrant Analysis

Intersection 652: LY Street/Trabuco Rd.

2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

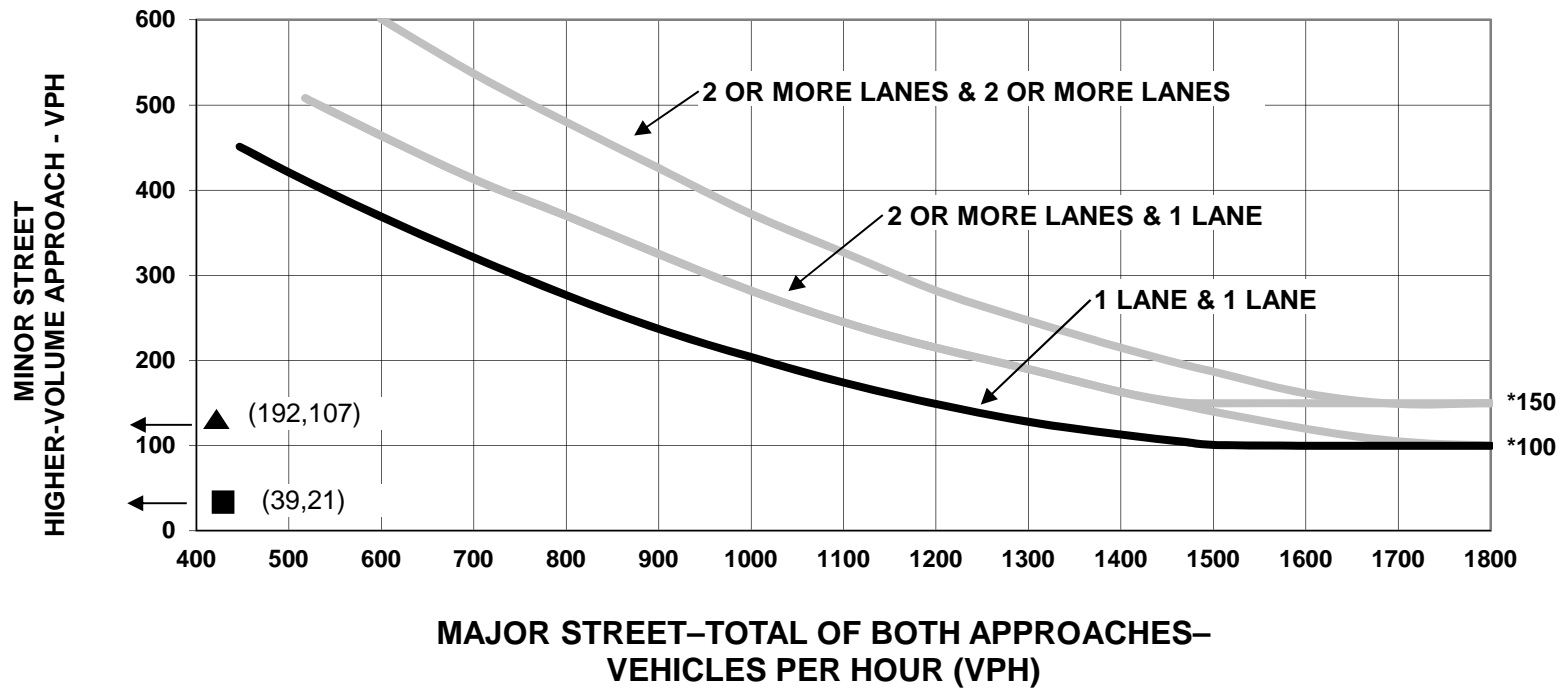
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 11 - Signal Warrant Analysis

Intersection 653: LY Street/Loop Road

2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

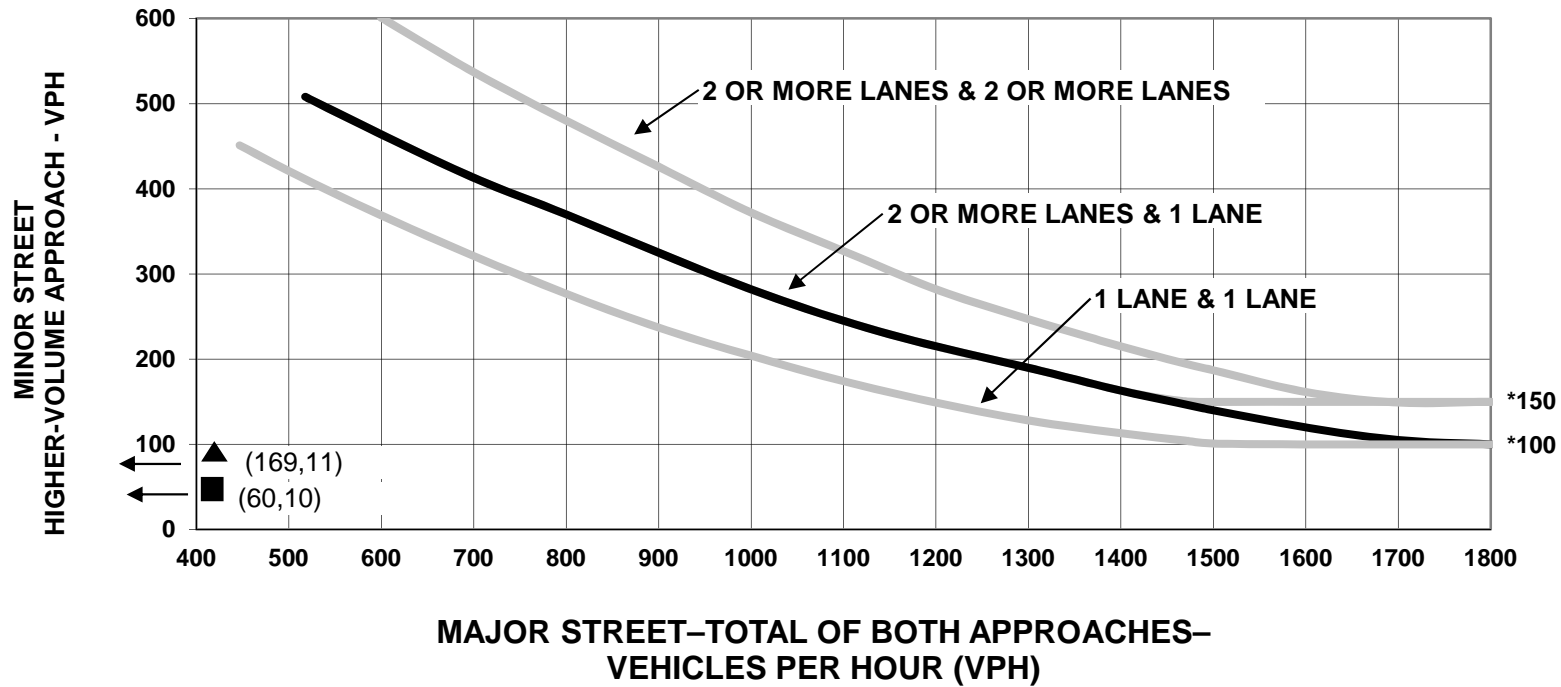
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 12 - Signal Warrant Analysis

Intersection 654: C St./LV St.

2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

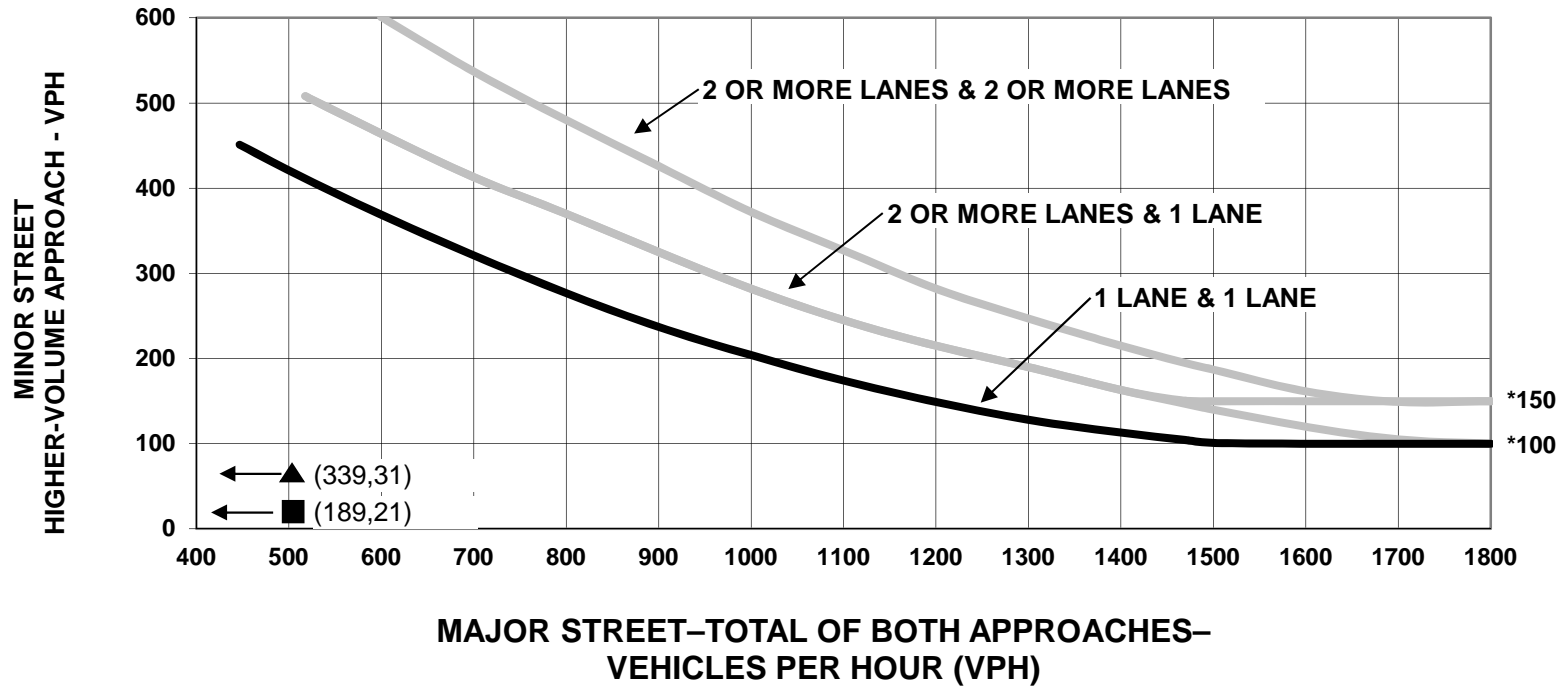
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 13 - Signal Warrant Analysis

Intersection 655: O St./8th St.

2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

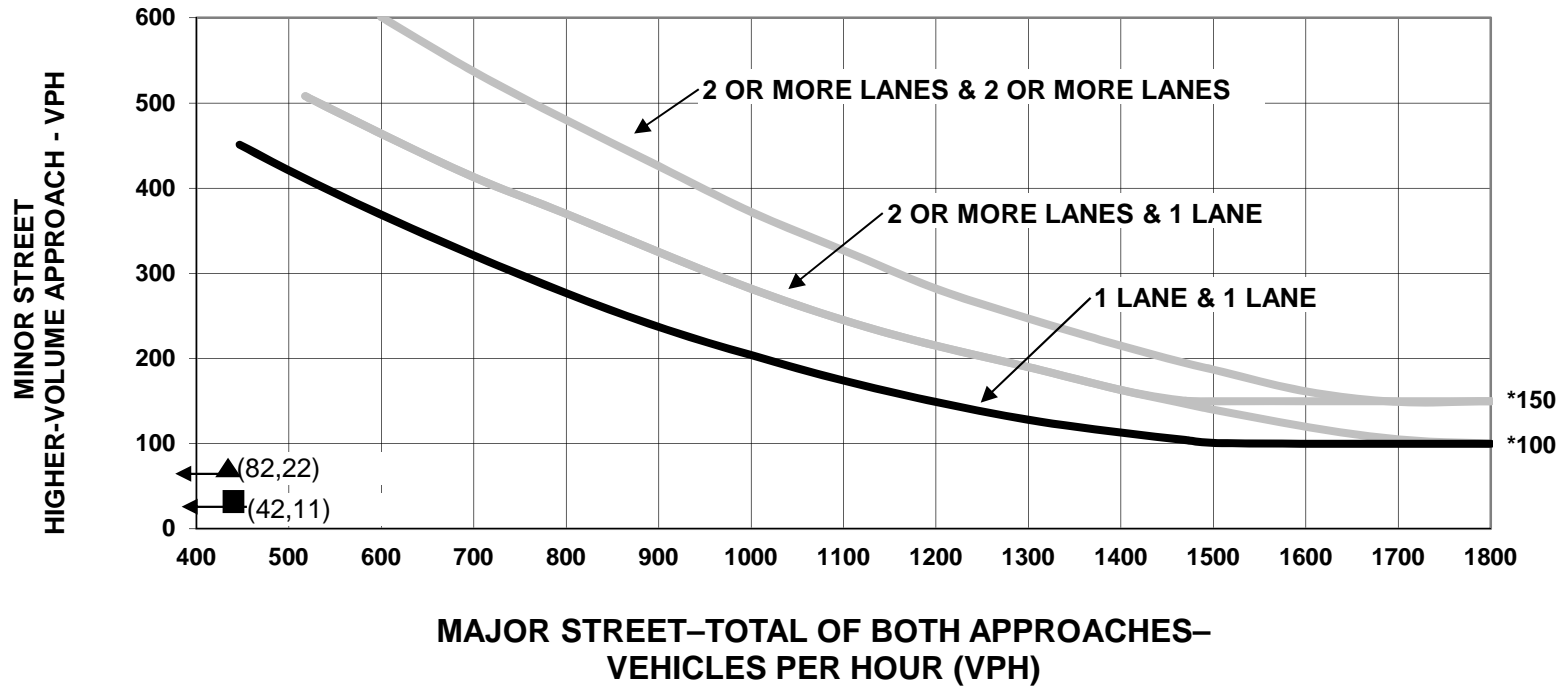
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 14 - Signal Warrant Analysis

Intersection 656: C St./8th St.

2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

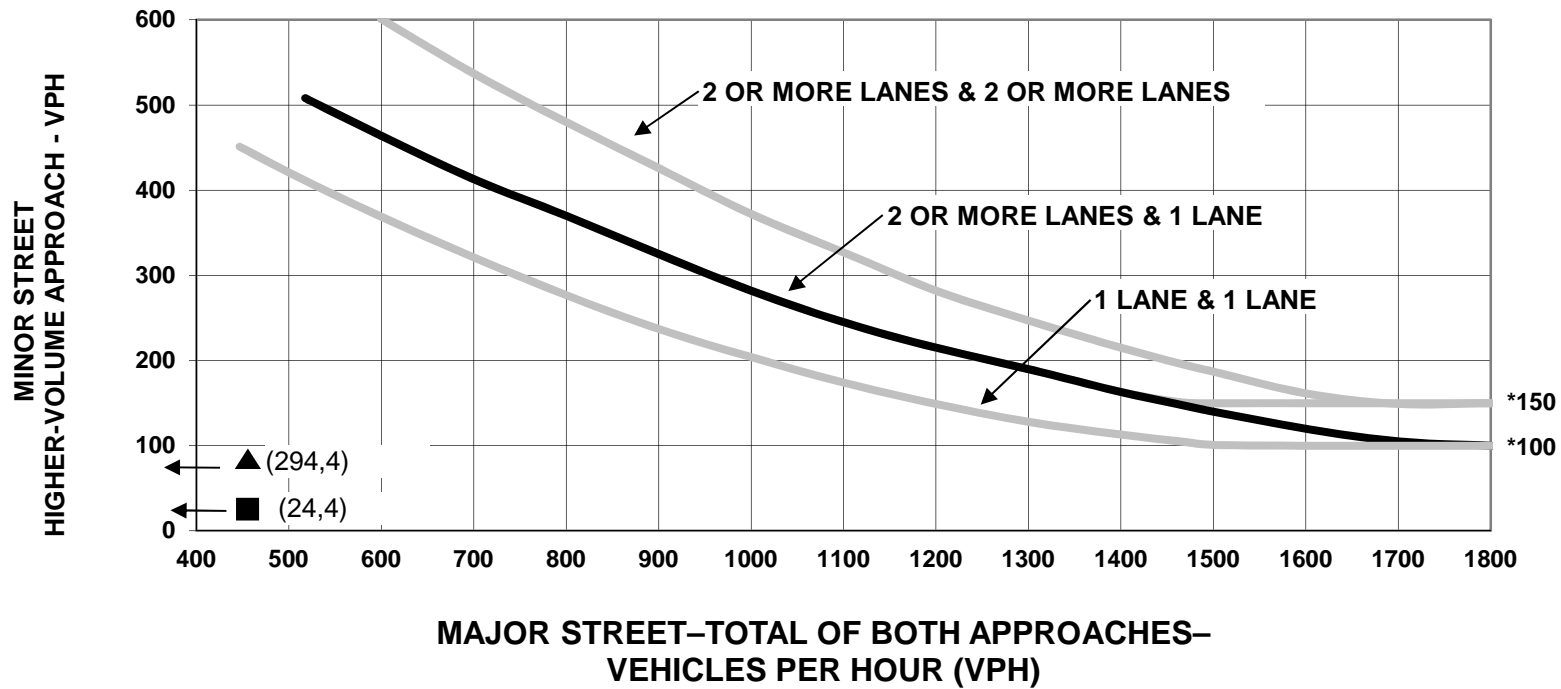
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 15 - Signal Warrant Analysis

Intersection 657: GP Blvd N/S Conn/GP Blvd E/W

2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

- A.M. Peak Hour
- ▲ P.M. Peak Hour

**Table 6: Signal Warrant Analysis - 2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.
(Alternative 6)**

Int. ID	Intersection Name	AM Peak Hour Volumes		PM Peak Hour Volumes		Signal Warrant
		Major Street (Dir)	Minor Street (Dir)	Major Street (Dir)	Minor Street (Dir)	
558	Ridge Valley-O St./Irvine Bl.	2806 (EB/WB)	1091 (SB)	3646 (EB/WB)	438 (NB)	Yes (AM/PM)
559	O St./Trabuco Rd.	1631 (EB/WB)	799 (SB)	1844 (EB/WB)	735 (SB)	Yes (AM/PM)
560	O St./Marine Wy.	648 (NB/SB)	112 (SB)	1460 (EB/WB)	130 (SB)	Yes (PM)
561	LY Street/Irvine Bl.	2569 (NB/SB)	101 (NB)	2879 (EB/WB)	121 (NB)	Yes (AM/PM)
562	Great Park Bl. W./Marine Wy.	439 (EB/WB)	51 (SB)	904 (EB/WB)	96 (SB)	No
572	Modjeska-A St./Irvine Bl.	914 (EB/WB)	506 (SB)	3215 (EB/WB)	453 (SB)	Yes (AM/PM)
575	O St./LV St.	122 (NB/SB)	21 (WB)	232 (NB/SB)	41 (WB)	No
576	O St./C St.	162 (NB/SB)	11 (WB)	351 (NB/SB)	42 (WB)	No
577	Pusan Way-Z St./Irvine Bl.	3084 (EB/WB)	444 (NB)	3463 (EB/WB)	454 (NB)	Yes (AM/PM)
651	C St./Trabuco Rd.	316 (EB/WB)	153 (SB)	470 (EB/WB)	320 (NB)	No
652	LY Street/Trabuco Rd.	170 (NB/SB)	50 (EB)	401 (NB/SB)	209 (EB)	No
653	LY Street/Loop Road	97 (NB/SB)	33 (WB)	315 (NB/SB)	164 (WB)	No
654	C St./LV St.	72 (NB/SB)	11 (EB)	168 (NB/SB)	19 (EB)	No
655	O St./8th St.	139 (NB/SB)	31 (WB)	248 (NB/SB)	42 (WB)	No
656	C St./8th St.	53 (EB/WB)	12 (NB)	91 (EB/WB)	20 (NB)	No
657	GP Blvd N/S Conn/GP Blvd E/W	95 (NB/SB)	4 (WB)	314 (NB/SB)	4 (WB)	No

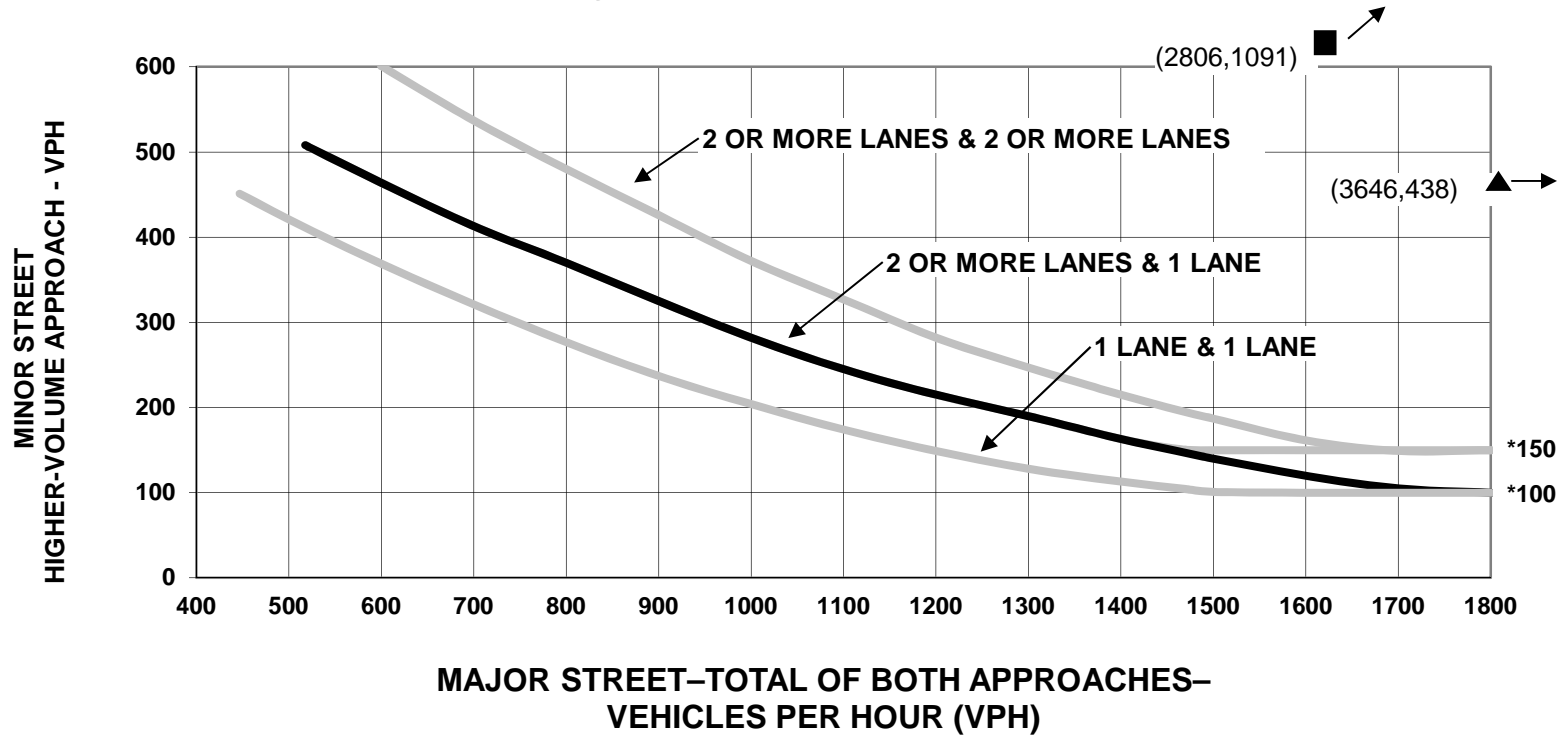
Notes: Intersections where signals are warranted are shown in **bold**.

Figure 1 - Signal Warrant Analysis

Intersection 558: Ridge Valley-O St./Irvine Bl.

2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

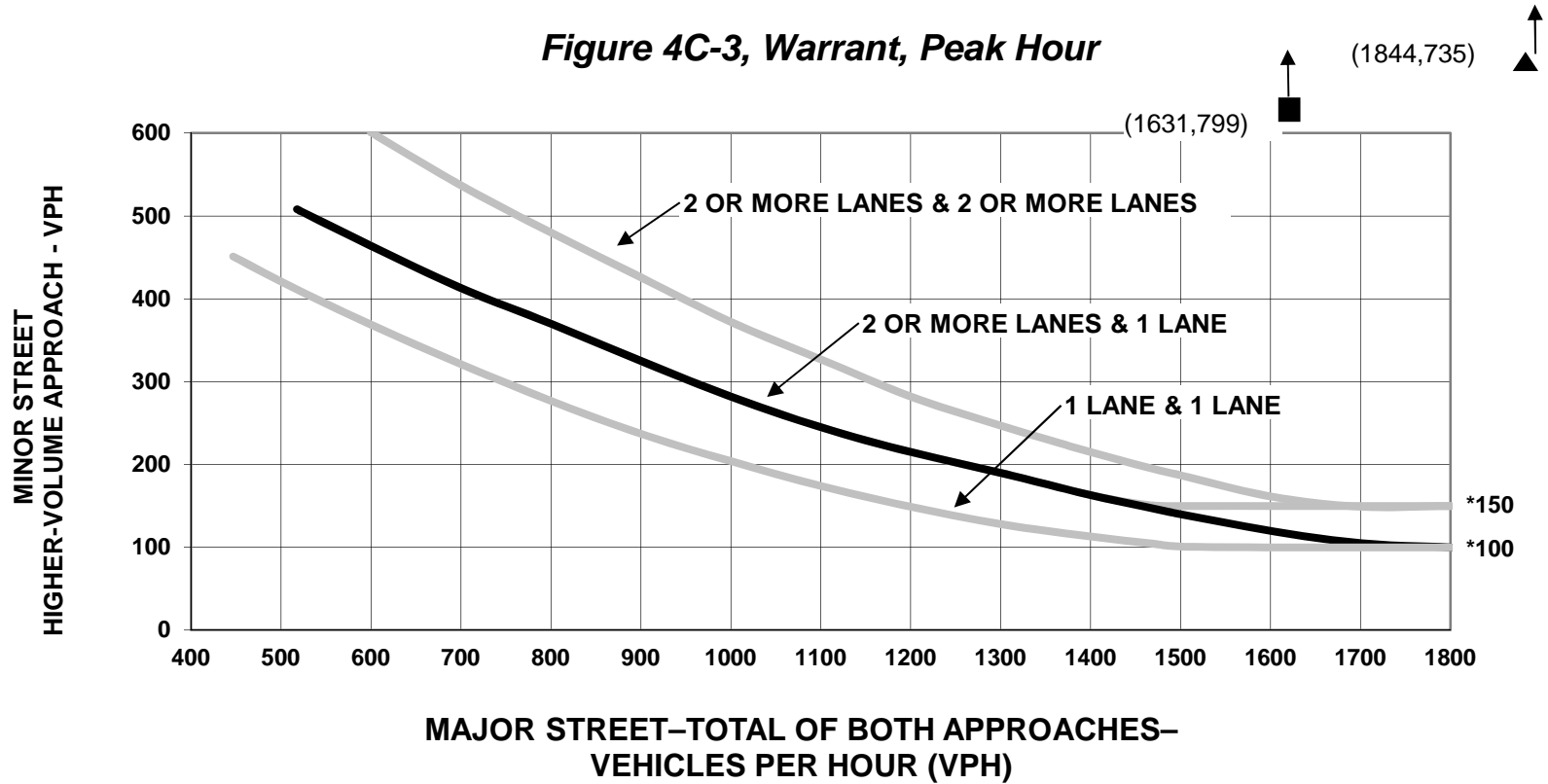
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 2 - Signal Warrant Analysis

Intersection 559: O St./Trabuco Rd.

2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

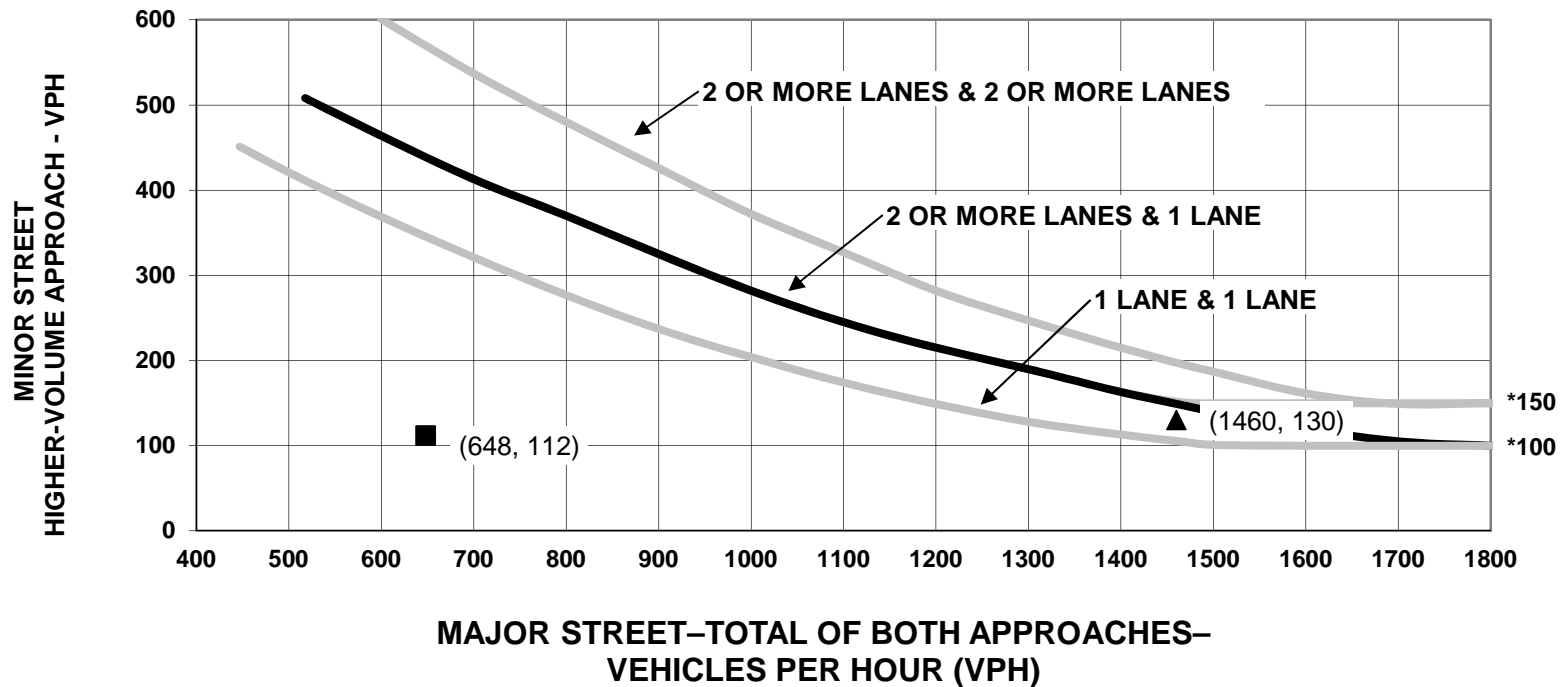
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 3 - Signal Warrant Analysis

Intersection 560: O St./Marine Wy.

2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

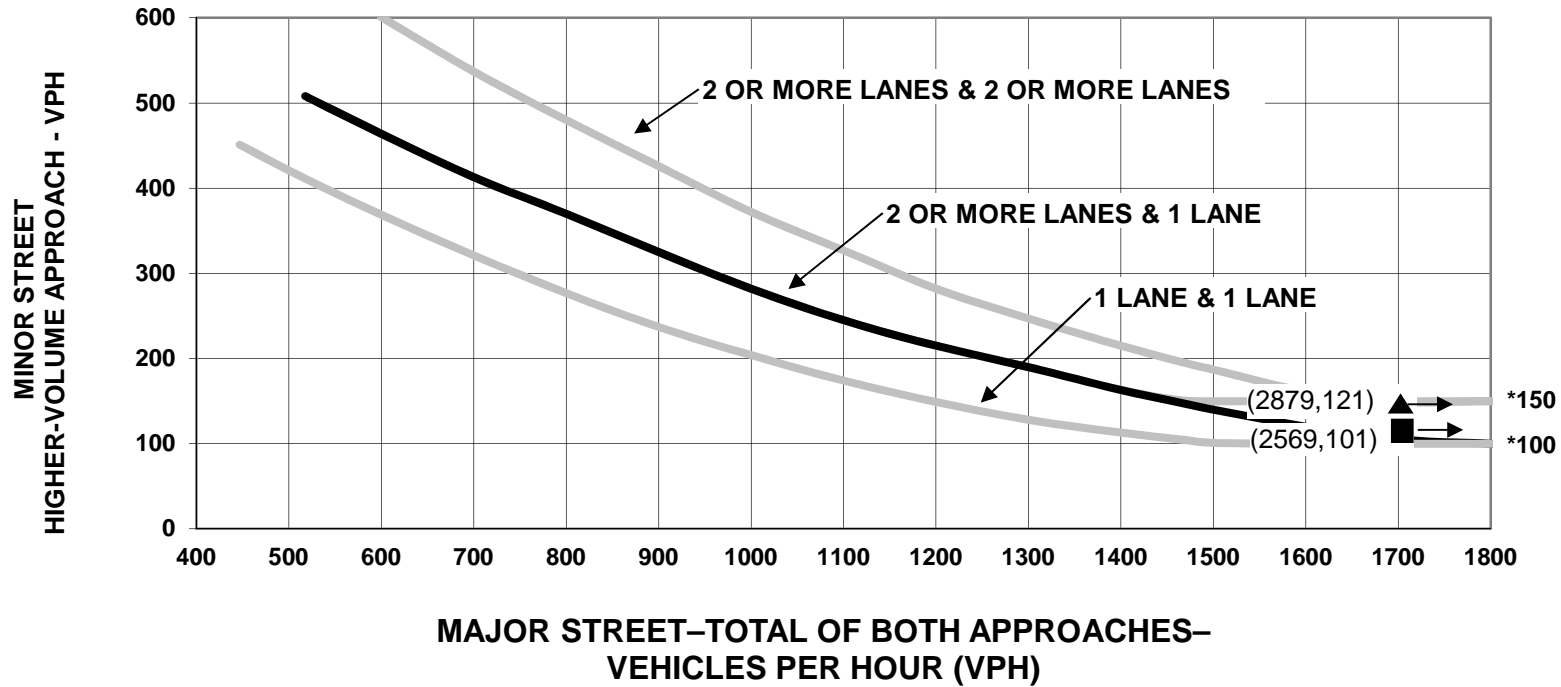
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 4 - Signal Warrant Analysis

Intersection 561: LY Street/Irvine Bl.

2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

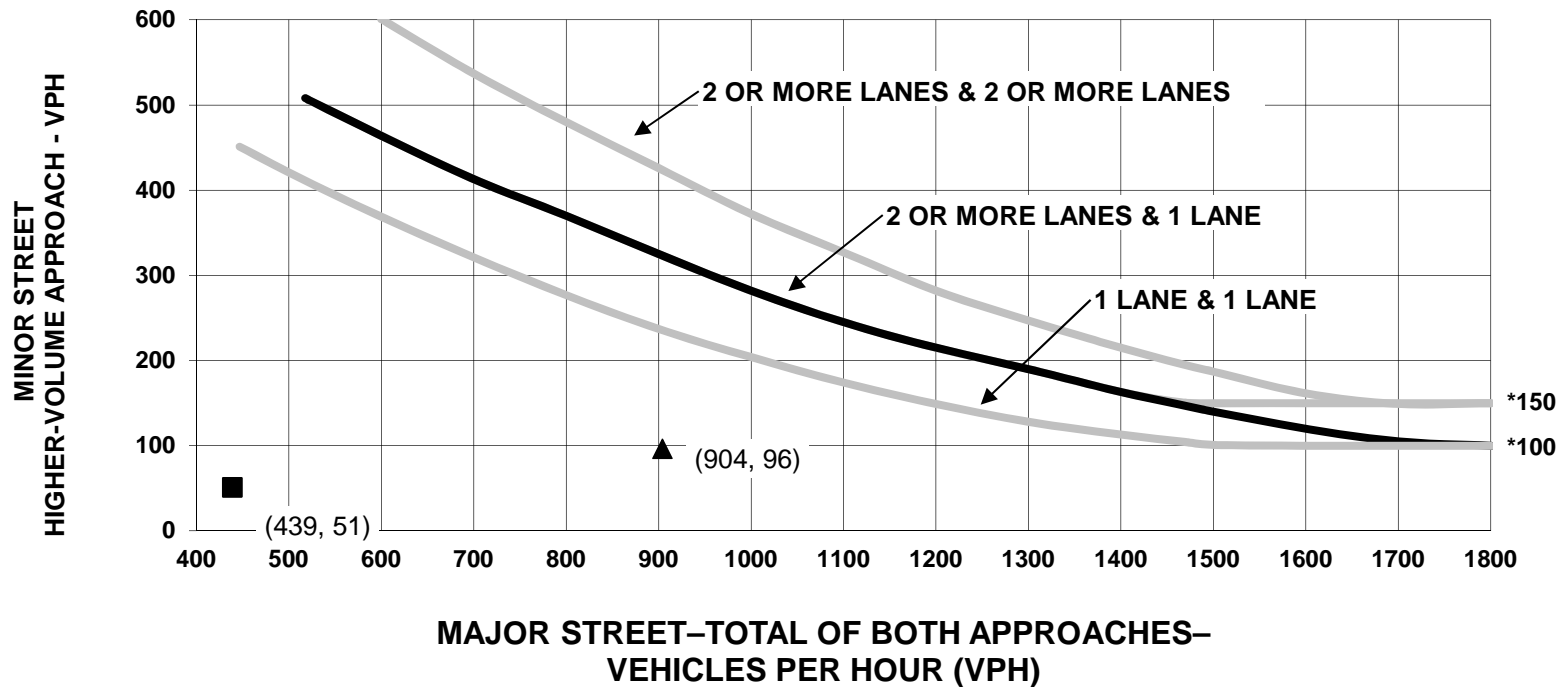
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 5 - Signal Warrant Analysis

Intersection 562: Great Park Bl. W./Marine Wy.

2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

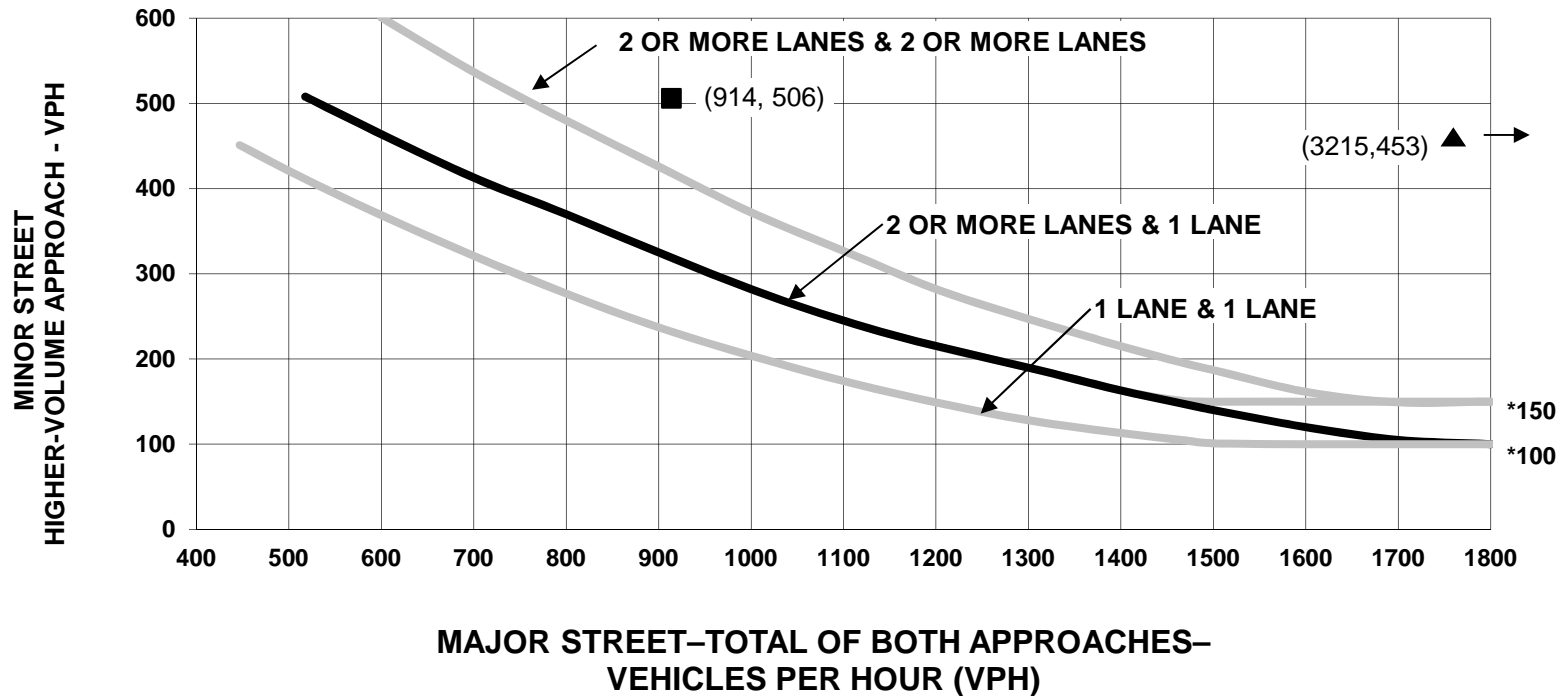
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 6 - Signal Warrant Analysis

Intersection 572: Modjeska-A St./Irvine Bl.

2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

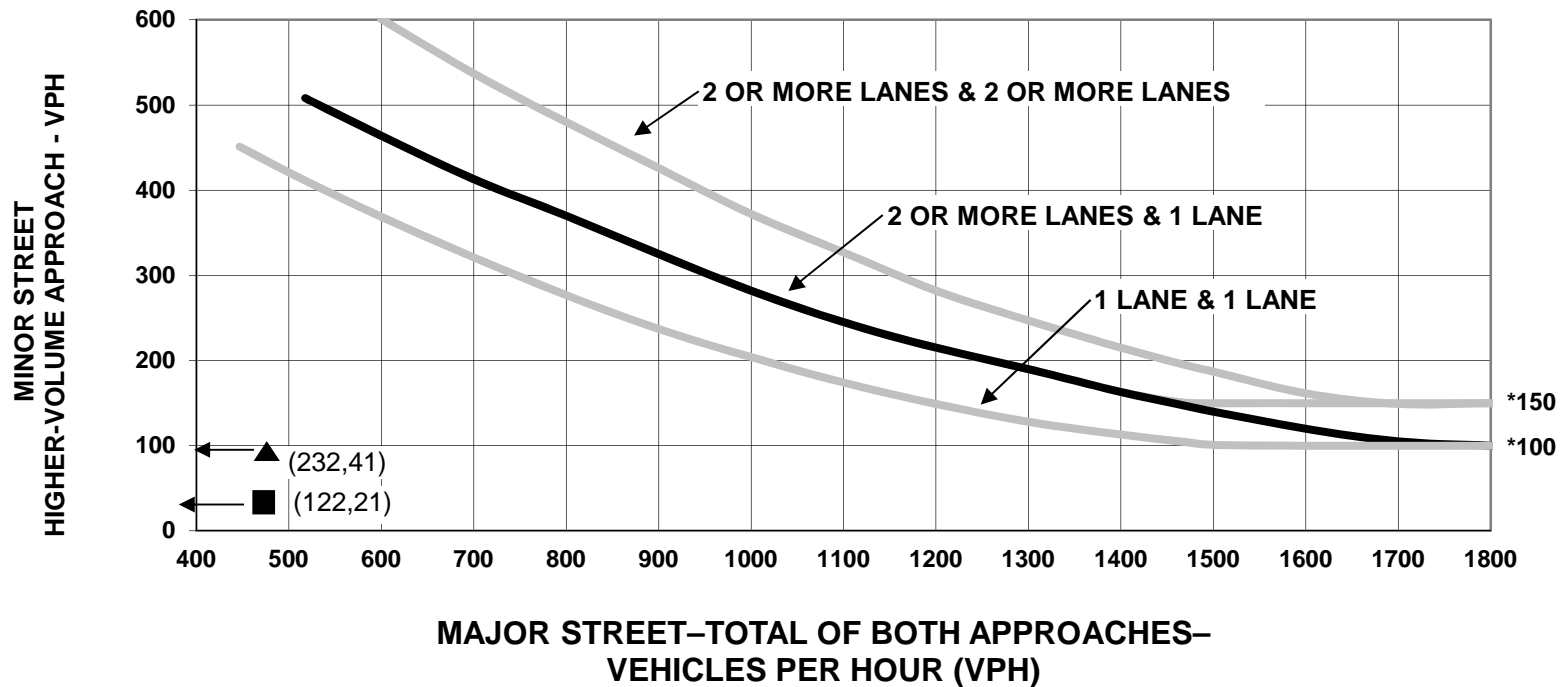
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 7 - Signal Warrant Analysis

Intersection 575: O St./LV St.

2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

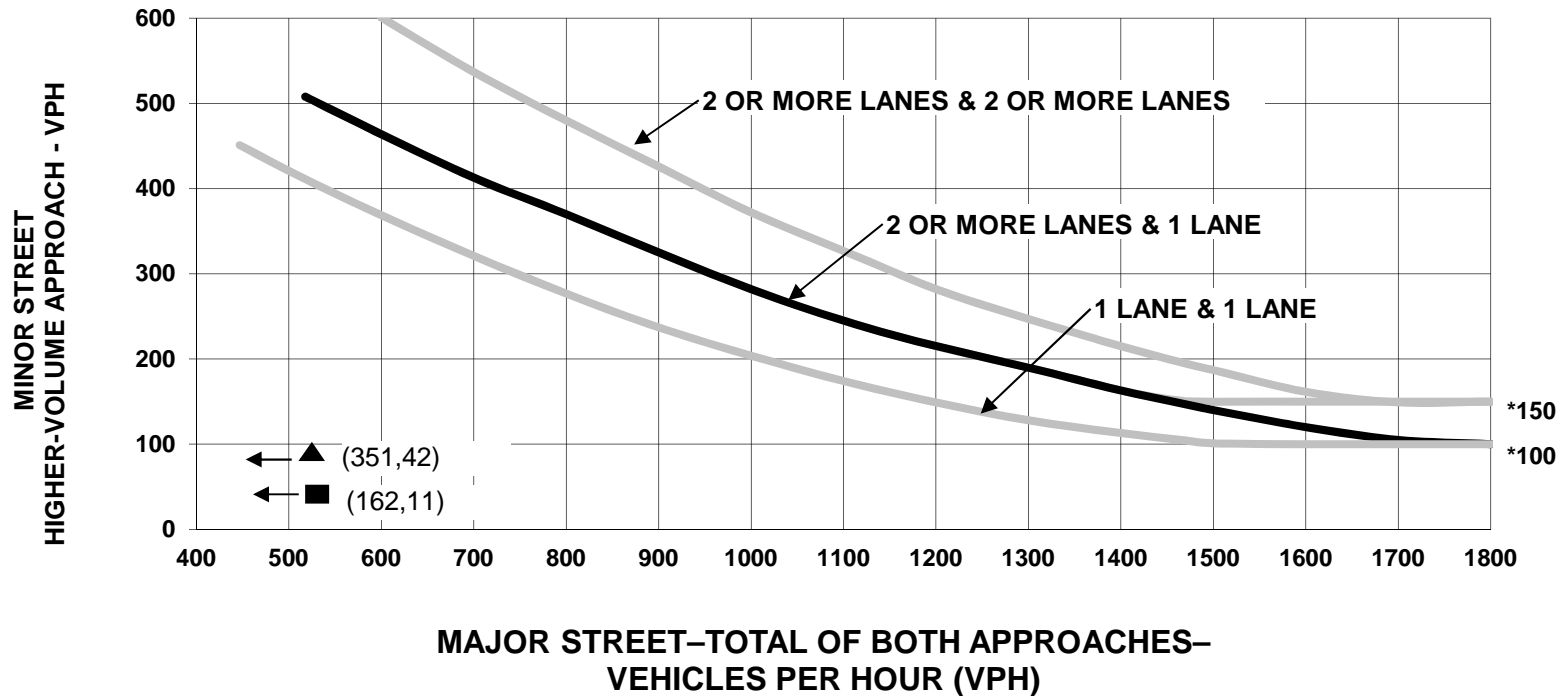
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 8 - Signal Warrant Analysis

Intersection 576: O St./C St.

2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

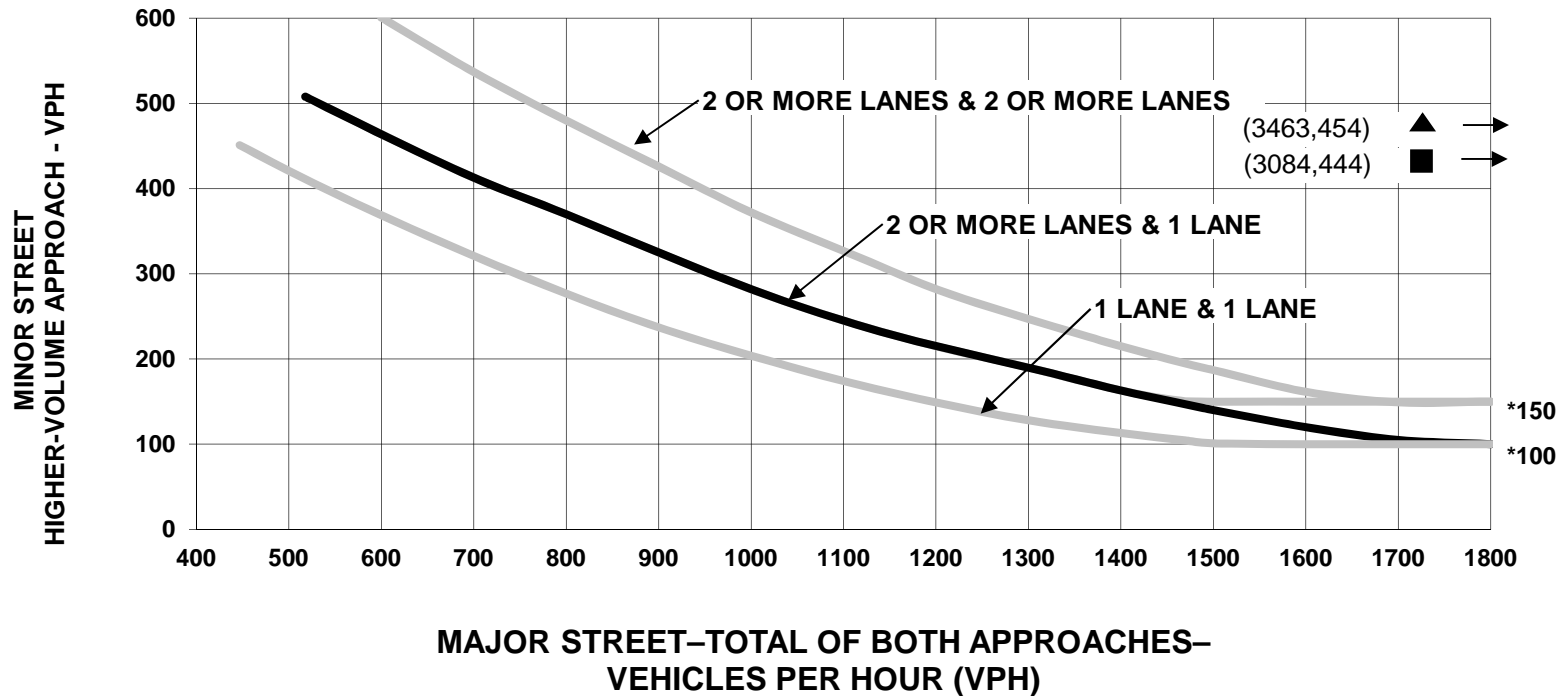
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 9 - Signal Warrant Analysis

Intersection 577: Pusan Way-Z St./Irvine Bl.

2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

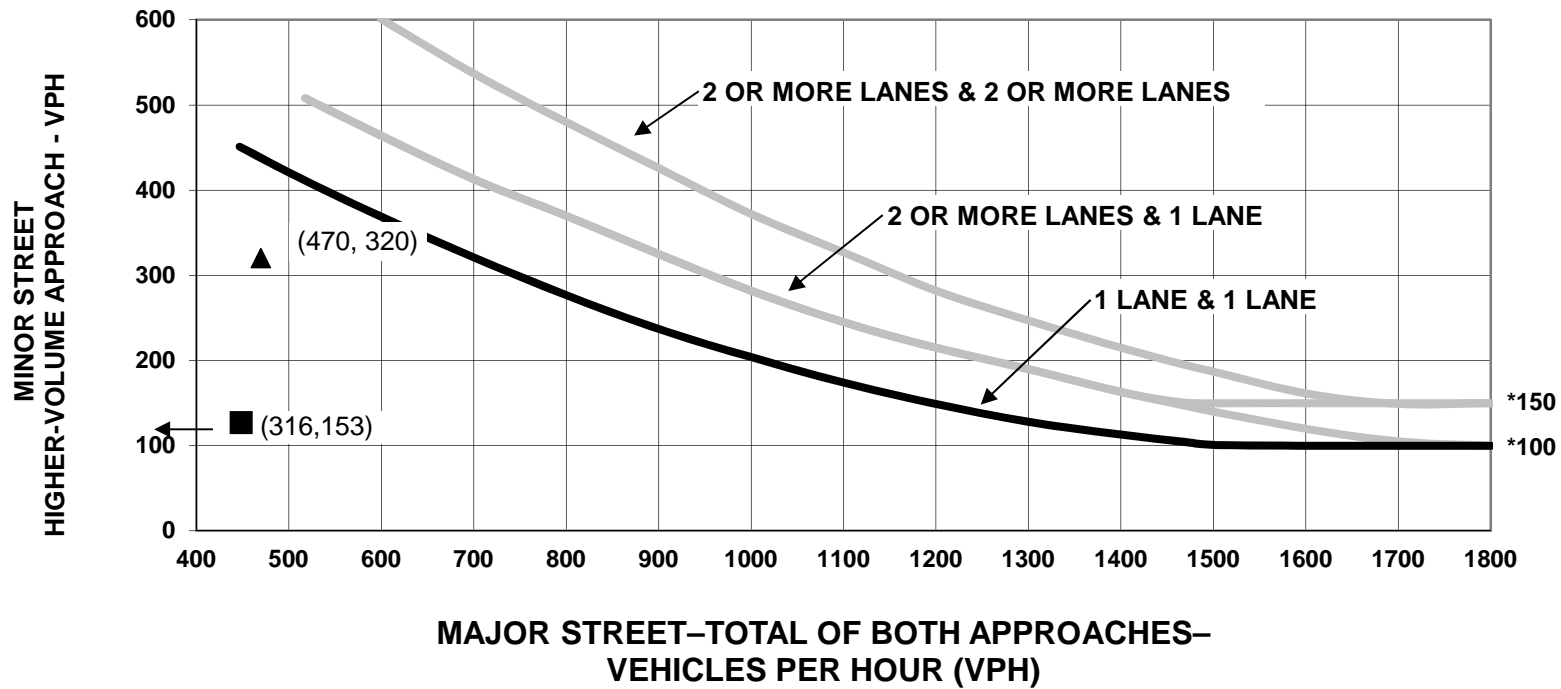
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 10 - Signal Warrant Analysis

Intersection 651: C St./Trabuco Rd.

2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

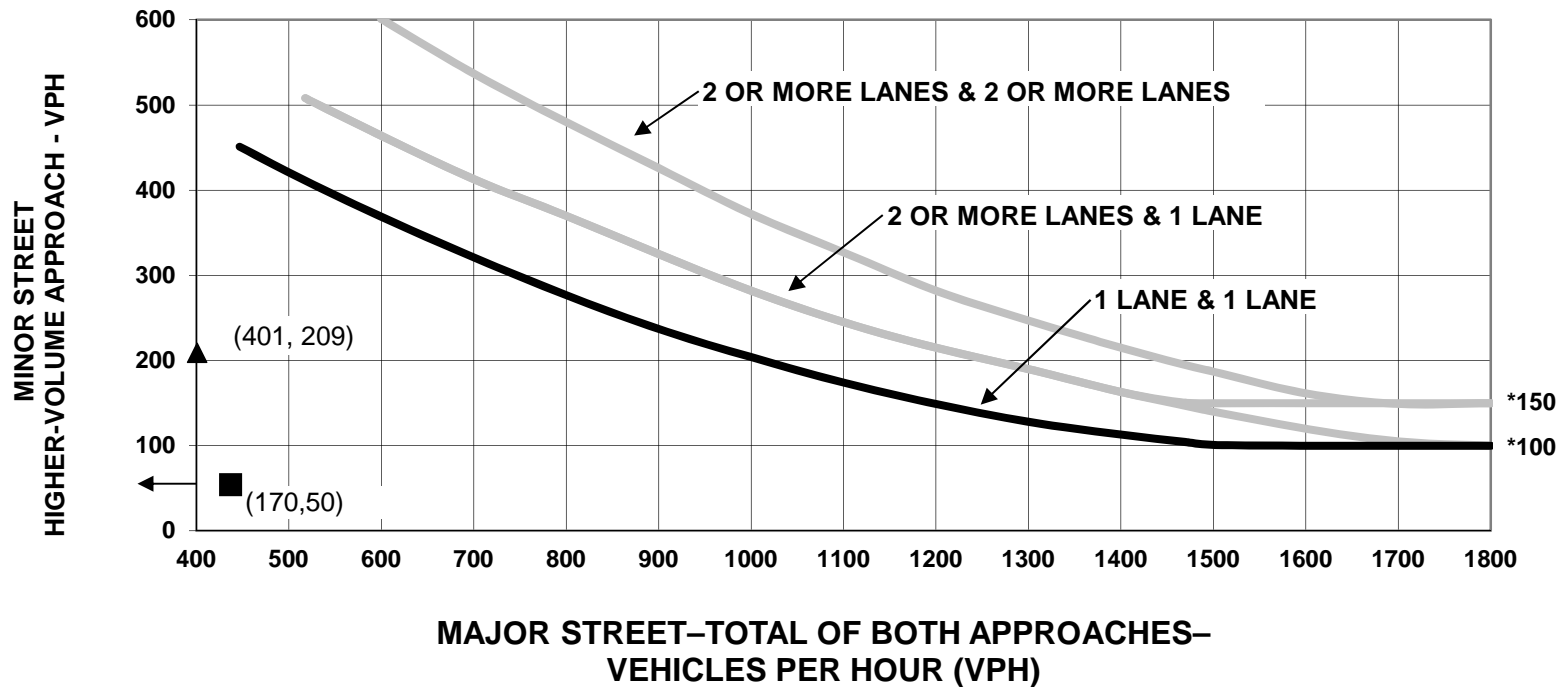
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 11 - Signal Warrant Analysis

Intersection 652: LY Street/Trabuco Rd.

2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

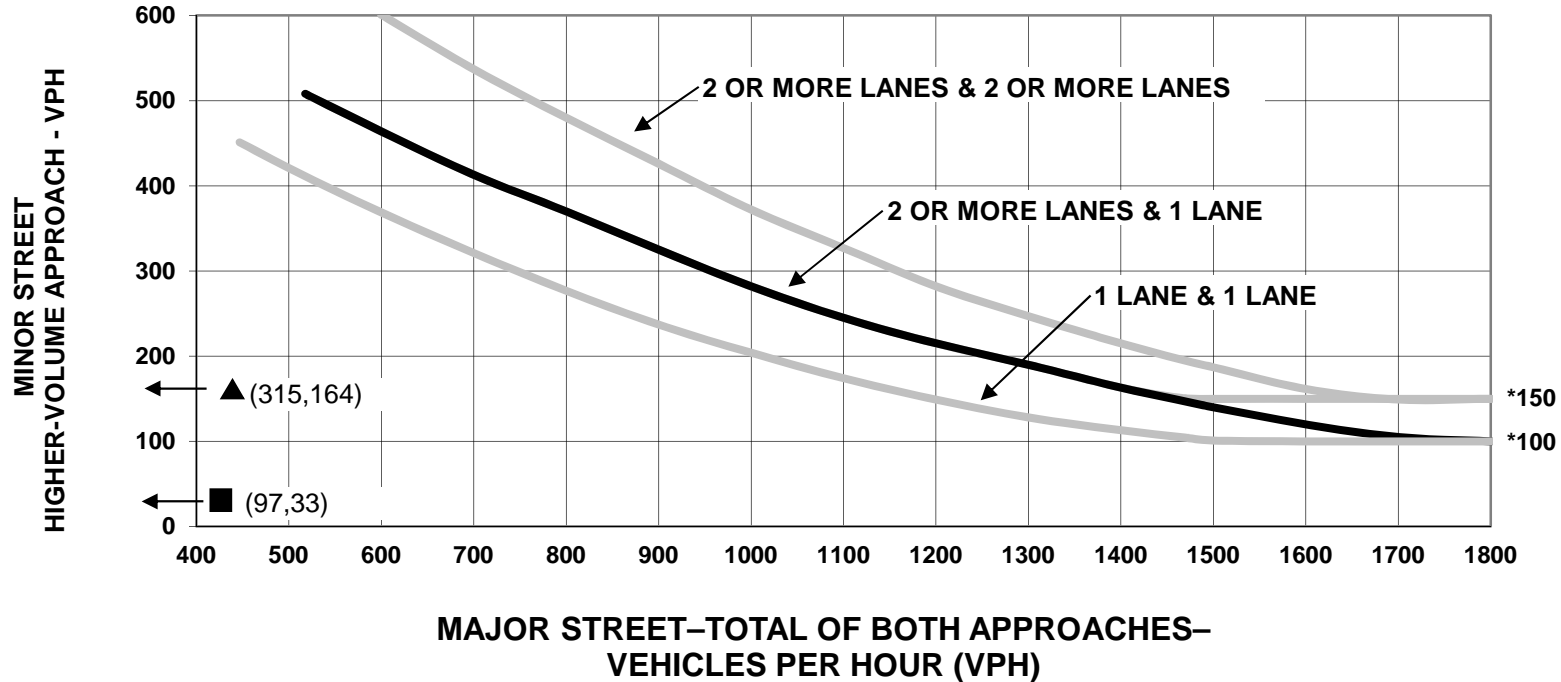
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 12 - Signal Warrant Analysis

Intersection 653: LY Street/Loop Road

2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

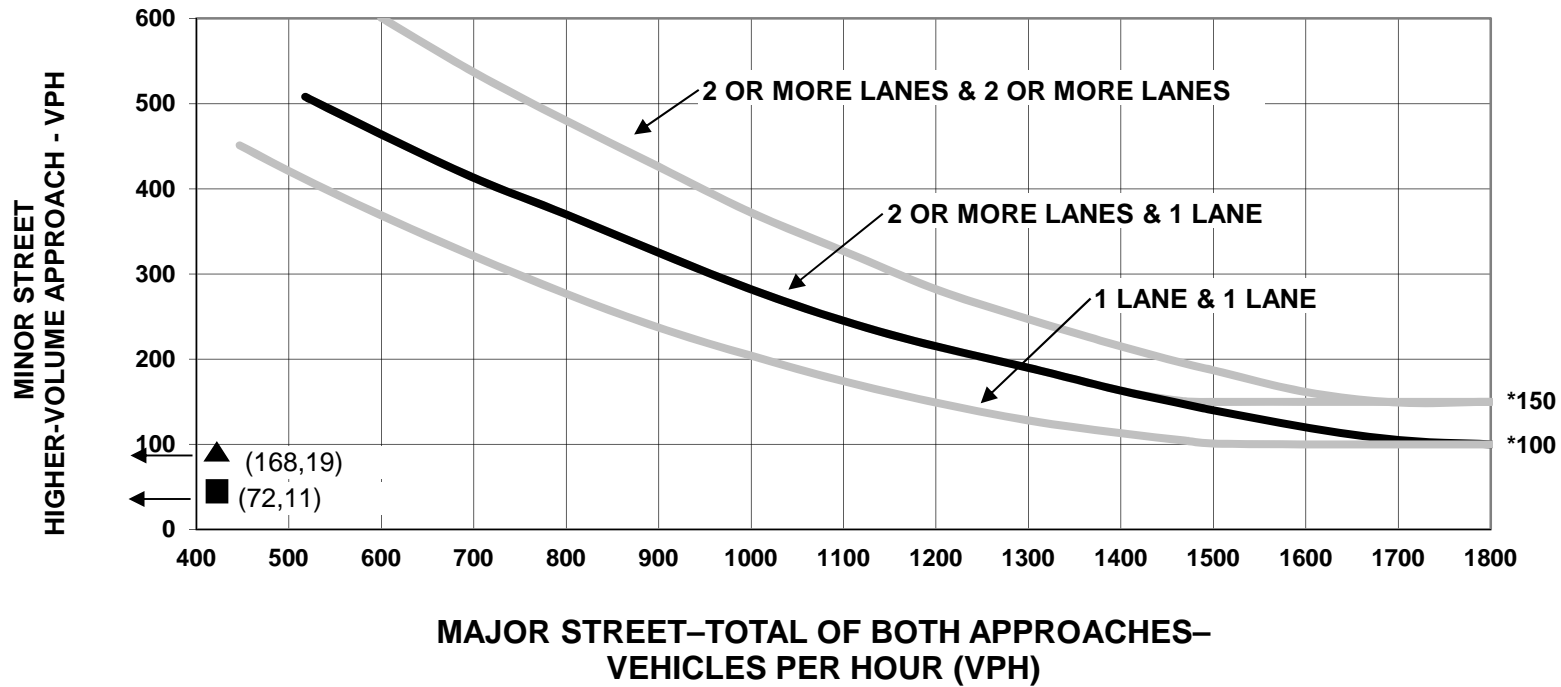
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 12 - Signal Warrant Analysis

Intersection 654: C St./LV St.

2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

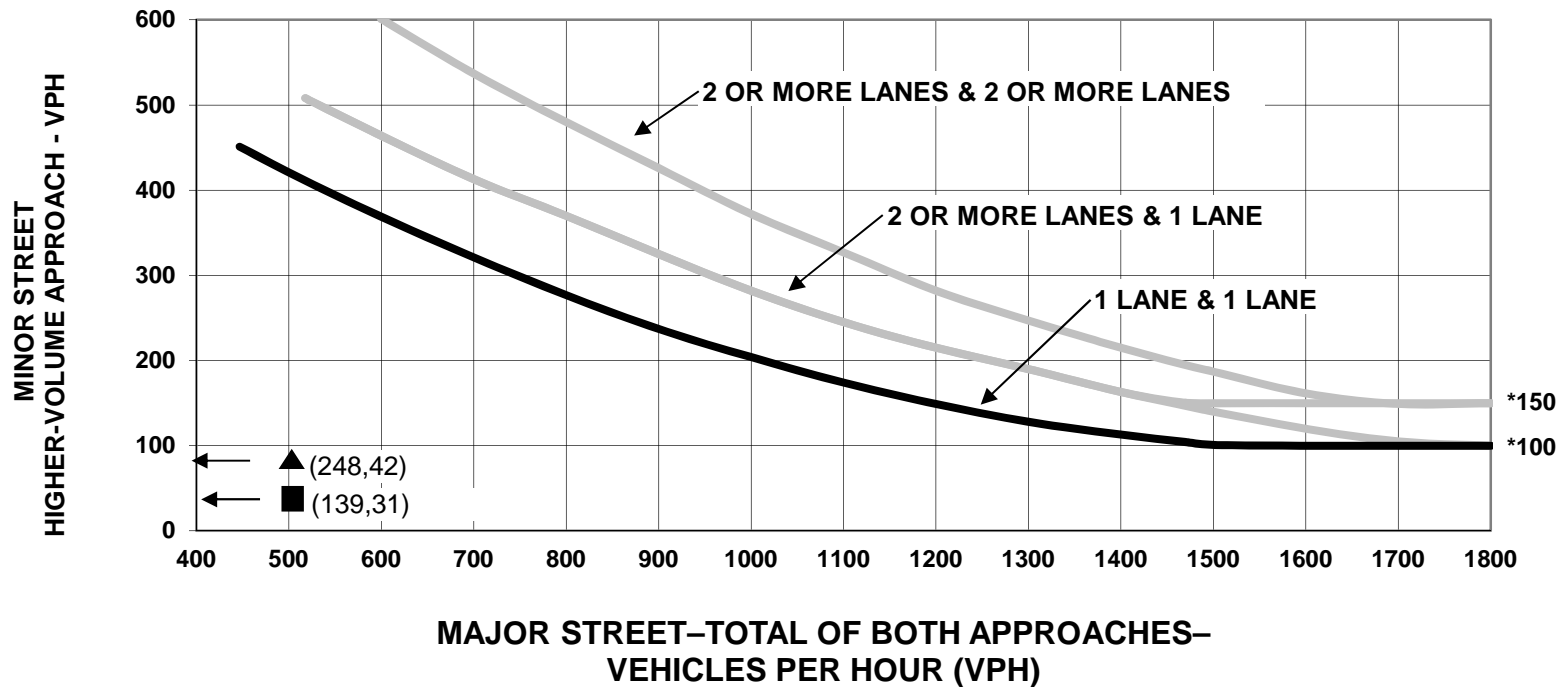
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 13 - Signal Warrant Analysis

Intersection 655: O St./8th St.

2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

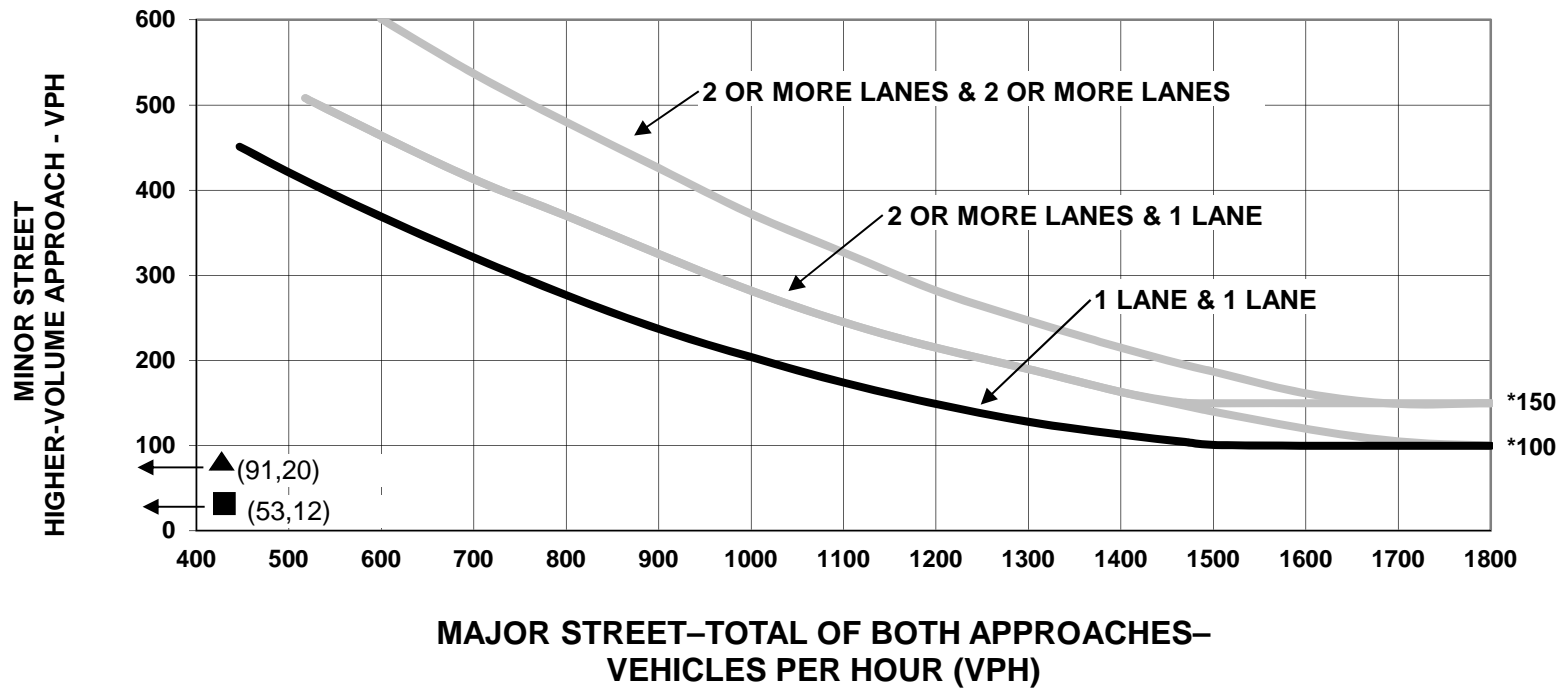
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 14 - Signal Warrant Analysis

Intersection 656: C St./8th St.

2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

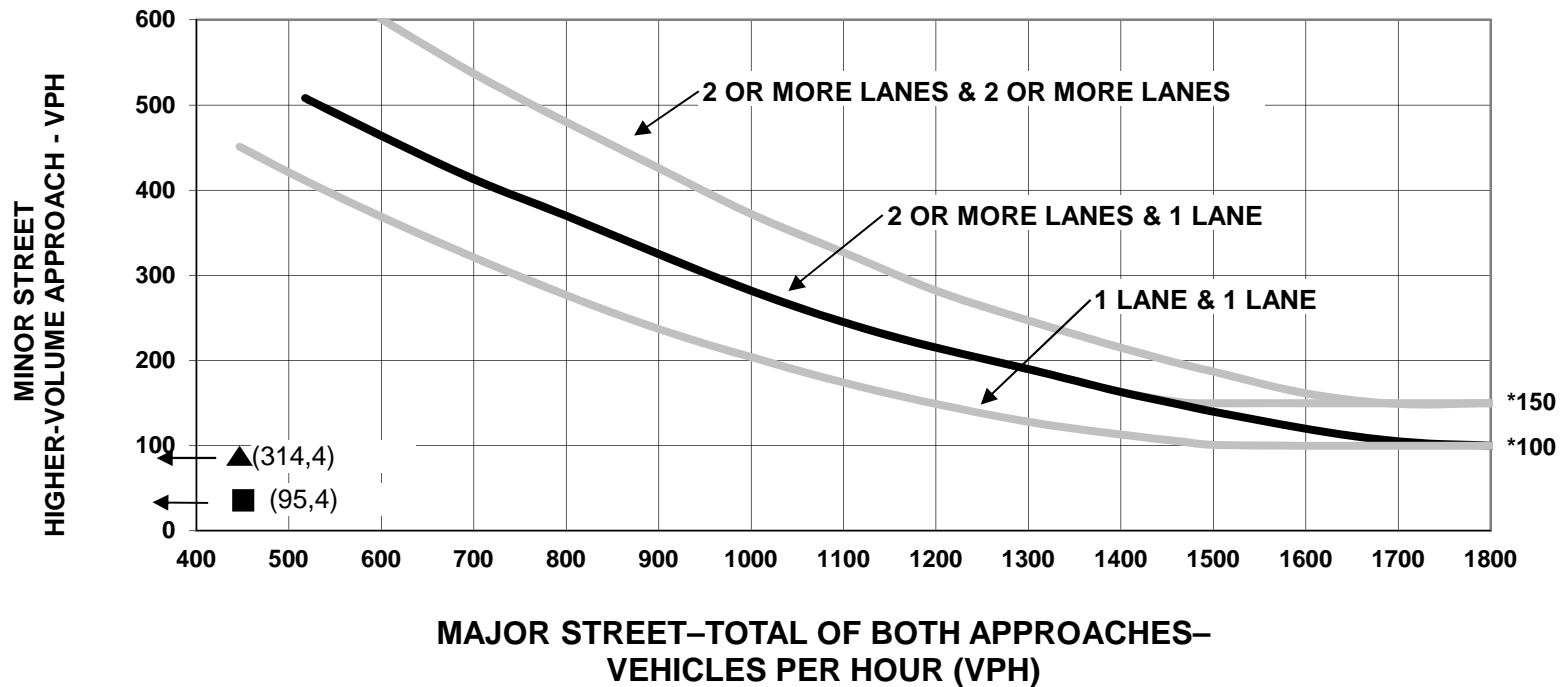
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 15 - Signal Warrant Analysis

Intersection 657: GP Blvd N/S Conn/GP Blvd E/W

2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

- A.M. Peak Hour
- ▲ P.M. Peak Hour

APPENDIX C

**INTERSECTION TURN MOVEMENTS AND
LEVEL OF SERVICE**

Appendix C

Intersections Turn Movements and Level of Service

Alternative 1 Existing

ITAM AM (PM) Intersection Volume Forecasts

Existing Conditions

<p>Legend</p> <p>ICU, or Delay for unsignalized</p> <p>Level of Service or "U" for unsignalized</p>	<p>282 Jeffrey Rd. & Portola Pkwy.</p> <p>0.34 (0.35) A (A)</p>	<p>283 Jeffrey Rd. & Irvine Bl.</p> <p>0.49 (0.55) A (A)</p>
<p>284 Jeffrey Rd. & Bryan Av.</p> <p>0.45 (0.37) A (A)</p>	<p>285 Jeffrey Rd. & Trabuco Rd.</p> <p>0.45 (0.42) A (A)</p>	<p>286 Jeffrey Rd. & Roosevelt</p> <p>0.58 (0.43) A (A)</p>
<p>287 Jeffrey Rd. & I-5 NB Ramps</p> <p>0.58 (0.59) A (A)</p>	<p>288 Jeffrey Rd. & Walnut Av./I-5 SB Ramps</p> <p>0.71 (0.78) C (C)</p>	<p>289 Jeffrey Rd. & ICD</p> <p>0.6 (0.75) A (C)</p>
<p>290 Jeffrey Rd. & Barranca Pkwy.</p> <p>0.72 (0.81) C (D)</p>	<p>291 Jeffrey Rd. & Alton Pkwy.</p> <p>0.77 (0.78) C (C)</p>	<p>293 Jeffrey Rd. & I-405 NB Ramps</p> <p>0.66 (0.72) B (C)</p>
<p>294 University Dr. & I-405 SB Ramps</p> <p>0.61 (0.57) B (A)</p>	<p>300 Sand Canyon. Av. & Portola Pkwy.</p> <p>0.27 (0.29) A (A)</p>	<p>301 Sand Canyon. Av. & Irvine Bl.</p> <p>0.5 (0.49) A (A)</p>

**ITAM AM (PM) Intersection Volume Forecasts
Existing Conditions**

<p>302 Sand Canyon. Av. & Trabuco Pkwy.</p> <p>0.39 (0.37) A (A)</p>	<p>303 Sand Canyon. Av. & I-5 NB Ramps</p> <p>0.65 (0.52) B (A)</p>	<p>304 Sand Canyon. Av. & Marine Wy.</p> <p>0.5 (0.5) A (A)</p>
<p>305 Sand Canyon. Av. & I-5 SB Ramps</p> <p>0.57 (0.54) A (A)</p>	<p>306 Sand Canyon. Av. & Oak Cyn./Laguna Cyn. Rd.</p> <p>0.47 (0.4) A (A)</p>	<p>307 Sand Canyon. Av. & ICD</p> <p>0.37 (0.46) A (A)</p>
<p>309 Sand Canyon. Av. & Barranca Pkwy.</p> <p>0.39 (0.45) A (A)</p>	<p>310 Sand Canyon. Av. & Alton Pkwy.</p> <p>0.54 (0.65) A (B)</p>	<p>311 Sand Canyon. Av. & I-405 NB Ramps</p> <p>0.46 (0.43) A (A)</p>
<p>312 Sand Canyon. Av. & I-405 SB Ramps</p> <p>0.68 (0.4) B (A)</p>	<p>313 Laguna Canyon Rd. & ICD</p> <p>0.21 (0.3) A (A)</p>	<p>314 Laguna Canyon Rd. & Barranca Pkwy.</p> <p>0.29 (0.3) A (A)</p>
<p>315 Laguna Canyon Rd. & Alton Pkwy.</p> <p>0.54 (0.38) A (A)</p>	<p>316 SR-133 SB Ramps & Irvine Bl.</p> <p>0.39 (0.43) A (A)</p>	<p>317 SR-133 NB Ramps & Irvine Bl.</p> <p>0.46 (0.48) A (A)</p>

ITAM AM (PM) Intersection Volume Forecasts Existing Conditions

<p>318 Banting & Barranca Pkwy.</p> <p>0.4 (0.6) sec A (C)</p>	<p>319 Banting & Alton Pkwy.</p> <p>0.4 (0.6) sec A (A)</p>	<p>321 Laguna Canyon Rd. & Old Laguna Cyn. Rd.</p> <p>0.4 (0.6) sec B (A)</p>
<p>327 Barranca Pkwy. & Technology</p> <p>0.5 (0.58) A (A)</p>	<p>328 Barranca Pkwy. & I-5 HOV Ramp</p> <p>0.54 (0.41) A (A)</p>	<p>329 Barranca Pkwy. & ICD</p> <p>0.4 (0.4) A (A)</p>
<p>330 Barranca Pkwy. & Pacifica</p> <p>0.4 (0.44) A (A)</p>	<p>331 ICD & Gateway Bl.</p> <p>0.39 (0.33) A (A)</p>	<p>333 Pacifica & Gateway Bl.</p> <p>0.49 (0.61) A (B)</p>
<p>338 Alton Pkwy. & Irvine Bl.</p> <p>0.45 (0.49) A (A)</p>	<p>339 Alton Pkwy. & Toledo Wy.</p> <p>0.38 (0.36) A (A)</p>	<p>340 Alton Pkwy. & Jeronimo Rd.</p> <p>0.35 (0.34) A (A)</p>
<p>341 Alton Pkwy. & Barranca Pkwy./Muirlands Bl.</p> <p>0.44 (0.5) A (A)</p>	<p>343 Alton Pkwy. & Ada</p> <p>0.36 (0.49) A (A)</p>	<p>344 Alton Pkwy. & Technology Dr. W.</p> <p>0.47 (0.63) A (B)</p>

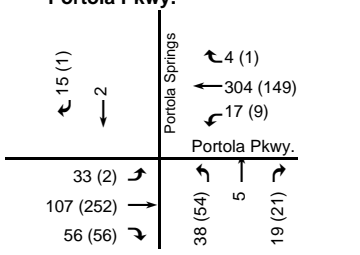
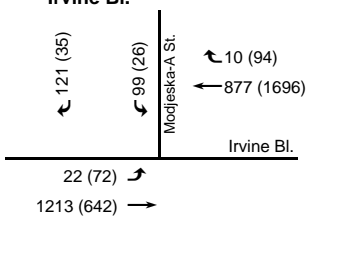
**ITAM AM (PM) Intersection Volume Forecasts
Existing Conditions**

<p>345 Alton Pkwy. & I-5 NB Ramps</p> <p>0.66 (0.44) B (A)</p>	<p>346 Alton Pkwy. & Enterprise</p> <p>0.63 (0.58) B (A)</p>	<p>348 Alton Pkwy. & ICD</p> <p>0.67 (0.67) B (B)</p>
<p>350 Alton Pkwy. & Pacifica</p> <p>0.37 (0.34) A (A)</p>	<p>351 Fortune Dr./I-5 SB Ramps & Enterprise</p> <p>0.32 (0.61) A (B)</p>	<p>357 Enterprise Dr. & Fortune Dr./I-405 NB Ramps</p> <p>0.29 (0.17) A (A)</p>
<p>358 ICD & Enterprise Dr.</p> <p>0.6 (0.56) A (A)</p>	<p>359 ICD & I-405 SB Ramps</p> <p>0.57 (0.57) A (A)</p>	<p>360 ICD & Research Dr.</p> <p>0.34 (0.38) A (A)</p>
<p>362 Bake Pkwy. & Irvine Bl.</p> <p>0.73 (0.72) C (C)</p>	<p>363 Bake Pkwy. & Toledo Wy.</p> <p>0.68 (0.61) B (B)</p>	<p>364 Bake Pkwy. & Jeronimo Rd.</p> <p>0.81 (0.76) D (C)</p>
<p>365 Bake Pkwy. & Muirlands Bl.</p> <p>0.57 (0.6) A (A)</p>	<p>366 Bake Pkwy. & Rockfield Bl.</p> <p>0.52 (0.61) A (B)</p>	<p>367 Bake Pkwy. & I-5 NB Ramps</p> <p>0.82 (0.53) D (A)</p>

ITAM AM (PM) Intersection Volume Forecasts
Existing Conditions

<p>368 Bake Pkwy. & I-5 SB Ramps</p> <p>0.64 (0.72) B (C)</p>	<p>371 Bake Pkwy. & Research Dr.</p> <p>0.34 (0.62) A (B)</p>	<p>372 Bake Pkwy. & ICD</p> <p>0.28 (0.26) A (A)</p>
<p>406 Laguna Canyon Rd. & Lake Forest Dr.</p> <p style="text-align: center;">Project Intersection</p>	<p>409 Bake Pkwy. & Commercentre Dr.</p> <p>0.56 (0.56) A (A)</p>	<p>444 Sand Canyon Av. & Burt Rd.</p> <p>0.58 (0.48) A (A)</p>
<p>481 Laguna Canyon Rd. & Technology Dr.</p> <p style="text-align: center;">Project Intersection</p>	<p>482 Road A & Trabuco Rd.</p> <p style="text-align: center;">Project Intersection</p>	<p>483 Road C & Trabuco Rd.</p> <p style="text-align: center;">Project Intersection</p>
<p>484 Sand Canyon Av. & Roosevelt</p> <p style="text-align: center;">Project Intersection</p>	<p>485 Sand Canyon Av. & Nightmist</p> <p style="text-align: center;">Project Intersection</p>	<p>514 Alton Pkwy. & Rancho Pkwy.</p> <p style="text-align: center;">Project Intersection</p>
<p>518 Alton Pkwy. & Commercentre</p> <p style="text-align: center;">Project Intersection</p>	<p>555 Bake Pkwy. & Rancho Pkwy. S</p> <p>0.5 (0.55) A (A)</p>	<p>556 Ridge Valley & Portola Pkwy.</p> <p>0.26 (0.16) A (A)</p>

ITAM AM (PM) Intersection Volume Forecasts
Existing Conditions

<p>558 Ridge Valley-O St. & Irvine Bl.</p> <p style="text-align: center;">Project Intersection</p>	<p>559 O St. & Trabuco Rd.</p> <p style="text-align: center;">Project Intersection</p>	<p>560 O St. & Marine Wy.</p> <p style="text-align: center;">Project Intersection</p>
<p>561 LY Street & Irvine Bl.</p> <p style="text-align: center;">Project Intersection</p>	<p>562 Great Park Bl. W. & Marine Wy.</p> <p style="text-align: center;">Project Intersection</p>	<p>563 B St. & Irvine Bl.</p> <p style="text-align: center;">Project Intersection</p>
<p>571 Portola Springs & Portola Pkwy.</p>  <p>0.22 (0.14) A (A)</p>	<p>572 Modjeska-A St. & Irvine Bl.</p>  <p>0.44 (0.43) A (A)</p>	<p>574 O St. & LN St.</p> <p style="text-align: center;">Project Intersection</p>
<p>575 O St. & LV St.</p> <p style="text-align: center;">Project Intersection</p>	<p>576 O St. & C St.</p> <p style="text-align: center;">Project Intersection</p>	<p>577 Pusan Way-Z St. & Irvine Bl.</p> <p style="text-align: center;">Project Intersection</p>
<p>579 A-02 St. & Irvine Bl.</p> <p style="text-align: center;">Project Intersection</p>	<p>650 O St. & C St.</p> <p style="text-align: center;">Project Intersection</p>	<p>651 C St. & Trabuco Rd.</p> <p style="text-align: center;">Project Intersection</p>

ITAM AM (PM) Intersection Volume Forecasts
Existing Conditions

652 LY Street & Trabuco Rd. Project Intersection	653 LY Street & Loop Road Project Intersection	654 C St. & LV St. Project Intersection
655 O St. & 8th St. Project Intersection	656 C St. & 8th St. Project Intersection	657 GP Blvd N/S Conn & GP Blvd E/W Project Intersection

Appendix C

Intersections Turn Movements and Level of Service

Alternative 2 Existing + 688 Acre GP

ITAM AM (PM) Intersection Volume Forecasts
Existing + Project Conditions

<p>Legend</p> <p>ICU, or Delay for unsignalized Level of Service or "U" for unsignalized</p>	<p>282 Jeffrey Rd. & Portola Pkwy.</p> <p>0.34 (0.35) A (A)</p>	<p>283 Jeffrey Rd. & Irvine Bl.</p> <p>0.47 (0.55) A (A)</p>
<p>284 Jeffrey Rd. & Bryan Av.</p> <p>0.44 (0.38) A (A)</p>	<p>285 Jeffrey Rd. & Trabuco Rd.</p> <p>0.44 (0.44) A (A)</p>	<p>286 Jeffrey Rd. & Roosevelt</p> <p>0.58 (0.43) A (A)</p>
<p>287 Jeffrey Rd. & I-5 NB Ramps</p> <p>0.59 (0.6) A (A)</p>	<p>288 Jeffrey Rd. & Walnut Av./I-5 SB Ramps</p> <p>0.71 (0.79) C (C)</p>	<p>289 Jeffrey Rd. & ICD</p> <p>0.59 (0.78) A (C)</p>
<p>290 Jeffrey Rd. & Barranca Pkwy.</p> <p>0.73 (0.82) C (D)</p>	<p>291 Jeffrey Rd. & Alton Pkwy.</p> <p>0.77 (0.79) C (C)</p>	<p>293 Jeffrey Rd. & I-405 NB Ramps</p> <p>0.66 (0.72) B (C)</p>
<p>294 University Dr. & I-405 SB Ramps</p> <p>0.61 (0.58) B (A)</p>	<p>300 Sand Canyon. Av. & Portola Pkwy.</p> <p>0.27 (0.31) A (A)</p>	<p>301 Sand Canyon. Av. & Irvine Bl.</p> <p>0.5 (0.53) A (A)</p>

**ITAM AM (PM) Intersection Volume Forecasts
Existing + Project Conditions**

<p>302 Sand Canyon. Av. & Trabuco Pkwy.</p> <p>0.4 (0.41) A (A)</p>	<p>303 Sand Canyon. Av. & I-5 NB Ramps</p> <p>0.66 (0.54) B (A)</p>	<p>304 Sand Canyon. Av. & Marine Wy.</p> <p>0.5 (0.73) A (C)</p>
<p>305 Sand Canyon. Av. & I-5 SB Ramps</p> <p>0.57 (0.63) A (B)</p>	<p>306 Sand Canyon. Av. & Oak Cyn./Laguna Cyn. Rd.</p> <p>0.47 (0.44) A (A)</p>	<p>307 Sand Canyon. Av. & ICD</p> <p>0.37 (0.48) A (A)</p>
<p>309 Sand Canyon. Av. & Barranca Pkwy.</p> <p>0.39 (0.46) A (A)</p>	<p>310 Sand Canyon. Av. & Alton Pkwy.</p> <p>0.54 (0.65) A (B)</p>	<p>311 Sand Canyon. Av. & I-405 NB Ramps</p> <p>0.46 (0.44) A (A)</p>
<p>312 Sand Canyon. Av. & I-405 SB Ramps</p> <p>0.68 (0.42) B (A)</p>	<p>313 Laguna Canyon Rd. & ICD</p> <p>0.21 (0.32) A (A)</p>	<p>314 Laguna Canyon Rd. & Barranca Pkwy.</p> <p>0.29 (0.3) A (A)</p>
<p>315 Laguna Canyon Rd. & Alton Pkwy.</p> <p>0.54 (0.38) A (A)</p>	<p>316 SR-133 SB Ramps & Irvine Bl.</p> <p>0.4 (0.45) A (A)</p>	<p>317 SR-133 NB Ramps & Irvine Bl.</p> <p>0.46 (0.49) A (A)</p>

**ITAM AM (PM) Intersection Volume Forecasts
Existing + Project Conditions**

<p>318 Banting & Barranca Pkwy.</p> <p>0.4 (0.6) sec A (C)</p>	<p>319 Banting & Alton Pkwy.</p> <p>0.4 (0.6) sec A (A)</p>	<p>321 Laguna Canyon Rd. & Old Laguna Cyn. Rd.</p> <p>0.4 (0.6) sec B (A)</p>
<p>327 Barranca Pkwy. & Technology</p> <p>0.5 (0.59) A (A)</p>	<p>328 Barranca Pkwy. & I-5 HOV Ramp</p> <p>0.55 (0.39) A (A)</p>	<p>329 Barranca Pkwy. & ICD</p> <p>0.42 (0.41) A (A)</p>
<p>330 Barranca Pkwy. & Pacifica</p> <p>0.4 (0.44) A (A)</p>	<p>331 ICD & Gateway Bl.</p> <p>0.39 (0.34) A (A)</p>	<p>333 Pacifica & Gateway Bl.</p> <p>0.51 (0.65) A (B)</p>
<p>338 Alton Pkwy. & Irvine Bl.</p> <p>0.45 (0.49) A (A)</p>	<p>339 Alton Pkwy. & Toledo Wy.</p> <p>0.38 (0.36) A (A)</p>	<p>340 Alton Pkwy. & Jeronimo Rd.</p> <p>0.36 (0.34) A (A)</p>
<p>341 Alton Pkwy. & Barranca Pkwy./Muirlands Bl.</p> <p>0.44 (0.49) A (A)</p>	<p>343 Alton Pkwy. & Ada</p> <p>0.37 (0.5) A (A)</p>	<p>344 Alton Pkwy. & Technology Dr. W.</p> <p>0.48 (0.64) A (B)</p>

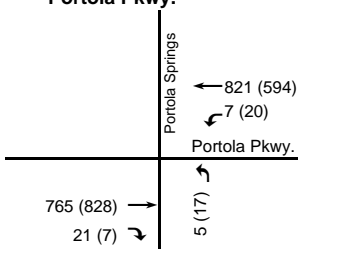
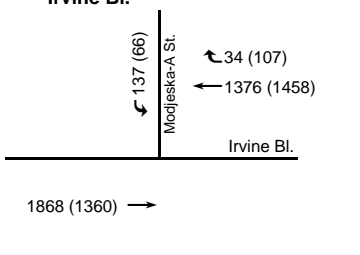
**ITAM AM (PM) Intersection Volume Forecasts
Existing + Project Conditions**

<p>345 Alton Pkwy. & I-5 NB Ramps</p> <p>0.66 (0.44) B (A)</p>	<p>346 Alton Pkwy. & Enterprise</p> <p>0.63 (0.58) B (A)</p>	<p>348 Alton Pkwy. & ICD</p> <p>0.67 (0.66) B (B)</p>
<p>350 Alton Pkwy. & Pacifica</p> <p>0.38 (0.34) A (A)</p>	<p>351 Fortune Dr./I-5 SB Ramps & Enterprise</p> <p>0.33 (0.61) A (B)</p>	<p>357 Enterprise Dr. & Fortune Dr./I-405 NB Ramps</p> <p>0.29 (0.18) A (A)</p>
<p>358 ICD & Enterprise Dr.</p> <p>0.61 (0.57) B (A)</p>	<p>359 ICD & I-405 SB Ramps</p> <p>0.57 (0.57) A (A)</p>	<p>360 ICD & Research Dr.</p> <p>0.34 (0.38) A (A)</p>
<p>362 Bake Pkwy. & Irvine Bl.</p> <p>0.73 (0.72) C (C)</p>	<p>363 Bake Pkwy. & Toledo Wy.</p> <p>0.68 (0.62) B (B)</p>	<p>364 Bake Pkwy. & Jeronimo Rd.</p> <p>0.82 (0.76) D (C)</p>
<p>365 Bake Pkwy. & Muirlands Bl.</p> <p>0.57 (0.6) A (A)</p>	<p>366 Bake Pkwy. & Rockfield Bl.</p> <p>0.52 (0.61) A (B)</p>	<p>367 Bake Pkwy. & I-5 NB Ramps</p> <p>0.81 (0.54) D (A)</p>

**ITAM AM (PM) Intersection Volume Forecasts
Existing + Project Conditions**

<p>368 Bake Pkwy. & I-5 SB Ramps</p> <p>0.63 (0.71) B (C)</p>	<p>371 Bake Pkwy. & Research Dr.</p> <p>0.34 (0.62) A (B)</p>	<p>372 Bake Pkwy. & ICD</p> <p>0.3 (0.26) A (A)</p>
<p>406 Laguna Canyon Rd. & Lake Forest Dr.</p> <p align="center">Project Intersection</p>	<p>409 Bake Pkwy. & Commercentre Dr.</p> <p>0.56 (0.56) A (A)</p>	<p>444 Sand Canyon Av. & Burt Rd.</p> <p>0.58 (0.52) A (A)</p>
<p>481 Laguna Canyon Rd. & Technology Dr.</p> <p align="center">Project Intersection</p>	<p>482 Road A & Trabuco Rd.</p> <p align="center">Project Intersection</p>	<p>483 Road C & Trabuco Rd.</p> <p align="center">Project Intersection</p>
<p>484 Sand Canyon Av. & Roosevelt</p> <p align="center">Project Intersection</p>	<p>485 Sand Canyon Av. & Nightmist</p> <p align="center">Project Intersection</p>	<p>514 Alton Pkwy. & Rancho Pkwy.</p> <p align="center">Project Intersection</p>
<p>518 Alton Pkwy. & Commercentre</p> <p align="center">Project Intersection</p>	<p>555 Bake Pkwy. & Rancho Pkwy. S</p> <p>0.5 (0.55) A (A)</p>	<p>556 Ridge Valley & Portola Pkwy.</p> <p>0.26 (0.16) A (A)</p>

ITAM AM (PM) Intersection Volume Forecasts
Existing + Project Conditions

<p>558 Ridge Valley-O St. & Irvine Bl.</p> <p style="text-align: center;">Project Intersection</p>	<p>559 O St. & Trabuco Rd.</p> <p style="text-align: center;">Project Intersection</p>	<p>560 O St. & Marine Wy.</p> <p style="text-align: center;">Project Intersection</p>
<p>561 LY Street & Irvine Bl.</p> <p style="text-align: center;">Project Intersection</p>	<p>562 Great Park Bl. W. & Marine Wy.</p> <p style="text-align: center;">Project Intersection</p>	<p>563 B St. & Irvine Bl.</p> <p style="text-align: center;">Project Intersection</p>
<p>571 Portola Springs & Portola Pkwy.</p>  <p>0.22 (0.15) A (A)</p>	<p>572 Modjeska-A St. & Irvine Bl.</p>  <p>0.44 (0.44) A (A)</p>	<p>574 O St. & LN St.</p> <p style="text-align: center;">Project Intersection</p>
<p>575 O St. & LV St.</p> <p style="text-align: center;">Project Intersection</p>	<p>576 O St. & C St.</p> <p style="text-align: center;">Project Intersection</p>	<p>577 Pusan Way-Z St. & Irvine Bl.</p> <p style="text-align: center;">Project Intersection</p>
<p>579 A-02 St. & Irvine Bl.</p> <p style="text-align: center;">Project Intersection</p>	<p>650 O St. & C St.</p> <p style="text-align: center;">Project Intersection</p>	<p>651 C St. & Trabuco Rd.</p> <p style="text-align: center;">Project Intersection</p>

ITAM AM (PM) Intersection Volume Forecasts
Existing + Project Conditions

652 LY Street & Trabuco Rd. Project Intersection	653 LY Street & Loop Road Project Intersection	654 C St. & LV St. Project Intersection
655 O St. & 8th St. Project Intersection	656 C St. & 8th St. Project Intersection	657 GP Blvd N/S Conn & GP Blvd E/W Project Intersection

Appendix C

Intersections Turn Movements and Level of Service

Alternative 3 2017 Baseline (No Project)

ITAM AM (PM) Intersection Volume Forecasts 2017 Baseline

<p>Legend</p> <p>ICU, or Delay for unsignalized</p> <p>Level of Service or "U" for unsignalized</p>	<p>282 Jeffrey Rd. & Portola Pkwy.</p> <p>0.53 (0.43) A (A)</p>	<p>283 Jeffrey Rd. & Irvine Bl.</p> <p>0.61 (0.59) B (A)</p>
<p>284 Jeffrey Rd. & Bryan Av.</p> <p>0.62 (0.5) B (A)</p>	<p>285 Jeffrey Rd. & Trabuco Rd.</p> <p>0.66 (0.62) B (B)</p>	<p>286 Jeffrey Rd. & Roosevelt</p> <p>0.76 (0.65) C (B)</p>
<p>287 Jeffrey Rd. & I-5 NB Ramps</p> <p>0.62 (0.77) B (C)</p>	<p>288 Jeffrey Rd. & Walnut Av./I-5 SB Ramps</p> <p>0.67 (0.84) B (D)</p>	<p>289 Jeffrey Rd. & ICD</p> <p>0.63 (0.8) B (C)</p>
<p>290 Jeffrey Rd. & Barranca Pkwy.</p> <p>0.81 (0.77) D (C)</p>	<p>291 Jeffrey Rd. & Alton Pkwy.</p> <p>0.93 (0.86) E (D)</p>	<p>293 Jeffrey Rd. & I-405 NB Ramps</p> <p>0.8 (0.79) C (C)</p>
<p>294 University Dr. & I-405 SB Ramps</p> <p>0.69 (0.64) B (B)</p>	<p>300 Sand Canyon. Av. & Portola Pkwy.</p> <p>0.33 (0.38) A (A)</p>	<p>301 Sand Canyon. Av. & Irvine Bl.</p> <p>0.68 (0.63) B (B)</p>

**ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline**

<p>302 Sand Canyon. Av. & Trabuco Pkwy.</p> <p>0.75 (0.76) C (C)</p>	<p>303 Sand Canyon. Av. & I-5 NB Ramps</p> <p>0.63 (0.7) B (B)</p>	<p>304 Sand Canyon. Av. & Marine Wy.</p> <p>0.73 (0.75) C (C)</p>
<p>305 Sand Canyon. Av. & I-5 SB Ramps</p> <p>0.69 (0.68) B (B)</p>	<p>306 Sand Canyon. Av. & Oak Cyn./Laguna Cyn. Rd.</p> <p>0.56 (0.69) A (B)</p>	<p>307 Sand Canyon. Av. & ICD</p> <p>0.59 (0.58) A (A)</p>
<p>309 Sand Canyon. Av. & Barranca Pkwy.</p> <p>0.6 (0.56) A (A)</p>	<p>310 Sand Canyon. Av. & Alton Pkwy.</p> <p>0.68 (0.7) B (B)</p>	<p>311 Sand Canyon. Av. & I-405 NB Ramps</p> <p>0.63 (0.48) B (A)</p>
<p>312 Sand Canyon. Av. & I-405 SB Ramps</p> <p>0.78 (0.59) C (A)</p>	<p>313 Laguna Canyon Rd. & ICD</p> <p>0.24 (0.31) A (A)</p>	<p>314 Laguna Canyon Rd. & Barranca Pkwy.</p> <p>0.34 (0.34) A (A)</p>
<p>315 Laguna Canyon Rd. & Alton Pkwy.</p> <p>0.48 (0.42) A (A)</p>	<p>316 SR-133 SB Ramps & Irvine Bl.</p> <p>0.64 (0.51) B (A)</p>	<p>317 SR-133 NB Ramps & Irvine Bl.</p> <p>0.57 (0.71) A (C)</p>

**ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline**

<p>318 Banting & Barranca Pkwy.</p> <p>0.4 (0.6) sec B (A)</p>	<p>319 Banting & Alton Pkwy.</p> <p>0.4 (0.6) sec A (A)</p>	<p>321 Laguna Canyon Rd. & Old Laguna Cyn. Rd.</p> <p>0.4 (0.6) sec D (D)</p>
<p>327 Barranca Pkwy. & Technology</p> <p>0.46 (0.54) A (A)</p>	<p>328 Barranca Pkwy. & I-5 HOV Ramp</p> <p>0.43 (0.32) A (A)</p>	<p>329 Barranca Pkwy. & ICD</p> <p>0.47 (0.54) A (A)</p>
<p>330 Barranca Pkwy. & Pacifica</p> <p>0.53 (0.63) A (B)</p>	<p>331 ICD & Gateway Bl.</p> <p>0.39 (0.43) A (A)</p>	<p>333 Pacifica & Gateway Bl.</p> <p>0.59 (0.61) A (B)</p>
<p>338 Alton Pkwy. & Irvine Bl.</p> <p>0.73 (0.8) C (C)</p>	<p>339 Alton Pkwy. & Toledo Wy.</p> <p>0.49 (0.53) A (A)</p>	<p>340 Alton Pkwy. & Jeronimo Rd.</p> <p>0.49 (0.46) A (A)</p>
<p>341 Alton Pkwy. & Barranca Pkwy./Muirlands Bl.</p> <p>0.51 (0.71) A (C)</p>	<p>343 Alton Pkwy. & Ada</p> <p>0.39 (0.49) A (A)</p>	<p>344 Alton Pkwy. & Technology Dr. W.</p> <p>0.43 (0.58) A (A)</p>

**ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline**

<p>345 Alton Pkwy. & I-5 NB Ramps</p> <p>0.65 (0.42) B (A)</p>	<p>346 Alton Pkwy. & Enterprise</p> <p>0.6 (0.6) A (A)</p>	<p>348 Alton Pkwy. & ICD</p> <p>0.62 (0.55) B (A)</p>
<p>350 Alton Pkwy. & Pacifica</p> <p>0.6 (0.44) A (A)</p>	<p>351 Fortune Dr./I-5 SB Ramps & Enterprise</p> <p>0.5 (0.61) A (B)</p>	<p>357 Enterprise Dr. & Fortune Dr./I-405 NB Ramps</p> <p>0.41 (0.55) A (A)</p>
<p>358 ICD & Enterprise Dr.</p> <p>0.63 (0.56) B (A)</p>	<p>359 ICD & I-405 SB Ramps</p> <p>0.63 (0.65) B (B)</p>	<p>360 ICD & Research Dr.</p> <p>0.59 (0.6) A (A)</p>
<p>362 Bake Pkwy. & Irvine Bl.</p> <p>0.75 (0.74) C (C)</p>	<p>363 Bake Pkwy. & Toledo Wy.</p> <p>0.83 (0.61) D (B)</p>	<p>364 Bake Pkwy. & Jeronimo Rd.</p> <p>0.74 (0.76) C (C)</p>
<p>365 Bake Pkwy. & Muirlands Bl.</p> <p>0.61 (0.67) B (B)</p>	<p>366 Bake Pkwy. & Rockfield Bl.</p> <p>0.57 (0.68) A (B)</p>	<p>367 Bake Pkwy. & I-5 NB Ramps</p> <p>0.86 (0.66) D (B)</p>

**ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline**

<p>368 Bake Pkwy. & I-5 SB Ramps</p> <p>0.73 (0.77) C (C)</p>	<p>371 Bake Pkwy. & Research Dr.</p> <p>0.44 (0.48) A (A)</p>	<p>372 Bake Pkwy. & ICD</p> <p>0.33 (0.36) A (A)</p>
<p>406 Laguna Canyon Rd. & Lake Forest Dr.</p> <p>0.95 (0.83) E (D)</p>	<p>409 Bake Pkwy. & Commercentre Dr.</p> <p>0.69 (0.77) B (C)</p>	<p>444 Sand Canyon Av. & Burt Rd.</p> <p>0.74 (0.62) C (B)</p>
<p>481 Laguna Canyon Rd. & Technology Dr.</p> <p>0.27 (0.24) A (A)</p>	<p>482 Road A & Trabuco Rd.</p> <p>0.32 (0.28) A (A)</p>	<p>483 Road C & Trabuco Rd.</p> <p>0.25 (0.27) A (A)</p>
<p>484 Sand Canyon Av. & Roosevelt</p> <p>0.44 (0.48) A (A)</p>	<p>485 Sand Canyon Av. & Nightmist</p> <p>0.75 (0.45) C (A)</p>	<p>514 Alton Pkwy. & Rancho Pkwy.</p> <p>0.48 (0.38) A (A)</p>
<p>518 Alton Pkwy. & Commercentre</p> <p>0.51 (0.58) A (A)</p>	<p>555 Bake Pkwy. & Rancho Pkwy. S</p> <p>0.66 (0.66) B (B)</p>	<p>556 Ridge Valley & Portola Pkwy.</p> <p>0.38 (0.39) A (A)</p>

**ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline**

<p>558 Ridge Valley-O St. & Irvine Bl.</p> <p>0.58 (0.79) A (C)</p>	<p>559 O St. & Trabuco Rd.</p> <p>0.5 (0.44) A (A)</p>	<p>560 O St. & Marine Wy.</p> <p>0.18 (0.26) A (A)</p>
<p>561 LY Street & Irvine Bl.</p> <p>0.42 (0.57) A (A)</p>	<p>562 Great Park Bl. W. & Marine Wy.</p> <p align="center">Project Intersection</p>	<p>563 B St. & Irvine Bl.</p> <p>0.64 (0.72) B (C)</p>
<p>571 Portola Springs & Portola Pkwy.</p> <p>0.39 (0.32) A (A)</p>	<p>572 Modjeska-A St. & Irvine Bl.</p> <p>0.47 (0.59) A (A)</p>	<p>574 O St. & LN St.</p> <p>0.22 (0.18) A (A)</p>
<p>575 O St. & LV St.</p> <p>9.3 (9.6 Sec.) A (A)</p>	<p>576 O St. & C St.</p> <p>0.1 (0.1 Sec.)</p>	<p>577 Pusan Way-Z St. & Irvine Bl.</p> <p>0.64 (0.51) B (A)</p>
<p>579 A-02 St. & Irvine Bl.</p> <p>0.78 (0.81) C (D)</p>	<p>650 O St. & C St.</p> <p>6.7 (5.74 Sec.) A (A)</p>	<p>651 C St. & Trabuco Rd.</p> <p>9.9 (11.4 Sec.) A (B)</p>

**ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline**

<p>652 LY Street & Trabuco Rd.</p> <p>9.8 (10.2 Sec.) A (B)</p>	<p>653 LY Street & Loop Road</p> <p align="center">Project Intersection</p>	<p>654 C St. & LV St.</p> <p>9.6 (10.2 Sec.)</p>
<p>655 O St. & 8th St.</p> <p>9.6 (10.7 Sec.) A (B)</p>	<p>656 C St. & 8th St.</p> <p>9.5 (9.6 Sec.) A (A)</p>	<p>657 GP Blvd N/S Conn & GP Blvd E/W</p> <p align="center">Project Intersection</p>

Appendix C

Intersections Turn Movements and Level of Service

Alternative 4 2017 Base + 688 Acre GP

**ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan**

<p>Legend</p> <p>ICU, or Delay for unsignalized</p> <p>Level of Service or "U" for unsignalized</p>	<p>282 Jeffrey Rd. & Portola Pkwy.</p> <p>0.52 (0.43) A (A)</p>	<p>283 Jeffrey Rd. & Irvine Bl.</p> <p>0.61 (0.6) B (A)</p>
<p>284 Jeffrey Rd. & Bryan Av.</p> <p>0.61 (0.5) B (A)</p>	<p>285 Jeffrey Rd. & Trabuco Rd.</p> <p>0.66 (0.65) B (B)</p>	<p>286 Jeffrey Rd. & Roosevelt</p> <p>0.76 (0.67) C (B)</p>
<p>287 Jeffrey Rd. & I-5 NB Ramps</p> <p>0.62 (0.79) B (C)</p>	<p>288 Jeffrey Rd. & Walnut Av./I-5 SB Ramps</p> <p>0.67 (0.84) B (D)</p>	<p>289 Jeffrey Rd. & ICD</p> <p>0.63 (0.8) B (C)</p>
<p>290 Jeffrey Rd. & Barranca Pkwy.</p> <p>0.81 (0.77) D (C)</p>	<p>291 Jeffrey Rd. & Alton Pkwy.</p> <p>0.92 (0.86) E (D)</p>	<p>293 Jeffrey Rd. & I-405 NB Ramps</p> <p>0.79 (0.79) C (C)</p>
<p>294 University Dr. & I-405 SB Ramps</p> <p>0.69 (0.64) B (B)</p>	<p>300 Sand Canyon. Av. & Portola Pkwy.</p> <p>0.35 (0.39) A (A)</p>	<p>301 Sand Canyon. Av. & Irvine Bl.</p> <p>0.68 (0.64) B (B)</p>

**ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan**

<p>302 Sand Canyon. Av. & Trabuco Pkwy.</p> <p>0.75 (0.78) C (C)</p>	<p>303 Sand Canyon. Av. & I-5 NB Ramps</p> <p>0.64 (0.74) B (C)</p>	<p>304 Sand Canyon. Av. & Marine Wy.</p> <p>0.74 (0.8) C (C)</p>
<p>305 Sand Canyon. Av. & I-5 SB Ramps</p> <p>0.69 (0.74) B (C)</p>	<p>306 Sand Canyon. Av. & Oak Cyn./Laguna Cyn. Rd.</p> <p>0.57 (0.73) A (C)</p>	<p>307 Sand Canyon. Av. & ICD</p> <p>0.6 (0.6) A (A)</p>
<p>309 Sand Canyon. Av. & Barranca Pkwy.</p> <p>0.6 (0.57) A (A)</p>	<p>310 Sand Canyon. Av. & Alton Pkwy.</p> <p>0.68 (0.7) B (B)</p>	<p>311 Sand Canyon. Av. & I-405 NB Ramps</p> <p>0.62 (0.48) B (A)</p>
<p>312 Sand Canyon. Av. & I-405 SB Ramps</p> <p>0.78 (0.59) C (A)</p>	<p>313 Laguna Canyon Rd. & ICD</p> <p>0.24 (0.31) A (A)</p>	<p>314 Laguna Canyon Rd. & Barranca Pkwy.</p> <p>0.35 (0.34) A (A)</p>
<p>315 Laguna Canyon Rd. & Alton Pkwy.</p> <p>0.48 (0.42) A (A)</p>	<p>316 SR-133 SB Ramps & Irvine Bl.</p> <p>0.65 (0.53) B (A)</p>	<p>317 SR-133 NB Ramps & Irvine Bl.</p> <p>0.58 (0.74) A (C)</p>

**ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan**

<p>318 Banting & Barranca Pkwy.</p> <p>0.4 (0.6) sec B (A)</p>	<p>319 Banting & Alton Pkwy.</p> <p>0.4 (0.6) sec A (A)</p>	<p>321 Laguna Canyon Rd. & Old Laguna Cyn. Rd.</p> <p>0.4 (0.6) sec D (D)</p>
<p>327 Barranca Pkwy. & Technology</p> <p>0.46 (0.55) A (A)</p>	<p>328 Barranca Pkwy. & I-5 HOV Ramp</p> <p>0.42 (0.32) A (A)</p>	<p>329 Barranca Pkwy. & ICD</p> <p>0.47 (0.54) A (A)</p>
<p>330 Barranca Pkwy. & Pacifica</p> <p>0.53 (0.63) A (B)</p>	<p>331 ICD & Gateway Bl.</p> <p>0.39 (0.44) A (A)</p>	<p>333 Pacifica & Gateway Bl.</p> <p>0.6 (0.62) A (B)</p>
<p>338 Alton Pkwy. & Irvine Bl.</p> <p>0.74 (0.81) C (D)</p>	<p>339 Alton Pkwy. & Toledo Wy.</p> <p>0.49 (0.53) A (A)</p>	<p>340 Alton Pkwy. & Jeronimo Rd.</p> <p>0.49 (0.46) A (A)</p>
<p>341 Alton Pkwy. & Barranca Pkwy./Muirlands Bl.</p> <p>0.52 (0.71) A (C)</p>	<p>343 Alton Pkwy. & Ada</p> <p>0.38 (0.51) A (A)</p>	<p>344 Alton Pkwy. & Technology Dr. W.</p> <p>0.43 (0.58) A (A)</p>

**ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan**

<p>345 Alton Pkwy. & I-5 NB Ramps</p> <p>0.65 (0.42) B (A)</p>	<p>346 Alton Pkwy. & Enterprise</p> <p>0.6 (0.6) A (A)</p>	<p>348 Alton Pkwy. & ICD</p> <p>0.63 (0.55) B (A)</p>
<p>350 Alton Pkwy. & Pacifica</p> <p>0.6 (0.43) A (A)</p>	<p>351 Fortune Dr./I-5 SB Ramps & Enterprise</p> <p>0.5 (0.6) A (A)</p>	<p>357 Enterprise Dr. & Fortune Dr./I-405 NB Ramps</p> <p>0.41 (0.54) A (A)</p>
<p>358 ICD & Enterprise Dr.</p> <p>0.63 (0.57) B (A)</p>	<p>359 ICD & I-405 SB Ramps</p> <p>0.63 (0.65) B (B)</p>	<p>360 ICD & Research Dr.</p> <p>0.59 (0.6) A (A)</p>
<p>362 Bake Pkwy. & Irvine Bl.</p> <p>0.74 (0.75) C (C)</p>	<p>363 Bake Pkwy. & Toledo Wy.</p> <p>0.83 (0.61) D (B)</p>	<p>364 Bake Pkwy. & Jeronimo Rd.</p> <p>0.74 (0.77) C (C)</p>
<p>365 Bake Pkwy. & Muirlands Bl.</p> <p>0.61 (0.67) B (B)</p>	<p>366 Bake Pkwy. & Rockfield Bl.</p> <p>0.58 (0.67) A (B)</p>	<p>367 Bake Pkwy. & I-5 NB Ramps</p> <p>0.86 (0.67) D (B)</p>

**ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan**

<p>368 Bake Pkwy. & I-5 SB Ramps</p> <p>0.73 (0.77) C (C)</p>	<p>371 Bake Pkwy. & Research Dr.</p> <p>0.44 (0.48) A (A)</p>	<p>372 Bake Pkwy. & ICD</p> <p>0.33 (0.36) A (A)</p>
<p>406 Laguna Canyon Rd. & Lake Forest Dr.</p> <p>0.94 (0.83) E (D)</p>	<p>409 Bake Pkwy. & Commercentre Dr.</p> <p>0.69 (0.77) B (C)</p>	<p>444 Sand Canyon Av. & Burt Rd.</p> <p>0.74 (0.65) C (B)</p>
<p>481 Laguna Canyon Rd. & Technology Dr.</p> <p>0.27 (0.25) A (A)</p>	<p>482 Road A & Trabuco Rd.</p> <p>0.32 (0.3) A (A)</p>	<p>483 Road C & Trabuco Rd.</p> <p>0.25 (0.29) A (A)</p>
<p>484 Sand Canyon Av. & Roosevelt</p> <p>0.45 (0.49) A (A)</p>	<p>485 Sand Canyon Av. & Nightmist</p> <p>0.75 (0.45) C (A)</p>	<p>514 Alton Pkwy. & Rancho Pkwy.</p> <p>0.49 (0.38) A (A)</p>
<p>518 Alton Pkwy. & Commercentre</p> <p>0.51 (0.58) A (A)</p>	<p>555 Bake Pkwy. & Rancho Pkwy. S</p> <p>0.66 (0.66) B (B)</p>	<p>556 Ridge Valley & Portola Pkwy.</p> <p>0.38 (0.41) A (A)</p>

**ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan**

<p>558 Ridge Valley-O St. & Irvine Bl.</p> <p>0.59 (0.81) A (D)</p>	<p>559 O St. & Trabuco Rd.</p> <p>0.51 (0.46) A (A)</p>	<p>560 O St. & Marine Wy.</p> <p>0.18 (0.34) A (A)</p>
<p>561 LY Street & Irvine Bl.</p> <p>0.43 (0.6) A (A)</p>	<p>562 Great Park Bl. W. & Marine Wy.</p> <p>9.4 (11.7 Sec.) A (B)</p>	<p>563 B St. & Irvine Bl.</p> <p>0.66 (0.75) B (C)</p>
<p>571 Portola Springs & Portola Pkwy.</p> <p>0.39 (0.32) A (A)</p>	<p>572 Modjeska-A St. & Irvine Bl.</p> <p>0.32 (0.61) A (B)</p>	<p>574 O St. & LN St.</p> <p>0.24 (0.19) A (A)</p>
<p>575 O St. & LV St.</p> <p>9.4 (10.4 Sec) A (B)</p>	<p>576 O St. & C St.</p> <p>0.3 (0.8 Sec.) A (B)</p>	<p>577 Pusan Way-Z St. & Irvine Bl.</p> <p>0.64 (0.52) B (A)</p>
<p>579 A-02 St. & Irvine Bl.</p> <p>0.78 (0.83) C (D)</p>	<p>650 O St. & C St.</p> <p>6.34 (5.44 Sec.) A (A)</p>	<p>651 C St. & Trabuco Rd.</p> <p>9.3 (12 Sec.) A (B)</p>

**ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan**

<p>652 LY Street & Trabuco Rd.</p> <p>9 (10 Sec.) A (A)</p>	<p>653 LY Street & Loop Road</p> <p>8.6 (8.9 Sec.) A (A)</p>	<p>654 C St. & LV St.</p> <p>7.1 (7.5 Sec.) A (A)</p>
<p>655 O St. & 8th St.</p> <p>9.3 (10.3 Sec.) A (B)</p>	<p>656 C St. & 8th St.</p> <p>7 (7.1 Sec.) A (A)</p>	<p>657 GP Blvd N/S Conn & GP Blvd E/W</p> <p>8.6 (9.5 Sec.) A (A)</p>

Appendix C

Intersections Turn Movements and Level of Service

Alternative 5

2017 Base + 688 Acre GP + FivePoint Option 1

ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

<p>Legend</p> <p>ICU, or Delay for unsignalized</p> <p>Level of Service or "U" for unsignalized</p>	<p>282 Jeffrey Rd. & Portola Pkwy.</p> <p>0.51 (0.43) A (A)</p>	<p>283 Jeffrey Rd. & Irvine Bl.</p> <p>0.61 (0.6) B (A)</p>
<p>284 Jeffrey Rd. & Bryan Av.</p> <p>0.61 (0.51) B (A)</p>	<p>285 Jeffrey Rd. & Trabuco Rd.</p> <p>0.66 (0.65) B (B)</p>	<p>286 Jeffrey Rd. & Roosevelt</p> <p>0.76 (0.67) C (B)</p>
<p>287 Jeffrey Rd. & I-5 NB Ramps</p> <p>0.62 (0.78) B (C)</p>	<p>288 Jeffrey Rd. & Walnut Av./I-5 SB Ramps</p> <p>0.67 (0.85) B (D)</p>	<p>289 Jeffrey Rd. & ICD</p> <p>0.63 (0.8) B (C)</p>
<p>290 Jeffrey Rd. & Barranca Pkwy.</p> <p>0.81 (0.77) D (C)</p>	<p>291 Jeffrey Rd. & Alton Pkwy.</p> <p>0.92 (0.86) E (D)</p>	<p>293 Jeffrey Rd. & I-405 NB Ramps</p> <p>0.79 (0.8) C (C)</p>
<p>294 University Dr. & I-405 SB Ramps</p> <p>0.69 (0.64) B (B)</p>	<p>300 Sand Canyon. Av. & Portola Pkwy.</p> <p>0.35 (0.39) A (A)</p>	<p>301 Sand Canyon. Av. & Irvine Bl.</p> <p>0.69 (0.64) B (B)</p>

ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

<p>302 Sand Canyon. Av. & Trabuco Pkwy.</p> <p>0.75 (0.79) C (C)</p>	<p>303 Sand Canyon. Av. & I-5 NB Ramps</p> <p>0.64 (0.75) B (C)</p>	<p>304 Sand Canyon. Av. & Marine Wy.</p> <p>0.74 (0.79) C (C)</p>
<p>305 Sand Canyon. Av. & I-5 SB Ramps</p> <p>0.69 (0.74) B (C)</p>	<p>306 Sand Canyon. Av. & Oak Cyn./Laguna Cyn. Rd.</p> <p>0.57 (0.73) A (C)</p>	<p>307 Sand Canyon. Av. & ICD</p> <p>0.6 (0.6) A (A)</p>
<p>309 Sand Canyon. Av. & Barranca Pkwy.</p> <p>0.6 (0.56) A (A)</p>	<p>310 Sand Canyon. Av. & Alton Pkwy.</p> <p>0.68 (0.72) B (C)</p>	<p>311 Sand Canyon. Av. & I-405 NB Ramps</p> <p>0.63 (0.48) B (A)</p>
<p>312 Sand Canyon. Av. & I-405 SB Ramps</p> <p>0.78 (0.59) C (A)</p>	<p>313 Laguna Canyon Rd. & ICD</p> <p>0.24 (0.31) A (A)</p>	<p>314 Laguna Canyon Rd. & Barranca Pkwy.</p> <p>0.34 (0.35) A (A)</p>
<p>315 Laguna Canyon Rd. & Alton Pkwy.</p> <p>0.48 (0.42) A (A)</p>	<p>316 SR-133 SB Ramps & Irvine Bl.</p> <p>0.64 (0.53) B (A)</p>	<p>317 SR-133 NB Ramps & Irvine Bl.</p> <p>0.58 (0.73) A (C)</p>

ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

<p>318 Banting & Barranca Pkwy.</p> <p>0.4 (0.6) sec B (A)</p>	<p>319 Banting & Alton Pkwy.</p> <p>0.4 (0.6) sec A (A)</p>	<p>321 Laguna Canyon Rd. & Old Laguna Cyn. Rd.</p> <p>0.4 (0.6) sec D (D)</p>
<p>327 Barranca Pkwy. & Technology</p> <p>0.46 (0.54) A (A)</p>	<p>328 Barranca Pkwy. & I-5 HOV Ramp</p> <p>0.42 (0.32) A (A)</p>	<p>329 Barranca Pkwy. & ICD</p> <p>0.47 (0.55) A (A)</p>
<p>330 Barranca Pkwy. & Pacifica</p> <p>0.53 (0.63) A (B)</p>	<p>331 ICD & Gateway Bl.</p> <p>0.39 (0.43) A (A)</p>	<p>333 Pacifica & Gateway Bl.</p> <p>0.59 (0.61) A (B)</p>
<p>338 Alton Pkwy. & Irvine Bl.</p> <p>0.74 (0.81) C (D)</p>	<p>339 Alton Pkwy. & Toledo Wy.</p> <p>0.49 (0.53) A (A)</p>	<p>340 Alton Pkwy. & Jeronimo Rd.</p> <p>0.49 (0.46) A (A)</p>
<p>341 Alton Pkwy. & Barranca Pkwy./Muirlands Bl.</p> <p>0.52 (0.71) A (C)</p>	<p>343 Alton Pkwy. & Ada</p> <p>0.38 (0.5) A (A)</p>	<p>344 Alton Pkwy. & Technology Dr. W.</p> <p>0.43 (0.58) A (A)</p>

ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

<p>345 Alton Pkwy. & I-5 NB Ramps</p> <p>0.65 (0.42) B (A)</p>	<p>346 Alton Pkwy. & Enterprise</p> <p>0.6 (0.6) A (A)</p>	<p>348 Alton Pkwy. & ICD</p> <p>0.63 (0.55) B (A)</p>
<p>350 Alton Pkwy. & Pacifica</p> <p>0.61 (0.42) B (A)</p>	<p>351 Fortune Dr./I-5 SB Ramps & Enterprise</p> <p>0.5 (0.6) A (A)</p>	<p>357 Enterprise Dr. & Fortune Dr./I-405 NB Ramps</p> <p>0.41 (0.55) A (A)</p>
<p>358 ICD & Enterprise Dr.</p> <p>0.63 (0.57) B (A)</p>	<p>359 ICD & I-405 SB Ramps</p> <p>0.63 (0.65) B (B)</p>	<p>360 ICD & Research Dr.</p> <p>0.59 (0.6) A (A)</p>
<p>362 Bake Pkwy. & Irvine Bl.</p> <p>0.74 (0.75) C (C)</p>	<p>363 Bake Pkwy. & Toledo Wy.</p> <p>0.83 (0.61) D (B)</p>	<p>364 Bake Pkwy. & Jeronimo Rd.</p> <p>0.74 (0.77) C (C)</p>
<p>365 Bake Pkwy. & Muirlands Bl.</p> <p>0.61 (0.67) B (B)</p>	<p>366 Bake Pkwy. & Rockfield Bl.</p> <p>0.57 (0.68) A (B)</p>	<p>367 Bake Pkwy. & I-5 NB Ramps</p> <p>0.86 (0.67) D (B)</p>

ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

<p>368 Bake Pkwy. & I-5 SB Ramps</p> <p>0.73 (0.77) C (C)</p>	<p>371 Bake Pkwy. & Research Dr.</p> <p>0.44 (0.48) A (A)</p>	<p>372 Bake Pkwy. & ICD</p> <p>0.33 (0.36) A (A)</p>
<p>406 Laguna Canyon Rd. & Lake Forest Dr.</p> <p>0.95 (0.83) E (D)</p>	<p>409 Bake Pkwy. & Commercentre Dr.</p> <p>0.69 (0.78) B (C)</p>	<p>444 Sand Canyon Av. & Burt Rd.</p> <p>0.74 (0.65) C (B)</p>
<p>481 Laguna Canyon Rd. & Technology Dr.</p> <p>0.27 (0.25) A (A)</p>	<p>482 Road A & Trabuco Rd.</p> <p>0.32 (0.29) A (A)</p>	<p>483 Road C & Trabuco Rd.</p> <p>0.24 (0.28) A (A)</p>
<p>484 Sand Canyon Av. & Roosevelt</p> <p>0.45 (0.48) A (A)</p>	<p>485 Sand Canyon Av. & Nightmist</p> <p>0.75 (0.45) C (A)</p>	<p>514 Alton Pkwy. & Rancho Pkwy.</p> <p>0.48 (0.38) A (A)</p>
<p>518 Alton Pkwy. & Commercentre</p> <p>0.51 (0.59) A (A)</p>	<p>555 Bake Pkwy. & Rancho Pkwy. S</p> <p>0.66 (0.66) B (B)</p>	<p>556 Ridge Valley & Portola Pkwy.</p> <p>0.39 (0.41) A (A)</p>

ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

<p>558 Ridge Valley-O St. & Irvine Bl.</p> <p>0.6 (0.8) A (C)</p>	<p>559 O St. & Trabuco Rd.</p> <p>0.5 (0.46) A (A)</p>	<p>560 O St. & Marine Wy.</p> <p>0.19 (0.33) A (A)</p>
<p>561 LY Street & Irvine Bl.</p> <p>0.43 (0.6) A (A)</p>	<p>562 Great Park Bl. W. & Marine Wy.</p> <p>9.4 (11.7 Sec.) A (B)</p>	<p>563 B St. & Irvine Bl.</p> <p>0.65 (0.75) B (C)</p>
<p>571 Portola Springs & Portola Pkwy.</p> <p>0.39 (0.32) A (A)</p>	<p>572 Modjeska-A St. & Irvine Bl.</p> <p>0.33 (0.61) A (B)</p>	<p>574 O St. & LN St.</p> <p>0.26 (0.2) A (A)</p>
<p>575 O St. & LV St.</p> <p>9.5 (10.3 Sec.) A (B)</p>	<p>576 O St. & C St.</p> <p>0.3 (0.8 Sec.) A (B)</p>	<p>577 Pusan Way-Z St. & Irvine Bl.</p> <p>0.63 (0.52) B (A)</p>
<p>579 A-02 St. & Irvine Bl.</p> <p>0.78 (0.83) C (D)</p>	<p>650 O St. & C St.</p> <p>6.8 (6.43 Sec.) A (A)</p>	<p>651 C St. & Trabuco Rd.</p> <p>8.2 (10 Sec.) A (B)</p>

ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan with Five Point Option 1

<p>652 LY Street & Trabuco Rd.</p> <p>8.8 (9.7 Sec.) A (A)</p>	<p>653 LY Street & Loop Road</p> <p>8.5 (8.9 Sec.) A (A)</p>	<p>654 C St. & LV St.</p> <p>7.1 (7.4 Sec.) A (A)</p>
<p>655 O St. & 8th St.</p> <p>9.2 (10.1 Sec.) A (B)</p>	<p>656 C St. & 8th St.</p> <p>6.9 (7.1 Sec.) A (A)</p>	<p>657 GP Blvd N/S Conn & GP Blvd E/W</p> <p>8.6 (10.1 Sec.)</p>

Appendix C

Intersections Turn Movements and Level of Service

Alternative 6

2017 Base + 688 Acre GP + Connector Road

ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

<p>Legend</p> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ AM (PM) ↷ AM (PM) ↸ AM (PM)</p> <p>N/S Street</p> </div> <div> <p>↶ AM (PM) ↷ AM (PM) ↸ AM (PM) ↹ E/W Street</p> </div> </div> <p>ICU, or Delay for unsignalized</p> <p>Level of Service or "U" for unsignalized</p>	<p>282 Jeffrey Rd. & Portola Pkwy.</p> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 22 (24) ↷ 22 (14) ↸ 33 (12)</p> <p>Jeffrey Rd.</p> </div> <div> <p>↶ 36 (4) ↷ 721 (691) ↸ 37 (64)</p> <p>Portola Pkwy.</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 25 (15) ↷ 434 (584) ↸ 464 (421)</p> </div> <div> <p>↶ 803 (545) ↷ 29 (11) ↸ 15 (74)</p> </div> </div> <p>0.52 (0.43) A (A)</p>	<p>283 Jeffrey Rd. & Irvine Bl.</p> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 32 (62) ↷ 715 (398) ↸ 348 (209)</p> <p>Jeffrey Rd.</p> </div> <div> <p>↶ 217 (338) ↷ 1669 (1614) ↸ 314 (253)</p> <p>Irvine Bl.</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 70 (67) ↷ 842 (1228) ↸ 251 (260)</p> </div> <div> <p>↶ 199 (389) ↷ 543 (767) ↸ 180 (246)</p> </div> </div> <p>0.61 (0.6) B (A)</p>
<p>284 Jeffrey Rd. & Bryan Av.</p> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 182 (157) ↷ 1041 (678) ↸ 56 (84)</p> <p>Jeffrey Rd.</p> </div> <div> <p>↶ 112 (87) ↷ 281 (165) ↸ 438 (188)</p> <p>Bryan Av.</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 250 (160) ↷ 130 (226) ↸ 160 (154)</p> </div> <div> <p>↶ 168 (318) ↷ 564 (1203) ↸ 119 (390)</p> </div> </div> <p>0.62 (0.5) B (A)</p>	<p>285 Jeffrey Rd. & Trabuco Rd.</p> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 266 (131) ↷ 1361 (919) ↸ 121 (44)</p> <p>Jeffrey Rd.</p> </div> <div> <p>↶ 52 (146) ↷ 702 (415) ↸ 595 (346)</p> <p>Trabuco Rd.</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 171 (304) ↷ 440 (512) ↸ 174 (165)</p> </div> <div> <p>↶ 132 (204) ↷ 667 (1600) ↸ 279 (704)</p> </div> </div> <p>0.67 (0.64) B (B)</p>	<p>286 Jeffrey Rd. & Roosevelt</p> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 77 (98) ↷ 1879 (1195) ↸ 140 (142)</p> <p>Jeffrey Rd.</p> </div> <div> <p>↶ 172 (134) ↷ 246 (218) ↸ 674 (293)</p> <p>Roosevelt</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 60 (122) ↷ 178 (292) ↸ 242 (262)</p> </div> <div> <p>↶ 149 (404) ↷ 950 (2193) ↸ 294 (576)</p> </div> </div> <p>0.76 (0.67) C (B)</p>
<p>287 Jeffrey Rd. & I-5 NB Ramps</p> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 630 (340) ↷ 2019 (1442)</p> <p>Jeffrey Rd.</p> </div> <div> <p>↶ 511 (801) ↷ 581 (488)</p> <p>I-5 NB Ramps</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 929 (2439) ↷ 210 (290)</p> </div> </div> <p>0.62 (0.78) B (C)</p>	<p>288 Jeffrey Rd. & Walnut Av./I-5 SB Ramps</p> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 254 (617) ↷ 1841 (1014) ↸ 447 (341)</p> <p>Jeffrey Rd.</p> </div> <div> <p>↶ 271 (587) ↷ 31 (109) ↸ 330 (436)</p> <p>Walnut Av./I-5 SB Ramps</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 124 (299) ↷ 279 (272) ↸ 199 (171)</p> </div> <div> <p>↶ 65 (214) ↷ 735 (1764) ↸ 114 (207)</p> </div> </div> <p>0.67 (0.86) B (D)</p>	<p>289 Jeffrey Rd. & ICD</p> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 388 (184) ↷ 1612 (1115) ↸ 341 (243)</p> <p>Jeffrey Rd.</p> </div> <div> <p>↶ 145 (497) ↷ 732 (1444) ↸ 203 (255)</p> <p>ICD</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 184 (350) ↷ 751 (808) ↸ 225 (226)</p> </div> <div> <p>↶ 170 (292) ↷ 691 (1533) ↸ 228 (259)</p> </div> </div> <p>0.63 (0.8) B (C)</p>
<p>290 Jeffrey Rd. & Barranca Pkwy.</p> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 377 (229) ↷ 1733 (1284) ↸ 65 (81)</p> <p>Jeffrey Rd.</p> </div> <div> <p>↶ 53 (77) ↷ 736 (609) ↸ 163 (156)</p> <p>Barranca Pkwy.</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 177 (476) ↷ 551 (746) ↸ 304 (250)</p> </div> <div> <p>↶ 257 (342) ↷ 810 (1577) ↸ 154 (163)</p> </div> </div> <p>0.81 (0.77) D (C)</p>	<p>291 Jeffrey Rd. & Alton Pkwy.</p> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 155 (203) ↷ 1873 (1170) ↸ 289 (407)</p> <p>Jeffrey Rd.</p> </div> <div> <p>↶ 139 (157) ↷ 885 (820) ↸ 581 (413)</p> <p>Alton Pkwy.</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 148 (268) ↷ 539 (890) ↸ 516 (352)</p> </div> <div> <p>↶ 421 (643) ↷ 882 (1580) ↸ 181 (337)</p> </div> </div> <p>0.92 (0.86) E (D)</p>	<p>293 Jeffrey Rd. & I-405 NB Ramps</p> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 1360 (440) ↷ 1867 (1443)</p> <p>Jeffrey Rd.</p> </div> <div> <p>↶ 112 (338) ↷ 1273 (1107)</p> <p>I-405 NB Ramps</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 1118 (214) ↷ 290 (110)</p> </div> </div> <p>0.79 (0.8) C (C)</p>
<p>294 University Dr. & I-405 SB Ramps</p> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 340 (280) ↷ 2722 (2204)</p> <p>University Dr.</p> </div> <div> <p>↶ 370 (539) ↷ 108 (106)</p> <p>I-405 SB Ramps</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 1050 (175) ↷ 1000 (129)</p> </div> </div> <p>0.69 (0.64) B (B)</p>	<p>300 Sand Canyon. Av. & Portola Pkwy.</p> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 1 (3) ↷ 7 (13) ↸ 2 (4)</p> <p>Sand Canyon. Av.</p> </div> <div> <p>↶ 4 (1) ↷ 648 (475) ↸ 563 (183)</p> <p>Portola Pkwy.</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 3 (1) ↷ 300 (578) ↸ 250 (54)</p> </div> <div> <p>↶ 101 (372) ↷ 3 (1) ↸ 218 (398)</p> </div> </div> <p>0.35 (0.39) A (A)</p>	<p>301 Sand Canyon. Av. & Irvine Bl.</p> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 158 (85) ↷ 884 (311) ↸ 288 (75)</p> <p>Sand Canyon. Av.</p> </div> <div> <p>↶ 98 (231) ↷ 1171 (1510) ↸ 572 (413)</p> <p>Irvine Bl.</p> </div> </div> <div style="display: flex; justify-content: space-around;"> <div> <p>↶ 112 (183) ↷ 1053 (913) ↸ 324 (206)</p> </div> <div> <p>↶ 171 (505) ↷ 320 (686) ↸ 218 (461)</p> </div> </div> <p>0.68 (0.64) B (B)</p>

ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

<p>302 Sand Canyon. Av. & Trabuco Pkwy.</p> <p>0.75 (0.78) C (C)</p>	<p>303 Sand Canyon. Av. & I-5 NB Ramps</p> <p>0.64 (0.74) B (C)</p>	<p>304 Sand Canyon. Av. & Marine Wy.</p> <p>0.74 (0.79) C (C)</p>
<p>305 Sand Canyon. Av. & I-5 SB Ramps</p> <p>0.69 (0.74) B (C)</p>	<p>306 Sand Canyon. Av. & Oak Cyn./Laguna Cyn. Rd.</p> <p>0.57 (0.73) A (C)</p>	<p>307 Sand Canyon. Av. & ICD</p> <p>0.59 (0.6) A (A)</p>
<p>309 Sand Canyon. Av. & Barranca Pkwy.</p> <p>0.6 (0.56) A (A)</p>	<p>310 Sand Canyon. Av. & Alton Pkwy.</p> <p>0.68 (0.71) B (C)</p>	<p>311 Sand Canyon. Av. & I-405 NB Ramps</p> <p>0.63 (0.48) B (A)</p>
<p>312 Sand Canyon. Av. & I-405 SB Ramps</p> <p>0.78 (0.59) C (A)</p>	<p>313 Laguna Canyon Rd. & ICD</p> <p>0.24 (0.31) A (A)</p>	<p>314 Laguna Canyon Rd. & Barranca Pkwy.</p> <p>0.34 (0.35) A (A)</p>
<p>315 Laguna Canyon Rd. & Alton Pkwy.</p> <p>0.48 (0.42) A (A)</p>	<p>316 SR-133 SB Ramps & Irvine Bl.</p> <p>0.64 (0.52) B (A)</p>	<p>317 SR-133 NB Ramps & Irvine Bl.</p> <p>0.57 (0.74) A (C)</p>

ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

<p>318 Banting & Barranca Pkwy.</p> <p>0.4 (0.6) sec B (A)</p>	<p>319 Banting & Alton Pkwy.</p> <p>0.4 (0.6) sec A (A)</p>	<p>321 Laguna Canyon Rd. & Old Laguna Cyn. Rd.</p> <p>0.4 (0.6) sec D (D)</p>
<p>327 Barranca Pkwy. & Technology</p> <p>0.46 (0.54) A (A)</p>	<p>328 Barranca Pkwy. & I-5 HOV Ramp</p> <p>0.43 (0.32) A (A)</p>	<p>329 Barranca Pkwy. & ICD</p> <p>0.47 (0.55) A (A)</p>
<p>330 Barranca Pkwy. & Pacifica</p> <p>0.53 (0.63) A (B)</p>	<p>331 ICD & Gateway Bl.</p> <p>0.39 (0.44) A (A)</p>	<p>333 Pacifica & Gateway Bl.</p> <p>0.6 (0.62) A (B)</p>
<p>338 Alton Pkwy. & Irvine Bl.</p> <p>0.74 (0.83) C (D)</p>	<p>339 Alton Pkwy. & Toledo Wy.</p> <p>0.49 (0.53) A (A)</p>	<p>340 Alton Pkwy. & Jeronimo Rd.</p> <p>0.49 (0.46) A (A)</p>
<p>341 Alton Pkwy. & Barranca Pkwy./Muirlands Bl.</p> <p>0.53 (0.71) A (C)</p>	<p>343 Alton Pkwy. & Ada</p> <p>0.38 (0.49) A (A)</p>	<p>344 Alton Pkwy. & Technology Dr. W.</p> <p>0.43 (0.58) A (A)</p>

ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

<p>345 Alton Pkwy. & I-5 NB Ramps</p> <p>0.65 (0.42) B (A)</p>	<p>346 Alton Pkwy. & Enterprise</p> <p>0.6 (0.59) A (A)</p>	<p>348 Alton Pkwy. & ICD</p> <p>0.62 (0.56) B (A)</p>
<p>350 Alton Pkwy. & Pacifica</p> <p>0.6 (0.43) A (A)</p>	<p>351 Fortune Dr./I-5 SB Ramps & Enterprise</p> <p>0.5 (0.6) A (A)</p>	<p>357 Enterprise Dr. & Fortune Dr./I-405 NB Ramps</p> <p>0.41 (0.55) A (A)</p>
<p>358 ICD & Enterprise Dr.</p> <p>0.63 (0.57) B (A)</p>	<p>359 ICD & I-405 SB Ramps</p> <p>0.63 (0.65) B (B)</p>	<p>360 ICD & Research Dr.</p> <p>0.59 (0.6) A (A)</p>
<p>362 Bake Pkwy. & Irvine Bl.</p> <p>0.74 (0.74) C (C)</p>	<p>363 Bake Pkwy. & Toledo Wy.</p> <p>0.83 (0.61) D (B)</p>	<p>364 Bake Pkwy. & Jeronimo Rd.</p> <p>0.74 (0.76) C (C)</p>
<p>365 Bake Pkwy. & Muirlands Bl.</p> <p>0.61 (0.67) B (B)</p>	<p>366 Bake Pkwy. & Rockfield Bl.</p> <p>0.57 (0.68) A (B)</p>	<p>367 Bake Pkwy. & I-5 NB Ramps</p> <p>0.86 (0.66) D (B)</p>

ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

<p>368 Bake Pkwy. & I-5 SB Ramps</p> <p>0.73 (0.77) C (C)</p>	<p>371 Bake Pkwy. & Research Dr.</p> <p>0.44 (0.48) A (A)</p>	<p>372 Bake Pkwy. & ICD</p> <p>0.33 (0.36) A (A)</p>
<p>406 Laguna Canyon Rd. & Lake Forest Dr.</p> <p>0.94 (0.83) E (D)</p>	<p>409 Bake Pkwy. & Commercentre Dr.</p> <p>0.69 (0.77) B (C)</p>	<p>444 Sand Canyon Av. & Burt Rd.</p> <p>0.74 (0.65) C (B)</p>
<p>481 Laguna Canyon Rd. & Technology Dr.</p> <p>0.27 (0.25) A (A)</p>	<p>482 Road A & Trabuco Rd.</p> <p>0.32 (0.29) A (A)</p>	<p>483 Road C & Trabuco Rd.</p> <p>0.24 (0.29) A (A)</p>
<p>484 Sand Canyon Av. & Roosevelt</p> <p>0.45 (0.49) A (A)</p>	<p>485 Sand Canyon Av. & Nightmist</p> <p>0.75 (0.45) C (A)</p>	<p>514 Alton Pkwy. & Rancho Pkwy.</p> <p>0.49 (0.38) A (A)</p>
<p>518 Alton Pkwy. & Commercentre</p> <p>0.51 (0.58) A (A)</p>	<p>555 Bake Pkwy. & Rancho Pkwy. S</p> <p>0.66 (0.66) B (B)</p>	<p>556 Ridge Valley & Portola Pkwy.</p> <p>0.38 (0.4) A (A)</p>

ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

<p>558 Ridge Valley-O St. & Irvine Bl.</p> <p>0.59 (0.8) A (C)</p>	<p>559 O St. & Trabuco Rd.</p> <p>0.5 (0.46) A (A)</p>	<p>560 O St. & Marine Wy.</p> <p>0.17 (0.33) A (A)</p>
<p>561 LY Street & Irvine Bl.</p> <p>0.43 (0.6) A (A)</p>	<p>562 Great Park Bl. W. & Marine Wy.</p> <p>10.1 (11.7 Sec.) B (B)</p>	<p>563 B St. & Irvine Bl.</p> <p>0.66 (0.76) B (C)</p>
<p>571 Portola Springs & Portola Pkwy.</p> <p>0.39 (0.32) A (A)</p>	<p>572 Modjeska-A St. & Irvine Bl.</p> <p>0.33 (0.62) A (B)</p>	<p>574 O St. & LN St.</p> <p>0.24 (0.19) A (A)</p>
<p>575 O St. & LV St.</p> <p>9.2 (9.8 Sec.) A (A)</p>	<p>576 O St. & C St.</p> <p>0.4 (0.8 Sec.) A (B)</p>	<p>577 Pusan Way-Z St. & Irvine Bl.</p> <p>0.64 (0.51) B (A)</p>
<p>579 A-02 St. & Irvine Bl.</p> <p>0.78 (0.84) C (D)</p>	<p>650 O St. & C St.</p> <p>6.39 (7.99 Sec.) A (A)</p>	<p>651 C St. & Trabuco Rd.</p> <p>9.3 (12.2 Sec.) A (B)</p>

ITAM AM (PM) Intersection Volume Forecasts
2017 Baseline + 688 Acre Park Development Plan + Connector between LY & Marine Way.

<p>652 LY Street & Trabuco Rd.</p> <p>9.3 (11 Sec.) A (B)</p>	<p>653 LY Street & Loop Road</p> <p>8.5 (9.3 Sec.) A (A)</p>	<p>654 C St. & LV St.</p> <p>7.1 (7.4 Sec.) A (A)</p>
<p>655 O St. & 8th St.</p> <p>9.1 (9.7 Sec.) A (A)</p>	<p>656 C St. & 8th St.</p> <p>7 (7.1 Sec.) A (A)</p>	<p>657 GP Blvd N/S Conn & GP Blvd E/W</p> <p>9.3 (10.2 Sec.) A (B)</p>

APPENDIX D

**SIGNALIZED INTERSECTION LEVEL OF SERVICE
CALCULATION SHEETS**

Appendix D

Signalized Intersections ITAM Level of Service Calculations

Alternative 1 Existing

282 . Jeffrey Rd. at Portola Pkwy.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	430 .13*	458 .13*		
NBT	1	1700	36 .02	12 .01		
NBR	f		24	50		
SBL	1	1700	39 .02	10 .01		
SBT	1	1700	28 .02*	12 .01*		
SBR	1	1700	9 .01	24 .01		
EBL	1	1700	17 .01	9 .01*		
EBT	2	3400	377 .11*	215 .06		
EBR	1	1700	438 .26	156 .09		
WBL	2	3400	50 .01*	38 .01		
WBT	2	3400	309 .09	502 .15*		
WBR	1	1700	36 .02	4 .00		
Right Turn Adjustment			EBR	.02*		
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for EBR						
TOTAL CAPACITY UTILIZATION			.34	.35		

283 . Jeffrey Rd. at Irvine Bl.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	144 .04	315 .09*		
NBT	3	5100	346 .07*	356 .07		
NBR	f		212	207		
SBL	2	3400	157 .05*	56 .02		
SBT	3	5100	283 .06	133 .03*		
SBR	1	1700	9 .01	16 .01		
EBL	2	3400	36 .01	22 .01*		
EBT	2	3400	799 .24*	730 .21		
EBR	1	1700	209 .12	193 .11		
WBL	2	3400	264 .08*	256 .08		
WBT	2	3400	987 .29	1262 .37*		
WBR	1	1700	113 .07	151 .09		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.49	.55		

284 . Jeffrey Rd. at Bryan Av.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	99 .03*	285 .08		
NBT	3	5100	378 .07	793 .16*		
NBR	d	1700	100 .06	392 .23		
SBL	2	3400	36 .01	61 .02*		
SBT	3	5100	644 .13*	423 .08		
SBR	1	1700	83 .05	101 .06		
EBL	1	1700	225 .13*	82 .05*		
EBT	2	3400	146 .04	177 .05		
EBR	d	1700	171 .10	104 .06		
WBL	2	3400	405 .12	163 .05		
WBT	1	1700	191 .11*	147 .09*		
WBR	d	1700	87 .05	57 .03		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.45	.37		

285 . Jeffrey Rd. at Trabuco Rd.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	88 .03*	165 .05		
NBT	3	5100	467 .09	1376 .27*		
NBR	d	1700	80 .05	255 .15		
SBL	2	3400	36 .01	12 .00		
SBT	3	5100	1150 .23*	677 .13		
SBR	1	1700	184 .11	80 .05		
EBL	2	3400	138 .04*	189 .06*		
EBT	2	3400	145 .04	134 .04		
EBR	1	1700	163 .10	116 .07		
WBL	2	3400	215 .06	140 .04		
WBT	2	3400	208 .06*	139 .04*		
WBR	1	1700	16 .01	52 .03		
Right Turn Adjustment			EBR	.04*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.45	.42		

286 . Jeffrey Rd. at Roosevelt

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	200 .06*	344 .10		
NBT	4	6800	570 .08	1603 .24*		
NBR	1	1700	88 .05	291 .17		
SBL	1	1700	19 .01	58 .03*		
SBT	3	5100	1437 .28*	733 .14		
SBR	d	1700	57 .03	88 .05		
EBL	1	1700	31 .02	112 .07*		
EBT	1	1700	16 .01*	52 .03		
EBR	1	1700	254 .15	322 .19		
WBL	2	3400	324 .10*	135 .04		
WBT	1	1700	27 .02	28 .02*		
WBR	1	1700	37 .02	41 .02		
Right Turn Adjustment			EBR .08*	EBR .02*		
Clearance Interval			.05*	.05*		
Note: Assumes Right-Turn Overlap for EBR						
TOTAL CAPACITY UTILIZATION			.58	.43		

287 . Jeffrey Rd. at I-5 NB Ramps

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	652 .13	1881 .37*		
NBR	f		242	381		
SBL	0	0	0	0		
SBT	3	5100	1893 .37*	1083 .21		
SBR	f		193	86		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1.5		538 .16*	479		
WBT	0	5100	0	0	.17*	
WBR	1.5		222	413		
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION			.58	.59		

288 . Jeffrey Rd. at Walnut Av./I-5 SB Ramps289 . Jeffrey Rd. at ICD

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	74 .02*	256 .08		
NBT	3	5100	575 .11	1515 .30*		
NBR	1	1700	151 .09	264 .16		
SBL	2	3400	526 .15	287 .08*		
SBT	3	5100	1748 .39*	821 .24		
SBR	0	0	251	423 .25		
EBL	1	1700	94 .06	237 .14		
EBT	1	1700	246 .14*	211 .12*		
EBR	1	1700	246 .14	182 .11		
WBL	2	3400	365 .11*	447 .13*		
WBT	1	1700	37 .02	100 .06		
WBR	1	1700	189 .11	452 .27		
Right Turn Adjustment				WBR .10*		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.71	.78		

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	112 .03*	216 .06		
NBT	3	5100	584 .11	1297 .25*		
NBR	1	1700	202 .12	211 .12		
SBL	2	3400	432 .13	255 .08*		
SBT	3	5100	1582 .31*	1006 .20		
SBR	1	1700	232 .14	248 .15		
EBL	2	3400	141 .04	268 .08*		
EBT	3	5100	808 .16*	522 .10		
EBR	f		190	42		
WBL	2	3400	153 .05*	201 .06		
WBT	3	5100	380 .07	1386 .27*		
WBR	1	1700	167 .10	596 .35		
Right Turn Adjustment				WBR .02*		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.60	.75		

290 . Jeffrey Rd. at Barranca Pkwy.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	225	.07*	352	.10*
NBT	3	5100	762	.18	1200	.25
NBR	0	0	133		100	
SBL	2	3400	76	.02	84	.02
SBT	3	5100	1311	.34*	1024	.28*
SBR	0	0	400		383	
EBL	2	3400	288	.08*	586	.17*
EBT	2	3400	600	.18	784	.23
EBR	d	1700	317	.19	236	.14
WBL	2	3400	160	.05	200	.06
WBT	2	3400	612	.18*	710	.21*
WBR	1	1700	55	.03	113	.07
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.72		.81

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	317	.09*	504	.15*
NBT	3	5100	785	.15	1234	.24
NBR	f		271		397	
SBL	2	3400	233	.07	267	.08
SBT	3	5100	1430	.30*	983	.23*
SBR	0	0	112		211	
EBL	2	3400	179	.05	251	.07
EBT	2	3400	716	.21*	775	.23*
EBR	d	1700	464	.27	357	.21
WBL	2	3400	418	.12*	418	.12*
WBT	2	3400	613	.18	925	.27
WBR	d	1700	117	.07	129	.08
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.77		.78

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	1153	.23	1882	.37*
NBR	f		251		96	
SBL	0	0	0		0	
SBT	3	5100	1358	.27*	1261	.25
SBR	f		1378		498	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1168	.34*	1022	.30*
WBT	0	0	0		0	
WBR	1	1700	140	.08	370	.22
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.66		.72

294 . University Dr. at I-405 SB Ramps

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	1020	.20	1617	.32
NBR	f		1039		810	
SBL	0	0	0		0	
SBT	3	5100	2401	.47*	2078	.41*
SBR	f		295		235	
EBL	2	3400	305	.09*	382	.11*
EBT	0	0	0		0	
EBR	1	1700	81	.05	76	.04
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.61		.57

300 . Sand Canyon. Av. at Portola Pkwy.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	124 .04*	418 .12*		
NBT	0	0	2	0		
NBR	2	3400	191 .06	316 .09		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	164 .05*	221 .07*		
EBR	f		301	65		
WBL	2	3400	430 .13*	177 .05*		
WBT	2	3400	316 .09	205 .06		
WBR	0	0	1	0		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.27	.29		

301 . Sand Canyon. Av. at Irvine Bl.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	115 .03*	340 .10*		
NBT	3	5100	247 .05	516 .10		
NBR	2	3400	180 .05	282 .08		
SBL	2	3400	269 .08	61 .02		
SBT	2	3400	599 .18*	213 .06*		
SBR	1	1700	120 .07	76 .04		
EBL	2	3400	88 .03	137 .04*		
EBT	4	6800	887 .13*	556 .08		
EBR	1	1700	198 .12	106 .06		
WBL	2	3400	374 .11*	262 .08		
WBT	3	5100	860 .17	1248 .24*		
WBR	1	1700	83 .05	213 .13		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.50	.49		

302 . Sand Canyon. Av. at Trabuco Pkwy.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	60 .02*	152 .04		
NBT	3	5100	418 .08	1389 .27*		
NBR	f		11	3		
SBL	2	3400	10 .00	8 .00		
SBT	3	5100	1516 .30*	551 .11		
SBR	1	1700	127 .07	90 .05		
EBL	2	3400	71 .02*	136 .04*		
EBT	3	5100	7 .00	4 .00		
EBR	f		192	71		
WBL	2	3400	9 .00	11 .00		
WBT	3	5100	2 .00*	29 .01*		
WBR	d	1700	8 .00	12 .01		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.39	.37		

303 . Sand Canyon. Av. at I-5 NB Ramps

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	205 .06*	486 .14*		
NBT	2	3400	336 .10	978 .29		
NBR	0	0	3	12		
SBL	1	1700	2 .00	0 .00		
SBT	2	3400	1277 .38*	500 .15*		
SBR	1	1700	378 .22	150 .09		
EBL	1.5		192	592		
EBT	0.5	3400	17 .06*	7 .18*		
EBR	1	1700	352 .21	177 .10		
WBL	1	1700	2 .00	5 .00		
WBT	1	1700	2 .00*	0 .00*		
WBR	0	0	0	3		
Right Turn Adjustment			EBR	.10*		
Clearance Interval				.05*		.05*
Note: Assumes E/W Split Phasing						
TOTAL CAPACITY UTILIZATION			.65	.52		

304 . Sand Canyon. Av. at Marine Wy.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	2	3400	510 .15	1339 .39*		
NBR	1	1700	79 .05	90 .05		
SBL	2	3400	90 .03	74 .02*		
SBT	2	3400	1413 .42*	601 .18		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1	1700	52 .03*	64 .04*		
WBT	0	0	0	0		
WBR	1	1700	77 .05	85 .05		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.50	.50		

305 . Sand Canyon. Av. at I-5 SB Ramps

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	2	3400	314 .09	969 .29*		
NBR	d	1700	109 .06	211 .12		
SBL	2	3400	444 .13	229 .07*		
SBT	2	3400	1033 .30*	441 .13		
SBR	0	0	0	0		
EBL	1.5		274 .16*	453 .13*		
EBT	0	5100	1	1		
EBR	1.5		731 .22	271 [.00]		
WBL	0	0	0	0		
WBT	0	0	0	0		
WBR	0	0	0	0		
Right Turn Adjustment			EBR	.06*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.57	.54		

306 . Sand Canyon. Av. at Oak Cyn./Laguna Cyn. R

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	57 .03*	18 .01*		
NBT	3	5100	256 .05	649 .13		
NBR	1	1700	21 .01	8 .00		
SBL	1	1700	209 .12	35 .02		
SBT	2	3400	1211 .36*	563 .17*		
SBR	1	1700	308 .18	59 .03		
EBL	2	3400	42 .01*	240 .07*		
EBT	1	1700	8 .00	33 .02		
EBR	d	1700	23 .01	84 .05		
WBL	2	3400	8 .00	23 .01		
WBT	1	1700	37 .02*	14 .01*		
WBR	1	1700	39 .02	237 .14		
Right Turn Adjustment				WBR	.09*	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.47	.40		

307 . Sand Canyon. Av. at ICD

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	186 .05*	260 .08*		
NBT	3	5100	195 .04	337 .07		
NBR	1	1700	107 .06	46 .03		
SBL	2	3400	167 .05	139 .04		
SBT	3	5100	671 .13*	419 .08*		
SBR	1	1700	89 .05	121 .07		
EBL	2	3400	94 .03	66 .02*		
EBT	3	5100	593 .12*	464 .09		
EBR	1	1700	119 .07	128 .08		
WBL	2	3400	77 .02*	153 .05		
WBT	3	5100	360 .07	1160 .23*		
WBR	1	1700	32 .02	101 .06		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.37	.46		

309 . Sand Canyon. Av. at Barranca Pkwy.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	71	.02*	170	.05*
NBT	3	5100	614	.12	440	.09
NBR	d	1700	91	.05	82	.05
SBL	2	3400	13	.00	56	.02
SBT	3	5100	657	.13*	777	.15*
SBR	d	1700	54	.03	163	.10
EBL	2	3400	98	.03*	51	.02*
EBT	2	3400	448	.13	501	.15
EBR	1	1700	138	.08	117	.07
WBL	2	3400	125	.04	120	.04
WBT	2	3400	531	.16*	609	.18*
WBR	1	1700	91	.05	33	.02
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.39	.45	

310 . Sand Canyon. Av. at Alton Pkwy.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	203	.06*	397	.12*
NBT	3	5100	668	.13	412	.08
NBR	1	1700	453	.27	128	.08
SBL	2	3400	171	.05	42	.01
SBT	3	5100	601	.12*	901	.18*
SBR	1	1700	66	.04	141	.08
EBL	2	3400	123	.04	78	.02
EBT	3	5100	704	.14*	739	.14*
EBR	1	1700	309	.18	348	.20
WBL	2	3400	465	.14*	543	.16*
WBT	2	3400	766	.23	716	.21
WBR	1	1700	55	.03	117	.07
Right Turn Adjustment			NBR	.03*		
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.54	.65	

311 . Sand Canyon. Av. at I-405 NB Ramps

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	2	3400	1092	.32*	469	.14
NBR	f		800		265	
SBL	0	0	0		0	
SBT	2	3400	479	.14	884	.26*
SBR	f		900		931	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	0.5		52		133	
WBT	0	3400	0	.09*	0	[.12]*
WBR	1.5		248		429	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.46	.43	

312 . Sand Canyon. Av. at I-405 SB Ramps

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	133	.08	140	.08*
NBT	2	3400	1147	.34*	549	.16
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	309	.09	557	.16*
SBR	f		203		465	
EBL	1.5		751	[.29]*	186	.11*
EBT	0	3400	2	.29	0	
EBR	0.5		219		296	.17
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.68	.40	

313 . Laguna Canyon Rd. at ICD

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	38 .01	82 .02		
NBT	2	3400	51 .02*	53 .02*		
NBR	d	1700	13 .01	67 .04		
SBL	2	3400	24 .01*	57 .02*		
SBT	2	3400	34 .01	30 .01		
SBR	d	1700	8 .00	34 .02		
EBL	2	3400	49 .01	7 .00		
EBT	3	5100	581 .11*	604 .12		
EBR	d	1700	89 .05	81 .05		
WBL	2	3400	56 .02*	19 .01		
WBT	3	5100	533 .10	1070 .21*		
WBR	d	1700	67 .04	45 .03		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.21	.30		

314 . Laguna Canyon Rd. at Barranca Pkwy.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	43 .01*	47 .01*		
NBT	2	3400	70 .02	70 .02		
NBR	d	1700	32 .02	103 .06		
SBL	2	3400	19 .01	64 .02		
SBT	2	3400	76 .02*	101 .03*		
SBR	d	1700	25 .01	78 .05		
EBL	2	3400	44 .01*	31 .01*		
EBT	2	3400	424 .12	539 .16		
EBR	1	1700	63 .04	33 .02		
WBL	2	3400	113 .03	43 .01		
WBT	2	3400	672 .20*	544 .16*		
WBR	d	1700	73 .04	87 .05		
Right Turn Adjustment				Multi		.04*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.29	.30		

315 . Laguna Canyon Rd. at Alton Pkwy.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	140 .08*	106 .06*		
NBT	2	3400	141 .04	82 .02		
NBR	d	1700	43 .03	70 .04		
SBL	1	1700	17 .01	29 .02		
SBT	2	3400	79 .02*	138 .04*		
SBR	d	1700	23 .01	67 .04		
EBL	2	3400	56 .02*	37 .01		
EBT	2	3400	557 .16	667 .20*		
EBR	1	1700	113 .07	131 .08		
WBL	2	3400	88 .03	94 .03*		
WBT	2	3400	1270 .37*	698 .21		
WBR	1	1700	44 .03	38 .02		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.54	.38		

316 . SR-133 SB Ramps at Irvine Bl.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	0	0	0	0		
NBR	0	0	0	0		
SBL	1	1700	204 .12*	24 .01*		
SBT	0	0	1	0		
SBR	2	3400	315 .09	143 .04		
EBL	0	0	0	0		
EBT	4	6800	1187 .17*	886 .13		
EBR	d	1700	184 .11	66 .04		
WBL	1	1700	87 .05*	50 .03		
WBT	3	5100	901 .18	1741 .34*		
WBR	0	0	0	0		
Right Turn Adjustment				SBR		.03*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.39	.43		

317 . SR-133 NB Ramps at Irvine Bl.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	52 .03*	120 .07*		
NBT	0	0	0	0		
NBR	1	1700	58 .03	61 .04		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	1280 .38*	710 .21		
EBR	f		106	191		
WBL	0	0	0	0		
WBT	3	5100	955 .19	1656 .36*		
WBR	0	0	35	198		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.46	.48		

318 . Banting at Barranca Pkwy.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	38 .01*	133 .04		
NBT	1	1700	68 .04	499 .29*		
NBR	1	1700	21 .01	95 .06		
SBL	2	3400	728 .21	448 .13*		
SBT	2	3400	494 .28*	175 .10		
SBR	0	0	456	300 .18		
EBL	1	1700	89 .05*	294 .17*		
EBT	2	3400	315 .09	326 .10		
EBR	d	1700	27 .02	100 .06		
WBL	1	1700	41 .02	106 .06		
WBT	2	3400	276 .08*	362 .11*		
WBR	f		26	494		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.47	.75		

319 . Banting at Alton Pkwy.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	5 .00	5 .00		
NBT	1	1700	4 .00	4 .00		
NBR	1	1700	3 .00	3 .00		
SBL	2	3400	51 .02	51 .02		
SBT	1	1700	58 .03*	58 .03*		
SBR	1	1700	184 .11	184 .11		
EBL	2	3400	18 .01*	20 .01		
EBT	2	3400	345 .10	1073 .32*		
EBR	d	1700	45 .03	45 .03		
WBL	1	1700	44 .03	144 .08*		
WBT	2	3400	808 .24*	448 .13		
WBR	d	1700	49 .03	49 .03		
Right Turn Adjustment			SBR	.07*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.40	.48		

321 . Laguna Canyon Rd. at Old Laguna Cyn. Rd.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	342 .10	143 .04*		
NBT	3	5100	2447 .48*	1978 .39		
NBR	d	1700	2 .00	10 .01		
SBL	1	1700	48 .03*	123 .07		
SBT	3	5100	1714 .34	2173 .43*		
SBR	1	1700	297 .17	204 .12		
EBL	3	5100	220 .04*	171 .03*		
EBT	1	1700	39 .02	49 .03		
EBR	f		89	299		
WBL	1	1700	11 .01	6 .00		
WBT	1	1700	103 .06*	25 .01*		
WBR	1	1700	128 .08	64 .04		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.66	.56		

327 . Barranca Pkwy. at Technology

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	587	.17*	70	.02
NBT	2	3400	751	.22	540	.16*
NBR	1	1700	178	.10	257	.15
SBL	1	1700	57	.03	119	.07*
SBT	2	3400	762	.22*	652	.19
SBR	1	1700	159	.09	27	.02
EBL	2	3400	16	.00	93	.03
EBT	2	3400	39	.01	181	.05*
EBR	d	1700	85	.05	475	.28
WBL	2	3400	82	.02	177	.05*
WBT	2	3400	197	.06*	43	.01
WBR	d	1700	8	.00	52	.03
Right Turn Adjustment					EBR	.20*
Clearance Interval						.05*
TOTAL CAPACITY UTILIZATION				.50	.58	

328 . Barranca Pkwy. at I-5 HOV Ramp

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	13	.01	26	.02*
NBT	2	3400	1427	.42*	996	.29
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	3	5100	847	.17	1494	.29*
SBR	d	1700	21	.01	137	.08
EBL	1	1700	127	.07*	80	.05*
EBT	0	0	0		0	
EBR	1	1700	12	.01	12	.01
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.54	.41	

329 . Barranca Pkwy. at ICD

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	106	.03	111	.03*
NBT	2	3400	805	.24*	841	.25
NBR	1	1700	23	.01	24	.01
SBL	2	3400	54	.02*	16	.00
SBT	2	3400	240	.07	793	.23*
SBR	1	1700	364	.21	90	.05
EBL	2	3400	148	.04*	52	.02*
EBT	3	5100	188	.04	178	.03
EBR	1	1700	6	.00	63	.04
WBL	2	3400	97	.03	45	.01
WBT	3	5100	245	.05*	141	.03*
WBR	1	1700	126	.07	139	.08
Right Turn Adjustment					WBR	.04*
Clearance Interval						.05*
TOTAL CAPACITY UTILIZATION				.40	.40	

330 . Barranca Pkwy. at Pacifica

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	92	.05	48	.03*
NBT	2	3400	654	.19*	738	.22
NBR	1	1700	79	.05	84	.05
SBL	1	1700	40	.02*	43	.03
SBT	2	3400	211	.06	808	.24*
SBR	d	1700	76	.04	27	.02
EBL	2	3400	10	.00	38	.01
EBT	2	3400	8	.00	130	.07*
EBR	0	0	4		108	
WBL	2	3400	156	.05	176	.05*
WBT	1	1700	165	.10*	46	.03
WBR	1	1700	272	.16	180	.11
Right Turn Adjustment				WBR	.04*	
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION				.40	.44	

331 . ICD at Gateway Bl.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	38	.01	29	.01*
NBT	3	5100	858	.17*	788	.15
NBR	d	1700	35	.02	5	.00
SBL	2	3400	65	.02*	26	.01
SBT	3	5100	326	.06	872	.17*
SBR	1	1700	42	.02	39	.02
EBL	1	1700	150	.09*	37	.02*
EBT	2	3400	117	.03	23	.01
EBR	1	1700	24	.01	44	.03
WBL	1	1700	1	.00	29	.02
WBT	2	3400	21	.01*	93	.03*
WBR	1	1700	130	.08	167	.10
Right Turn Adjustment Clearance Interval			WBR	.05* .05*	WBR	.05* .05*
TOTAL CAPACITY UTILIZATION				.39		.33

333 . Pacifica at Gateway Bl.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	206	.06*	366	.11*
NBT	2	3400	216	.06	145	.04
NBR	d	1700	7	.00	7	.00
SBL	2	3400	122	.04	20	.01
SBT	2	3400	133	.04*	145	.04*
SBR	d	1700	49	.03	602	.35
EBL	1	1700	547	.32*	102	.06*
EBT	2	3400	254	.07	14	.00
EBR	1	1700	144	.08	76	.04
WBL	1	1700	23	.01	7	.00
WBT	1	1700	30	.02*	154	.09*
WBR	1	1700	40	.02	110	.06
Right Turn Adjustment Clearance Interval				.05*	SBR	.26* .05*
TOTAL CAPACITY UTILIZATION				.49		.61

338 . Alton Pkwy. at Irvine Bl.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	74	.02*	547	.16*
NBT	0	0	0		0	
NBR	f		103		230	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	984	.19*	708	.14
EBR	1	1700	487	.29	63	.04
WBL	2	3400	371	.11*	140	.04
WBT	3	5100	865	.17	1412	.28*
WBR	0	0	0		0	
Right Turn Adjustment Clearance Interval			EBR	.08* .05*		.05*
TOTAL CAPACITY UTILIZATION				.45		.49

339 . Alton Pkwy. at Toledo Wy.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	51	.03*	21	.01
NBT	3	5100	400	.08	784	.15*
NBR	f		143		358	
SBL	1	1700	45	.03	26	.02*
SBT	3	5100	662	.13*	384	.08
SBR	0	0	10		4	
EBL	1	1700	1	.00	5	.00
EBT	1	1700	4	.02*	36	.06*
EBR	0	0	22		63	
WBL	1	1700	260	.15*	137	.08*
WBT	1	1700	46	.03	15	.01
WBR	1	1700	112	.07	71	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.38		.36

340 . Alton Pkwy. at Jeronimo Rd.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	88 .05*	8 .00		
NBT	3	5100	943 .18	930 .18*		
NBR	f		268	355		
SBL	2	3400	73 .02	59 .02*		
SBT	3	5100	736 .15*	867 .17		
SBR	0	0	25	1		
EBL	1	1700	5 .00	18 .01		
EBT	1	1700	2 .00*	23 .01*		
EBR	f		9	71		
WBL	2	3400	353 .10*	277 .08*		
WBT	1	1700	29 .02	7 .00		
WBR	1	1700	95 .06	96 .06		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.35	.34		

341 . Alton Pkwy. at Barranca Pkwy./Muirlands Bl.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	16 .01	50 .03*		
NBT	3	5100	1067 .21*	1103 .22		
NBR	f		194	178		
SBL	2	3400	77 .02*	64 .02		
SBT	3	5100	662 .13	1308 .26*		
SBR	f		802	183		
EBL	2	3400	263 .08*	263 .08*		
EBT	2	3400	105 .03	267 .08		
EBR	d	1700	41 .02	59 .03		
WBL	2	3400	102 .03	215 .06		
WBT	2	3400	236 .08*	135 .08*		
WBR	0	0	40	122		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.44	.50		

343 . Alton Pkwy. at Ada

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	394 .12*	128 .04		
NBT	3	5100	1186 .23	1284 .25*		
NBR	d	1700	18 .01	68 .04		
SBL	1	1700	10 .01	45 .03*		
SBT	3	5100	886 .17*	1216 .24		
SBR	d	1700	12 .01	21 .01		
EBL	1	1700	14 .01*	41 .02*		
EBT	1	1700	6 .00	35 .02		
EBR	1	1700	73 .04	274 .16		
WBL	1	1700	7 .00	43 .03		
WBT	1	1700	5 .01*	21 .03*		
WBR	0	0	5	37		
Right Turn Adjustment				EBR	.11*	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.36	.49		

344 . Alton Pkwy. at Technology Dr. W.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	496 .15	463 .14*		
NBT	3	5100	1416 .28*	804 .16		
NBR	1	1700	650 .38	98 .06		
SBL	1	1700	19 .01*	6 .00		
SBT	4	6800	787 .12	1071 .16*		
SBR	1	1700	92 .05	155 .09		
EBL	1	1700	89 .05*	307 .18*		
EBT	2	3400	72 .02	42 .01		
EBR	2	3400	154 .05	993 .29		
WBL	2	3400	144 .04	456 .13		
WBT	2	3400	62 .02*	87 .03*		
WBR	d	1700	14 .01	5 .00		
Right Turn Adjustment			NBR	.06*	EBR	.07*
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for EBR						
TOTAL CAPACITY UTILIZATION			.47	.63		

345 . Alton Pkwy. at I-5 NB Ramps

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	2113	.41*	1188	.23
NBR	f		106		427	
SBL	0	0	0	0		
SBT	3	5100	846	.17	1557	.31*
SBR	f		257		1001	
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1.5		601		260	.08*
WBT	0	5100	0	.20*	0	
WBR	1.5		404		150	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.66		.44

346 . Alton Pkwy. at Enterprise

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	1040	.20*	836	.16*
NBR	1	1700	37	.02	350	.21
SBL	1	1700	148	.09*	527	.31*
SBT	3	5100	1290	.25	1230	.24
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	2	3400	203	.06*	132	.04*
WBT	0	0	0	0	0	
WBR	2	3400	1284	.38	769	.23
Right Turn Adjustment			WBR	.23*	NBR	.02*
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for WBR						
TOTAL CAPACITY UTILIZATION				.63		.58

348 . Alton Pkwy. at ICD

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	41	.01*	17	.01
NBT	3	5100	452	.09	651	.13*
NBR	1	1700	73	.04	266	.16
SBL	2	3400	202	.06	650	.19*
SBT	3	5100	812	.16*	632	.12
SBR	1	1700	349	.21	102	.06
EBL	2	3400	96	.03	324	.10*
EBT	3	5100	335	.07*	861	.17
EBR	1	1700	5	.00	41	.02
WBL	2	3400	855	.25*	163	.05
WBT	3	5100	1419	.28	726	.14*
WBR	1	1700	775	.46	573	.34
Right Turn Adjustment			Multi	.13*	WBR	.06*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.67		.67

350 . Alton Pkwy. at Pacifica

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	38	.01*	148	.04
NBT	3	5100	272	.05	772	.15*
NBR	d	1700	88	.05	172	.10
SBL	2	3400	37	.01	46	.01*
SBT	2	3400	652	.19*	400	.12
SBR	1	1700	92	.05	132	.08
EBL	2	3400	67	.02	193	.06
EBT	2	3400	150	.04*	214	.06*
EBR	d	1700	85	.05	116	.07
WBL	1	1700	128	.08*	125	.07*
WBT	2	3400	142	.04	203	.06
WBR	d	1700	22	.01	56	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.37		.34

351 . Fortune Dr./I-5 SB Ramps at Enterprise357 . Enterprise Dr. at Fortune Dr./I-405 NB Ramps

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	17	.01*	113	.03*
NBT	2	3400	6	.00	66	.03
NBR	0	0	8		48	
SBL	2	3400	77	.02	202	.06
SBT	1	1700	311	.18*	163	.10*
SBR	f		1364		465	
EBL	1	1700	113	.07*	583	.34*
EBT	2	3400	50	.01	240	.07
EBR	1	1700	24	.01	41	.02
WBL	1	1700	8	.00	47	.03
WBT	2	3400	32	.01*	311	.09*
WBR	1	1700	11	.01	101	.06
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.32	.61	

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	78	.05	96	.06
NBT	1	1700	270	.16*	129	.08*
NBR	f		1365		1062	
SBL	1	1700	11	.01*	1	.00
SBT	2	3400	9	.01	13	.00
SBR	0	0	8		1	
EBL	1	1700	6	.00	2	.00
EBT	1	1700	29	.02*	22	.01*
EBR	1	1700	2	.00	2	.00
WBL	1.5		116	[.05]*	76	[.03]*
WBT	0.5	3400	40	.05	17	.03
WBR	f		8		4	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.29	.17	

358 . ICD at Enterprise Dr.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	2	3400	1770	.52*	1077	.32*
NBR	f		411		1074	
SBL	1	1700	6	.00	50	.03*
SBT	3	5100	486	.10	1058	.21
SBR	f		0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1	1700	56	.03*	271	.16*
WBT	0	0	0		0	
WBR	f		855		160	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.60	.56	

359 . ICD at I-405 SB Ramps

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	1264	.25*	1558	.31
NBR	f		34		49	
SBL	0	0	0		0	
SBT	2	3400	432	.13	1196	.35*
SBR	f		119		382	
EBL	2	3400	931	.27*	577	.17*
EBT	0	0	0		0	
EBR	f		787		818	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.57	.57	

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	0	.00	0	.00
NBT	3	5100	966	.19*	1260	.25*
NBR	d	1700	22	.01	16	.01
SBL	2	3400	293	.09*	205	.06*
SBT	3	5100	940	.18	1327	.26
SBR	1	1700	0	.00	0	.00
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1	1700	25	.01*	33	.02*
WBT	0	0	0		0	
WBR	f		183		513	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.34		.38

362 . Bake Pkwy. at Irvine Bl.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	294	.17	124	.07
NBT	3	5100	1839	.38*	1267	.36*
NBR	0	0	102		588	
SBL	2	3400	35	.01*	199	.06*
SBT	3	5100	979	.19	1474	.29
SBR	1	1700	412	.24	644	.38
EBL	2	3400	488	.14*	501	.15
EBT	3	5100	146	.03	752	.15*
EBR	1	1700	63	.04	246	.14
WBL	2	3400	765	.23	329	.10*
WBT	3	5100	763	.15*	334	.07
WBR	1	1700	160	.09	109	.06
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.73		.72

363 . Bake Pkwy. at Toledo Wy.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	279	.16*	27	.02*
NBT	3	5100	1993	.39	1812	.36
NBR	d	1700	38	.02	320	.19
SBL	1	1700	24	.01	63	.04
SBT	3	5100	1626	.32*	2064	.40*
SBR	d	1700	221	.13	40	.02
EBL	2	3400	34	.01	203	.06
EBT	2	3400	11	.00*	349	.10*
EBR	1	1700	9	.01	132	.08
WBL	1	1700	263	.15*	67	.04*
WBT	2	3400	298	.10	27	.02
WBR	0	0	43		68	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.68		.61

364 . Bake Pkwy. at Jeronimo Rd.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	398	.23*	52	.03*
NBT	3	5100	2343	.46	2060	.40
NBR	d	1700	38	.02	323	.19
SBL	1	1700	26	.02	71	.04
SBT	3	5100	1741	.34*	2148	.42*
SBR	d	1700	111	.07	45	.03
EBL	2	3400	24	.01	108	.03
EBT	2	3400	22	.01*	436	.13*
EBR	1	1700	51	.03	381	.22
WBL	1	1700	309	.18*	99	.06*
WBT	2	3400	437	.14	65	.03
WBR	0	0	51		36	
Right Turn Adjustment					EBR	.07*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.81		.76

365 . Bake Pkwy. at Muirlands Bl.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	156	.05	94	.03*
NBT	4	6800	2492	.37*	1841	.27
NBR	f		74		212	
SBL	2	3400	44	.01*	192	.06
SBT	4	6800	1844	.27	2037	.30*
SBR	f		136		69	
EBL	2	3400	27	.01*	237	.07
EBT	2	3400	86	.03	634	.19*
EBR	f		24		152	
WBL	2	3400	185	.05	90	.03*
WBT	2	3400	458	.13*	157	.05
WBR	f		109		66	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.57		.60

366 . Bake Pkwy. at Rockfield Bl.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	160	.05	28	.01*
NBT	4	6800	2721	.40*	1996	.29
NBR	f		555		290	
SBL	2	3400	79	.02*	166	.05
SBT	4	6800	2007	.30	2290	.34*
SBR	1	1700	8	.00	7	.00
EBL	1	1700	4	.00	10	.01
EBT	2	3400	6	.00*	70	.02*
EBR	f		18		297	
WBL	2	3400	177	.05*	637	.19*
WBT	2	3400	43	.01	16	.00
WBR	f		63		106	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.52		.61

367 . Bake Pkwy. at I-5 NB Ramps

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	2786	.55*	2113	.41*
NBR	f		161		975	
SBL	0	0	0		0	
SBT	3	5100	397	.08	793	.16
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1.5		152	.09*	43	.03*
WBT	0	5100	0		0	
WBR	1.5		744	.22	237	.07
Right Turn Adjustment			WBR	.13*	WBR	.04*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.82		.53

368 . Bake Pkwy. at I-5 SB Ramps

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	430	.09	1195	.26*
NBR	0	0	35		117	
SBL	0	0	0		0	
SBT	3	5100	453	.09*	336	.07
SBR	f		180		484	
EBL	3	5100	2529	.50*	2073	.41*
EBT	0	0	0		0	
EBR	1	1700	573	.34	158	.09
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.72

371 . Bake Pkwy. at Research Dr.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	13	.01	9	.01
NBT	3	5100	196	.04*	391	.08*
NBR	d	1700	15	.01	26	.02
SBL	2	3400	364	.11*	112	.03*
SBT	3	5100	288	.06	228	.04
SBR	1	1700	336	.20	129	.08
EBL	2	3400	79	.02*	310	.09*
EBT	2	3400	109	.03	112	.03
EBR	d	1700	13	.01	35	.02
WBL	1	1700	10	.01	33	.02
WBT	1	1700	128	.08*	172	.10*
WBR	1	1700	195	.11	661	.39
Right Turn Adjustment			SBR	.04*	WBR	.27*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.34		.62

372 . Bake Pkwy. at ICD

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	30	.01*	52	.02*
NBT	3	5100	41	.01	96	.02
NBR	d	1700	11	.01	18	.01
SBL	2	3400	110	.03	54	.02
SBT	1	1700	95	.06*	33	.02*
SBR	1	1700	35	.02	75	.04
EBL	2	3400	46	.01*	33	.01
EBT	3	5100	689	.14	810	.16*
EBR	f		44		24	
WBL	1	1700	29	.02	18	.01*
WBT	3	5100	788	.15*	680	.13
WBR	d	1700	198	.12	188	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.28		.26

409 . Bake Pkwy. at Commercentre Dr.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	89	.05*	89	.05*
NBT	2	3400	1068	.31	1068	.31
NBR	d	1700	464	.27	464	.27
SBL	1	1700	18	.01	18	.01
SBT	2	3400	1471	.43*	1471	.43*
SBR	d	1700	57	.03	57	.03
EBL	1	1700	18	.01*	18	.01*
EBT	2	3400	5	.00	5	.00
EBR	0	0	13	.01	13	.01
WBL	2	3400	117	.03	117	.03
WBT	1	1700	29	.02*	29	.02*
WBR	0	0	1		1	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.56		.56

444 . Sand Canyon Av. at Burt Rd.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	0	.00	0	.00
NBT	2	3400	309	.10	1114	.35*
NBR	0	0	35		60	
SBL	1	1700	107	.06	101	.06*
SBT	2	3400	1683	.50*	599	.18
SBR	0	0	1		0	
EBL	1	1700	4	.00	0	.00
EBT	1	1700	3	.00	0	.00
EBR	d	1700	2	.00	0	.00
WBL	0	0	50		32	
WBT	1	1700	8	.03*	0	.02*
WBR	d	1700	76	.04	99	.06
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.58		.48

485 . Sand Canyon Av. at Nightmist

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	8		9	
NBT	4	6800	459	.07	1591	.24*
NBR	d	1700	31	.02	6	.00
SBL	1	1700	22	.01	2	.00
SBT	4	6800	1651	.24*	629	.09
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1	1700	23	.01*	2	.00
WBT	0	0	0		0	
WBR	d	1700	16	.01	1	.00
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.30		.29

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	252	.15*	28	.02
NBT	2	3400	667	.20	1294	.44*
NBR	0	0	0		206	
SBL	0	0	0		0	
SBT	2	3400	981	.29*	796	.23
SBR	1	1700	250	.15	32	.02
EBL	2	3400	24	.01*	213	.06*
EBT	0	0	0		0	
EBR	1	1700	28	.02	206	.12
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.50		.55

556 . Ridge Valley at Portola Pkwy.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	148	.09*	49	.03*
NBT	1	1700	6	.00	4	.00
NBR	0	0	1		2	
SBL	1	1700	17	.01	9	.01
SBT	1	1700	10	.01*	3	.00*
SBR	1	1700	27	.02	25	.01
EBL	1	1700	33	.02*	25	.01
EBT	2	3400	205	.06	271	.08*
EBR	d	1700	35	.02	86	.05
WBL	1	1700	7	.00	7	.00
WBT	2	3400	304	.09*	147	.04
WBR	d	1700	13	.01	13	.01
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.26		.16

571 . Portola Springs at Portola Pkwy.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	98	.03*	118	.03*
NBT	1	1700	24	.02	5	.00
NBR	0	0	7		2	
SBL	1	1700	5	.00	12	.01
SBT	1	1700	22	.01*	5	.00*
SBR	d	1700	63	.04	37	.02
EBL	1	1700	96	.06*	19	.01
EBT	2	3400	112	.03	156	.05*
EBR	1	1700	114	.07	56	.03
WBL	1	1700	8	.00	13	.01*
WBT	2	3400	231	.07*	129	.04
WBR	d	1700	21	.01	6	.00
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.22		.14

572 . Modjeska-A St. at Irvine Bl.

ITAM 12 2012 Existing (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	2	3400	99	.03*	26	.01*
SBT	0	0	0		0	
SBR	1	1700	121	.07	35	.02
EBL	1	1700	22	.01	72	.04*
EBT	2	3400	1213	.36*	642	.19
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	3	5100	877	.17	1696	.33*
WBR	1	1700	10	.01	94	.06
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.44		.43

Appendix D

Signalized Intersections ITAM Level of Service Calculations

Alternative 2 Existing + 688 Acre GP

282 . Jeffrey Rd. at Portola Pkwy.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	431 .13*	457 .13*		
NBT	1	1700	36 .02	12 .01		
NBR	f		24	40		
SBL	1	1700	39 .02	10 .01		
SBT	1	1700	28 .02*	12 .01*		
SBR	1	1700	9 .01	24 .01		
EBL	1	1700	17 .01	9 .01*		
EBT	2	3400	394 .12*	221 .07		
EBR	1	1700	443 .26	173 .10		
WBL	2	3400	47 .01*	36 .01		
WBT	2	3400	307 .09	516 .15*		
WBR	1	1700	36 .02	4 .00		
Right Turn Adjustment			EBR	.01*		
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for EBR						
TOTAL CAPACITY UTILIZATION			.34	.35		

283 . Jeffrey Rd. at Irvine Bl.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	144 .04	312 .09*		
NBT	3	5100	346 .07*	344 .07		
NBR	f		214	237		
SBL	2	3400	157 .05*	55 .02		
SBT	3	5100	285 .06	148 .03*		
SBR	1	1700	9 .01	16 .01		
EBL	2	3400	36 .01	22 .01*		
EBT	2	3400	793 .23*	730 .21		
EBR	1	1700	214 .13	203 .12		
WBL	2	3400	248 .07*	258 .08		
WBT	2	3400	991 .29	1274 .37*		
WBR	1	1700	113 .07	151 .09		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.47	.55		

284 . Jeffrey Rd. at Bryan Av.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	99 .03*	291 .09*		
NBT	3	5100	381 .07	810 .16		
NBR	d	1700	100 .06	384 .23		
SBL	2	3400	36 .01	61 .02		
SBT	3	5100	635 .12*	449 .09*		
SBR	1	1700	83 .05	103 .06		
EBL	1	1700	225 .13*	81 .05*		
EBT	2	3400	145 .04	197 .06		
EBR	d	1700	172 .10	107 .06		
WBL	2	3400	405 .12	162 .05		
WBT	1	1700	190 .11*	146 .09*		
WBR	d	1700	87 .05	57 .03		
Right Turn Adjustment				NBR	.01*	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.44	.38		

285 . Jeffrey Rd. at Trabuco Rd.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	88 .03*	170 .05		
NBT	3	5100	468 .09	1388 .27*		
NBR	d	1700	80 .05	255 .15		
SBL	2	3400	39 .01	23 .01*		
SBT	3	5100	1127 .22*	695 .14		
SBR	1	1700	193 .11	79 .05		
EBL	2	3400	138 .04	192 .06*		
EBT	2	3400	162 .05*	171 .05		
EBR	1	1700	173 .10	116 .07		
WBL	2	3400	215 .06*	140 .04		
WBT	2	3400	206 .06	173 .05*		
WBR	1	1700	16 .01	53 .03		
Right Turn Adjustment			EBR	.03*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.44	.44		

286 . Jeffrey Rd. at Roosevelt

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	199 .06*	343 .10		
NBT	4	6800	571 .08	1619 .24*		
NBR	1	1700	88 .05	291 .17		
SBL	1	1700	19 .01	58 .03*		
SBT	3	5100	1420 .28*	753 .15		
SBR	d	1700	61 .04	88 .05		
EBL	1	1700	32 .02	114 .07*		
EBT	1	1700	16 .01*	52 .03		
EBR	1	1700	253 .15	322 .19		
WBL	2	3400	324 .10*	135 .04		
WBT	1	1700	27 .02	28 .02*		
WBR	1	1700	37 .02	41 .02		
Right Turn Adjustment			EBR .08*	EBR .02*		
Clearance Interval			.05*	.05*		
Note: Assumes Right-Turn Overlap for EBR						
TOTAL CAPACITY UTILIZATION			.58	.43		

287 . Jeffrey Rd. at I-5 NB Ramps

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	661 .13	1946 .38*		
NBR	f		243	380		
SBL	0	0	0	0		
SBT	3	5100	1918 .38*	1128 .22		
SBR	f		167	86		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1.5		536 .16*	480		
WBT	0	5100	0	0	.17*	
WBR	1.5		223	410		
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION			.59	.60		

288 . Jeffrey Rd. at Walnut Av./I-5 SB Ramps289 . Jeffrey Rd. at ICD

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	74 .02*	252 .07		
NBT	3	5100	583 .11	1567 .31*		
NBR	1	1700	152 .09	263 .15		
SBL	2	3400	541 .16	304 .09*		
SBT	3	5100	1756 .39*	842 .25		
SBR	0	0	251	430 .25		
EBL	1	1700	97 .06	240 .14		
EBT	1	1700	242 .14*	223 .13*		
EBR	1	1700	244 .14	180 .11		
WBL	2	3400	368 .11*	443 .13*		
WBT	1	1700	37 .02	99 .06		
WBR	1	1700	189 .11	460 .27		
Right Turn Adjustment				WBR .08*		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.71	.79		

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	111 .03*	212 .06		
NBT	3	5100	594 .12	1314 .26*		
NBR	1	1700	209 .12	215 .13		
SBL	2	3400	432 .13	264 .08*		
SBT	3	5100	1587 .31*	1013 .20		
SBR	1	1700	234 .14	247 .15		
EBL	2	3400	141 .04	267 .08*		
EBT	3	5100	819 .16*	537 .11		
EBR	f		190	44		
WBL	2	3400	147 .04*	211 .06		
WBT	3	5100	381 .07	1404 .28*		
WBR	1	1700	164 .10	623 .37		
Right Turn Adjustment				WBR .03*		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.59	.78		

290 . Jeffrey Rd. at Barranca Pkwy.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	223	.07*	350	.10*
NBT	3	5100	767	.18	1233	.26
NBR	0	0	132		99	
SBL	2	3400	76	.02	84	.02
SBT	3	5100	1311	.34*	1043	.28*
SBR	0	0	401		386	
EBL	2	3400	289	.09*	584	.17*
EBT	2	3400	606	.18	812	.24
EBR	d	1700	316	.19	234	.14
WBL	2	3400	161	.05	193	.06
WBT	2	3400	610	.18*	733	.22*
WBR	1	1700	59	.03	101	.06
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.73		.82

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	316	.09*	495	.15*
NBT	3	5100	788	.15	1269	.25
NBR	f		271		394	
SBL	2	3400	233	.07	266	.08
SBT	3	5100	1429	.30*	1000	.24*
SBR	0	0	114		210	
EBL	2	3400	182	.05	248	.07*
EBT	2	3400	706	.21*	788	.23
EBR	d	1700	471	.28	356	.21
WBL	2	3400	418	.12*	418	.12
WBT	2	3400	612	.18	938	.28*
WBR	d	1700	114	.07	126	.07
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.77		.79

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	1163	.23	1911	.37*
NBR	f		252		95	
SBL	0	0	0		0	
SBT	3	5100	1364	.27*	1275	.25
SBR	f		1378		500	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1172	.34*	1024	.30*
WBT	0	0	0		0	
WBR	1	1700	133	.08	364	.21
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.66		.72

294 . University Dr. at I-405 SB Ramps

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	1025	.20	1629	.32
NBR	f		1037		808	
SBL	0	0	0		0	
SBT	3	5100	2403	.47*	2087	.41*
SBR	f		303		242	
EBL	2	3400	311	.09*	397	.12*
EBT	0	0	0		0	
EBR	1	1700	81	.05	72	.04
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.61		.58

300 . Sand Canyon. Av. at Portola Pkwy.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	125 .04*	425 .13*		
NBT	0	0	2	0		
NBR	2	3400	192 .06	323 .10		
SBL	0	0	0	0		
SBT	0	0	1	1		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	165 .05*	227 .07*		
EBR	f		316	57		
WBL	2	3400	433 .13*	188 .06*		
WBT	2	3400	312 .09	212 .06		
WBR	0	0	0	0		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.27	.31		

301 . Sand Canyon. Av. at Irvine Bl.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	115 .03*	338 .10*		
NBT	3	5100	252 .05	545 .11		
NBR	2	3400	182 .05	320 .09		
SBL	2	3400	283 .08	60 .02		
SBT	2	3400	604 .18*	255 .08*		
SBR	1	1700	119 .07	39 .02		
EBL	2	3400	87 .03	127 .04*		
EBT	4	6800	886 .13*	566 .08		
EBR	1	1700	197 .12	111 .07		
WBL	2	3400	381 .11*	289 .09		
WBT	3	5100	848 .17	1306 .26*		
WBR	1	1700	82 .05	207 .12		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.50	.53		

302 . Sand Canyon. Av. at Trabuco Pkwy.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	60 .02*	138 .04		
NBT	3	5100	423 .08	1418 .28*		
NBR	f		36	37		
SBL	2	3400	36 .01	89 .03*		
SBT	3	5100	1514 .30*	561 .11		
SBR	1	1700	114 .07	82 .05		
EBL	2	3400	67 .02*	107 .03*		
EBT	3	5100	59 .01	183 .04		
EBR	f		178	61		
WBL	2	3400	23 .01	42 .01		
WBT	3	5100	37 .01*	127 .02*		
WBR	d	1700	17 .01	54 .03		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.40	.41		

303 . Sand Canyon. Av. at I-5 NB Ramps

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	208 .06*	505 .15*		
NBT	2	3400	350 .10	1018 .30		
NBR	0	0	3	12		
SBL	1	1700	2 .00	1 .00		
SBT	2	3400	1275 .38*	532 .16*		
SBR	1	1700	378 .22	150 .09		
EBL	1.5		208	600		
EBT	0.5	3400	17 .07*	7 .18*		
EBR	1	1700	368 .22	458 .27		
WBL	1	1700	2 .00	4 .00		
WBT	1	1700	2 .00*	0 .00*		
WBR	0	0	0	3		
Right Turn Adjustment			EBR	.10*		
Clearance Interval				.05*		.05*
Note: Assumes E/W Split Phasing						
TOTAL CAPACITY UTILIZATION			.66	.54		

304 . Sand Canyon. Av. at Marine Wy.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	2	3400	517 .15	1292 .38*		
NBR	1	1700	95 .06	376 .22		
SBL	2	3400	118 .03	408 .12*		
SBT	2	3400	1400 .41*	580 .17		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1	1700	76 .04*	314 .18*		
WBT	0	0	0	0		
WBR	1	1700	87 .05	191 .11		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.50	.73		

305 . Sand Canyon. Av. at I-5 SB Ramps

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	2	3400	332 .10	1149 .34*		
NBR	d	1700	107 .06	180 .11		
SBL	2	3400	451 .13	319 .09*		
SBT	2	3400	1036 .30*	580 .17		
SBR	0	0	0	0		
EBL	1.5		280 .16*	513 .15*		
EBT	0	5100	1	1		
EBR	1.5		731 .22	230		
WBL	0	0	0	0		
WBT	0	0	0	0		
WBR	0	0	0	0		
Right Turn Adjustment			EBR	.06*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.57	.63		

306 . Sand Canyon. Av. at Oak Cyn./Laguna Cyn. R

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	57 .03*	16 .01*		
NBT	3	5100	272 .05	794 .16		
NBR	1	1700	21 .01	8 .00		
SBL	1	1700	208 .12	29 .02		
SBT	2	3400	1215 .36*	669 .20*		
SBR	1	1700	307 .18	54 .03		
EBL	2	3400	41 .01*	227 .07*		
EBT	1	1700	8 .00	39 .02		
EBR	d	1700	24 .01	84 .05		
WBL	2	3400	8 .00	23 .01		
WBT	1	1700	36 .02*	15 .01*		
WBR	1	1700	39 .02	248 .15		
Right Turn Adjustment				WBR	.10*	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.47	.44		

307 . Sand Canyon. Av. at ICD

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	183 .05*	270 .08*		
NBT	3	5100	208 .04	413 .08		
NBR	1	1700	107 .06	46 .03		
SBL	2	3400	163 .05	181 .05		
SBT	3	5100	676 .13*	462 .09*		
SBR	1	1700	92 .05	141 .08		
EBL	2	3400	98 .03	110 .03*		
EBT	3	5100	601 .12*	437 .09		
EBR	1	1700	118 .07	128 .08		
WBL	2	3400	77 .02*	152 .04		
WBT	3	5100	347 .07	1165 .23*		
WBR	1	1700	31 .02	138 .08		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.37	.48		

309 . Sand Canyon. Av. at Barranca Pkwy.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	73	.02*	171	.05*
NBT	3	5100	615	.12	508	.10
NBR	d	1700	91	.05	81	.05
SBL	2	3400	13	.00	56	.02
SBT	3	5100	659	.13*	803	.16*
SBR	d	1700	54	.03	179	.11
EBL	2	3400	104	.03*	62	.02*
EBT	2	3400	445	.13	533	.16
EBR	1	1700	137	.08	117	.07
WBL	2	3400	125	.04	120	.04
WBT	2	3400	540	.16*	613	.18*
WBR	1	1700	91	.05	33	.02
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.39	.46	

310 . Sand Canyon. Av. at Alton Pkwy.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	203	.06*	403	.12*
NBT	3	5100	669	.13	455	.09
NBR	1	1700	456	.27	129	.08
SBL	2	3400	170	.05	27	.01
SBT	3	5100	603	.12*	927	.18*
SBR	1	1700	66	.04	155	.09
EBL	2	3400	124	.04	95	.03
EBT	3	5100	701	.14*	735	.14*
EBR	1	1700	308	.18	344	.20
WBL	2	3400	466	.14*	541	.16*
WBT	2	3400	765	.23	714	.21
WBR	1	1700	56	.03	115	.07
Right Turn Adjustment			NBR	.03*		
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.54	.65	

311 . Sand Canyon. Av. at I-405 NB Ramps

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	2	3400	1091	.32*	510	.15
NBR	f		800		263	
SBL	0	0	0		0	
SBT	2	3400	477	.14	885	.26*
SBR	f		904		949	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	0.5		52		133	
WBT	0	3400	0	.09*	0	[.13]*
WBR	1.5		254		437	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.46	.44	

312 . Sand Canyon. Av. at I-405 SB Ramps

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	132	.08	140	.08*
NBT	2	3400	1147	.34*	565	.17
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	308	.09	561	.17*
SBR	f		201		462	
EBL	1.5		751	[.29]*	208	.12*
EBT	0	3400	2	.29	0	
EBR	0.5		220		300	.18
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.68	.42	

313 . Laguna Canyon Rd. at ICD

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	38 .01	85 .03*		
NBT	2	3400	51 .02*	62 .02		
NBR	d	1700	13 .01	66 .04		
SBL	2	3400	24 .01*	61 .02		
SBT	2	3400	33 .01	25 .01*		
SBR	d	1700	8 .00	34 .02		
EBL	2	3400	49 .01	7 .00		
EBT	3	5100	584 .11*	626 .12		
EBR	d	1700	89 .05	87 .05		
WBL	2	3400	55 .02*	19 .01		
WBT	3	5100	518 .10	1105 .22*		
WBR	d	1700	66 .04	45 .03		
Right Turn Adjustment Clearance Interval				SBR .01*		
			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.21	.32		

314 . Laguna Canyon Rd. at Barranca Pkwy.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	44 .01*	50 .01*		
NBT	2	3400	70 .02	79 .02		
NBR	d	1700	32 .02	102 .06		
SBL	2	3400	19 .01	64 .02		
SBT	2	3400	76 .02*	103 .03*		
SBR	d	1700	25 .01	77 .05		
EBL	2	3400	43 .01*	31 .01		
EBT	2	3400	422 .12	564 .17*		
EBR	1	1700	63 .04	39 .02		
WBL	2	3400	113 .03	43 .01*		
WBT	2	3400	680 .20*	546 .16		
WBR	d	1700	73 .04	87 .05		
Right Turn Adjustment Clearance Interval				NBR .03*		
			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.29	.30		

315 . Laguna Canyon Rd. at Alton Pkwy.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	140 .08*	106 .06*		
NBT	2	3400	142 .04	88 .03		
NBR	d	1700	42 .02	69 .04		
SBL	1	1700	17 .01	29 .02		
SBT	2	3400	80 .02*	144 .04*		
SBR	d	1700	22 .01	68 .04		
EBL	2	3400	56 .02*	38 .01		
EBT	2	3400	555 .16	678 .20*		
EBR	1	1700	111 .07	128 .08		
WBL	2	3400	87 .03	94 .03*		
WBT	2	3400	1271 .37*	698 .21		
WBR	1	1700	44 .03	48 .03		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.54	.38		

316 . SR-133 SB Ramps at Irvine Bl.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	0	0	0	0		
NBR	0	0	0	0		
SBL	1	1700	210 .12*	24 .01*		
SBT	0	0	1	0		
SBR	2	3400	321 .09	178 .05		
EBL	0	0	0	0		
EBT	4	6800	1204 .18*	929 .14		
EBR	d	1700	183 .11	69 .04		
WBL	1	1700	87 .05*	52 .03		
WBT	3	5100	891 .17	1786 .35*		
WBR	0	0	0	0		
Right Turn Adjustment Clearance Interval				SBR .04*		
			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.40	.45		

317 . SR-133 NB Ramps at Irvine Bl.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	52 .03*	126 .07*		
NBT	0	0	0	0		
NBR	1	1700	58 .03	62 .04		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	1303 .38*	755 .22		
EBR	f		106	189		
WBL	0	0	0	0		
WBT	3	5100	945 .19	1698 .37*		
WBR	0	0	35	198		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.46	.49		

318 . Banting at Barranca Pkwy.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	38 .01*	137 .04		
NBT	1	1700	71 .04	510 .30*		
NBR	1	1700	21 .01	96 .06		
SBL	2	3400	729 .21	428 .13*		
SBT	2	3400	493 .28*	200 .12		
SBR	0	0	454	305 .18		
EBL	1	1700	85 .05*	293 .17*		
EBT	2	3400	314 .09	358 .11		
EBR	d	1700	28 .02	100 .06		
WBL	1	1700	41 .02	106 .06		
WBT	2	3400	286 .08*	364 .11*		
WBR	f		27	487		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.47	.76		

319 . Banting at Alton Pkwy.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	5 .00	5 .00		
NBT	1	1700	4 .00	7 .00		
NBR	1	1700	3 .00	2 .00		
SBL	2	3400	51 .02	52 .02		
SBT	1	1700	58 .03*	58 .03*		
SBR	1	1700	182 .11	207 .12		
EBL	2	3400	19 .01*	30 .01		
EBT	2	3400	340 .10	1073 .32*		
EBR	d	1700	45 .03	45 .03		
WBL	1	1700	44 .03	144 .08*		
WBT	2	3400	806 .24*	439 .13		
WBR	d	1700	49 .03	50 .03		
Right Turn Adjustment			SBR	.07*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.40	.48		

321 . Laguna Canyon Rd. at Old Laguna Cyn. Rd.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	344 .10	142 .04*		
NBT	3	5100	2445 .48*	1991 .39		
NBR	d	1700	2 .00	10 .01		
SBL	1	1700	48 .03*	123 .07		
SBT	3	5100	1716 .34	2182 .43*		
SBR	1	1700	294 .17	204 .12		
EBL	3	5100	220 .04*	168 .03*		
EBT	1	1700	39 .02	49 .03		
EBR	f		87	300		
WBL	1	1700	11 .01	6 .00		
WBT	1	1700	103 .06*	25 .01*		
WBR	1	1700	128 .08	64 .04		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.66	.56		

327 . Barranca Pkwy. at Technology

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	586 .17*	74 .02		
NBT	2	3400	752 .22	537 .16*		
NBR	1	1700	178 .10	266 .16		
SBL	1	1700	57 .03	119 .07*		
SBT	2	3400	762 .22*	656 .19		
SBR	1	1700	159 .09	27 .02		
EBL	2	3400	16 .00	92 .03		
EBT	2	3400	38 .01	179 .05*		
EBR	d	1700	85 .05	492 .29		
WBL	2	3400	82 .02	176 .05*		
WBT	2	3400	195 .06*	43 .01		
WBR	d	1700	8 .00	52 .03		
Right Turn Adjustment				EBR	.21*	
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.50	.59		

328 . Barranca Pkwy. at I-5 HOV Ramp

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	36 .02	25 .01		
NBT	2	3400	1422 .42*	1011 .30*		
NBR	0	0	0	0		
SBL	0	0	0	0		
SBT	3	5100	846 .17	1502 .29		
SBR	d	1700	22 .01	149 .09		
EBL	1	1700	132 .08*	75 .04*		
EBT	0	0	0	0		
EBR	1	1700	12 .01	12 .01		
WBL	0	0	0	0		
WBT	0	0	0	0		
WBR	0	0	0	0		
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION			.55	.39		

329 . Barranca Pkwy. at ICD

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	106 .03	110 .03*		
NBT	2	3400	806 .24*	816 .24		
NBR	1	1700	22 .01	63 .04		
SBL	2	3400	55 .02*	15 .00		
SBT	2	3400	237 .07	804 .24*		
SBR	1	1700	365 .21	88 .05		
EBL	2	3400	142 .04*	96 .03*		
EBT	3	5100	194 .04	158 .03		
EBR	1	1700	6 .00	62 .04		
WBL	2	3400	110 .03	45 .01		
WBT	3	5100	223 .04*	169 .03*		
WBR	1	1700	148 .09	134 .08		
Right Turn Adjustment			WBR	.03*	WBR	.03*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.42	.41		

330 . Barranca Pkwy. at Pacifica

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	92 .05	49 .03*		
NBT	2	3400	654 .19*	751 .22		
NBR	1	1700	79 .05	83 .05		
SBL	1	1700	40 .02*	44 .03		
SBT	2	3400	221 .07	820 .24*		
SBR	d	1700	76 .04	27 .02		
EBL	2	3400	10 .00	38 .01		
EBT	2	3400	0 .00	129 .07*		
EBR	0	0	12	111		
WBL	2	3400	154 .05	181 .05*		
WBT	1	1700	165 .10*	45 .03		
WBR	1	1700	272 .16	181 .11		
Right Turn Adjustment			WBR	.04*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.40	.44		

331 . ICD at Gateway Bl.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	72 .02	51 .02*		
NBT	3	5100	873 .17*	812 .16		
NBR	d	1700	35 .02	5 .00		
SBL	2	3400	66 .02*	26 .01		
SBT	3	5100	331 .06	890 .17*		
SBR	1	1700	40 .02	38 .02		
EBL	1	1700	149 .09*	37 .02*		
EBT	2	3400	106 .03	26 .01		
EBR	1	1700	24 .01	44 .03		
WBL	1	1700	1 .00	28 .02		
WBT	2	3400	19 .01*	116 .03*		
WBR	1	1700	130 .08	166 .10		
Right Turn Adjustment Clearance Interval			WBR .05* .05*	WBR .05* .05*		
TOTAL CAPACITY UTILIZATION			.39	.34		

333 . Pacifica at Gateway Bl.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	207 .06*	368 .11*		
NBT	2	3400	214 .06	149 .04		
NBR	d	1700	7 .00	7 .00		
SBL	2	3400	122 .04	20 .01		
SBT	2	3400	135 .04*	142 .04*		
SBR	d	1700	37 .02	606 .36		
EBL	1	1700	548 .32*	103 .06*		
EBT	2	3400	242 .07	17 .01		
EBR	1	1700	153 .09	71 .04		
WBL	1	1700	23 .01	7 .00		
WBT	1	1700	60 .04*	209 .12*		
WBR	1	1700	40 .02	110 .06		
Right Turn Adjustment Clearance Interval				SBR .27* .05*		
TOTAL CAPACITY UTILIZATION			.51	.65		

338 . Alton Pkwy. at Irvine Bl.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	75 .02*	549 .16*		
NBT	0	0	0	0		
NBR	f		103	209		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	3	5100	984 .19*	749 .15		
EBR	1	1700	485 .29	65 .04		
WBL	2	3400	376 .11*	140 .04		
WBT	3	5100	863 .17	1442 .28*		
WBR	0	0	0	0		
Right Turn Adjustment Clearance Interval			EBR .08* .05*	.05*		
TOTAL CAPACITY UTILIZATION			.45	.49		

339 . Alton Pkwy. at Toledo Wy.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	51 .03*	21 .01		
NBT	3	5100	397 .08	776 .15*		
NBR	f		141	359		
SBL	1	1700	45 .03	26 .02*		
SBT	3	5100	665 .13*	388 .08		
SBR	0	0	10	4		
EBL	1	1700	1 .00	5 .00		
EBT	1	1700	4 .02*	36 .06*		
EBR	0	0	22	63		
WBL	1	1700	257 .15*	137 .08*		
WBT	1	1700	46 .03	13 .01		
WBR	1	1700	111 .07	73 .04		
Clearance Interval				.05* .05*		
TOTAL CAPACITY UTILIZATION			.38	.36		

340 . Alton Pkwy. at Jeronimo Rd.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	88 .05*	8 .00		
NBT	3	5100	941 .18	921 .18*		
NBR	f		267	355		
SBL	2	3400	73 .02	59 .02*		
SBT	3	5100	735 .15*	874 .17		
SBR	0	0	25	1		
EBL	1	1700	5 .00	18 .01		
EBT	1	1700	2 .00*	23 .01*		
EBR	f		9	71		
WBL	2	3400	359 .11*	279 .08*		
WBT	1	1700	29 .02	7 .00		
WBR	1	1700	94 .06	97 .06		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.36	.34		

341 . Alton Pkwy. at Barranca Pkwy./Muirlands Bl.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	16 .01	50 .03*		
NBT	3	5100	1064 .21*	1112 .22		
NBR	f		192	176		
SBL	2	3400	77 .02*	64 .02		
SBT	3	5100	672 .13	1312 .26*		
SBR	f		796	189		
EBL	2	3400	263 .08*	246 .07*		
EBT	2	3400	107 .03	277 .08		
EBR	d	1700	41 .02	59 .03		
WBL	2	3400	97 .03	227 .07		
WBT	2	3400	238 .08*	137 .08*		
WBR	0	0	41	122		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.44	.49		

343 . Alton Pkwy. at Ada

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	391 .12*	128 .04		
NBT	3	5100	1182 .23	1294 .25*		
NBR	d	1700	17 .01	68 .04		
SBL	1	1700	10 .01	45 .03*		
SBT	3	5100	893 .18*	1236 .24		
SBR	d	1700	12 .01	21 .01		
EBL	1	1700	14 .01*	41 .02*		
EBT	1	1700	6 .00	35 .02		
EBR	1	1700	71 .04	292 .17		
WBL	1	1700	7 .00	53 .03		
WBT	1	1700	10 .01*	18 .03*		
WBR	0	0	5	36		
Right Turn Adjustment				EBR	.12*	
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION			.37	.50		

344 . Alton Pkwy. at Technology Dr. W.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	499 .15	464 .14*		
NBT	3	5100	1408 .28*	813 .16		
NBR	1	1700	655 .39	97 .06		
SBL	1	1700	19 .01*	6 .00		
SBT	4	6800	795 .12	1120 .16*		
SBR	1	1700	90 .05	155 .09		
EBL	1	1700	89 .05*	307 .18*		
EBT	2	3400	73 .02	40 .01		
EBR	2	3400	149 .04	1022 .30		
WBL	2	3400	144 .04	448 .13		
WBT	2	3400	61 .02*	90 .03*		
WBR	d	1700	14 .01	5 .00		
Right Turn Adjustment			NBR	.07*	EBR	.08*
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for EBR						
TOTAL CAPACITY UTILIZATION			.48	.64		

345 . Alton Pkwy. at I-5 NB Ramps

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	2110	.41*	1198	.23
NBR	f		105		419	
SBL	0	0	0	0		
SBT	3	5100	851	.17	1566	.31*
SBR	f		255		1062	
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1.5		604		259	.08*
WBT	0	5100	0	.20*	0	
WBR	1.5		407		149	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.66		.44

346 . Alton Pkwy. at Enterprise

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	1032	.20*	844	.17*
NBR	1	1700	37	.02	349	.21
SBL	1	1700	149	.09*	528	.31*
SBT	3	5100	1297	.25	1236	.24
SBR	0	0	0		0	
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	2	3400	203	.06*	132	.04*
WBT	0	0	0		0	
WBR	2	3400	1288	.38	763	.22
Right Turn Adjustment			WBR	.23*	NBR	.01*
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for WBR						
TOTAL CAPACITY UTILIZATION				.63		.58

348 . Alton Pkwy. at ICD

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	41	.01*	17	.01
NBT	3	5100	455	.09	653	.13*
NBR	1	1700	73	.04	247	.15
SBL	2	3400	201	.06	654	.19*
SBT	3	5100	804	.16*	629	.12
SBR	1	1700	368	.22	107	.06
EBL	2	3400	98	.03	322	.09*
EBT	3	5100	339	.07*	881	.17
EBR	1	1700	5	.00	41	.02
WBL	2	3400	868	.26*	165	.05
WBT	3	5100	1448	.28	768	.15*
WBR	1	1700	774	.46	574	.34
Right Turn Adjustment			Multi	.12*	WBR	.05*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.67		.66

350 . Alton Pkwy. at Pacifica

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	38	.01*	148	.04
NBT	3	5100	266	.05	760	.15*
NBR	d	1700	88	.05	172	.10
SBL	2	3400	37	.01	46	.01*
SBT	2	3400	665	.20*	402	.12
SBR	1	1700	89	.05	131	.08
EBL	2	3400	76	.02	189	.06
EBT	2	3400	150	.04*	214	.06*
EBR	d	1700	83	.05	115	.07
WBL	1	1700	128	.08*	125	.07*
WBT	2	3400	142	.04	203	.06
WBR	d	1700	22	.01	56	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.38		.34

351 . Fortune Dr./I-5 SB Ramps at Enterprise357 . Enterprise Dr. at Fortune Dr./I-405 NB Ramps

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	17 .01*	114 .03*		
NBT	2	3400	6 .00	68 .03		
NBR	0	0	8	48		
SBL	2	3400	67 .02	202 .06		
SBT	1	1700	322 .19*	177 .10*		
SBR	f		1370	471		
EBL	1	1700	112 .07*	582 .34*		
EBT	2	3400	51 .02	242 .07		
EBR	1	1700	24 .01	41 .02		
WBL	1	1700	8 .00	47 .03		
WBT	2	3400	31 .01*	298 .09*		
WBR	1	1700	11 .01	101 .06		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.33	.61		

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	77 .05	96 .06		
NBT	1	1700	270 .16*	129 .08*		
NBR	f		1376	1060		
SBL	1	1700	11 .01*	1 .00		
SBT	2	3400	9 .01	13 .00		
SBR	0	0	8	1		
EBL	1	1700	6 .00	2 .00		
EBT	1	1700	28 .02*	30 .02*		
EBR	1	1700	2 .00	2 .00		
WBL	1.5		110 {.05}*	76 {.03}*		
WBT	0.5	3400	57 .05	14 .03		
WBR	f		8	4		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.29	.18		

358 . ICD at Enterprise Dr.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	2	3400	1788 .53*	1118 .33*		
NBR	f		422	1073		
SBL	1	1700	6 .00	50 .03*		
SBT	3	5100	488 .10	1071 .21		
SBR	f		0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1	1700	56 .03*	271 .16*		
WBT	0	0	0	0		
WBR	f		849	160		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.61	.57		

359 . ICD at I-405 SB Ramps

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	1294 .25*	1598 .31		
NBR	f		34	48		
SBL	0	0	0	0		
SBT	2	3400	434 .13	1196 .35*		
SBR	f		119	394		
EBL	2	3400	930 .27*	577 .17*		
EBT	0	0	0	0		
EBR	f		788	827		
WBL	0	0	0	0		
WBT	0	0	0	0		
WBR	0	0	0	0		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.57	.57		

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	0	.00	0	.00
NBT	3	5100	982	.19*	1293	.25*
NBR	d	1700	25	.01	15	.01
SBL	2	3400	293	.09*	207	.06*
SBT	3	5100	943	.18	1335	.26
SBR	1	1700	0	.00	0	.00
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1	1700	24	.01*	33	.02*
WBT	0	0	0		0	
WBR	f		197		519	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.34		.38

362 . Bake Pkwy. at Irvine Bl.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	298	.18	128	.08
NBT	3	5100	1852	.38*	1264	.36*
NBR	0	0	103		588	
SBL	2	3400	35	.01*	198	.06*
SBT	3	5100	976	.19	1471	.29
SBR	1	1700	416	.24	653	.38
EBL	2	3400	486	.14*	511	.15
EBT	3	5100	144	.03	769	.15*
EBR	1	1700	69	.04	251	.15
WBL	2	3400	777	.23	330	.10*
WBT	3	5100	761	.15*	349	.07
WBR	1	1700	158	.09	109	.06
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.73		.72

363 . Bake Pkwy. at Toledo Wy.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	278	.16*	28	.02*
NBT	3	5100	2012	.39	1811	.36
NBR	d	1700	40	.02	318	.19
SBL	1	1700	24	.01	64	.04
SBT	3	5100	1646	.32*	2066	.41*
SBR	d	1700	217	.13	39	.02
EBL	2	3400	34	.01	203	.06
EBT	2	3400	9	.00*	350	.10*
EBR	1	1700	9	.01	132	.08
WBL	1	1700	261	.15*	67	.04*
WBT	2	3400	298	.10	28	.02
WBR	0	0	43		68	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.68		.62

364 . Bake Pkwy. at Jeronimo Rd.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	389	.23*	51	.03*
NBT	3	5100	2362	.46	2059	.40
NBR	d	1700	40	.02	327	.19
SBL	1	1700	25	.01	74	.04
SBT	3	5100	1760	.35*	2147	.42*
SBR	d	1700	111	.07	45	.03
EBL	2	3400	24	.01	108	.03
EBT	2	3400	21	.01*	436	.13*
EBR	1	1700	52	.03	380	.22
WBL	1	1700	304	.18*	102	.06*
WBT	2	3400	451	.15	68	.03
WBR	0	0	52		36	
Right Turn Adjustment					EBR	.07*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.82		.76

365 . Bake Pkwy. at Muirlands Bl.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	155	.05	94	.03*
NBT	4	6800	2494	.37*	1840	.27
NBR	f		76		217	
SBL	2	3400	45	.01*	191	.06
SBT	4	6800	1858	.27	2038	.30*
SBR	f		138		70	
EBL	2	3400	27	.01*	237	.07
EBT	2	3400	86	.03	642	.19*
EBR	f		25		152	
WBL	2	3400	170	.05	90	.03*
WBT	2	3400	455	.13*	159	.05
WBR	f		117		71	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.57		.60

366 . Bake Pkwy. at Rockfield Bl.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	157 .05	27 .01*		
NBT	4	6800	2720 .40*	1997 .29		
NBR	f		556	291		
SBL	2	3400	77 .02*	167 .05		
SBT	4	6800	2005 .29	2289 .34*		
SBR	1	1700	12 .01	7 .00		
EBL	1	1700	4 .00	10 .01		
EBT	2	3400	7 .00*	70 .02*		
EBR	f		18	296		
WBL	2	3400	172 .05*	640 .19*		
WBT	2	3400	44 .01	17 .01		
WBR	f		68	108		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.52	.61		

367 . Bake Pkwy. at I-5 NB Ramps

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	2804 .55*	2119 .42*		
NBR	f		63	960		
SBL	0	0	0	0		
SBT	3	5100	375 .07	791 .16		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1.5		149 .09*	43 .03*		
WBT	0	5100	0	0		
WBR	1.5		722 .21	231 .07		
Right Turn Adjustment			WBR .12*	WBR .04*		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.81	.54		

368 . Bake Pkwy. at I-5 SB Ramps

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	339 .07	1178 .25*		
NBR	0	0	35	117		
SBL	0	0	0	0		
SBT	3	5100	427 .08*	335 .07		
SBR	f		181	483		
EBL	3	5100	2540 .50*	2081 .41*		
EBT	0	0	0	0		
EBR	1	1700	576 .34	152 .09		
WBL	0	0	0	0		
WBT	0	0	0	0		
WBR	0	0	0	0		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.63	.71		

371 . Bake Pkwy. at Research Dr.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	13 .01	9 .01		
NBT	3	5100	140 .03*	366 .07*		
NBR	d	1700	15 .01	26 .02		
SBL	2	3400	366 .11*	113 .03*		
SBT	3	5100	270 .05	221 .04		
SBR	1	1700	328 .19	128 .08		
EBL	2	3400	78 .02*	307 .09*		
EBT	2	3400	110 .03	113 .03		
EBR	d	1700	13 .01	35 .02		
WBL	1	1700	10 .01	33 .02		
WBT	1	1700	146 .09*	171 .10*		
WBR	1	1700	159 .09	672 .40		
Right Turn Adjustment			SBR .04*	WBR .28*		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.34	.62		

372 . Bake Pkwy. at ICD

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	33	.01*	53	.02*
NBT	3	5100	38	.01	96	.02
NBR	d	1700	11	.01	18	.01
SBL	2	3400	114	.03	47	.01
SBT	1	1700	97	.06*	34	.02*
SBR	1	1700	10	.01	74	.04
EBL	2	3400	52	.02*	35	.01
EBT	3	5100	689	.14	816	.16*
EBR	f		41		23	
WBL	1	1700	29	.02	18	.01*
WBT	3	5100	828	.16*	710	.14
WBR	d	1700	140	.08	161	.09
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.30		.26

409 . Bake Pkwy. at Commercentre Dr.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	89	.05*	89	.05*
NBT	2	3400	1075	.32	1072	.32
NBR	d	1700	466	.27	466	.27
SBL	1	1700	18	.01	18	.01
SBT	2	3400	1473	.43*	1474	.43*
SBR	d	1700	56	.03	56	.03
EBL	1	1700	18	.01*	18	.01*
EBT	2	3400	5	.00	4	.00
EBR	0	0	13	.01	13	.01
WBL	2	3400	118	.03	117	.03
WBT	1	1700	29	.02*	30	.02*
WBR	0	0	1		1	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.56		.56

444 . Sand Canyon Av. at Burt Rd.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	0	.00	0	.00
NBT	2	3400	326	.11	1259	.39*
NBR	0	0	33		59	
SBL	1	1700	107	.06	104	.06*
SBT	2	3400	1686	.50*	694	.20
SBR	0	0	1		0	
EBL	1	1700	4	.00	0	.00
EBT	1	1700	3	.00	0	.00
EBR	d	1700	2	.00	0	.00
WBL	0	0	50		32	
WBT	1	1700	8	.03*	0	.02*
WBR	d	1700	76	.04	104	.06
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.58		.52

485 . Sand Canyon Av. at Nightmist

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	8		9	
NBT	4	6800	489	.07	1639	.24*
NBR	d	1700	31	.02	6	.00
SBL	1	1700	22	.01	2	.00
SBT	4	6800	1648	.24*	660	.10
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1	1700	23	.01*	2	.00
WBT	0	0	0		0	
WBR	d	1700	16	.01	1	.00
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.30		.29

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	253	.15*	28	.02
NBT	2	3400	672	.20	1297	.44*
NBR	0	0	0		206	
SBL	0	0	0		0	
SBT	2	3400	977	.29*	791	.23
SBR	1	1700	250	.15	32	.02
EBL	2	3400	24	.01*	213	.06*
EBT	0	0	0		0	
EBR	1	1700	28	.02	208	.12
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.50		.55

556 . Ridge Valley at Portola Pkwy.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	147	.09*	52	.03*
NBT	1	1700	6	.00	4	.00
NBR	0	0	1		3	
SBL	1	1700	17	.01	9	.01
SBT	1	1700	10	.01*	3	.00*
SBR	1	1700	27	.02	25	.01
EBL	1	1700	33	.02*	24	.01
EBT	2	3400	207	.06	280	.08*
EBR	d	1700	35	.02	86	.05
WBL	1	1700	7	.00	7	.00
WBT	2	3400	304	.09*	155	.05
WBR	d	1700	13	.01	13	.01
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.26		.16

571 . Portola Springs at Portola Pkwy.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	98	.03*	126	.04*
NBT	1	1700	24	.02	5	.00
NBR	0	0	7		2	
SBL	1	1700	5	.00	12	.01
SBT	1	1700	22	.01*	5	.00*
SBR	d	1700	63	.04	37	.02
EBL	1	1700	96	.06*	19	.01
EBT	2	3400	114	.03	163	.05*
EBR	1	1700	113	.07	56	.03
WBL	1	1700	8	.00	13	.01*
WBT	2	3400	231	.07*	129	.04
WBR	d	1700	21	.01	6	.00
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.22		.15

572 . Modjeska-A St. at Irvine Bl.

ITAM 12 2012 Existing+Project (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	2	3400	99	.03*	26	.01*
SBT	0	0	0		0	
SBR	1	1700	121	.07	35	.02
EBL	1	1700	22	.01	72	.04*
EBT	2	3400	1237	.36*	689	.20
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	3	5100	866	.17	1738	.34*
WBR	1	1700	10	.01	101	.06
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.44		.44

Appendix D

Signalized Intersections ITAM Level of Service Calculations

Alternative 3 2017 Baseline (No Project)

282 . Jeffrey Rd. at Portola Pkwy.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	807 .24*	559 .16*		
NBT	1	1700	28 .02	10 .01		
NBR	f		14	61		
SBL	1	1700	32 .02	11 .01		
SBT	1	1700	22 .01*	13 .01*		
SBR	1	1700	24 .01	26 .02		
EBL	1	1700	26 .02*	16 .01*		
EBT	2	3400	426 .13	578 .17		
EBR	1	1700	466 .27	416 .24		
WBL	2	3400	34 .01	51 .02		
WBT	2	3400	725 .21*	685 .20*		
WBR	1	1700	36 .02	4 .00		
Clearance Interval			.05*	.05*		
Note: Assumes Right-Turn Overlap for EBR						
TOTAL CAPACITY UTILIZATION			.53	.43		

283 . Jeffrey Rd. at Irvine Bl.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	198 .06	389 .11		
NBT	3	5100	544 .11*	769 .15*		
NBR	f		180	246		
SBL	2	3400	346 .10*	200 .06*		
SBT	3	5100	716 .14	381 .07		
SBR	1	1700	32 .02	59 .03		
EBL	2	3400	70 .02*	66 .02*		
EBT	3	5100	834 .16	1214 .24		
EBR	d	1700	250 .15	258 .15		
WBL	2	3400	313 .09	251 .07		
WBT	3	5100	1659 .33*	1602 .31*		
WBR	d	1700	217 .13	335 .20		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.61	.59		

284 . Jeffrey Rd. at Bryan Av.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	167 .05*	319 .09		
NBT	3	5100	564 .11	1202 .24*		
NBR	d	1700	119 .07	390 .23		
SBL	2	3400	56 .02	83 .02*		
SBT	3	5100	1040 .20*	652 .13		
SBR	1	1700	184 .11	154 .09		
EBL	1	1700	252 .15*	161 .09*		
EBT	2	3400	131 .04	227 .07		
EBR	d	1700	158 .09	152 .09		
WBL	2	3400	435 .13	186 .05		
WBT	1	1700	282 .17*	166 .10*		
WBR	d	1700	113 .07	87 .05		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.62	.50		

285 . Jeffrey Rd. at Trabuco Rd.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	130 .04*	202 .06		
NBT	3	5100	665 .13	1594 .31*		
NBR	d	1700	273 .16	680 .40		
SBL	2	3400	120 .04	41 .01*		
SBT	3	5100	1362 .27*	888 .17		
SBR	1	1700	267 .16	125 .07		
EBL	2	3400	173 .05	300 .09		
EBT	2	3400	437 .13*	489 .14*		
EBR	1	1700	174 .10	163 .10		
WBL	2	3400	594 .17*	349 .10*		
WBT	2	3400	703 .21	413 .12		
WBR	1	1700	52 .03	146 .09		
Right Turn Adjustment				NBR	.01*	
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.66	.62		

286 . Jeffrey Rd. at Roosevelt

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	152	.04*	399	.12
NBT	4	6800	942	.14	2167	.32*
NBR	1	1700	299	.18	557	.33
SBL	2	3400	140	.04	137	.04*
SBT	3	5100	1869	.37*	1177	.23
SBR	d	1700	76	.04	96	.06
EBL	1	1700	59	.03	121	.07
EBT	1	1700	174	.10*	276	.16*
EBR	1	1700	237	.14	267	.16
WBL	2	3400	677	.20*	286	.08*
WBT	1	1700	245	.14	215	.13
WBR	1	1700	170	.10	133	.08
Clearance Interval				.05*	.05*	
Note: Assumes Right-Turn Overlap for EBR						
TOTAL CAPACITY UTILIZATION				.76	.65	

287 . Jeffrey Rd. at I-5 NB Ramps

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	927	.18	2407	.47*
NBR	f		210		290	
SBL	0	0	0		0	
SBT	3	5100	2020	.40*	1424	.28
SBR	f		630		340	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1.5		590	.17*	496	
WBT	0	5100	0		0	.25*
WBR	1.5		503	[.13]	793	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.62	.77	

288 . Jeffrey Rd. at Walnut Av./I-5 SB Ramps289 . Jeffrey Rd. at ICD

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	64	.02*	214	.06
NBT	3	5100	729	.14	1734	.34*
NBR	1	1700	110	.06	205	.12
SBL	2	3400	445	.13	337	.10*
SBT	3	5100	1846	.41*	1005	.30
SBR	0	0	256		616	.36
EBL	2	3400	126	.04	293	.09
EBT	1.5	5100	275	.09*	268	[.08]*
EBR	1.5		198		169	
WBL	2	3400	326	.10*	437	.13*
WBT	1	1700	30	.02	110	.06
WBR	1	1700	274	.16	583	.34
Right Turn Adjustment					WBR	.14*
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.67	.84	

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	166	.05*	287	.08
NBT	3	5100	689	.14	1511	.30*
NBR	1	1700	225	.13	253	.15
SBL	2	3400	342	.10	237	.07*
SBT	3	5100	1614	.32*	1116	.22
SBR	1	1700	385	.23	181	.11
EBL	2	3400	184	.05	346	.10*
EBT	3	5100	744	.15*	790	.15
EBR	f		222		226	
WBL	2	3400	204	.06*	257	.08
WBT	3	5100	729	.14	1432	.28*
WBR	1	1700	147	.09	493	.29
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.63	.80	

290 . Jeffrey Rd. at Barranca Pkwy.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	257	.08*	344	.10*
NBT	3	5100	801	.19	1555	.34
NBR	0	0	153		160	
SBL	2	3400	65	.02	81	.02
SBT	3	5100	1733	.41*	1276	.30*
SBR	0	0	377		233	
EBL	2	3400	176	.05*	474	.14*
EBT	2	3400	552	.16	740	.22
EBR	d	1700	305	.18	246	.14
WBL	2	3400	163	.05	150	.04
WBT	2	3400	736	.22*	605	.18*
WBR	1	1700	53	.03	75	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.81		.77

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	423	.12*	642	.19
NBT	3	5100	876	.17	1560	.31*
NBR	f		180		337	
SBL	2	3400	285	.08	402	.12*
SBT	3	5100	1871	.37*	1160	.23
SBR	d	1700	154	.09	199	.12
EBL	2	3400	147	.04	264	.08
EBT	2	3400	535	.16*	891	.26*
EBR	d	1700	519	.31	354	.21
WBL	2	3400	580	.17*	416	.12*
WBT	2	3400	882	.26	819	.24
WBR	d	1700	137	.08	155	.09
Right Turn Adjustment			EBR	.06*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.93		.86

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	1115	.22	2123	.42*
NBR	f		291		110	
SBL	0	0	0		0	
SBT	3	5100	1865	.37*	1433	.28
SBR	f		1365		440	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1275	.38*	1097	.32*
WBT	0	0	0		0	
WBR	1	1700	109	.06	337	.20
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.80		.79

294 . University Dr. at I-405 SB Ramps

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	1043	.20	1739	.34
NBR	f		1000		1290	
SBL	0	0	0		0	
SBT	3	5100	2720	.53*	2196	.43*
SBR	f		340		270	
EBL	2	3400	367	.11*	531	.16*
EBT	0	0	0		0	
EBR	1	1700	110	.06	104	.06
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.69		.64

300 . Sand Canyon. Av. at Portola Pkwy.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	103 .03*	356 .10*		
NBT	0	0	3	1		
NBR	2	3400	214 .06	414 .12		
SBL	0	0	2	4		
SBT	0	0	7	13		
SBR	0	0	1	3		
EBL	0	0	3	1		
EBT	2	3400	294 .09*	571 .17*		
EBR	f		254	50		
WBL	2	3400	559 .16*	187 .06*		
WBT	2	3400	646 .19	471 .14		
WBR	0	0	4	1		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.33	.38		

301 . Sand Canyon. Av. at Irvine Bl.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	172 .05*	511 .15*		
NBT	3	5100	321 .06	692 .14		
NBR	2	3400	216 .06	447 .13		
SBL	2	3400	287 .08	73 .02		
SBT	2	3400	884 .26*	310 .09*		
SBR	1	1700	159 .09	87 .05		
EBL	2	3400	111 .03	184 .05*		
EBT	4	6800	1037 .15*	883 .13		
EBR	1	1700	321 .19	203 .12		
WBL	2	3400	565 .17*	398 .12		
WBT	3	5100	1168 .23	1486 .29*		
WBR	1	1700	98 .06	226 .13		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.68	.63		

302 . Sand Canyon. Av. at Trabuco Pkwy.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	210 .06*	246 .07		
NBT	3	5100	346 .07	1885 .37*		
NBR	f		434	468		
SBL	2	3400	239 .07	295 .09*		
SBT	3	5100	1782 .35*	626 .12		
SBR	1	1700	269 .16	34 .02		
EBL	2	3400	70 .02	135 .04		
EBT	3	5100	328 .06*	457 .09*		
EBR	f		443	250		
WBL	2	3400	775 .23*	554 .16*		
WBT	3	5100	311 .06	490 .10		
WBR	d	1700	294 .17	170 .10		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.75	.76		

303 . Sand Canyon. Av. at I-5 NB Ramps

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	147 .04*	795 .23*		
NBT	3	5100	691 .14	2162 .42		
NBR	d	1700	9 .01	20 .01		
SBL	1	1700	3 .00	1 .00		
SBT	4	6800	2957 .43*	1356 .20*		
SBR	1	1700	521 .31	255 .15		
EBL	1.5		338	741		
EBT	0.5	3400	18 .10*	9 .22*		
EBR	2	3400	467 .14	269 .08		
WBL	1	1700	6 .00	8 .00		
WBT	1	1700	3 .00*	1 .00*		
WBR	0	0	1	1		
Right Turn Adjustment			EBR	.01*		
Clearance Interval				.05*		
Note: Assumes E/W Split Phasing						
TOTAL CAPACITY UTILIZATION			.63	.70		

304 . Sand Canyon. Av. at Marine Wy.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	1	0		
NBT	3	5100	725 .14	2712 .53*		
NBR	1	1700	326 .19	238 .14		
SBL	2	3400	224 .07	172 .05*		
SBT	3	5100	3236 .63*	1505 .30		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	2	3400	184 .05*	315 .09*		
WBT	0	0	0	0		
WBR	1	1700	135 .08	278 .16		
Right Turn Adjustment Clearance Interval				WBR .03*		
			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.73	.75		

305 . Sand Canyon. Av. at I-5 SB Ramps

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	4	6800	665 .10	2401 .35*		
NBR	1	1700	98 .06	241 .14		
SBL	2	3400	830 .24	527 .16*		
SBT	4	6800	2566 .38*	1279 .19		
SBR	0	0	0	0		
EBL	2.5		385 .11*	599 .12*		
EBT	0	6800	2	2		
EBR	1.5		874 .26	231 [.00]		
WBL	0	0	0	0		
WBT	0	0	0	0		
WBR	0	0	0	0		
Right Turn Adjustment Clearance Interval			EBR .15*			
			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.69	.68		

306 . Sand Canyon. Av. at Oak Cyn./Laguna Cyn. R

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	58 .03*	42 .02		
NBT	3	5100	594 .12	1422 .28*		
NBR	1	1700	46 .03	79 .05		
SBL	2	3400	830 .24	277 .08*		
SBT	3	5100	2091 .41*	949 .19		
SBR	d	1700	333 .20	157 .09		
EBL	2	3400	92 .03	356 .10*		
EBT	1	1700	84 .05*	184 .11		
EBR	d	1700	33 .02	91 .05		
WBL	2	3400	76 .02*	69 .02		
WBT	1.5	5100	150 [.04]	61 .04*		
WBR	1.5		84	812 .24		
Right Turn Adjustment Clearance Interval				WBR .14*		
			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.56	.69		

307 . Sand Canyon. Av. at ICD

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	224 .07*	222 .07		
NBT	3	5100	516 .10	1003 .20*		
NBR	1	1700	111 .07	60 .04		
SBL	2	3400	276 .08	248 .07*		
SBT	3	5100	1589 .31*	754 .15		
SBR	1	1700	305 .18	310 .18		
EBL	2	3400	152 .04*	242 .07*		
EBT	3	5100	416 .08	543 .11		
EBR	1	1700	112 .07	136 .08		
WBL	2	3400	73 .02	140 .04		
WBT	3	5100	593 .12*	949 .19*		
WBR	1	1700	63 .04	204 .12		
Clearance Interval				.05*		
				.05*		
TOTAL CAPACITY UTILIZATION			.59	.58		

309 . Sand Canyon. Av. at Barranca Pkwy.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	130	.04*	173	.05*
NBT	3	5100	904	.18	928	.18
NBR	d	1700	103	.06	117	.07
SBL	2	3400	25	.01	58	.02
SBT	3	5100	1393	.27*	1151	.23*
SBR	d	1700	125	.07	153	.09
EBL	2	3400	108	.03*	116	.03
EBT	2	3400	391	.12	595	.18*
EBR	1	1700	130	.08	178	.10
WBL	2	3400	127	.04	161	.05*
WBT	2	3400	705	.21*	464	.14
WBR	1	1700	99	.06	45	.03
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.60	.56	

310 . Sand Canyon. Av. at Alton Pkwy.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	318	.09*	351	.10*
NBT	3	5100	1017	.20	726	.14
NBR	1	1700	446	.26	193	.11
SBL	2	3400	269	.08	99	.03
SBT	3	5100	1173	.23*	1189	.23*
SBR	1	1700	118	.07	182	.11
EBL	2	3400	134	.04*	140	.04
EBT	3	5100	487	.10	678	.13*
EBR	1	1700	329	.19	363	.21
WBL	2	3400	532	.16	629	.19*
WBT	2	3400	917	.27*	597	.18
WBR	1	1700	101	.06	184	.11
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.68	.70	

311 . Sand Canyon. Av. at I-405 NB Ramps

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	2	3400	1453	.43*	862	.25
NBR	f		650		380	
SBL	0	0	0		0	
SBT	2	3400	675	.20	957	.28*
SBR	f		1320		1240	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	0.5		55		163	
WBT	0	3400	0	.15*	0	[.15]*
WBR	1.5		447		368	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.63	.48	

312 . Sand Canyon. Av. at I-405 SB Ramps

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	166	.10	118	.07*
NBT	2	3400	993	.29*	744	.22
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	314	.09	695	.20*
SBR	f		216		442	
EBL	1.5		1130	[.44]*	496	[.27]*
EBT	0	3400	0	.44	0	.27
EBR	0.5		360		415	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.78	.59	

313 . Laguna Canyon Rd. at ICD

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	55	.02*	110	.03
NBT	2	3400	51	.02	127	.04*
NBR	d	1700	24	.01	63	.04
SBL	2	3400	37	.01	59	.02*
SBT	2	3400	96	.03*	60	.02
SBR	d	1700	17	.01	31	.02
EBL	2	3400	48	.01*	25	.01*
EBT	3	5100	538	.11	748	.15
EBR	d	1700	91	.05	98	.06
WBL	2	3400	44	.01	22	.01
WBT	3	5100	648	.13*	949	.19*
WBR	d	1700	52	.03	68	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.24		.31

314 . Laguna Canyon Rd. at Barranca Pkwy.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	65	.02*	63	.02*
NBT	2	3400	111	.03	119	.04
NBR	d	1700	44	.03	150	.09
SBL	2	3400	19	.01	48	.01
SBT	2	3400	99	.03*	100	.03*
SBR	d	1700	21	.01	103	.06
EBL	2	3400	40	.01*	38	.01
EBT	2	3400	407	.12	662	.19*
EBR	1	1700	87	.05	44	.03
WBL	2	3400	123	.04	66	.02*
WBT	2	3400	794	.23*	524	.15
WBR	d	1700	39	.02	104	.06
Right Turn Adjustment					NBR	.03*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.34		.34

315 . Laguna Canyon Rd. at Alton Pkwy.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	111	.07*	147	.09*
NBT	2	3400	200	.06	156	.05
NBR	d	1700	79	.05	107	.06
SBL	1	1700	42	.02	42	.02
SBT	2	3400	123	.04*	140	.04*
SBR	d	1700	45	.03	68	.04
EBL	2	3400	103	.03*	52	.02*
EBT	2	3400	561	.17	690	.20
EBR	1	1700	137	.08	100	.06
WBL	2	3400	101	.03	90	.03
WBT	2	3400	999	.29*	745	.22*
WBR	1	1700	48	.03	73	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.48		.42

316 . SR-133 SB Ramps at Irvine Bl.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	288	.17*	74	.04*
SBT	0	0	2		0	
SBR	2	3400	231	.07	213	.06
EBL	0	0	0		0	
EBT	4	6800	1321	.19*	1396	.21
EBR	d	1700	267	.16	128	.08
WBL	1	1700	383	.23*	152	.09
WBT	3	5100	1578	.31	2057	.40*
WBR	0	0	0		0	
Right Turn Adjustment					SBR	.02*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.51

317 . SR-133 NB Ramps at Irvine Bl.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	91 .05*	233 .14*		
NBT	0	0	0	0		
NBR	1	1700	152 .09	444 .26		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	1458 .43*	1336 .39		
EBR	f		110	220		
WBL	0	0	0	0		
WBT	3	5100	1909 .39	2027 .44*		
WBR	0	0	60	200		
Right Turn Adjustment Clearance Interval			NBR .04* .05*	NBR .08* .05*		
TOTAL CAPACITY UTILIZATION			.57	.71		

318 . Banting at Barranca Pkwy.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	18 .01*	32 .01		
NBT	1	1700	14 .01	135 .08*		
NBR	1	1700	19 .01	113 .07		
SBL	2	3400	790 .23	90 .03*		
SBT	2	3400	650 .38*	133 .08		
SBR	0	0	641	167 .10		
EBL	1	1700	21 .01*	302 .18*		
EBT	2	3400	351 .10	867 .26		
EBR	d	1700	14 .01	20 .01		
WBL	1	1700	26 .02	27 .02		
WBT	2	3400	751 .22*	511 .15*		
WBR	f		76	613		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.67	.49		

319 . Banting at Alton Pkwy.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	2 .00	21 .01		
NBT	1	1700	9 .01	75 .04*		
NBR	1	1700	9 .01	94 .06		
SBL	2	3400	48 .01	114 .03*		
SBT	1	1700	95 .06*	9 .01		
SBR	1	1700	216 .13	67 .04		
EBL	2	3400	28 .01*	44 .01		
EBT	2	3400	515 .15	1052 .31*		
EBR	d	1700	25 .01	4 .00		
WBL	1	1700	90 .05	7 .00		
WBT	2	3400	1348 .40*	682 .20		
WBR	d	1700	103 .06	51 .03		
Right Turn Adjustment Clearance Interval			SBR .06* .05*	NBR .02* .05*		
TOTAL CAPACITY UTILIZATION			.58	.45		

321 . Laguna Canyon Rd. at Old Laguna Cyn. Rd.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	554 .16	254 .07*		
NBT	3	5100	3725 .73*	2979 .58		
NBR	1	1700	57 .03	96 .06		
SBL	2	3400	42 .01*	101 .03		
SBT	3	5100	2684 .53	3413 .67*		
SBR	1	1700	586 .34	335 .20		
EBL	3	5100	251 .05*	358 .07*		
EBT	1	1700	31 .02	93 .05		
EBR	f		188	291		
WBL	1	1700	78 .05	66 .04		
WBT	2	3400	150 .04*	61 .02*		
WBR	d	1700	103 .06	83 .05		
Right Turn Adjustment Clearance Interval			WBR .01* .05*			.05*
TOTAL CAPACITY UTILIZATION			.89	.88		

327 . Barranca Pkwy. at Technology

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	402	.12*	62	.02
NBT	2	3400	636	.19	623	.18*
NBR	1	1700	166	.10	188	.11
SBL	1	1700	171	.10	260	.15*
SBT	2	3400	611	.18*	658	.19
SBR	1	1700	259	.15	44	.03
EBL	2	3400	56	.02*	242	.07
EBT	2	3400	133	.04	272	.08*
EBR	d	1700	64	.04	357	.21
WBL	2	3400	46	.01	195	.06*
WBT	2	3400	289	.09*	85	.03
WBR	d	1700	98	.06	156	.09
Right Turn Adjustment Clearance Interval					EBR	.02*
						.05*
TOTAL CAPACITY UTILIZATION				.46	.54	

328 . Barranca Pkwy. at I-5 HOV Ramp

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	5	.00	14	.01
NBT	2	3400	992	.29*	786	.23*
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	3	5100	730	.14	1072	.21
SBR	d	1700	35	.02	106	.06
EBL	1	1700	148	.09*	74	.04*
EBT	0	0	0		0	
EBR	1	1700	20	.01	8	.00
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.43	.32	

329 . Barranca Pkwy. at ICD

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	148	.04	31	.01*
NBT	2	3400	753	.22*	413	.12
NBR	1	1700	191	.11	234	.14
SBL	2	3400	78	.02*	150	.04
SBT	2	3400	387	.11	701	.21*
SBR	1	1700	253	.15	299	.18
EBL	2	3400	106	.03*	276	.08*
EBT	3	5100	329	.06	906	.18
EBR	1	1700	13	.01	287	.17
WBL	2	3400	228	.07	212	.06
WBT	3	5100	776	.15*	970	.19*
WBR	1	1700	225	.13	101	.06
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.47	.54	

330 . Barranca Pkwy. at Pacifica

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	251	.15*	35	.02*
NBT	2	3400	767	.23	506	.15
NBR	1	1700	151	.09	509	.30
SBL	1	1700	19	.01	96	.06
SBT	2	3400	525	.15*	1076	.32*
SBR	d	1700	129	.08	19	.01
EBL	2	3400	11	.00	99	.03
EBT	2	3400	9	.01	137	.08*
EBR	0	0	40	.02	335	.20
WBL	2	3400	315	.09	197	.06*
WBT	1	1700	301	.18*	29	.02
WBR	1	1700	392	.23	65	.04
Right Turn Adjustment Clearance Interval					EBR	.10*
						.05*
TOTAL CAPACITY UTILIZATION				.53	.63	

331 . ICD at Gateway Bl.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	86	.03	40	.01*
NBT	3	5100	915	.18*	762	.15
NBR	d	1700	70	.04	13	.01
SBL	2	3400	63	.02*	91	.03
SBT	3	5100	453	.09	1101	.22*
SBR	1	1700	53	.03	71	.04
EBL	1	1700	146	.09*	53	.03*
EBT	2	3400	217	.06	76	.02
EBR	1	1700	68	.04	81	.05
WBL	1	1700	9	.01	73	.04
WBT	2	3400	61	.02*	200	.06*
WBR	1	1700	120	.07	309	.18
Right Turn Adjustment Clearance Interval			WBR	.03* .05*	WBR	.06* .05*
TOTAL CAPACITY UTILIZATION					.39	.43

333 . Pacifica at Gateway Bl.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	158	.05*	419	.12*
NBT	2	3400	173	.05	132	.04
NBR	d	1700	11	.01	39	.02
SBL	2	3400	80	.02	55	.02
SBT	2	3400	78	.02*	223	.07*
SBR	d	1700	42	.02	472	.28
EBL	1	1700	648	.38*	108	.06*
EBT	2	3400	369	.11	125	.04
EBR	1	1700	179	.11	147	.09
WBL	1	1700	12	.01	21	.01
WBT	1	1700	159	.09*	259	.15*
WBR	1	1700	110	.06	80	.05
Right Turn Adjustment Clearance Interval					SBR	.16* .05*
TOTAL CAPACITY UTILIZATION					.59	.61

338 . Alton Pkwy. at Irvine Bl.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	186	.05*	685	.20*
NBT	3	5100	596	.12	1172	.23
NBR	f		78		144	
SBL	2	3400	222	.07	173	.05
SBT	3	5100	1236	.24*	618	.12*
SBR	f		542		849	
EBL	2	3400	816	.24*	574	.17*
EBT	3	5100	940	.18	623	.12
EBR	1	1700	575	.34	251	.15
WBL	2	3400	197	.06	100	.03
WBT	3	5100	769	.15*	1306	.26*
WBR	1	1700	275	.16	244	.14
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION					.73	.80

339 . Alton Pkwy. at Toledo Wy.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	55	.03*	19	.01
NBT	3	5100	998	.20	1880	.37*
NBR	f		55		168	
SBL	1	1700	52	.03	48	.03*
SBT	3	5100	1650	.33*	1062	.21
SBR	0	0	33		14	
EBL	1	1700	5	.00	17	.01
EBT	1	1700	3	.02*	24	.05*
EBR	0	0	33		61	
WBL	1	1700	98	.06*	46	.03*
WBT	1	1700	23	.01	7	.00
WBR	1	1700	128	.08	83	.05
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION					.49	.53

340 . Alton Pkwy. at Jeronimo Rd.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	81	.05*	11	.01
NBT	3	5100	1279	.25	1527	.30*
NBR	f		234		349	
SBL	2	3400	108	.03	73	.02*
SBT	3	5100	1460	.29*	1334	.26
SBR	0	0	38		2	
EBL	1	1700	7	.00	24	.01
EBT	1	1700	2	.00*	18	.01*
EBR	f		11		69	
WBL	2	3400	349	.10*	257	.08*
WBT	1	1700	22	.01	7	.00
WBR	1	1700	108	.06	120	.07
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.49		.46

341 . Alton Pkwy. at Barranca Pkwy./Muirlands Bl.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	9	.01	10	.01
NBT	3	5100	1089	.21*	928	.18*
NBR	f		144		332	
SBL	2	3400	84	.02*	122	.04*
SBT	3	5100	1004	.20	999	.20
SBR	f		724		560	
EBL	2	3400	399	.12*	790	.23*
EBT	2	3400	132	.04	506	.15
EBR	d	1700	8	.00	5	.00
WBL	2	3400	218	.06	96	.03
WBT	2	3400	298	.11*	420	.21*
WBR	0	0	82		293	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.51		.71

343 . Alton Pkwy. at Ada

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	305	.09*	135	.04*
NBT	3	5100	1427	.28	1070	.21
NBR	d	1700	17	.01	13	.01
SBL	1	1700	16	.01	15	.01
SBT	3	5100	1047	.21*	1377	.27*
SBR	d	1700	45	.03	15	.01
EBL	1	1700	5	.00	18	.01*
EBT	1	1700	7	.00	2	.00
EBR	1	1700	58	.03	255	.15
WBL	1	1700	15	.01	19	.01
WBT	1	1700	20	.04*	11	.01*
WBR	0	0	48		10	
Right Turn Adjustment					EBR	.11*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.39		.49

344 . Alton Pkwy. at Technology Dr. W.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	457	.13	392	.12*
NBT	3	5100	1526	.30*	839	.16
NBR	1	1700	393	.23	64	.04
SBL	1	1700	35	.02*	8	.00
SBT	4	6800	1008	.15	1541	.23*
SBR	1	1700	97	.06	127	.07
EBL	1	1700	78	.05*	247	.15*
EBT	2	3400	51	.02	47	.01
EBR	2	3400	133	.04	516	.15
WBL	2	3400	68	.02	493	.15
WBT	2	3400	47	.01*	81	.02*
WBR	d	1700	16	.01	14	.01
Right Turn Adjustment					EBR	.01*
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for EBR						
TOTAL CAPACITY UTILIZATION				.43		.58

345 . Alton Pkwy. at I-5 NB Ramps

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	2056	.40*	1194	.23
NBR	f		180		610	
SBL	0	0	0	0		
SBT	3	5100	995	.20	1616	.32*
SBR	f		250		950	
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1.5		495		164	.05*
WBT	0	5100	0	.20*	0	
WBR	1.5		534		126	{.01}
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.65		.42

346 . Alton Pkwy. at Enterprise

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	1022	.20*	1072	.21*
NBR	1	1700	39	.02	222	.13
SBL	1	1700	171	.10*	508	.30*
SBT	3	5100	1328	.26	1286	.25
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	2	3400	182	.05*	134	.04*
WBT	0	0	0	0	0	
WBR	2	3400	1198	.35	738	.22
Right Turn Adjustment			WBR	.20*		
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for WBR						
TOTAL CAPACITY UTILIZATION				.60		.60

348 . Alton Pkwy. at ICD

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	49	.01	27	.01
NBT	3	5100	588	.12*	818	.16*
NBR	1	1700	83	.05	265	.16
SBL	2	3400	186	.05*	404	.12*
SBT	3	5100	834	.16	798	.16
SBR	1	1700	250	.15	238	.14
EBL	2	3400	137	.04	346	.10
EBT	3	5100	411	.08*	832	.16*
EBR	1	1700	12	.01	32	.02
WBL	2	3400	574	.17*	220	.06*
WBT	3	5100	811	.16	444	.09
WBR	1	1700	685	.40	316	.19
Right Turn Adjustment			WBR	.15*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.62		.55

350 . Alton Pkwy. at Pacifica

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	46	.01*	132	.04
NBT	3	5100	428	.08	944	.19*
NBR	d	1700	88	.05	182	.11
SBL	2	3400	232	.07	259	.08*
SBT	2	3400	1274	.37*	591	.17
SBR	1	1700	122	.07	166	.10
EBL	2	3400	61	.02	126	.04
EBT	2	3400	118	.03*	229	.07*
EBR	d	1700	71	.04	58	.03
WBL	1	1700	240	.14*	91	.05*
WBT	2	3400	198	.06	232	.07
WBR	d	1700	202	.12	191	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.60		.44

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	32	.01*	153	.05*
NBT	2	3400	10	.01	61	.03
NBR	0	0	19	.01	39	
SBL	2	3400	105	.03	246	.07
SBT	1	1700	634	.37*	267	.16*
SBR	f		1229		327	
EBL	1	1700	68	.04*	409	.24*
EBT	2	3400	76	.02	254	.07
EBR	1	1700	47	.03	86	.05
WBL	1	1700	19	.01	98	.06
WBT	2	3400	109	.03*	370	.11*
WBR	1	1700	22	.01	140	.08
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.50		.61

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	139	.08*	226	.13*
NBT	1	1700	42	.02	232	.14
NBR	f		329		752	
SBL	1	1700	4	.00	28	.02
SBT	2	3400	13	.01*	137	.07*
SBR	0	0	23	.01	94	
EBL	1	1700	51	.03	288	.17
EBT	1	1700	95	.06*	406	.24*
EBR	1	1700	53	.03	117	.07
WBL	1.5		481	[.21]*	104	.06*
WBT	0.5	3400	235	.21	160	.09
WBR	f		35		186	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.41		.55

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	2	3400	1906	.56*	1033	.30*
NBR	f		522		1251	
SBL	1	1700	8	.00	59	.03*
SBT	3	5100	665	.13	1549	.30
SBR	f		240		690	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1	1700	35	.02*	301	.18*
WBT	0	0	0		0	
WBR	f		464		167	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.63		.56

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	1329	.26*	1694	.33
NBR	f		72		60	
SBL	0	0	0		0	
SBT	2	3400	595	.18	1454	.43*
SBR	f		124		400	
EBL	2	3400	1093	.32*	586	.17*
EBT	0	0	0		0	
EBR	f		947		606	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.63		.65

360 . ICD at Research Dr.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	38	.02	132	.08*
NBT	3	5100	878	.17*	1003	.20
NBR	d	1700	7	.00	11	.01
SBL	2	3400	267	.08*	279	.08
SBT	3	5100	879	.17	1461	.29*
SBR	1	1700	108	.06	285	.17
EBL	2	3400	267	.08	73	.02
EBT	1	1700	468	.28*	268	.16*
EBR	d	1700	102	.06	47	.03
WBL	1	1700	13	.01*	31	.02*
WBT	1	1700	61	.04	231	.14
WBR	f		252		729	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.59		.60

362 . Bake Pkwy. at Irvine Bl.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	417	.12	167	.05
NBT	3	5100	1695	.37*	1191	.35*
NBR	0	0	170		767	.45
SBL	2	3400	34	.01*	168	.05*
SBT	3	5100	1089	.21	1333	.26
SBR	1	1700	346	.20	563	.33
EBL	2	3400	418	.12	393	.12
EBT	3	5100	226	.04*	818	.16*
EBR	1	1700	110	.06	286	.17
WBL	2	3400	941	.28*	445	.13*
WBT	4	6800	708	.12	437	.08
WBR	0	0	97		100	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.75		.74

363 . Bake Pkwy. at Toledo Wy.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	270	.16*	23	.01
NBT	3	5100	2089	.41	2075	.41*
NBR	d	1700	48	.03	404	.24
SBL	1	1700	18	.01	45	.03*
SBT	3	5100	2102	.41*	2155	.42
SBR	d	1700	125	.07	19	.01
EBL	2	3400	15	.00	106	.03
EBT	2	3400	6	.00*	201	.06*
EBR	1	1700	8	.00	111	.07
WBL	1	1700	350	.21*	94	.06*
WBT	2	3400	173	.06	18	.01
WBR	0	0	27		59	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.83		.61

364 . Bake Pkwy. at Jeronimo Rd.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	361	.11	44	.01
NBT	3	5100	2506	.49*	2409	.47*
NBR	d	1700	34	.02	304	.18
SBL	1	1700	34	.02*	80	.05*
SBT	4	6800	2166	.34	2257	.34
SBR	0	0	149		46	
EBL	2	3400	29	.01	138	.04
EBT	2	3400	22	.01*	446	.13*
EBR	1	1700	48	.03	363	.21
WBL	1	1700	292	.17*	110	.06*
WBT	2	3400	445	.15	70	.04
WBR	0	0	61		54	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.74		.76

365 . Bake Pkwy. at Muirlands Bl.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	171	.05	86	.03*
NBT	4	6800	2852	.42*	2419	.36
NBR	f		108		302	
SBL	2	3400	52	.02*	178	.05
SBT	4	6800	2389	.35	2676	.39*
SBR	f		156		47	
EBL	2	3400	32	.01*	176	.05
EBT	2	3400	61	.02	550	.16*
EBR	f		36		222	
WBL	2	3400	241	.07	122	.04*
WBT	2	3400	367	.11*	106	.03
WBR	f		94		65	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.61		.67

366 . Bake Pkwy. at Rockfield Bl.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	214	.06	26	.01
NBT	4	6800	3022	.44*	2583	.38*
NBR	f		554		298	
SBL	2	3400	125	.04*	177	.05*
SBT	4	6800	2475	.36	2836	.42
SBR	1	1700	19	.01	11	.01
EBL	1	1700	5	.00	17	.01
EBT	2	3400	11	.00*	85	.03*
EBR	f		14		278	
WBL	2	3400	145	.04*	576	.17*
WBT	2	3400	87	.03	23	.01
WBR	f		87		120	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.57		.68

367 . Bake Pkwy. at I-5 NB Ramps

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	3025	.59*	2728	.53*
NBR	f		310		1020	
SBL	0	0	0		0	
SBT	3	5100	786	.15	1128	.22
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1.5		144	.08*	42	.02*
WBT	0	5100	0		0	
WBR	1.5		745	.22	282	.08
Right Turn Adjustment			WBR	.14*	WBR	.06*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.86		.66

368 . Bake Pkwy. at I-5 SB Ramps

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	490	.10	1379	.29*
NBR	0	0	19		99	
SBL	0	0	0		0	
SBT	3	5100	710	.14*	622	.12
SBR	f		229		515	
EBL	3	5100	2767	.54*	2174	.43*
EBT	0	0	0		1	
EBR	1	1700	414	.24	109	.06
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.73		.77

371 . Bake Pkwy. at Research Dr.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	29	.02*	32	.02
NBT	3	5100	301	.06	534	.10*
NBR	d	1700	7	.00	16	.01
SBL	2	3400	160	.05	71	.02*
SBT	3	5100	533	.10*	356	.07
SBR	1	1700	473	.28	282	.17
EBL	2	3400	133	.04*	466	.14*
EBT	2	3400	116	.03	133	.04
EBR	d	1700	41	.02	44	.03
WBL	1	1700	9	.01	40	.02
WBT	1	1700	142	.08*	296	.17*
WBR	1	1700	119	.07	189	.11
Right Turn Adjustment Clearance Interval			SBR	.15* .05*		.05*
TOTAL CAPACITY UTILIZATION				.44	.48	

372 . Bake Pkwy. at ICD

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	75	.02	116	.03
NBT	3	5100	69	.01*	128	.03*
NBR	d	1700	9	.01	4	.00
SBL	2	3400	230	.07*	245	.07*
SBT	3	5100	207	.04	64	.01
SBR	1	1700	154	.09	130	.08
EBL	2	3400	97	.03*	187	.06*
EBT	3	5100	569	.11	1062	.21
EBR	f		125		162	
WBL	1	1700	4	.00	4	.00
WBT	3	5100	800	.16*	785	.15*
WBR	d	1700	181	.11	256	.15
Right Turn Adjustment Clearance Interval			SBR	.01* .05*		.05*
TOTAL CAPACITY UTILIZATION				.33	.36	

406 . Laguna Canyon Rd. at Lake Forest Dr.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	2681	.53*	1774	.35*
NBR	1	1700	132	.08	100	.06
SBL	2	3400	1110	.33*	1310	.39*
SBT	3	5100	1613	.32	2243	.44
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	119	.04*	147	.04*
WBT	0	0	0		0	
WBR	f		1655		1516	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.95	.83	

409 . Bake Pkwy. at Commercentre Dr.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	99	.06*	135	.08*
NBT	2	3400	676	.20	708	.21
NBR	d	1700	583	.34	543	.32
SBL	1	1700	58	.03	61	.04
SBT	2	3400	1111	.33*	1035	.30*
SBR	d	1700	162	.10	252	.15
EBL	1	1700	274	.16*	237	.14*
EBT	2	3400	151	.07	116	.05
EBR	0	0	92		62	
WBL	2	3400	160	.05	213	.06
WBT	1	1700	150	.09*	332	.20*
WBR	0	0	3		5	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.69	.77	

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK VOL	HOUR V/C	PM PK VOL	HOUR V/C
NBL	1	1700	39	.02*	34	.02
NBT	3	5100	723	.15	2398	.48*
NBR	0	0	37		54	
SBL	1	1700	91	.05	96	.06*
SBT	3	5100	3254	.64*	1351	.26
SBR	1	1700	26	.02	6	.00
EBL	1	1700	18	.01	44	.03*
EBT	1	1700	2	.00*	0	.00
EBR	d	1700	0	.00	26	.02
WBL	1	1700	54	.03*	46	.03
WBT	1	1700	5	.00	0	.00*
WBR	1	1700	51	.03	64	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.74		.62

481 . Laguna Canyon Rd. at Technology Dr.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	1 .00	1 .00		
NBT	2	3400	13 .00*	46 .01*		
NBR	d	1700	16 .01	23 .01		
SBL	2	3400	644 .19*	432 .13*		
SBT	2	3400	27 .01	25 .01		
SBR	d	1700	11 .01	5 .00		
EBL	1	1700	1 .00	5 .00		
EBT	1	1700	9 .01	25 .02*		
EBR	0	0	1	1		
WBL	1	1700	13 .01	15 .01*		
WBT	1	1700	49 .03*	25 .01		
WBR	2	3400	256 .08	508 .15		
Right Turn Adjustment				WBR	.02*	
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.27	.24		

482 . Road A at Trabuco Rd.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	11 .01*	15 .01*		
NBT	0	0	0	0		
NBR	1	1700	1 .00	6 .00		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	509 .15	751 .22*		
EBR	d	1700	25 .01	23 .01		
WBL	1	1700	5 .00	8 .00		
WBT	2	3400	899 .26*	587 .17		
WBR	0	0	0	0		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.32	.28		

483 . Road C at Trabuco Rd.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	30 [.02]*	17 [.01]*		
NBT	0	0	0	0		
NBR	1	1700	50 .03	33 .02		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	530 .16*	602 .18*		
EBR	d	1700	14 .01	33 .02		
WBL	1	1700	26 .02*	47 .03*		
WBT	2	3400	570 .17	437 .13		
WBR	0	0	0	0		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.25	.27		

484 . Sand Canyon Av. at Roosevelt

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	47 .01*	119 .04		
NBT	4	6800	894 .13	1859 .27*		
NBR	d	1700	80 .05	111 .07		
SBL	2	3400	172 .05	122 .04*		
SBT	4	6800	2005 .29*	941 .14		
SBR	d	1700	108 .06	118 .07		
EBL	2	3400	112 .03	141 .04*		
EBT	1	1700	88 .05*	86 .05		
EBR	d	1700	122 .07	72 .04		
WBL	2	3400	103 .03*	97 .03		
WBT	1	1700	45 .03	104 .06*		
WBR	d	1700	94 .06	189 .11		
Right Turn Adjustment			EBR	.01*	WBR	.02*
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.44	.48		

485 . Sand Canyon Av. at Nightmist

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	51	.02*	270	.08
NBT	4	6800	884	.13	2489	.37*
NBR	d	1700	44	.03	77	.05
SBL	1	1700	19	.01	18	.01*
SBT	4	6800	2913	.43*	1415	.21
SBR	d	1700	22	.01	47	.03
EBL	2	3400	42	.01	41	.01*
EBT	1	1700	17	.01*	15	.01
EBR	1	1700	386	.23	133	.08
WBL	2	3400	148	.04*	45	.01
WBT	1	1700	7	.00	14	.01*
WBR	d	1700	16	.01	14	.01
Right Turn Adjustment Clearance Interval			EBR	.20* .05*		.05*
TOTAL CAPACITY UTILIZATION				.75	.45	

514 . Alton Pkwy. at Rancho Pkwy.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	16	.00	54	.02
NBT	3	5100	843	.17	1372	.27*
NBR	1	1700	101	.06	161	.09
SBL	2	3400	42	.01	49	.01*
SBT	3	5100	1563	.31*	936	.18
SBR	1	1700	0	.00	14	.01
EBL	1	1700	16	.01	10	.01
EBT	1	1700	16	.01*	10	.01*
EBR	1	1700	68	.04	20	.01
WBL	1	1700	144	.08*	73	.04*
WBT	1	1700	4	.02	12	.03
WBR	0	0	34		38	
Right Turn Adjustment Clearance Interval			EBR	.03* .05*		.05*
TOTAL CAPACITY UTILIZATION				.48	.38	

518 . Alton Pkwy. at Commercentre

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	917	.18	1458	.29*
NBR	d	1700	578	.34	490	.29
SBL	1	1700	172	.10	91	.05*
SBT	3	5100	1684	.33*	945	.19
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1.5		326	.10*	649	.19*
WBT	0	5100	0		0	
WBR	1.5		53		186	.11
Right Turn Adjustment Clearance Interval			NBR	.03* .05*		.05*
TOTAL CAPACITY UTILIZATION				.51	.58	

555 . Bake Pkwy. at Rancho Pkwy. S

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	173	.10*	32	.02
NBT	2	3400	880	.26	1826	.54*
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	1617	.48*	1112	.33
SBR	1	1700	227	.13	60	.04
EBL	2	3400	90	.03*	237	.07*
EBT	0	0	0		0	
EBR	1	1700	83	.05	124	.07
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.66	.66	

556 . Ridge Valley at Portola Pkwy.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	134	.08*	145	.09*
NBT	1	1700	10	.01	18	.06
NBR	0	0	11		84	
SBL	1	1700	57	.03	37	.02
SBT	1	1700	38	.02*	8	.00*
SBR	1	1700	8	.00	7	.00
EBL	1	1700	11	.01	6	.00
EBT	2	3400	431	.13*	570	.17*
EBR	d	1700	84	.05	112	.07
WBL	1	1700	175	.10*	141	.08*
WBT	2	3400	580	.17	338	.10
WBR	d	1700	43	.03	46	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.38		.39

558 . Ridge Valley-0 St. at Irvine Bl.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	179	.05*	137	.04
NBT	2	3400	97	.03	283	.08*
NBR	d	1700	36	.02	28	.02
SBL	1	1700	121	.07	49	.03*
SBT	2	3400	364	.11*	142	.04
SBR	f		606		242	
EBL	2	3400	81	.02*	439	.13*
EBT	3	5100	1233	.24	1044	.20
EBR	1	1700	179	.11	249	.15
WBL	2	3400	47	.01	39	.01
WBT	2	3400	1204	.35*	1701	.50*
WBR	1	1700	21	.01	68	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.58		.79

559 . 0 St. at Trabuco Rd.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	62	.02*	94	.03*
NBT	1.5	3400	10	.01	40	.02
NBR	0.5		19	.01	68	.04
SBL	1	1700	45	.03	56	.03
SBT	1.5	5100	26	.02*	36	.02*
SBR	1.5		718	.21	624	.18
EBL	2	3400	404	.12*	497	.15*
EBT	1.5	5100	496	.15	636	.19
EBR	1.5		57	.03	68	.04
WBL	1	1700	18	.01	26	.02
WBT	1.5	3400	590	.19*	452	.14*
WBR	0.5		47		24	
Right Turn Adjustment			SBR	.10*	SBR	.05*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.50		.44

560 . 0 St. at Marine Wy.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	2	3400	71	.02*	47	.01*
SBT	0	0	0		0	
SBR	1	1700	90	.05	126	.07
EBL	1	1700	49	.03	147	.09*
EBT	2	3400	369	.11*	253	.07
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	200	.06	384	.11*
WBR	1	1700	21	.01	83	.05
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.18		.26

561 . LY Street at Irvine Bl.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	53 .03*	58 .03*		
NBT	0	0	0	0		
NBR	1	1700	38 .02	32 .02		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	3	5100	1292 .25	948 .19		
EBR	1	1700	43 .03	96 .06		
WBL	1	1700	37 .02	44 .03		
WBT	2	3400	1157 .34*	1672 .49*		
WBR	0	0	0	0		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.42	.57		

563 . B St. at Irvine Bl.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	11 .01*	11 .01*		
NBT	0	0	0	0		
NBR	1	1700	8 .00	9 .01		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	1967 .58*	1261 .37		
EBR	1	1700	12 .01	12 .01		
WBL	1	1700	8 .00	8 .00		
WBT	2	3400	1382 .41	2259 .66*		
WBR	0	0	0	0		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.64	.72		

571 . Portola Springs at Portola Pkwy.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	234 .07*	334 .10*		
NBT	1	1700	24 .07	0 .04		
NBR	0	0	91	73		
SBL	1	1700	0 .00	0 .00		
SBT	1	1700	37 .02*	0 .00*		
SBR	d	1700	262 .15	116 .07		
EBL	1	1700	72 .04*	188 .11*		
EBT	2	3400	229 .07	279 .08		
EBR	1	1700	162 .10	393 .23		
WBL	1	1700	21 .01	29 .02		
WBT	2	3400	364 .11*	134 .04*		
WBR	d	1700	4 .00	43 .03		
Right Turn Adjustment			SBR .10*	EBR .02*		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.39	.32		

572 . Modjeska-A St. at Irvine Bl.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	0 .00	0 .00		
NBT	1	1700	0 .00*	0 .00*		
NBR	1	1700	0 .00	0 .00		
SBL	2	3400	512 .15*	262 .08*		
SBT	1	1700	0 .00	0 .00		
SBR	d	1700	251 .15	172 .10		
EBL	1	1700	128 .08*	213 .13*		
EBT	3	5100	1208 .24	731 .14		
EBR	1	1700	0 .00	0 .00		
WBL	1	1700	0 .00	0 .00		
WBT	3	5100	979 .19*	1672 .33*		
WBR	1	1700	162 .10	489 .29		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.47	.59		

574 . 0 St. at LN St.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	17	.01*	53	.03*
NBT	2	3400	114	.04	230	.07
NBR	0	0	7		24	
SBL	1	1700	9	.01	11	.01
SBT	2	3400	390	.12*	209	.07*
SBR	0	0	22		24	
EBL	1	1700	23	.01	15	.01
EBT	1	1700	4	.04*	5	.02*
EBR	0	0	64		30	
WBL	1	1700	7	.00	11	.01*
WBT	1	1700	1	.00	4	.01
WBR	0	0	2		5	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.22		.18

575 . 0 St. at LV St.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	1	.00	1	.00
NBT	1.5	3400	39	.01	129	.04*
NBR	0.5		1		9	
SBL	1	1700	1	.00	11	.01*
SBT	1.5	3400	101	.03*	59	.02
SBR	0.5		1		1	
EBL	1	1700	1	.00	1	.00
EBT	0.5	1700	1	.00	1	.00
EBR	0.5		1		1	
WBL	1	1700	6	.00	11	.01
WBT	0.5	1700	1	.00*	1	.02*
WBR	0.5		4		31	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.08		.12

576 . 0 St. at C St.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	1		1	
NBT	1	1700	70	.04	230	.14*
NBR	0	0	1		1	
SBL	1	1700	1	.00	1	.00
SBT	1	1700	160	.09*	170	.10
SBR	0	0	1		1	
EBL	0	0	1		1	
EBT	0	0	1		1	
EBR	0	0	1		1	
WBL	1	1700	1	.00	1	.00
WBT	0	0	1		1	
WBR	1	1700	1	.00	1	.00
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.14		.19

577 . Pusan Way-Z St. at Irvine Bl.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	97	.06*	70	.04
NBT	1	1700	46	.03	93	.05*
NBR	1	1700	301	.18	228	.13
SBL	1	1700	93	.05	41	.02*
SBT	1	1700	77	.05*	38	.02
SBR	1	1700	30	.02	12	.01
EBL	1	1700	6	.00	18	.01*
EBT	3	5100	1662	.33*	1055	.21
EBR	1	1700	67	.04	81	.05
WBL	1	1700	187	.11*	231	.14
WBT	3	5100	1116	.22	1953	.38*
WBR	1	1700	17	.01	50	.03
Right Turn Adjustment			NBR	.04*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.51

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	24	.01	43	.03
NBT	1	1700	9	.01*	36	.02*
NBR	1	1700	57	.03	72	.04
SBL	1	1700	233	.14*	122	.07*
SBT	1	1700	69	.10	17	.05
SBR	0	0	99		74	
EBL	1	1700	25	.01	69	.04*
EBT	2	3400	1860	.55*	1269	.37
EBR	1	1700	68	.04	18	.01
WBL	2	3400	112	.03*	75	.02
WBT	2	3400	1277	.38	2158	.63*
WBR	1	1700	55	.03	195	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.78		.81

650 . 0 St. at C St.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	2	3400	147 .05	234 .08*		
NBR	0	0	17	35		
SBL	0	0	124	175 [.10]*		
SBT	2	3400	400 .15*	229 .12		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1	1700	60 .04*	31 .02*		
WBT	0	0	0	0		
WBR	1	1700	173 .10	156 .09		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.24	.25		

651 . C St. at Trabuco Rd.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	66 .04*	195 .11*		
NBT	0.5	1700	12 .01	119 .08		
NBR	0.5		4	25		
SBL	1	1700	4 .00	4 .00		
SBT	0.5	1700	104 .11*	53 .05*		
SBR	0.5		82	33		
EBL	1	1700	26 .02	59 .03		
EBT	0.5	1700	72 .15*	111 .15*		
EBR	0.5		190	149		
WBL	1	1700	16 .01*	11 .01*		
WBT	0.5	1700	113 .07	65 .04		
WBR	0.5		2	4		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.36	.37		

652 . LY Street at Trabuco Rd.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	1	5		
NBT	1	1700	10 .01	57 .04		
NBR	0	0	0	0		
SBL	0	0	0	0		
SBT	1	1700	74 .12*	35 .06*		
SBR	0	0	129	67		
EBL	0	0	80 [.05]*	140		
EBT	1	1700	0 .05	0 .09*		
EBR	0	0	6	6		
WBL	0	0	0	0		
WBT	0	0	0	0		
WBR	0	0	0	0		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.22	.20		

653 . LY Street at GP Blvd N/S Conn

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	0.5	1700	10 .01	40 .02		
NBR	0.5		0	0		
SBL	1	1700	0 .00	0 .00		
SBT	1	1700	60 .04*	30 .02*		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	0.5		0	0		
WBT	0	1700	0	0		
WBR	0.5		0	0		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.09	.07		

654 . C St. at LV St.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	6	14		
NBT	1	1700	9 .01	84 .07*		
NBR	0	0	5	17		
SBL	0	0	2	7		
SBT	1	1700	66 .04*	61 .04		
SBR	0	0	2	6		
EBL	0	0	1	9 [.01]*		
EBT	1	1700	4 .01	16 .02		
EBR	0	0	15	16		
WBL	0	0	36	13		
WBT	1	1700	12 .03*	11 .02*		
WBR	0	0	2	7		
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION			.12	.15		

655 . O St. at 8th St.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	2	3400	23 .01	98 .06*		
NBR	0	0	45 .03	131 .08		
SBL	1	1700	15 .01	19 .01*		
SBT	2	3400	86 .03*	51 .02		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1	1700	74 .04*	119 .07*		
WBT	0	0	0	0		
WBR	1	1700	7 .00	32 .02		
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION			.12	.19		

656 . C St. at 8th St.

ITAM 12 2017 Baseline (IRVINE ISEC)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	1	1		
NBT	1	1700	0 .00	0 .00		
NBR	0	0	3	3		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	1	1700	30 .02	90 .05		
EBR	0	0	1	1		
WBL	0	0	1	1		
WBT	1	1700	80 .05*	110 .07*		
WBR	0	0	0	0		
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION			.10	.12		

Appendix D

Signalized Intersections ITAM Level of Service Calculations

Alternative 4 2017 Base + 688 Acre GP

282 . Jeffrey Rd. at Portola Pkwy.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	803 .24*	541 .16*		
NBT	1	1700	29 .02	10 .01		
NBR	f		15	69		
SBL	1	1700	33 .02	12 .01		
SBT	1	1700	22 .01*	14 .01*		
SBR	1	1700	22 .01	24 .01		
EBL	1	1700	25 .01*	15 .01*		
EBT	2	3400	434 .13	589 .17		
EBR	1	1700	464 .27	425 .25		
WBL	2	3400	37 .01	61 .02		
WBT	2	3400	721 .21*	695 .20*		
WBR	1	1700	36 .02	4 .00		
Clearance Interval			.05*	.05*		
Note: Assumes Right-Turn Overlap for EBR						
TOTAL CAPACITY UTILIZATION			.52	.43		

283 . Jeffrey Rd. at Irvine Bl.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	200 .06	390 .11		
NBT	3	5100	543 .11*	767 .15*		
NBR	f		179	245		
SBL	2	3400	349 .10*	208 .06*		
SBT	3	5100	713 .14	398 .08		
SBR	1	1700	33 .02	62 .04		
EBL	2	3400	71 .02*	67 .02*		
EBT	3	5100	843 .17	1227 .24		
EBR	d	1700	250 .15	261 .15		
WBL	2	3400	307 .09	251 .07		
WBT	3	5100	1667 .33*	1617 .32*		
WBR	d	1700	216 .13	336 .20		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.61	.60		

284 . Jeffrey Rd. at Bryan Av.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	165 .05*	321 .09		
NBT	3	5100	565 .11	1204 .24*		
NBR	d	1700	119 .07	391 .23		
SBL	2	3400	56 .02	83 .02*		
SBT	3	5100	1042 .20*	674 .13		
SBR	1	1700	182 .11	155 .09		
EBL	1	1700	251 .15*	159 .09*		
EBT	2	3400	131 .04	226 .07		
EBR	d	1700	158 .09	156 .09		
WBL	2	3400	433 .13	190 .06		
WBT	1	1700	276 .16*	165 .10*		
WBR	d	1700	112 .07	86 .05		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.61	.50		

285 . Jeffrey Rd. at Trabuco Rd.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	132 .04*	205 .06		
NBT	3	5100	668 .13	1601 .31*		
NBR	d	1700	276 .16	711 .42		
SBL	2	3400	120 .04	44 .01*		
SBT	3	5100	1359 .27*	910 .18		
SBR	1	1700	267 .16	130 .08		
EBL	2	3400	172 .05	303 .09		
EBT	2	3400	436 .13*	515 .15*		
EBR	1	1700	174 .10	164 .10		
WBL	2	3400	592 .17*	346 .10*		
WBT	2	3400	703 .21	415 .12		
WBR	1	1700	51 .03	146 .09		
Right Turn Adjustment				NBR	.03*	
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.66	.65		

286 . Jeffrey Rd. at Roosevelt

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	149 .04*	402 .12		
NBT	4	6800	950 .14	2194 .32*		
NBR	1	1700	294 .17	577 .34		
SBL	2	3400	141 .04	142 .04*		
SBT	3	5100	1867 .37*	1197 .23		
SBR	d	1700	77 .05	97 .06		
EBL	1	1700	60 .04	122 .07		
EBT	1	1700	177 .10*	291 .17*		
EBR	1	1700	242 .14	262 .15		
WBL	2	3400	674 .20*	301 .09*		
WBT	1	1700	246 .14	222 .13		
WBR	1	1700	172 .10	134 .08		
Clearance Interval			.05*	.05*		
Note: Assumes Right-Turn Overlap for EBR						
TOTAL CAPACITY UTILIZATION			.76	.67		

287 . Jeffrey Rd. at I-5 NB Ramps

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	929 .18	2432 .48*		
NBR	f		210	290		
SBL	0	0	0	0		
SBT	3	5100	2029 .40*	1436 .28		
SBR	f		620	350		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1.5		581 .17*	494		
WBT	0	5100	0	0	.26*	
WBR	1.5		511 [.14]	808		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.62	.79		

288 . Jeffrey Rd. at Walnut Av./I-5 SB Ramps289 . Jeffrey Rd. at ICD

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	65 .02*	217 .06		
NBT	3	5100	734 .14	1758 .34*		
NBR	1	1700	114 .07	207 .12		
SBL	2	3400	449 .13	334 .10*		
SBT	3	5100	1843 .41*	1011 .30		
SBR	0	0	255	614 .36		
EBL	2	3400	124 .04	296 .09		
EBT	1.5	5100	278 .09*	270 [.08]*		
EBR	1.5		198	172		
WBL	2	3400	328 .10*	440 .13*		
WBT	1	1700	30 .02	110 .06		
WBR	1	1700	272 .16	580 .34		
Right Turn Adjustment				WBR .14*		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.67	.84		

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	170 .05*	293 .09		
NBT	3	5100	692 .14	1529 .30*		
NBR	1	1700	228 .13	260 .15		
SBL	2	3400	341 .10	242 .07*		
SBT	3	5100	1613 .32*	1118 .22		
SBR	1	1700	386 .23	184 .11		
EBL	2	3400	184 .05	348 .10*		
EBT	3	5100	751 .15*	808 .16		
EBR	f		225	226		
WBL	2	3400	202 .06*	256 .08		
WBT	3	5100	724 .14	1443 .28*		
WBR	1	1700	144 .08	493 .29		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.63	.80		

290 . Jeffrey Rd. at Barranca Pkwy.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	258	.08*	339	.10*
NBT	3	5100	809	.19	1569	.34
NBR	0	0	154		162	
SBL	2	3400	65	.02	80	.02
SBT	3	5100	1732	.41*	1283	.30*
SBR	0	0	378		227	
EBL	2	3400	177	.05*	473	.14*
EBT	2	3400	551	.16	738	.22
EBR	d	1700	304	.18	249	.15
WBL	2	3400	164	.05	158	.05
WBT	2	3400	744	.22*	614	.18*
WBR	1	1700	54	.03	78	.05
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.81		.77

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	421	.12*	645	.19
NBT	3	5100	885	.17	1569	.31*
NBR	f		184		335	
SBL	2	3400	288	.08	407	.12*
SBT	3	5100	1870	.37*	1170	.23
SBR	d	1700	152	.09	204	.12
EBL	2	3400	147	.04	267	.08
EBT	2	3400	538	.16*	890	.26*
EBR	d	1700	516	.30	352	.21
WBL	2	3400	584	.17*	411	.12*
WBT	2	3400	877	.26	823	.24
WBR	d	1700	138	.08	156	.09
Right Turn Adjustment			EBR	.05*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.92		.86

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	1119	.22	2143	.42*
NBR	f		290		110	
SBL	0	0	0		0	
SBT	3	5100	1864	.37*	1443	.28
SBR	f		1362		440	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1271	.37*	1097	.32*
WBT	0	0	0		0	
WBR	1	1700	113	.07	337	.20
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.79		.79

294 . University Dr. at I-405 SB Ramps

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	1047	.21	1759	.34
NBR	f		990		1290	
SBL	0	0	0		0	
SBT	3	5100	2717	.53*	2207	.43*
SBR	f		340		270	
EBL	2	3400	363	.11*	531	.16*
EBT	0	0	0		0	
EBR	1	1700	113	.07	103	.06
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.69		.64

300 . Sand Canyon. Av. at Portola Pkwy.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	102 .03*	377 .11*		
NBT	0	0	3	1		
NBR	2	3400	215 .06	397 .12		
SBL	0	0	2	4		
SBT	1	1700	7 .01*	13 .01*		
SBR	0	0	1	3		
EBL	0	0	3	1		
EBT	2	3400	293 .09*	579 .17*		
EBR	f		254	55		
WBL	2	3400	568 .17*	182 .05*		
WBT	2	3400	647 .19	470 .14		
WBR	0	0	4	1		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.35	.39		

301 . Sand Canyon. Av. at Irvine Bl.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	171 .05*	505 .15*		
NBT	3	5100	315 .06	687 .13		
NBR	2	3400	223 .07	469 .14		
SBL	2	3400	294 .09	77 .02		
SBT	2	3400	888 .26*	308 .09*		
SBR	1	1700	158 .09	85 .05		
EBL	2	3400	108 .03	181 .05*		
EBT	4	6800	1053 .15*	918 .14		
EBR	1	1700	319 .19	201 .12		
WBL	2	3400	574 .17*	413 .12		
WBT	3	5100	1171 .23	1524 .30*		
WBR	1	1700	97 .06	233 .14		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.68	.64		

302 . Sand Canyon. Av. at Trabuco Pkwy.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	213 .06*	240 .07		
NBT	3	5100	354 .07	1876 .37*		
NBR	f		443	503		
SBL	2	3400	238 .07	310 .09*		
SBT	3	5100	1795 .35*	632 .12		
SBR	1	1700	266 .16	33 .02		
EBL	2	3400	70 .02	139 .04		
EBT	3	5100	331 .06*	507 .10*		
EBR	f		450	266		
WBL	2	3400	791 .23*	592 .17*		
WBT	3	5100	312 .06	497 .10		
WBR	d	1700	298 .18	176 .10		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.75	.78		

303 . Sand Canyon. Av. at I-5 NB Ramps

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	148 .04*	837 .25*		
NBT	3	5100	699 .14	2132 .42		
NBR	d	1700	9 .01	20 .01		
SBL	1	1700	3 .00	1 .00		
SBT	4	6800	2979 .44*	1457 .21*		
SBR	1	1700	519 .31	214 .13		
EBL	1.5		340	762		
EBT	0.5	3400	18 .11*	9 .23*		
EBR	2	3400	475 .14	379 .11		
WBL	1	1700	6 .00	8 .00		
WBT	1	1700	3 .00*	1 .00*		
WBR	0	0	1	1		
Clearance Interval			.05*	.05*		
Note: Assumes E/W Split Phasing						
TOTAL CAPACITY UTILIZATION			.64	.74		

304 . Sand Canyon. Av. at Marine Wy.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	1	0		
NBT	3	5100	735 .14	2675 .52*		
NBR	1	1700	326 .19	510 .30		
SBL	2	3400	234 .07	340 .10*		
SBT	3	5100	3255 .64*	1542 .30		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	2	3400	175 .05*	428 .13*		
WBT	0	0	0	0		
WBR	1	1700	135 .08	335 .20		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.74	.80		

305 . Sand Canyon. Av. at I-5 SB Ramps

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	4	6800	667 .10	2573 .38*		
NBR	1	1700	96 .06	238 .14		
SBL	2	3400	832 .24	611 .18*		
SBT	4	6800	2574 .38*	1333 .20		
SBR	0	0	0	0		
EBL	2.5		393 .12*	653 .13*		
EBT	0	6800	2	2		
EBR	1.5		876 .26	209		
WBL	0	0	0	0		
WBT	0	0	0	0		
WBR	0	0	0	0		
Right Turn Adjustment			EBR	.14*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.69	.74		

306 . Sand Canyon. Av. at Oak Cyn./Laguna Cyn. R

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	61 .04*	36 .02		
NBT	3	5100	606 .12	1520 .30*		
NBR	1	1700	49 .03	80 .05		
SBL	2	3400	832 .24	292 .09*		
SBT	3	5100	2099 .41*	976 .19		
SBR	d	1700	334 .20	142 .08		
EBL	2	3400	86 .03	367 .11*		
EBT	1	1700	81 .05*	178 .10		
EBR	d	1700	32 .02	86 .05		
WBL	2	3400	74 .02*	68 .02		
WBT	1.5	5100	146 .04	52 .03*		
WBR	1.5		79	863 .25		
Right Turn Adjustment				WBR	.15*	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.57	.73		

307 . Sand Canyon. Av. at ICD

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	228 .07*	216 .06		
NBT	3	5100	523 .10	1050 .21*		
NBR	1	1700	110 .06	56 .03		
SBL	2	3400	277 .08	247 .07*		
SBT	3	5100	1590 .31*	763 .15		
SBR	1	1700	312 .18	318 .19		
EBL	2	3400	154 .05*	272 .08*		
EBT	3	5100	415 .08	548 .11		
EBR	1	1700	111 .07	140 .08		
WBL	2	3400	73 .02	139 .04		
WBT	3	5100	603 .12*	959 .19*		
WBR	1	1700	64 .04	221 .13		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.60	.60		

309 . Sand Canyon. Av. at Barranca Pkwy.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	123	.04*	187	.06*
NBT	3	5100	906	.18	946	.19
NBR	d	1700	97	.06	117	.07
SBL	2	3400	24	.01	59	.02
SBT	3	5100	1388	.27*	1155	.23*
SBR	d	1700	120	.07	167	.10
EBL	2	3400	114	.03*	119	.04
EBT	2	3400	390	.11	595	.18*
EBR	1	1700	135	.08	176	.10
WBL	2	3400	129	.04	159	.05*
WBT	2	3400	699	.21*	496	.15
WBR	1	1700	102	.06	46	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.60		.57

310 . Sand Canyon. Av. at Alton Pkwy.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	318	.09*	356	.10*
NBT	3	5100	1008	.20	749	.15
NBR	1	1700	444	.26	195	.11
SBL	2	3400	268	.08	99	.03
SBT	3	5100	1173	.23*	1188	.23*
SBR	1	1700	118	.07	183	.11
EBL	2	3400	135	.04*	142	.04
EBT	3	5100	492	.10	676	.13*
EBR	1	1700	333	.20	362	.21
WBL	2	3400	531	.16	630	.19*
WBT	2	3400	918	.27*	602	.18
WBR	1	1700	101	.06	188	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.68		.70

311 . Sand Canyon. Av. at I-405 NB Ramps

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	2	3400	1453	.43*	881	.26
NBR	f		650		381	
SBL	0	0	0		0	
SBT	2	3400	684	.20	954	.28*
SBR	f		1320		1243	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	0.5		56		158	
WBT	0	3400	0	.14*	0	[.15]*
WBR	1.5		427		382	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.62		.48

312 . Sand Canyon. Av. at I-405 SB Ramps

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	166	.10	122	.07*
NBT	2	3400	994	.29*	762	.22
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	322	.09	694	.20*
SBR	f		218		438	
EBL	1.5		1136	[.44]*	498	[.27]*
EBT	0	3400	0	.44	0	.27
EBR	0.5		364		426	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.78		.59

313 . Laguna Canyon Rd. at ICD

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	54	.02*	107	.03
NBT	2	3400	50	.01	130	.04*
NBR	d	1700	25	.01	63	.04
SBL	2	3400	38	.01	57	.02*
SBT	2	3400	96	.03*	54	.02
SBR	d	1700	16	.01	29	.02
EBL	2	3400	47	.01*	26	.01*
EBT	3	5100	550	.11	761	.15
EBR	d	1700	91	.05	94	.06
WBL	2	3400	45	.01	22	.01
WBT	3	5100	664	.13*	983	.19*
WBR	d	1700	53	.03	74	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.24		.31

314 . Laguna Canyon Rd. at Barranca Pkwy.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	61	.02*	66	.02*
NBT	2	3400	108	.03	120	.04
NBR	d	1700	41	.02	154	.09
SBL	2	3400	18	.01	47	.01
SBT	2	3400	92	.03*	99	.03*
SBR	d	1700	20	.01	103	.06
EBL	2	3400	41	.01*	37	.01
EBT	2	3400	411	.12	659	.19*
EBR	1	1700	86	.05	44	.03
WBL	2	3400	122	.04	67	.02*
WBT	2	3400	799	.24*	541	.16
WBR	d	1700	41	.02	103	.06
Right Turn Adjustment					NBR	.03*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.35		.34

315 . Laguna Canyon Rd. at Alton Pkwy.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	113	.07*	151	.09*
NBT	2	3400	199	.06	162	.05
NBR	d	1700	78	.05	107	.06
SBL	1	1700	41	.02	41	.02
SBT	2	3400	123	.04*	142	.04*
SBR	d	1700	46	.03	67	.04
EBL	2	3400	103	.03*	54	.02*
EBT	2	3400	560	.16	692	.20
EBR	1	1700	137	.08	105	.06
WBL	2	3400	100	.03	93	.03
WBT	2	3400	1001	.29*	752	.22*
WBR	1	1700	48	.03	74	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.48		.42

316 . SR-133 SB Ramps at Irvine Bl.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	287	.17*	74	.04*
SBT	0	0	2		0	
SBR	2	3400	232	.07	213	.06
EBL	0	0	0		0	
EBT	4	6800	1342	.20*	1446	.21
EBR	d	1700	275	.16	134	.08
WBL	1	1700	385	.23*	156	.09
WBT	3	5100	1586	.31	2117	.42*
WBR	0	0	0		0	
Right Turn Adjustment					SBR	.02*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.65		.53

317 . SR-133 NB Ramps at Irvine Bl.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	95 .06*	237 .14*		
NBT	0	0	0	0		
NBR	1	1700	157 .09	460 .27		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	1483 .44*	1390 .41		
EBR	f		110	220		
WBL	0	0	0	0		
WBT	3	5100	1915 .39	2083 .45*		
WBR	0	0	60	200		
Right Turn Adjustment			NBR .03*	NBR .10*		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.58	.74		

318 . Banting at Barranca Pkwy.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	19 .01*	34 .01		
NBT	1	1700	13 .01	138 .08*		
NBR	1	1700	20 .01	117 .07		
SBL	2	3400	797 .23	93 .03*		
SBT	2	3400	650 .38*	141 .08		
SBR	0	0	634	176 .10		
EBL	1	1700	18 .01*	299 .18*		
EBT	2	3400	344 .10	870 .26		
EBR	d	1700	14 .01	20 .01		
WBL	1	1700	26 .02	29 .02		
WBT	2	3400	747 .22*	529 .16*		
WBR	f		69	613		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.67	.50		

319 . Banting at Alton Pkwy.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	2 .00	23 .01		
NBT	1	1700	9 .01	76 .04*		
NBR	1	1700	10 .01	92 .05		
SBL	2	3400	47 .01	116 .03*		
SBT	1	1700	96 .06*	9 .01		
SBR	1	1700	216 .13	75 .04		
EBL	2	3400	26 .01*	46 .01		
EBT	2	3400	517 .15	1052 .31*		
EBR	d	1700	25 .01	4 .00		
WBL	1	1700	91 .05	7 .00		
WBT	2	3400	1355 .40*	692 .20		
WBR	d	1700	97 .06	49 .03		
Right Turn Adjustment			SBR .06*	NBR .01*		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.58	.44		

321 . Laguna Canyon Rd. at Old Laguna Cyn. Rd.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	558 .16	253 .07*		
NBT	3	5100	3717 .73*	2994 .59		
NBR	1	1700	56 .03	99 .06		
SBL	2	3400	43 .01*	105 .03		
SBT	3	5100	2692 .53	3423 .67*		
SBR	1	1700	574 .34	334 .20		
EBL	3	5100	256 .05*	362 .07		
EBT	1	1700	31 .02	96 .06*		
EBR	f		183	292		
WBL	1	1700	75 .04	69 .04*		
WBT	2	3400	148 .04*	63 .02		
WBR	d	1700	107 .06	88 .05		
Right Turn Adjustment			WBR .01*			
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.89	.89		

327 . Barranca Pkwy. at Technology

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	403	.12*	72	.02
NBT	2	3400	629	.19	614	.18*
NBR	1	1700	171	.10	178	.10
SBL	1	1700	174	.10	260	.15*
SBT	2	3400	610	.18*	649	.19
SBR	1	1700	257	.15	54	.03
EBL	2	3400	55	.02*	262	.08
EBT	2	3400	135	.04	283	.08*
EBR	d	1700	63	.04	368	.22
WBL	2	3400	46	.01	193	.06*
WBT	2	3400	290	.09*	105	.03
WBR	d	1700	96	.06	163	.10
Right Turn Adjustment					EBR	.03*
Clearance Interval						.05*
TOTAL CAPACITY UTILIZATION				.46	.55	

328 . Barranca Pkwy. at I-5 HOV Ramp

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	5	.00	14	.01
NBT	2	3400	1001	.29*	786	.23*
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	3	5100	730	.14	1072	.21
SBR	d	1700	35	.02	106	.06
EBL	1	1700	139	.08*	74	.04*
EBT	0	0	0		0	
EBR	1	1700	20	.01	8	.00
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.42	.32	

329 . Barranca Pkwy. at ICD

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	149	.04	32	.01*
NBT	2	3400	752	.22*	414	.12
NBR	1	1700	191	.11	239	.14
SBL	2	3400	78	.02*	149	.04
SBT	2	3400	387	.11	695	.20*
SBR	1	1700	254	.15	300	.18
EBL	2	3400	106	.03*	273	.08*
EBT	3	5100	330	.06	912	.18
EBR	1	1700	13	.01	287	.17
WBL	2	3400	229	.07	217	.06
WBT	3	5100	785	.15*	1008	.20*
WBR	1	1700	226	.13	102	.06
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.47	.54	

330 . Barranca Pkwy. at Pacifica

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	251	.15*	36	.02*
NBT	2	3400	767	.23	515	.15
NBR	1	1700	151	.09	510	.30
SBL	1	1700	19	.01	96	.06
SBT	2	3400	525	.15*	1076	.32*
SBR	d	1700	129	.08	19	.01
EBL	2	3400	11	.00	100	.03
EBT	2	3400	9	.01	136	.08*
EBR	0	0	40	.02	334	.20
WBL	2	3400	315	.09	196	.06*
WBT	1	1700	301	.18*	29	.02
WBR	1	1700	392	.23	65	.04
Right Turn Adjustment					EBR	.10*
Clearance Interval						.05*
TOTAL CAPACITY UTILIZATION				.53	.63	

331 . ICD at Gateway Bl.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	81	.02	44	.01*
NBT	3	5100	921	.18*	817	.16
NBR	d	1700	70	.04	14	.01
SBL	2	3400	64	.02*	90	.03
SBT	3	5100	454	.09	1104	.22*
SBR	1	1700	51	.03	70	.04
EBL	1	1700	147	.09*	52	.03*
EBT	2	3400	216	.06	76	.02
EBR	1	1700	67	.04	82	.05
WBL	1	1700	9	.01	74	.04
WBT	2	3400	58	.02*	196	.06*
WBR	1	1700	122	.07	301	.18
Right Turn Adjustment Clearance Interval			WBR	.03* .05*	WBR	.07* .05*
TOTAL CAPACITY UTILIZATION					.39	.44

333 . Pacifica at Gateway Bl.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	154	.05	420	.12*
NBT	2	3400	176	.05*	131	.04
NBR	d	1700	11	.01	39	.02
SBL	2	3400	85	.03*	55	.02
SBT	2	3400	82	.02	222	.07*
SBR	d	1700	43	.03	473	.28
EBL	1	1700	647	.38*	108	.06*
EBT	2	3400	366	.11	126	.04
EBR	1	1700	177	.10	147	.09
WBL	1	1700	12	.01	21	.01
WBT	1	1700	156	.09*	267	.16*
WBR	1	1700	112	.07	82	.05
Right Turn Adjustment Clearance Interval					SBR	.16* .05*
TOTAL CAPACITY UTILIZATION					.60	.62

338 . Alton Pkwy. at Irvine Bl.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	187	.06*	700	.21*
NBT	3	5100	595	.12	1157	.23
NBR	f		78		143	
SBL	2	3400	223	.07	172	.05
SBT	3	5100	1241	.24*	608	.12*
SBR	f		545		861	
EBL	2	3400	812	.24*	594	.17*
EBT	3	5100	944	.19	626	.12
EBR	1	1700	573	.34	250	.15
WBL	2	3400	190	.06	102	.03
WBT	3	5100	775	.15*	1350	.26*
WBR	1	1700	276	.16	249	.15
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION					.74	.81

339 . Alton Pkwy. at Toledo Wy.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	55	.03*	19	.01
NBT	3	5100	999	.20	1890	.37*
NBR	f		55		168	
SBL	1	1700	52	.03	48	.03*
SBT	3	5100	1658	.33*	1052	.21
SBR	0	0	32		14	
EBL	1	1700	4	.00	17	.01
EBT	1	1700	3	.02*	24	.05*
EBR	0	0	33		61	
WBL	1	1700	99	.06*	46	.03*
WBT	1	1700	23	.01	7	.00
WBR	1	1700	127	.07	83	.05
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION					.49	.53

340 . Alton Pkwy. at Jeronimo Rd.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	81 .05*	11 .01		
NBT	3	5100	1284 .25	1529 .30*		
NBR	f		236	350		
SBL	2	3400	106 .03	72 .02*		
SBT	3	5100	1454 .29*	1342 .26		
SBR	0	0	39	2		
EBL	1	1700	7 .00	23 .01		
EBT	1	1700	2 .00*	18 .01*		
EBR	f		11	70		
WBL	2	3400	350 .10*	258 .08*		
WBT	1	1700	22 .01	7 .00		
WBR	1	1700	107 .06	118 .07		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.49	.46		

341 . Alton Pkwy. at Barranca Pkwy./Muirlands Bl.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	8 .00	10 .01		
NBT	3	5100	1094 .21*	934 .18*		
NBR	f		142	335		
SBL	2	3400	86 .03*	119 .04*		
SBT	3	5100	988 .19	1017 .20		
SBR	f		724	557		
EBL	2	3400	401 .12*	788 .23*		
EBT	2	3400	132 .04	506 .15		
EBR	d	1700	8 .00	5 .00		
WBL	2	3400	214 .06	98 .03		
WBT	2	3400	297 .11*	422 .21*		
WBR	0	0	85	288		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.52	.71		

343 . Alton Pkwy. at Ada

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	308 .09*	135 .04*		
NBT	3	5100	1443 .28	1069 .21		
NBR	d	1700	17 .01	13 .01		
SBL	1	1700	16 .01	15 .01		
SBT	3	5100	1029 .20*	1407 .28*		
SBR	d	1700	45 .03	15 .01		
EBL	1	1700	5 .00	18 .01*		
EBT	1	1700	7 .00	2 .00		
EBR	1	1700	58 .03	264 .16		
WBL	1	1700	13 .01	19 .01		
WBT	1	1700	18 .04*	11 .01*		
WBR	0	0	42	9		
Right Turn Adjustment				EBR	.12*	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.38	.51		

344 . Alton Pkwy. at Technology Dr. W.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	457 .13	388 .11*		
NBT	3	5100	1522 .30*	837 .16		
NBR	1	1700	384 .23	64 .04		
SBL	1	1700	34 .02*	9 .01		
SBT	4	6800	984 .14	1581 .23*		
SBR	1	1700	96 .06	130 .08		
EBL	1	1700	82 .05*	249 .15*		
EBT	2	3400	52 .02	47 .01		
EBR	2	3400	138 .04	515 .15		
WBL	2	3400	68 .02	494 .15		
WBT	2	3400	47 .01*	82 .02*		
WBR	d	1700	16 .01	14 .01		
Right Turn Adjustment				EBR	.02*	
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for EBR						
TOTAL CAPACITY UTILIZATION			.43	.58		

345 . Alton Pkwy. at I-5 NB Ramps

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	2054 .40*	1186 .23		
NBR	f		190	610		
SBL	0	0	0	0		
SBT	3	5100	989 .19	1624 .32*		
SBR	f		220	980		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1.5		491	166 .05*		
WBT	0	5100	0 .20*	0		
WBR	1.5		536	124 [.01]		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.65			.42

346 . Alton Pkwy. at Enterprise

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	1031 .20*	1072 .21*		
NBR	1	1700	39 .02	222 .13		
SBL	1	1700	171 .10*	508 .30*		
SBT	3	5100	1319 .26	1306 .26		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	2	3400	181 .05*	134 .04*		
WBT	0	0	0	0		
WBR	2	3400	1189 .35	728 .21		
Right Turn Adjustment			WBR	.20*		
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for WBR						
TOTAL CAPACITY UTILIZATION			.60			.60

348 . Alton Pkwy. at ICD

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	49 .01	30 .01		
NBT	3	5100	588 .12*	818 .16*		
NBR	1	1700	83 .05	264 .16		
SBL	2	3400	186 .05*	403 .12*		
SBT	3	5100	828 .16	799 .16		
SBR	1	1700	246 .14	262 .15		
EBL	2	3400	136 .04	347 .10		
EBT	3	5100	412 .08*	833 .16*		
EBR	1	1700	12 .01	32 .02		
WBL	2	3400	580 .17*	219 .06*		
WBT	3	5100	815 .16	488 .10		
WBR	1	1700	695 .41	315 .19		
Right Turn Adjustment			WBR	.16*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.63			.55

350 . Alton Pkwy. at Pacifica

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	47 .01*	131 .04		
NBT	3	5100	426 .08	934 .18*		
NBR	d	1700	89 .05	190 .11		
SBL	2	3400	233 .07	255 .08*		
SBT	2	3400	1271 .37*	590 .17		
SBR	1	1700	123 .07	168 .10		
EBL	2	3400	60 .02	126 .04		
EBT	2	3400	117 .03*	225 .07*		
EBR	d	1700	72 .04	61 .04		
WBL	1	1700	238 .14*	90 .05*		
WBT	2	3400	197 .06	232 .07		
WBR	d	1700	206 .12	190 .11		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.60			.43

351 . Fortune Dr./I-5 SB Ramps at Enterprise357 . Enterprise Dr. at Fortune Dr./I-405 NB Ramps

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	31	.01*	150	.04*
NBT	2	3400	9	.01	62	.03
NBR	0	0	20	.01	40	
SBL	2	3400	116	.03	248	.07
SBT	1	1700	624	.37*	273	.16*
SBR	f		1221		322	
EBL	1	1700	69	.04*	405	.24*
EBT	2	3400	84	.02	252	.07
EBR	1	1700	47	.03	86	.05
WBL	1	1700	19	.01	101	.06
WBT	2	3400	109	.03*	368	.11*
WBR	1	1700	22	.01	143	.08
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.50	.60	

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	142	.08*	226	.13*
NBT	1	1700	39	.02	233	.14
NBR	f		329		750	
SBL	1	1700	4	.00	28	.02
SBT	2	3400	14	.01*	140	.07*
SBR	0	0	22	.01	92	
EBL	1	1700	48	.03	282	.17
EBT	1	1700	96	.06*	397	.23*
EBR	1	1700	56	.03	120	.07
WBL	1.5		498	[.21]*	108	.06*
WBT	0.5	3400	231	.21	159	.09
WBR	f		31		184	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.41	.54	

358 . ICD at Enterprise Dr.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	2	3400	1908	.56*	1050	.31*
NBR	f		523		1245	
SBL	1	1700	7	.00	65	.04*
SBT	3	5100	662	.13	1542	.30
SBR	f		240		690	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1	1700	38	.02*	288	.17*
WBT	0	0	0		0	
WBR	f		472		180	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.63	.57	

359 . ICD at I-405 SB Ramps

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	1328	.26*	1693	.33
NBR	f		72		60	
SBL	0	0	0		0	
SBT	2	3400	586	.17	1445	.43*
SBR	f		124		400	
EBL	2	3400	1084	.32*	587	.17*
EBT	0	0	0		0	
EBR	f		956		615	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.63	.65	

360 . ICD at Research Dr.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	39	.02	131	.08*
NBT	3	5100	875	.17*	1004	.20
NBR	d	1700	7	.00	11	.01
SBL	2	3400	271	.08*	281	.08
SBT	3	5100	878	.17	1468	.29*
SBR	1	1700	106	.06	286	.17
EBL	2	3400	260	.08	72	.02
EBT	1	1700	476	.28*	268	.16*
EBR	d	1700	103	.06	47	.03
WBL	1	1700	13	.01*	33	.02*
WBT	1	1700	62	.04	233	.14
WBR	f		251		736	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.59		.60

362 . Bake Pkwy. at Irvine Bl.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	421	.12	171	.05
NBT	3	5100	1692	.36*	1187	.35*
NBR	0	0	169		777	.46
SBL	2	3400	34	.01*	170	.05*
SBT	3	5100	1092	.21	1321	.26
SBR	1	1700	344	.20	574	.34
EBL	2	3400	423	.12	390	.11
EBT	3	5100	228	.04*	824	.16*
EBR	1	1700	113	.07	284	.17
WBL	2	3400	945	.28*	458	.13*
WBT	4	6800	706	.12	462	.08
WBR	0	0	95		103	
Right Turn Adjustment					NBR	.01*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.74		.75

363 . Bake Pkwy. at Toledo Wy.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	270	.16*	23	.01
NBT	3	5100	2089	.41	2085	.41*
NBR	d	1700	48	.03	405	.24
SBL	1	1700	18	.01	45	.03*
SBT	3	5100	2112	.41*	2155	.42
SBR	d	1700	125	.07	19	.01
EBL	2	3400	15	.00	106	.03
EBT	2	3400	6	.00*	200	.06*
EBR	1	1700	8	.00	111	.07
WBL	1	1700	350	.21*	94	.06*
WBT	2	3400	172	.06	18	.01
WBR	0	0	27		59	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.83		.61

364 . Bake Pkwy. at Jeronimo Rd.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	359	.11	44	.01
NBT	3	5100	2511	.49*	2420	.47*
NBR	d	1700	33	.02	306	.18
SBL	1	1700	34	.02*	79	.05*
SBT	4	6800	2174	.34	2263	.34
SBR	0	0	151		46	
EBL	2	3400	29	.01	137	.04
EBT	2	3400	22	.01*	445	.13*
EBR	1	1700	48	.03	366	.22
WBL	1	1700	290	.17*	111	.07*
WBT	2	3400	445	.15	70	.04
WBR	0	0	62		53	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.74		.77

365 . Bake Pkwy. at Muirlands Bl.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	167	.05	86	.03*
NBT	4	6800	2856	.42*	2419	.36
NBR	f		107		302	
SBL	2	3400	52	.02*	178	.05
SBT	4	6800	2392	.35	2676	.39*
SBR	f		153		47	
EBL	2	3400	32	.01*	176	.05
EBT	2	3400	61	.02	550	.16*
EBR	f		36		222	
WBL	2	3400	244	.07	122	.04*
WBT	2	3400	364	.11*	106	.03
WBR	f		95		65	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.61		.67

366 . Bake Pkwy. at Rockfield Bl.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	216	.06	26	.01
NBT	4	6800	3028	.45*	2574	.38*
NBR	f		557		301	
SBL	2	3400	124	.04*	175	.05*
SBT	4	6800	2477	.36	2835	.42
SBR	1	1700	18	.01	11	.01
EBL	1	1700	5	.00	17	.01
EBT	2	3400	11	.00*	84	.02*
EBR	f		14		279	
WBL	2	3400	146	.04*	586	.17*
WBT	2	3400	87	.03	23	.01
WBR	f		86		119	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.58		.67

367 . Bake Pkwy. at I-5 NB Ramps

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	3025	.59*	2737	.54*
NBR	f		310		1020	
SBL	0	0	0		0	
SBT	3	5100	786	.15	1138	.22
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1.5		144	.08*	42	.02*
WBT	0	5100	0		0	
WBR	1.5		745	.22	273	.08
Right Turn Adjustment			WBR	.14*	WBR	.06*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.86		.67

368 . Bake Pkwy. at I-5 SB Ramps

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	490	.10	1381	.29*
NBR	0	0	19		99	
SBL	0	0	0		0	
SBT	3	5100	710	.14*	628	.12
SBR	f		229		517	
EBL	3	5100	2767	.54*	2177	.43*
EBT	0	0	0		1	
EBR	1	1700	414	.24	107	.06
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.73		.77

371 . Bake Pkwy. at Research Dr.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	29 .02*	32 .02		
NBT	3	5100	301 .06	530 .10*		
NBR	d	1700	7 .00	16 .01		
SBL	2	3400	160 .05	72 .02*		
SBT	3	5100	533 .10*	357 .07		
SBR	1	1700	473 .28	284 .17		
EBL	2	3400	133 .04*	462 .14*		
EBT	2	3400	116 .03	132 .04		
EBR	d	1700	41 .02	44 .03		
WBL	1	1700	9 .01	40 .02		
WBT	1	1700	142 .08*	293 .17*		
WBR	1	1700	119 .07	188 .11		
Right Turn Adjustment Clearance Interval			SBR .15* .05*			.05*
TOTAL CAPACITY UTILIZATION			.44	.48		

372 . Bake Pkwy. at ICD

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	74 .02	115 .03		
NBT	3	5100	70 .01*	128 .03*		
NBR	d	1700	9 .01	4 .00		
SBL	2	3400	232 .07*	248 .07*		
SBT	3	5100	207 .04	65 .01		
SBR	1	1700	153 .09	126 .07		
EBL	2	3400	94 .03*	181 .05		
EBT	3	5100	564 .11	1059 .21*		
EBR	f		123	161		
WBL	1	1700	4 .00	4 .00		
WBT	3	5100	799 .16*	789 .15		
WBR	d	1700	181 .11	261 .15		
Right Turn Adjustment Clearance Interval			SBR .01* .05*			.05*
TOTAL CAPACITY UTILIZATION			.33	.36		

406 . Laguna Canyon Rd. at Lake Forest Dr.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	2676 .52*	1789 .35*		
NBR	1	1700	134 .08	100 .06		
SBL	2	3400	1116 .33*	1320 .39*		
SBT	3	5100	1610 .32	2245 .44		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	2	3400	120 .04*	145 .04*		
WBT	0	0	0	0		
WBR	f		1654	1521		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.94	.83		

409 . Bake Pkwy. at Commercentre Dr.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	98 .06*	136 .08*		
NBT	2	3400	676 .20	708 .21		
NBR	d	1700	584 .34	542 .32		
SBL	1	1700	58 .03	62 .04		
SBT	2	3400	1120 .33*	1032 .30*		
SBR	d	1700	161 .09	254 .15		
EBL	1	1700	279 .16*	237 .14*		
EBT	2	3400	154 .07	116 .05		
EBR	0	0	94	62		
WBL	2	3400	166 .05	216 .06		
WBT	1	1700	154 .09*	340 .20*		
WBR	0	0	3	5		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.69	.77		

ITAM 12 2017 Base+688_Alt4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	39	.02*	34	.02
NBT	3	5100	721	.15	2556	.51*
NBR	0	0	37		53	
SBL	1	1700	91	.05	97	.06*
SBT	3	5100	3255	.64*	1373	.27
SBR	1	1700	26	.02	6	.00
EBL	1	1700	18	.01	45	.03*
EBT	1	1700	2	.00*	0	.00
EBR	d	1700	0	.00	25	.01
WBL	1	1700	55	.03*	48	.03
WBT	1	1700	5	.00	0	.00*
WBR	1	1700	51	.03	72	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.74		.65

481 . Laguna Canyon Rd. at Technology Dr.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	1 .00	1 .00		
NBT	2	3400	13 .00*	48 .01*		
NBR	d	1700	16 .01	22 .01		
SBL	2	3400	644 .19*	453 .13*		
SBT	2	3400	27 .01	19 .01		
SBR	d	1700	11 .01	5 .00		
EBL	1	1700	1 .00	6 .00		
EBT	1	1700	9 .01	25 .02*		
EBR	0	0	1	1		
WBL	1	1700	13 .01	10 .01*		
WBT	1	1700	49 .03*	25 .01		
WBR	2	3400	246 .07	547 .16		
Right Turn Adjustment				WBR	.03*	
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.27		.25	

482 . Road A at Trabuco Rd.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	11 .01*	15 .01*		
NBT	0	0	0	0		
NBR	1	1700	1 .00	6 .00		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	519 .15	812 .24*		
EBR	d	1700	25 .01	24 .01		
WBL	1	1700	5 .00	7 .00		
WBT	2	3400	899 .26*	586 .17		
WBR	0	0	0	0		
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.32		.30	

483 . Road C at Trabuco Rd.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	30 [.02]*	16 [.01]*		
NBT	0	0	0	0		
NBR	1	1700	50 .03	34 .02		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	530 .16*	666 .20*		
EBR	d	1700	14 .01	34 .02		
WBL	1	1700	26 .02*	46 .03*		
WBT	2	3400	570 .17	434 .13		
WBR	0	0	0	0		
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.25		.29	

484 . Sand Canyon Av. at Roosevelt

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	46 .01*	120 .04		
NBT	4	6800	908 .13	1860 .27*		
NBR	d	1700	78 .05	122 .07		
SBL	2	3400	173 .05	123 .04*		
SBT	4	6800	2030 .30*	993 .15		
SBR	d	1700	111 .07	122 .07		
EBL	2	3400	121 .04	158 .05*		
EBT	1	1700	88 .05*	85 .05		
EBR	d	1700	123 .07	77 .05		
WBL	2	3400	97 .03*	91 .03		
WBT	1	1700	43 .03	108 .06*		
WBR	d	1700	92 .05	191 .11		
Right Turn Adjustment			EBR	.01*	WBR	.02*
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.45		.49	

485 . Sand Canyon Av. at Nightmist

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	51	.02*	258	.08
NBT	4	6800	895	.13	2493	.37*
NBR	d	1700	44	.03	76	.04
SBL	1	1700	19	.01	19	.01*
SBT	4	6800	2933	.43*	1463	.22
SBR	d	1700	22	.01	48	.03
EBL	2	3400	43	.01	42	.01*
EBT	1	1700	17	.01*	15	.01
EBR	1	1700	394	.23	132	.08
WBL	2	3400	148	.04*	45	.01
WBT	1	1700	7	.00	13	.01*
WBR	d	1700	16	.01	14	.01
Right Turn Adjustment Clearance Interval			EBR	.20*		
				.05*		.05*
TOTAL CAPACITY UTILIZATION				.75		.45

514 . Alton Pkwy. at Rancho Pkwy.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	16	.00	54	.02
NBT	3	5100	842	.17	1382	.27*
NBR	1	1700	102	.06	161	.09
SBL	2	3400	42	.01	49	.01*
SBT	3	5100	1575	.31*	937	.18
SBR	1	1700	0	.00	14	.01
EBL	1	1700	16	.01	10	.01
EBT	1	1700	16	.01*	10	.01*
EBR	1	1700	69	.04	20	.01
WBL	1	1700	145	.09*	73	.04*
WBT	1	1700	4	.02	12	.03
WBR	0	0	33		38	
Right Turn Adjustment Clearance Interval			EBR	.03*		
				.05*		.05*
TOTAL CAPACITY UTILIZATION				.49		.38

518 . Alton Pkwy. at Commercentre

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	917	.18	1467	.29*
NBR	d	1700	577	.34	491	.29
SBL	1	1700	173	.10	90	.05*
SBT	3	5100	1694	.33*	946	.19
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1.5		326	.10*	658	.19*
WBT	0	5100	0		0	
WBR	1.5		53		187	.11
Right Turn Adjustment Clearance Interval			NBR	.03*		
				.05*		.05*
TOTAL CAPACITY UTILIZATION				.51		.58

555 . Bake Pkwy. at Rancho Pkwy. S

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	173	.10*	32	.02
NBT	2	3400	880	.26	1822	.54*
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	1617	.48*	1106	.33
SBR	1	1700	227	.13	60	.04
EBL	2	3400	90	.03*	234	.07*
EBT	0	0	0		0	
EBR	1	1700	83	.05	126	.07
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.66		.66

556 . Ridge Valley at Portola Pkwy.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	134	.08*	146	.09*
NBT	1	1700	10	.01	21	.07
NBR	0	0	11		102	
SBL	1	1700	57	.03	38	.02
SBT	1	1700	38	.02*	7	.00*
SBR	1	1700	8	.00	6	.00
EBL	1	1700	11	.01	6	.00
EBT	2	3400	431	.13*	581	.17*
EBR	d	1700	84	.05	109	.06
WBL	1	1700	175	.10*	163	.10*
WBT	2	3400	580	.17	338	.10
WBR	d	1700	43	.03	53	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.38		.41

558 . Ridge Valley-0 St. at Irvine Bl.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	174	.05*	132	.04
NBT	2	3400	102	.03	285	.08*
NBR	d	1700	37	.02	30	.02
SBL	1	1700	130	.08	59	.03*
SBT	2	3400	349	.10*	133	.04
SBR	f		612		261	
EBL	2	3400	85	.03*	445	.13*
EBT	3	5100	1273	.25	1144	.22
EBR	1	1700	166	.10	212	.12
WBL	2	3400	45	.01	35	.01
WBT	2	3400	1214	.36*	1751	.52*
WBR	1	1700	23	.01	72	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.59		.81

559 . 0 St. at Trabuco Rd.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	64	.02*	111	.03
NBT	1.5	3400	12	.01	60	.04*
NBR	0.5		24	.01	88	.05
SBL	1	1700	56	.03	64	.04*
SBT	1.5	5100	38	.02*	63	.04
SBR	1.5		742	.22	652	.19
EBL	2	3400	403	.12*	571	.17*
EBT	1.5	5100	509	.15	630	.19
EBR	1.5		68	.04	102	.06
WBL	1	1700	25	.01	45	.03
WBT	1.5	3400	583	.19*	471	.15*
WBR	0.5		55		32	
Right Turn Adjustment			SBR	.11*	SBR	.01*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.51		.46

560 . 0 St. at Marine Wy.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	2	3400	79	.02*	103	.03*
SBT	0	0	0		0	
SBR	1	1700	71	.04	87	.05
EBL	1	1700	44	.03	145	.09*
EBT	2	3400	387	.11*	697	.21
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	213	.06	583	.17*
WBR	1	1700	27	.02	145	.09
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.18		.34

561 . LY Street at Irvine Bl.

ITAM 12 2017 Base+688_Alt4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	62 .04*	86 .05*		
NBT	0	0	0	0		
NBR	1	1700	39 .02	35 .02		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	3	5100	1311 .26	965 .19		
EBR	1	1700	63 .04	172 .10		
WBL	1	1700	47 .03	58 .03		
WBT	2	3400	1158 .34*	1694 .50*		
WBR	0	0	0	0		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.43	.60		

562 . Great Park Bl. W. at Marine Wy.

ITAM 12 2017 Base+688_Alt4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	0	0	0	0		
NBR	0	0	0	0		
SBL	1	1700	3 .00	6 .00		
SBT	0	0	0	0		
SBR	1	1700	7 .00	112 .07		
EBL	2	3400	32 .01	485 .14*		
EBT	2	3400	297 .09*	186 .05		
EBR	0	0	0	0		
WBL	0	0	0	0		
WBT	2	3400	153 .05	302 .10*		
WBR	0	0	8	39		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.14	.29		

563 . B St. at Irvine Bl.

ITAM 12 2017 Base+688_Alt4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	23 .01*	44 .03*		
NBT	0	0	0	0		
NBR	1	1700	17 .01	36 .02		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	1899 .56*	1254 .37		
EBR	1	1700	94 .06	35 .02		
WBL	1	1700	66 .04*	25 .01		
WBT	2	3400	1331 .39	2286 .67*		
WBR	0	0	0	0		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.66	.75		

571 . Portola Springs at Portola Pkwy.

ITAM 12 2017 Base+688_Alt4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	243 .07*	342 .10*		
NBT	1	1700	25 .07	0 .05		
NBR	0	0	92	77		
SBL	1	1700	0 .00	0 .00		
SBT	1	1700	36 .02*	0 .00*		
SBR	d	1700	263 .15	115 .07		
EBL	1	1700	72 .04*	187 .11*		
EBT	2	3400	228 .07	298 .09		
EBR	1	1700	162 .10	394 .23		
WBL	1	1700	21 .01	31 .02		
WBT	2	3400	364 .11*	150 .04*		
WBR	d	1700	4 .00	46 .03		
Right Turn Adjustment			SBR	.10*	EBR	.02*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.39	.32		

572 . Modjeska-A St. at Irvine Bl.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	3	.00	9	.01
NBT	1	1700	23	.01	120	.07*
NBR	1	1700	230	.14	20	.01
SBL	2	3400	0	.00	171	.05*
SBT	1	1700	164	.10*	177	.10
SBR	d	1700	330	.19	106	.06
EBL	1	1700	39	.02	176	.10*
EBT	3	5100	323	.06*	799	.16
EBR	1	1700	3	.00	33	.02
WBL	1	1700	54	.03*	60	.04
WBT	3	5100	261	.05	1754	.34*
WBR	1	1700	239	.14	414	.24
Right Turn Adjustment			Multi	.08*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.32		.61

574 . O St. at LN St.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	21	.01*	54	.03*
NBT	2	3400	115	.04	238	.08
NBR	0	0	10		32	
SBL	1	1700	7	.00	12	.01
SBT	2	3400	364	.11*	231	.07*
SBR	0	0	14		20	
EBL	1	1700	15	.01	15	.01
EBT	1	1700	4	.04*	6	.03*
EBR	0	0	71		39	
WBL	1	1700	45	.03*	24	.01*
WBT	1	1700	5	.01	6	.01
WBR	0	0	10		9	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.24		.19

575 . O St. at LV St.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	1		1	
NBT	1	1700	45	.03	184	.12*
NBR	0	0	12		14	
SBL	1	1700	8	.00	16	.01*
SBT	1	1700	104	.06*	135	.08
SBR	0	0	1		1	
EBL	1	1700	1	.00	1	.00
EBT	1	1700	1	.00*	1	.00*
EBR	0	0	1		1	
WBL	1	1700	16	.01*	15	.01*
WBT	0	0	1		1	
WBR	1	1700	5	.00	26	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.12		.19

576 . O St. at C St.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	1		1	
NBT	1	1700	66	.04	208	.17*
NBR	0	0	4		74	
SBL	1	1700	6	.00	16	.01*
SBT	1	1700	145	.09*	150	.09
SBR	0	0	1		1	
EBL	1	1700	1	.00	1	.00
EBT	1	1700	1	.00	1	.00*
EBR	0	0	1		1	
WBL	1	1700	5	.00	40	.02*
WBT	0	0	1		1	
WBR	1	1700	4	.00	12	.01
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.14		.25

577 . Pusan Way-Z St. at Irvine Bl.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	97	.06*	76	.04
NBT	1	1700	46	.03	90	.05*
NBR	1	1700	302	.18	268	.16
SBL	1	1700	90	.05	39	.02*
SBT	1	1700	82	.05*	41	.02
SBR	1	1700	29	.02	11	.01
EBL	1	1700	6	.00	14	.01*
EBT	3	5100	1669	.33*	1043	.20
EBR	1	1700	74	.04	89	.05
WBL	1	1700	204	.12*	280	.16
WBT	3	5100	1114	.22	1973	.39*
WBR	1	1700	17	.01	45	.03
Right Turn Adjustment			NBR	.03*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.52

579 . A-02 St. at Irvine Bl.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	24	.01	42	.02
NBT	1	1700	9	.01*	37	.02*
NBR	1	1700	57	.03	73	.04
SBL	1	1700	232	.14*	121	.07*
SBT	1	1700	73	.10	25	.05
SBR	0	0	96		68	
EBL	1	1700	25	.01	67	.04*
EBT	2	3400	1867	.55*	1290	.38
EBR	1	1700	73	.04	26	.02
WBL	2	3400	103	.03*	59	.02
WBT	2	3400	1293	.38	2225	.65*
WBR	1	1700	56	.03	206	.12
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.78		.83

650 . 0 St. at C St.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	2	3400	182	.05	266	.08*
NBR	0	0	1		16	
SBL	0	0	38		94	[.06]*
SBT	2	3400	411	.13*	261	.10
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	1	1700	0	.00	0	.00
WBL	0	0	12	[.01]*	19	[.01]*
WBT	0	0	0		0	
WBR	1	1700	135	.08	114	.07
Right Turn Adjustment			WBR	.01*	WBR	.01*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.20		.21

651 . C St. at Trabuco Rd.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	53	.03*	175	.10*
NBT	0.5	1700	16	.01	104	.09
NBR	0.5		4		46	
SBL	1	1700	3	.00	9	.01
SBT	0.5	1700	99	.08*	67	.06*
SBR	0.5		43		35	
EBL	1	1700	22	.01	39	.02
EBT	0.5	1700	53	.13*	155	.17*
EBR	0.5		174		129	
WBL	1	1700	17	.01*	24	.01*
WBT	0.5	1700	64	.04	111	.07
WBR	0.5		2		7	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.30		.39

652 . LY Street at Trabuco Rd.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	10	.01*	80	.05*
NBT	0.5	1700	20	.01	60	.04
NBR	0.5		0		0	
SBL	1	1700	0	.00	0	.00
SBT	1	1700	47	.03*	66	.04*
SBR	1	1700	44	.03	53	.03
EBL	1	1700	33	.02*	73	.04
EBT	0.5	1700	0	.01	0	.07*
EBR	0.5		17		118	
WBL	0.5		0		0	
WBT	0.5	1700	0	.00*	0	.00
WBR	0.5	850	0	.00	0	.00
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.11		.21

653 . LY Street at GP Blvd N/S Conn

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0		0	
NBT	0.5	1700	8	.01*	18	.02*
NBR	0.5		2		12	
SBL	1	1700	21	.01*	163	.10*
SBT	1	1700	19	.01	7	.00
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	0.5		5		3	
WBT	0	1700	0	.01*	0	.06*
WBR	0.5		15		106	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.08		.23

654 . C St. at LV St.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	2	4		
NBT	1	1700	7 .01	82 .06*		
NBR	0	0	2	9		
SBL	0	0	5	8		
SBT	1	1700	51 .04*	72 .05		
SBR	0	0	5	4		
EBL	0	0	2	4		
EBT	1	1700	4 .01	3 .01		
EBR	0	0	5	3		
WBL	0	0	5	4		
WBT	1	1700	4 .01*	2 .01*		
WBR	0	0	2	4		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.10	.12		

655 . O St. at 8th St.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	0 .00	0 .00		
NBT	1.5	3400	47 .02	186 .06*		
NBR	0.5		16	26		
SBL	1	1700	4 .00	5 .00		
SBT	1.5	3400	122 .04*	132 .04		
SBR	0.5		0	0		
EBL	1	1700	0 .00	0 .00		
EBT	0.5	1700	0 .00*	0 .00*		
EBR	0.5		0	0		
WBL	1	1700	28 .02*	32 .02*		
WBT	0.5	1700	0 .00	0 .01		
WBR	0.5		3	9		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.11	.13		

656 . C St. at 8th St.

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	5	2		
NBT	1	1700	1 .01	1 .01		
NBR	0	0	6	18		
SBL	0	0	2	4		
SBT	1	1700	5 .01*	4 .01*		
SBR	0	0	4	1		
EBL	0	0	1	1		
EBT	1	1700	15 .01	27 .02		
EBR	0	0	5	3		
WBL	0	0	4	12		
WBT	1	1700	27 .02*	36 .03*		
WBR	0	0	1	1		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.08	.09		

657 . GP Blvd N/S Conn at GP Blvd E/W

ITAM 12 2017 Base+688_A1t4 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	0.5	1700	0 .00	0 .00		
NBR	0.5		0	0		
SBL	1	1700	1 .00	1 .00		
SBT	1	1700	0 .01*	0 .06*		
SBR	0	0	10	110		
EBL	0	0	10 {.01}*	180 {.11}*		
EBT	0	0	3	3		
EBR	0	0	0	0		
WBL	1	1700	0 .00	0 .00		
WBT	0	0	3	3		
WBR	1	1700	1 .00	1 .00		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.07	.22		

Appendix D

Signalized Intersections ITAM Level of Service Calculations

**Alternative 5
2017 Base + 688 Acre GP + FivePoint Option 1**

282 . Jeffrey Rd. at Portola Pkwy.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	793	.23*	546	.16*
NBT	1	1700	29	.02	11	.01
NBR	f		15		71	
SBL	1	1700	33	.02	12	.01
SBT	1	1700	22	.01*	14	.01*
SBR	1	1700	22	.01	24	.01
EBL	1	1700	25	.01*	15	.01*
EBT	2	3400	434	.13	587	.17
EBR	1	1700	463	.27	424	.25
WBL	2	3400	37	.01	62	.02
WBT	2	3400	730	.21*	690	.20*
WBR	1	1700	37	.02	4	.00
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for EBR						
TOTAL CAPACITY UTILIZATION			.51		.43	

283 . Jeffrey Rd. at Irvine Bl.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	200	.06	389	.11
NBT	3	5100	544	.11*	767	.15*
NBR	f		179		246	
SBL	2	3400	348	.10*	209	.06*
SBT	3	5100	717	.14	398	.08
SBR	1	1700	33	.02	62	.04
EBL	2	3400	70	.02*	67	.02*
EBT	3	5100	843	.17	1228	.24
EBR	d	1700	252	.15	260	.15
WBL	2	3400	311	.09	253	.07
WBT	3	5100	1667	.33*	1614	.32*
WBR	d	1700	216	.13	338	.20
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.61		.60	

284 . Jeffrey Rd. at Bryan Av.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	169	.05*	317	.09
NBT	3	5100	570	.11	1202	.24*
NBR	d	1700	122	.07	388	.23
SBL	2	3400	55	.02	85	.03*
SBT	3	5100	1045	.20*	678	.13
SBR	1	1700	179	.11	158	.09
EBL	1	1700	249	.15*	161	.09*
EBT	2	3400	130	.04	227	.07
EBR	d	1700	161	.09	154	.09
WBL	2	3400	441	.13	188	.06
WBT	1	1700	276	.16*	165	.10*
WBR	d	1700	112	.07	87	.05
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.61		.51	

285 . Jeffrey Rd. at Trabuco Rd.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	132	.04*	203	.06
NBT	3	5100	668	.13	1605	.31*
NBR	d	1700	276	.16	709	.42
SBL	2	3400	119	.04	44	.01*
SBT	3	5100	1371	.27*	921	.18
SBR	1	1700	265	.16	129	.08
EBL	2	3400	172	.05	300	.09
EBT	2	3400	435	.13*	507	.15*
EBR	1	1700	176	.10	164	.10
WBL	2	3400	593	.17*	345	.10*
WBT	2	3400	693	.20	407	.12
WBR	1	1700	51	.03	144	.08
Right Turn Adjustment					NBR	.03*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.66		.65	

286 . Jeffrey Rd. at Roosevelt

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	149	.04*	401	.12*
NBT	4	6800	950	.14	2195	.32
NBR	1	1700	294	.17	577	.34
SBL	2	3400	140	.04	142	.04
SBT	3	5100	1879	.37*	1206	.24*
SBR	d	1700	77	.05	97	.06
EBL	1	1700	60	.04	122	.07
EBT	1	1700	178	.10*	291	.17*
EBR	1	1700	242	.14	263	.15
WBL	2	3400	674	.20*	301	.09*
WBT	1	1700	246	.14	221	.13
WBR	1	1700	172	.10	134	.08
Clearance Interval				.05*	.05*	
Note: Assumes Right-Turn Overlap for EBR						
TOTAL CAPACITY UTILIZATION				.76	.67	

287 . Jeffrey Rd. at I-5 NB Ramps

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	929	.18	2433	.48*
NBR	f		210		290	
SBL	0	0	0		0	
SBT	3	5100	2029	.40*	1445	.28
SBR	f		630		360	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1.5		581	.17*	485	
WBT	0	5100	0		0	.25*
WBR	1.5		511	[.14]	807	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.62	.78	

288 . Jeffrey Rd. at Walnut Av./I-5 SB Ramps289 . Jeffrey Rd. at ICD

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	65	.02*	215	.06
NBT	3	5100	734	.14	1761	.35*
NBR	1	1700	114	.07	206	.12
SBL	2	3400	449	.13	337	.10*
SBT	3	5100	1843	.41*	1014	.30
SBR	0	0	255		616	.36
EBL	2	3400	124	.04	294	.09
EBT	1.5	5100	278	.09*	267	[.08]*
EBR	1.5		198		169	
WBL	2	3400	328	.10*	437	.13*
WBT	1	1700	30	.02	109	.06
WBR	1	1700	272	.16	584	.34
Right Turn Adjustment					WBR	.14*
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.67	.85	

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	168	.05*	292	.09
NBT	3	5100	695	.14	1528	.30*
NBR	1	1700	227	.13	259	.15
SBL	2	3400	343	.10	244	.07*
SBT	3	5100	1612	.32*	1122	.22
SBR	1	1700	386	.23	186	.11
EBL	2	3400	186	.05	349	.10*
EBT	3	5100	751	.15*	807	.16
EBR	f		223		225	
WBL	2	3400	205	.06*	254	.07
WBT	3	5100	736	.14	1442	.28*
WBR	1	1700	149	.09	494	.29
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.63	.80	

290 . Jeffrey Rd. at Barranca Pkwy.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	260	.08*	342	.10*
NBT	3	5100	804	.19	1577	.34
NBR	0	0	155		163	
SBL	2	3400	65	.02	81	.02
SBT	3	5100	1731	.41*	1284	.30*
SBR	0	0	375		229	
EBL	2	3400	174	.05*	476	.14*
EBT	2	3400	550	.16	746	.22
EBR	d	1700	306	.18	250	.15
WBL	2	3400	163	.05	156	.05
WBT	2	3400	735	.22*	609	.18*
WBR	1	1700	52	.03	77	.05
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.81		.77

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	418	.12*	644	.19
NBT	3	5100	883	.17	1575	.31*
NBR	f		182		334	
SBL	2	3400	289	.09	406	.12*
SBT	3	5100	1872	.37*	1173	.23
SBR	d	1700	153	.09	203	.12
EBL	2	3400	148	.04	269	.08
EBT	2	3400	539	.16*	890	.26*
EBR	d	1700	515	.30	354	.21
WBL	2	3400	583	.17*	413	.12*
WBT	2	3400	880	.26	823	.24
WBR	d	1700	140	.08	157	.09
Right Turn Adjustment			EBR	.05*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.92		.86

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	1120	.22	2142	.42*
NBR	f		291		110	
SBL	0	0	0		0	
SBT	3	5100	1870	.37*	1453	.28
SBR	f		1365		440	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1270	.37*	1107	.33*
WBT	0	0	0		0	
WBR	1	1700	114	.07	338	.20
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.79		.80

294 . University Dr. at I-405 SB Ramps

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	1050	.21	1759	.34
NBR	f		1000		1280	
SBL	0	0	0		0	
SBT	3	5100	2722	.53*	2206	.43*
SBR	f		340		280	
EBL	2	3400	370	.11*	541	.16*
EBT	0	0	0		0	
EBR	1	1700	108	.06	104	.06
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.69		.64

300 . Sand Canyon. Av. at Portola Pkwy.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	102 .03*	377 .11*		
NBT	0	0	3	1		
NBR	2	3400	218 .06	397 .12		
SBL	0	0	2	4		
SBT	1	1700	7 .01*	13 .01*		
SBR	0	0	1	3		
EBL	0	0	3	1		
EBT	2	3400	300 .09*	589 .17*		
EBR	f		253	56		
WBL	2	3400	570 .17*	181 .05*		
WBT	2	3400	657 .19	470 .14		
WBR	0	0	4	1		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.35	.39		

301 . Sand Canyon. Av. at Irvine Bl.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	172 .05*	501 .15*		
NBT	3	5100	316 .06	684 .13		
NBR	2	3400	222 .07	465 .14		
SBL	2	3400	292 .09	77 .02		
SBT	2	3400	881 .26*	308 .09*		
SBR	1	1700	157 .09	85 .05		
EBL	2	3400	109 .03	182 .05*		
EBT	4	6800	1059 .16*	918 .14		
EBR	1	1700	321 .19	201 .12		
WBL	2	3400	571 .17*	411 .12		
WBT	3	5100	1173 .23	1524 .30*		
WBR	1	1700	96 .06	234 .14		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.69	.64		

302 . Sand Canyon. Av. at Trabuco Pkwy.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	215 .06*	243 .07		
NBT	3	5100	352 .07	1880 .37*		
NBR	f		445	500		
SBL	2	3400	238 .07	304 .09*		
SBT	3	5100	1789 .35*	641 .13		
SBR	1	1700	267 .16	33 .02		
EBL	2	3400	69 .02	137 .04		
EBT	3	5100	327 .06*	496 .10*		
EBR	f		445	270		
WBL	2	3400	776 .23*	599 .18*		
WBT	3	5100	308 .06	494 .10		
WBR	d	1700	289 .17	173 .10		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.75	.79		

303 . Sand Canyon. Av. at I-5 NB Ramps

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	147 .04*	840 .25*		
NBT	3	5100	700 .14	2120 .42		
NBR	d	1700	9 .01	20 .01		
SBL	1	1700	3 .00	1 .00		
SBT	4	6800	2967 .44*	1470 .22*		
SBR	1	1700	512 .30	220 .13		
EBL	1.5		341	764		
EBT	0.5	3400	18 .11*	9 .23*		
EBR	2	3400	474 .14	376 .11		
WBL	1	1700	6 .00	8 .00		
WBT	1	1700	3 .00*	1 .00*		
WBR	0	0	1	1		
Clearance Interval			.05*	.05*		
Note: Assumes E/W Split Phasing						
TOTAL CAPACITY UTILIZATION			.64	.75		

304 . Sand Canyon. Av. at Marine Wy.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	1	0		
NBT	3	5100	744 .15	2672 .52*		
NBR	1	1700	320 .19	508 .30		
SBL	2	3400	230 .07	342 .10*		
SBT	3	5100	3246 .64*	1554 .30		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	2	3400	174 .05*	416 .12*		
WBT	0	0	0	0		
WBR	1	1700	136 .08	328 .19		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.74	.79		

305 . Sand Canyon. Av. at I-5 SB Ramps

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	4	6800	667 .10	2570 .38*		
NBR	1	1700	96 .06	241 .14		
SBL	2	3400	831 .24	607 .18*		
SBT	4	6800	2565 .38*	1328 .20		
SBR	0	0	0	0		
EBL	2.5		393 .12*	650 .13*		
EBT	0	6800	2	2		
EBR	1.5		875 .26	212		
WBL	0	0	0	0		
WBT	0	0	0	0		
WBR	0	0	0	0		
Right Turn Adjustment			EBR	.14*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.69	.74		

306 . Sand Canyon. Av. at Oak Cyn./Laguna Cyn. R

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	64 .04*	35 .02		
NBT	3	5100	604 .12	1518 .30*		
NBR	1	1700	49 .03	79 .05		
SBL	2	3400	824 .24	294 .09*		
SBT	3	5100	2092 .41*	969 .19		
SBR	d	1700	338 .20	143 .08		
EBL	2	3400	89 .03	368 .11*		
EBT	1	1700	86 .05*	177 .10		
EBR	d	1700	34 .02	85 .05		
WBL	2	3400	74 .02*	66 .02		
WBT	1.5	5100	148 .04	51 .03*		
WBR	1.5		77	864 .25		
Right Turn Adjustment				WBR	.15*	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.57	.73		

307 . Sand Canyon. Av. at ICD

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	227 .07*	219 .06		
NBT	3	5100	523 .10	1056 .21*		
NBR	1	1700	110 .06	56 .03		
SBL	2	3400	277 .08	244 .07*		
SBT	3	5100	1591 .31*	765 .15		
SBR	1	1700	312 .18	320 .19		
EBL	2	3400	154 .05*	269 .08*		
EBT	3	5100	414 .08	541 .11		
EBR	1	1700	111 .07	139 .08		
WBL	2	3400	72 .02	138 .04		
WBT	3	5100	594 .12*	954 .19*		
WBR	1	1700	64 .04	218 .13		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.60	.60		

309 . Sand Canyon. Av. at Barranca Pkwy.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	130	.04*	180	.05*
NBT	3	5100	909	.18	944	.19
NBR	d	1700	101	.06	118	.07
SBL	2	3400	25	.01	61	.02
SBT	3	5100	1388	.27*	1158	.23*
SBR	d	1700	124	.07	166	.10
EBL	2	3400	112	.03*	118	.03
EBT	2	3400	394	.12	601	.18*
EBR	1	1700	135	.08	172	.10
WBL	2	3400	127	.04	160	.05*
WBT	2	3400	706	.21*	494	.15
WBR	1	1700	99	.06	47	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.60		.56

310 . Sand Canyon. Av. at Alton Pkwy.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	317	.09*	360	.11*
NBT	3	5100	1015	.20	745	.15
NBR	1	1700	451	.27	194	.11
SBL	2	3400	269	.08	96	.03
SBT	3	5100	1166	.23*	1183	.23*
SBR	1	1700	117	.07	180	.11
EBL	2	3400	133	.04*	141	.04
EBT	3	5100	490	.10	671	.13*
EBR	1	1700	328	.19	368	.22
WBL	2	3400	535	.16	634	.19*
WBT	2	3400	916	.27*	601	.18
WBR	1	1700	102	.06	185	.11
Right Turn Adjustment					EBR	.01*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.68		.72

311 . Sand Canyon. Av. at I-405 NB Ramps

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	2	3400	1453	.43*	873	.26
NBR	f		650		380	
SBL	0	0	0		0	
SBT	2	3400	675	.20	956	.28*
SBR	f		1320		1240	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	0.5		55		164	
WBT	0	3400	0	.15*	0	[.15]*
WBR	1.5		447		377	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.63		.48

312 . Sand Canyon. Av. at I-405 SB Ramps

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	166	.10	120	.07*
NBT	2	3400	993	.29*	762	.22
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	314	.09	695	.20*
SBR	f		216		442	
EBL	1.5		1130	[.44]*	503	[.27]*
EBT	0	3400	0	.44	0	.27
EBR	0.5		360		418	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.78		.59

313 . Laguna Canyon Rd. at ICD

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	54	.02*	109	.03
NBT	2	3400	51	.02	131	.04*
NBR	d	1700	25	.01	61	.04
SBL	2	3400	37	.01	56	.02*
SBT	2	3400	96	.03*	54	.02
SBR	d	1700	16	.01	30	.02
EBL	2	3400	47	.01*	26	.01*
EBT	3	5100	541	.11	753	.15
EBR	d	1700	91	.05	94	.06
WBL	2	3400	45	.01	21	.01
WBT	3	5100	654	.13*	981	.19*
WBR	d	1700	53	.03	73	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.24		.31

314 . Laguna Canyon Rd. at Barranca Pkwy.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	65	.02*	69	.02*
NBT	2	3400	111	.03	121	.04
NBR	d	1700	44	.03	150	.09
SBL	2	3400	17	.01	45	.01
SBT	2	3400	94	.03*	99	.03*
SBR	d	1700	20	.01	106	.06
EBL	2	3400	40	.01*	39	.01
EBT	2	3400	408	.12	665	.20*
EBR	1	1700	89	.05	46	.03
WBL	2	3400	127	.04	66	.02*
WBT	2	3400	795	.23*	545	.16
WBR	d	1700	39	.02	100	.06
Right Turn Adjustment					NBR	.03*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.34		.35

315 . Laguna Canyon Rd. at Alton Pkwy.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	111	.07*	147	.09*
NBT	2	3400	200	.06	167	.05
NBR	d	1700	80	.05	106	.06
SBL	1	1700	41	.02	42	.02
SBT	2	3400	125	.04*	140	.04*
SBR	d	1700	44	.03	68	.04
EBL	2	3400	102	.03*	56	.02*
EBT	2	3400	559	.16	695	.20
EBR	1	1700	140	.08	100	.06
WBL	2	3400	105	.03	90	.03
WBT	2	3400	995	.29*	749	.22*
WBR	1	1700	49	.03	78	.05
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.48		.42

316 . SR-133 SB Ramps at Irvine Bl.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	285	.17*	75	.04*
SBT	0	0	2		0	
SBR	2	3400	234	.07	212	.06
EBL	0	0	0		0	
EBT	4	6800	1355	.20*	1445	.21
EBR	d	1700	273	.16	132	.08
WBL	1	1700	376	.22*	158	.09
WBT	3	5100	1594	.31	2118	.42*
WBR	0	0	0		0	
Right Turn Adjustment					SBR	.02*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.53

317 . SR-133 NB Ramps at Irvine Bl.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	93 .05*	239 .14*		
NBT	0	0	0	0		
NBR	1	1700	160 .09	448 .26		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	1490 .44*	1402 .41		
EBR	f		110	220		
WBL	0	0	0	0		
WBT	3	5100	1917 .39	2091 .45*		
WBR	0	0	60	200		
Right Turn Adjustment			NBR .04*	NBR .09*		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.58	.73		

318 . Banting at Barranca Pkwy.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	19 .01*	34 .01		
NBT	1	1700	13 .01	138 .08*		
NBR	1	1700	20 .01	117 .07		
SBL	2	3400	797 .23	90 .03*		
SBT	2	3400	650 .38*	147 .09		
SBR	0	0	635	173 .10		
EBL	1	1700	18 .01*	301 .18*		
EBT	2	3400	344 .10	876 .26		
EBR	d	1700	14 .01	22 .01		
WBL	1	1700	27 .02	31 .02		
WBT	2	3400	757 .22*	536 .16*		
WBR	f		69	615		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.67	.50		

319 . Banting at Alton Pkwy.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	2 .00	23 .01		
NBT	1	1700	9 .01	76 .04*		
NBR	1	1700	10 .01	91 .05		
SBL	2	3400	47 .01	122 .04*		
SBT	1	1700	96 .06*	9 .01		
SBR	1	1700	216 .13	79 .05		
EBL	2	3400	26 .01*	46 .01		
EBT	2	3400	517 .15	1047 .31*		
EBR	d	1700	25 .01	4 .00		
WBL	1	1700	91 .05	6 .00		
WBT	2	3400	1355 .40*	688 .20		
WBR	d	1700	97 .06	49 .03		
Right Turn Adjustment			SBR .06*	NBR .01*		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.58	.45		

321 . Laguna Canyon Rd. at Old Laguna Cyn. Rd.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	560 .16	251 .07*		
NBT	3	5100	3714 .73*	3001 .59		
NBR	1	1700	56 .03	99 .06		
SBL	2	3400	43 .01*	106 .03		
SBT	3	5100	2694 .53	3435 .67*		
SBR	1	1700	573 .34	336 .20		
EBL	3	5100	255 .05*	360 .07		
EBT	1	1700	31 .02	95 .06*		
EBR	f		183	287		
WBL	1	1700	76 .04	68 .04*		
WBT	2	3400	149 .04*	63 .02		
WBR	d	1700	105 .06	89 .05		
Right Turn Adjustment			WBR .01*			
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.89	.89		

327 . Barranca Pkwy. at Technology

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	404 .12*	68 .02		
NBT	2	3400	629 .19	608 .18*		
NBR	1	1700	167 .10	178 .10		
SBL	1	1700	170 .10	261 .15*		
SBT	2	3400	610 .18*	650 .19		
SBR	1	1700	257 .15	51 .03		
EBL	2	3400	55 .02*	258 .08		
EBT	2	3400	133 .04	281 .08*		
EBR	d	1700	64 .04	364 .21		
WBL	2	3400	46 .01	196 .06*		
WBT	2	3400	289 .09*	101 .03		
WBR	d	1700	96 .06	164 .10		
Right Turn Adjustment				EBR	.02*	
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.46	.54		

328 . Barranca Pkwy. at I-5 HOV Ramp

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	5 .00	14 .01		
NBT	2	3400	999 .29*	794 .23*		
NBR	0	0	0	0		
SBL	0	0	0	0		
SBT	3	5100	731 .14	1073 .21		
SBR	d	1700	35 .02	106 .06		
EBL	1	1700	141 .08*	66 .04*		
EBT	0	0	0	0		
EBR	1	1700	19 .01	7 .00		
WBL	0	0	0	0		
WBT	0	0	0	0		
WBR	0	0	0	0		
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION			.42	.32		

329 . Barranca Pkwy. at ICD

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	148 .04	32 .01*		
NBT	2	3400	752 .22*	416 .12		
NBR	1	1700	190 .11	238 .14		
SBL	2	3400	77 .02*	148 .04		
SBT	2	3400	391 .12	697 .21*		
SBR	1	1700	251 .15	303 .18		
EBL	2	3400	107 .03*	273 .08*		
EBT	3	5100	329 .06	904 .18		
EBR	1	1700	14 .01	288 .17		
WBL	2	3400	233 .07	215 .06		
WBT	3	5100	774 .15*	1005 .20*		
WBR	1	1700	222 .13	101 .06		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.47	.55		

330 . Barranca Pkwy. at Pacifica

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	251 .15*	36 .02*		
NBT	2	3400	767 .23	515 .15		
NBR	1	1700	151 .09	510 .30		
SBL	1	1700	19 .01	96 .06		
SBT	2	3400	525 .15*	1076 .32*		
SBR	d	1700	129 .08	19 .01		
EBL	2	3400	11 .00	100 .03		
EBT	2	3400	9 .01	136 .08*		
EBR	0	0	40 .02	334 .20		
WBL	2	3400	315 .09	196 .06*		
WBT	1	1700	301 .18*	29 .02		
WBR	1	1700	392 .23	65 .04		
Right Turn Adjustment				EBR	.10*	
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.53	.63		

331 . ICD at Gateway Bl.

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	86	.03	44	.01*
NBT	3	5100	913	.18*	809	.16
NBR	d	1700	71	.04	14	.01
SBL	2	3400	64	.02*	94	.03
SBT	3	5100	452	.09	1103	.22*
SBR	1	1700	53	.03	71	.04
EBL	1	1700	147	.09*	54	.03*
EBT	2	3400	224	.07	82	.02
EBR	1	1700	69	.04	85	.05
WBL	1	1700	9	.01	72	.04
WBT	2	3400	61	.02*	195	.06*
WBR	1	1700	120	.07	297	.17
Right Turn Adjustment Clearance Interval			WBR	.03* .05*	WBR	.06* .05*
TOTAL CAPACITY UTILIZATION				.39	.43	

333 . Pacifica at Gateway Bl.

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	158	.05*	420	.12*
NBT	2	3400	171	.05	131	.04
NBR	d	1700	11	.01	39	.02
SBL	2	3400	82	.02	55	.02
SBT	2	3400	75	.02*	215	.06*
SBR	d	1700	43	.03	470	.28
EBL	1	1700	650	.38*	109	.06*
EBT	2	3400	377	.11	126	.04
EBR	1	1700	173	.10	145	.09
WBL	1	1700	12	.01	20	.01
WBT	1	1700	159	.09*	260	.15*
WBR	1	1700	109	.06	80	.05
Right Turn Adjustment Clearance Interval					SBR	.17* .05*
TOTAL CAPACITY UTILIZATION				.59	.61	

338 . Alton Pkwy. at Irvine Bl.

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	187	.06*	698	.21*
NBT	3	5100	594	.12	1154	.23
NBR	f		79		141	
SBL	2	3400	222	.07	170	.05
SBT	3	5100	1236	.24*	612	.12*
SBR	f		541		861	
EBL	2	3400	810	.24*	586	.17*
EBT	3	5100	944	.19	629	.12
EBR	1	1700	576	.34	256	.15
WBL	2	3400	190	.06	102	.03
WBT	3	5100	775	.15*	1351	.26*
WBR	1	1700	275	.16	249	.15
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.74	.81	

339 . Alton Pkwy. at Toledo Wy.

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	56	.03*	19	.01
NBT	3	5100	1002	.20	1882	.37*
NBR	f		57		169	
SBL	1	1700	51	.03	48	.03*
SBT	3	5100	1656	.33*	1061	.21
SBR	0	0	31		14	
EBL	1	1700	4	.00	16	.01
EBT	1	1700	3	.02*	23	.05*
EBR	0	0	33		62	
WBL	1	1700	101	.06*	47	.03*
WBT	1	1700	22	.01	7	.00
WBR	1	1700	124	.07	82	.05
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.49	.53	

340 . Alton Pkwy. at Jeronimo Rd.

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	81 .05*	11 .01		
NBT	3	5100	1289 .25	1527 .30*		
NBR	f		235	348		
SBL	2	3400	107 .03	74 .02*		
SBT	3	5100	1451 .29*	1353 .27		
SBR	0	0	38	2		
EBL	1	1700	7 .00	24 .01		
EBT	1	1700	2 .00*	18 .01*		
EBR	f		11	70		
WBL	2	3400	348 .10*	257 .08*		
WBT	1	1700	22 .01	7 .00		
WBR	1	1700	109 .06	119 .07		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.49	.46		

341 . Alton Pkwy. at Barranca Pkwy./Muirlands Bl.

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	9 .01	10 .01		
NBT	3	5100	1099 .22*	926 .18*		
NBR	f		144	333		
SBL	2	3400	83 .02*	119 .04*		
SBT	3	5100	995 .20	1017 .20		
SBR	f		723	557		
EBL	2	3400	399 .12*	787 .23*		
EBT	2	3400	132 .04	508 .15		
EBR	d	1700	8 .00	5 .00		
WBL	2	3400	217 .06	98 .03		
WBT	2	3400	299 .11*	422 .21*		
WBR	0	0	82	288		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.52	.71		

343 . Alton Pkwy. at Ada

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	306 .09*	135 .04*		
NBT	3	5100	1437 .28	1070 .21		
NBR	d	1700	17 .01	13 .01		
SBL	1	1700	16 .01	15 .01		
SBT	3	5100	1027 .20*	1407 .28*		
SBR	d	1700	44 .03	15 .01		
EBL	1	1700	5 .00	18 .01*		
EBT	1	1700	7 .00	2 .00		
EBR	1	1700	58 .03	255 .15		
WBL	1	1700	15 .01	19 .01		
WBT	1	1700	20 .04*	11 .01*		
WBR	0	0	48	10		
Right Turn Adjustment				EBR	.11*	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.38	.50		

344 . Alton Pkwy. at Technology Dr. W.

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	456 .13	384 .11*		
NBT	3	5100	1524 .30*	840 .16		
NBR	1	1700	384 .23	64 .04		
SBL	1	1700	35 .02*	9 .01		
SBT	4	6800	982 .14	1575 .23*		
SBR	1	1700	97 .06	126 .07		
EBL	1	1700	80 .05*	246 .14		
EBT	2	3400	51 .02	47 .01*		
EBR	2	3400	131 .04	518 .15		
WBL	2	3400	67 .02	496 .15*		
WBT	2	3400	47 .01*	80 .02		
WBR	d	1700	16 .01	14 .01		
Right Turn Adjustment				EBR	.03*	
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for EBR						
TOTAL CAPACITY UTILIZATION			.43	.58		

345 . Alton Pkwy. at I-5 NB Ramps

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	2058	.40*	1183	.23
NBR	f		180		630	
SBL	0	0	0	0		
SBT	3	5100	987	.19	1627	.32*
SBR	f		220		970	
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1.5		493		163	.05*
WBT	0	5100	0	.20*	0	
WBR	1.5		532		127	{.01}
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.65		.42

346 . Alton Pkwy. at Enterprise

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	1033	.20*	1077	.21*
NBR	1	1700	38	.02	218	.13
SBL	1	1700	172	.10*	504	.30*
SBT	3	5100	1325	.26	1308	.26
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	2	3400	178	.05*	135	.04*
WBT	0	0	0	0	0	
WBR	2	3400	1203	.35	748	.22
Right Turn Adjustment			WBR	.20*		
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for WBR						
TOTAL CAPACITY UTILIZATION				.60		.60

348 . Alton Pkwy. at ICD

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	49	.01	29	.01
NBT	3	5100	589	.12*	809	.16*
NBR	1	1700	85	.05	262	.15
SBL	2	3400	187	.06*	406	.12*
SBT	3	5100	833	.16	799	.16
SBR	1	1700	246	.14	256	.15
EBL	2	3400	132	.04	346	.10
EBT	3	5100	408	.08*	832	.16*
EBR	1	1700	11	.01	32	.02
WBL	2	3400	586	.17*	219	.06*
WBT	3	5100	815	.16	475	.09
WBR	1	1700	689	.41	316	.19
Right Turn Adjustment			WBR	.15*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.63		.55

350 . Alton Pkwy. at Pacifica

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	48	.01*	130	.04
NBT	3	5100	434	.09	935	.18*
NBR	d	1700	90	.05	190	.11
SBL	2	3400	230	.07	260	.08*
SBT	2	3400	1276	.38*	593	.17
SBR	1	1700	122	.07	169	.10
EBL	2	3400	60	.02	123	.04*
EBT	2	3400	118	.03*	220	.06
EBR	d	1700	72	.04	58	.03
WBL	1	1700	238	.14*	89	.05
WBT	2	3400	196	.06	231	.07*
WBR	d	1700	196	.12	192	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.61		.42

351 . Fortune Dr./I-5 SB Ramps at Enterprise357 . Enterprise Dr. at Fortune Dr./I-405 NB Ramps

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	31	.01*	152	.04*
NBT	2	3400	10	.01	61	.03
NBR	0	0	19	.01	39	
SBL	2	3400	106	.03	247	.07
SBT	1	1700	634	.37*	272	.16*
SBR	f		1220		328	
EBL	1	1700	68	.04*	406	.24*
EBT	2	3400	75	.02	254	.07
EBR	1	1700	46	.03	87	.05
WBL	1	1700	19	.01	102	.06
WBT	2	3400	108	.03*	380	.11*
WBR	1	1700	22	.01	143	.08
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.50		.60

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	143	.08*	228	.13*
NBT	1	1700	39	.02	232	.14
NBR	f		328		749	
SBL	1	1700	4	.00	28	.02
SBT	2	3400	13	.01*	140	.07*
SBR	0	0	23	.01	93	
EBL	1	1700	48	.03	290	.17
EBT	1	1700	96	.06*	408	.24*
EBR	1	1700	56	.03	123	.07
WBL	1.5		489	[.21]*	107	.06*
WBT	0.5	3400	231	.21	160	.09
WBR	f		31		183	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.41		.55

358 . ICD at Enterprise Dr.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	2	3400	1904	.56*	1055	.31*
NBR	f		522		1248	
SBL	1	1700	8	.00	62	.04*
SBT	3	5100	665	.13	1544	.30
SBR	f		230		690	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1	1700	35	.02*	296	.17*
WBT	0	0	0		0	
WBR	f		466		175	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.63		.57

359 . ICD at I-405 SB Ramps

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	1318	.26*	1693	.33
NBR	f		72		60	
SBL	0	0	0		0	
SBT	2	3400	585	.17	1445	.43*
SBR	f		124		400	
EBL	2	3400	1087	.32*	587	.17*
EBT	0	0	0		0	
EBR	f		953		615	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.63		.65

360 . ICD at Research Dr.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	39	.02	132	.08*
NBT	3	5100	875	.17*	1003	.20
NBR	d	1700	7	.00	11	.01
SBL	2	3400	271	.08*	279	.08
SBT	3	5100	878	.17	1461	.29*
SBR	1	1700	106	.06	285	.17
EBL	2	3400	260	.08	73	.02
EBT	1	1700	476	.28*	268	.16*
EBR	d	1700	103	.06	47	.03
WBL	1	1700	13	.01*	31	.02*
WBT	1	1700	62	.04	231	.14
WBR	f		251		729	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.59		.60

362 . Bake Pkwy. at Irvine Bl.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	418	.12	173	.05
NBT	3	5100	1691	.36*	1186	.35*
NBR	0	0	168		775	.46
SBL	2	3400	34	.01*	169	.05*
SBT	3	5100	1088	.21	1319	.26
SBR	1	1700	345	.20	578	.34
EBL	2	3400	423	.12	390	.11
EBT	3	5100	228	.04*	824	.16*
EBR	1	1700	112	.07	284	.17
WBL	2	3400	940	.28*	456	.13*
WBT	4	6800	707	.12	464	.08
WBR	0	0	96		101	
Right Turn Adjustment					NBR	.01*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.74		.75

363 . Bake Pkwy. at Toledo Wy.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	270	.16*	23	.01
NBT	3	5100	2089	.41	2085	.41*
NBR	d	1700	48	.03	405	.24
SBL	1	1700	18	.01	45	.03*
SBT	3	5100	2102	.41*	2155	.42
SBR	d	1700	125	.07	19	.01
EBL	2	3400	15	.00	106	.03
EBT	2	3400	6	.00*	200	.06*
EBR	1	1700	8	.00	111	.07
WBL	1	1700	350	.21*	94	.06*
WBT	2	3400	173	.06	18	.01
WBR	0	0	27		59	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.83		.61

364 . Bake Pkwy. at Jeronimo Rd.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	362	.11	44	.01
NBT	3	5100	2505	.49*	2420	.47*
NBR	d	1700	34	.02	306	.18
SBL	1	1700	34	.02*	79	.05*
SBT	4	6800	2171	.34	2263	.34
SBR	0	0	147		46	
EBL	2	3400	29	.01	137	.04
EBT	2	3400	22	.01*	445	.13*
EBR	1	1700	49	.03	366	.22
WBL	1	1700	294	.17*	111	.07*
WBT	2	3400	443	.15	70	.04
WBR	0	0	61		53	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.74		.77

365 . Bake Pkwy. at Muirlands Bl.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	170	.05	86	.03*
NBT	4	6800	2857	.42*	2425	.36
NBR	f		107		299	
SBL	2	3400	52	.02*	176	.05
SBT	4	6800	2391	.35	2682	.39*
SBR	f		160		47	
EBL	2	3400	32	.01*	180	.05
EBT	2	3400	62	.02	555	.16*
EBR	f		35		226	
WBL	2	3400	234	.07	122	.04*
WBT	2	3400	365	.11*	106	.03
WBR	f		94		65	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.61		.67

366 . Bake Pkwy. at Rockfield Bl.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	214	.06	26	.01
NBT	4	6800	3022	.44*	2585	.38*
NBR	f		555		298	
SBL	2	3400	125	.04*	178	.05*
SBT	4	6800	2465	.36	2844	.42
SBR	1	1700	19	.01	11	.01
EBL	1	1700	5	.00	17	.01
EBT	2	3400	11	.00*	85	.03*
EBR	f		14		278	
WBL	2	3400	145	.04*	568	.17*
WBT	2	3400	87	.03	23	.01
WBR	f		87		118	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.57		.68

367 . Bake Pkwy. at I-5 NB Ramps

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	3025	.59*	2736	.54*
NBR	f		310		1020	
SBL	0	0	0		0	
SBT	3	5100	786	.15	1130	.22
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1.5		144	.08*	40	.02*
WBT	0	5100	0		0	
WBR	1.5		745	.22	274	.08
Right Turn Adjustment			WBR	.14*	WBR	.06*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.86		.67

368 . Bake Pkwy. at I-5 SB Ramps

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	490	.10	1379	.29*
NBR	0	0	19		99	
SBL	0	0	0		0	
SBT	3	5100	710	.14*	622	.12
SBR	f		229		515	
EBL	3	5100	2767	.54*	2174	.43*
EBT	0	0	0		1	
EBR	1	1700	414	.24	109	.06
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.73		.77

371 . Bake Pkwy. at Research Dr.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	29 .02*	32 .02		
NBT	3	5100	301 .06	525 .10*		
NBR	d	1700	7 .00	15 .01		
SBL	2	3400	158 .05	71 .02*		
SBT	3	5100	538 .11*	356 .07		
SBR	1	1700	469 .28	282 .17		
EBL	2	3400	131 .04*	466 .14*		
EBT	2	3400	115 .03	133 .04		
EBR	d	1700	42 .02	44 .03		
WBL	1	1700	10 .01	40 .02		
WBT	1	1700	142 .08*	296 .17*		
WBR	1	1700	118 .07	189 .11		
Right Turn Adjustment Clearance Interval			SBR	.14* .05*		.05*
TOTAL CAPACITY UTILIZATION				.44		.48

372 . Bake Pkwy. at ICD

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	74 .02	116 .03		
NBT	3	5100	70 .01*	128 .03*		
NBR	d	1700	9 .01	4 .00		
SBL	2	3400	232 .07*	247 .07*		
SBT	3	5100	207 .04	68 .01		
SBR	1	1700	153 .09	126 .07		
EBL	2	3400	94 .03*	177 .05		
EBT	3	5100	564 .11	1059 .21*		
EBR	f		123	168		
WBL	1	1700	4 .00	4 .00		
WBT	3	5100	799 .16*	788 .15		
WBR	d	1700	181 .11	255 .15		
Right Turn Adjustment Clearance Interval			SBR	.01* .05*		.05*
TOTAL CAPACITY UTILIZATION				.33		.36

406 . Laguna Canyon Rd. at Lake Forest Dr.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	2681 .53*	1794 .35*		
NBR	1	1700	132 .08	101 .06		
SBL	2	3400	1110 .33*	1319 .39*		
SBT	3	5100	1613 .32	2245 .44		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	2	3400	119 .04*	145 .04*		
WBT	0	0	0	0		
WBR	f		1655	1516		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.95		.83

409 . Bake Pkwy. at Commercentre Dr.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	98 .06*	136 .08*		
NBT	2	3400	676 .20	708 .21		
NBR	d	1700	584 .34	550 .32		
SBL	1	1700	57 .03	62 .04		
SBT	2	3400	1114 .33*	1040 .31*		
SBR	d	1700	159 .09	254 .15		
EBL	1	1700	274 .16*	237 .14*		
EBT	2	3400	151 .07	118 .05		
EBR	0	0	93	63		
WBL	2	3400	167 .05	218 .06		
WBT	1	1700	153 .09*	340 .20*		
WBR	0	0	3	5		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.69		.78

ITAM 12 2017 Base+688+0pt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK VOL	HOUR V/C	PM PK VOL	HOUR V/C
NBL	1	1700	39	.02*	34	.02
NBT	3	5100	723	.15	2551	.51*
NBR	0	0	37		54	
SBL	1	1700	91	.05	96	.06*
SBT	3	5100	3254	.64*	1369	.27
SBR	1	1700	26	.02	6	.00
EBL	1	1700	18	.01	44	.03*
EBT	1	1700	2	.00*	0	.00
EBR	d	1700	0	.00	25	.01
WBL	1	1700	54	.03*	49	.03
WBT	1	1700	5	.00	0	.00*
WBR	1	1700	51	.03	71	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.74		.65

481 . Laguna Canyon Rd. at Technology Dr.

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	1 .00	1 .00		
NBT	2	3400	13 .00*	48 .01*		
NBR	d	1700	16 .01	22 .01		
SBL	2	3400	644 .19*	453 .13*		
SBT	2	3400	27 .01	19 .01		
SBR	d	1700	11 .01	5 .00		
EBL	1	1700	1 .00	6 .00		
EBT	1	1700	9 .01	25 .02*		
EBR	0	0	1	1		
WBL	1	1700	13 .01	10 .01*		
WBT	1	1700	49 .03*	25 .01		
WBR	2	3400	246 .07	547 .16		
Right Turn Adjustment				WBR	.03*	
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.27		.25	

482 . Road A at Trabuco Rd.

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	11 .01*	14 .01*		
NBT	0	0	0	0		
NBR	1	1700	1 .00	6 .00		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	509 .15	796 .23*		
EBR	d	1700	25 .01	24 .01		
WBL	1	1700	5 .00	7 .00		
WBT	2	3400	889 .26*	582 .17		
WBR	0	0	0	0		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.32		.29	

483 . Road C at Trabuco Rd.

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	32 [.02]*	16 [.01]*		
NBT	0	0	0	0		
NBR	1	1700	48 .03	34 .02		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	526 .15	656 .19*		
EBR	d	1700	15 .01	33 .02		
WBL	1	1700	25 .01	47 .03*		
WBT	2	3400	563 .17*	434 .13		
WBR	0	0	0	0		
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.24		.28	

484 . Sand Canyon Av. at Roosevelt

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	48 .01*	120 .04		
NBT	4	6800	911 .13	1860 .27*		
NBR	d	1700	81 .05	122 .07		
SBL	2	3400	171 .05	125 .04*		
SBT	4	6800	2009 .30*	1010 .15		
SBR	d	1700	109 .06	123 .07		
EBL	2	3400	118 .03	151 .04*		
EBT	1	1700	89 .05*	83 .05		
EBR	d	1700	124 .07	75 .04		
WBL	2	3400	97 .03*	94 .03		
WBT	1	1700	44 .03	107 .06*		
WBR	d	1700	91 .05	189 .11		
Right Turn Adjustment			EBR	.01*	WBR	.02*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.45		.48	

485 . Sand Canyon Av. at Nightmist

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	51 .02*	249 .07		
NBT	4	6800	903 .13	2493 .37*		
NBR	d	1700	45 .03	75 .04		
SBL	1	1700	19 .01	19 .01*		
SBT	4	6800	2915 .43*	1483 .22		
SBR	d	1700	21 .01	48 .03		
EBL	2	3400	44 .01	42 .01*		
EBT	1	1700	17 .01*	15 .01		
EBR	1	1700	393 .23	132 .08		
WBL	2	3400	148 .04*	45 .01		
WBT	1	1700	7 .00	13 .01*		
WBR	d	1700	17 .01	15 .01		
Right Turn Adjustment Clearance Interval			EBR .20* .05*			.05*
TOTAL CAPACITY UTILIZATION			.75	.45		

514 . Alton Pkwy. at Rancho Pkwy.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	16 .00	54 .02		
NBT	3	5100	843 .17	1382 .27*		
NBR	1	1700	101 .06	154 .09		
SBL	2	3400	43 .01	47 .01*		
SBT	3	5100	1574 .31*	936 .18		
SBR	1	1700	0 .00	14 .01		
EBL	1	1700	16 .01	10 .01		
EBT	1	1700	16 .01*	9 .01*		
EBR	1	1700	69 .04	21 .01		
WBL	1	1700	144 .08*	73 .04*		
WBT	1	1700	4 .02	12 .03		
WBR	0	0	34	37		
Right Turn Adjustment Clearance Interval			EBR .03* .05*			.05*
TOTAL CAPACITY UTILIZATION			.48	.38		

518 . Alton Pkwy. at Commercentre

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	918 .18	1459 .29*		
NBR	d	1700	580 .34	496 .29		
SBL	1	1700	170 .10	94 .06*		
SBT	3	5100	1692 .33*	944 .19		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1.5		328 .10*	656 .19*		
WBT	0	5100	0	0		
WBR	1.5		52	191 .11		
Right Turn Adjustment Clearance Interval			NBR .03* .05*			.05*
TOTAL CAPACITY UTILIZATION			.51	.59		

555 . Bake Pkwy. at Rancho Pkwy. S

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	173 .10*	32 .02		
NBT	2	3400	880 .26	1822 .54*		
NBR	0	0	0	0		
SBL	0	0	0	0		
SBT	2	3400	1617 .48*	1106 .33		
SBR	1	1700	227 .13	60 .04		
EBL	2	3400	90 .03*	234 .07*		
EBT	0	0	0	0		
EBR	1	1700	83 .05	126 .07		
WBL	0	0	0	0		
WBT	0	0	0	0		
WBR	0	0	0	0		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.66	.66		

556 . Ridge Valley at Portola Pkwy.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	134	.08*	145	.09*
NBT	1	1700	10	.01	21	.07
NBR	0	0	11		105	
SBL	1	1700	57	.03	38	.02
SBT	1	1700	39	.02*	7	.00*
SBR	1	1700	7	.00	6	.00
EBL	1	1700	11	.01	5	.00
EBT	2	3400	430	.13*	587	.17*
EBR	d	1700	85	.05	107	.06
WBL	1	1700	183	.11*	165	.10*
WBT	2	3400	590	.17	339	.10
WBR	d	1700	43	.03	54	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.39		.41

558 . Ridge Valley-0 St. at Irvine Bl.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	175	.05*	139	.04
NBT	2	3400	101	.03	288	.08*
NBR	d	1700	36	.02	30	.02
SBL	1	1700	125	.07	57	.03*
SBT	2	3400	363	.11*	138	.04
SBR	f		603		259	
EBL	2	3400	86	.03*	442	.13*
EBT	3	5100	1268	.25	1133	.22
EBR	1	1700	179	.11	226	.13
WBL	2	3400	48	.01	36	.01
WBT	2	3400	1222	.36*	1742	.51*
WBR	1	1700	23	.01	70	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.60		.80

559 . 0 St. at Trabuco Rd.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	60	.02*	92	.03
NBT	1.5	3400	10	.01	44	.03*
NBR	0.5		20	.01	75	.04
SBL	1	1700	49	.03	64	.04*
SBT	1.5	5100	27	.02*	53	.03
SBR	1.5		720	.21	624	.18
EBL	2	3400	403	.12*	516	.15*
EBT	1.5	5100	512	.15	662	.19
EBR	1.5		55	.03	93	.05
WBL	1	1700	18	.01	44	.03
WBT	1.5	3400	585	.19*	515	.16*
WBR	0.5		49		31	
Right Turn Adjustment			SBR	.10*	SBR	.03*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.50		.46

560 . 0 St. at Marine Wy.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	2	3400	81	.02*	96	.03*
SBT	0	0	0		0	
SBR	1	1700	69	.04	74	.04
EBL	1	1700	31	.02	140	.08*
EBT	2	3400	391	.12*	704	.21
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	218	.06	576	.17*
WBR	1	1700	21	.01	150	.09
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.19		.33

561 . LY Street at Irvine Bl.

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	62 .04*	85 .05*		
NBT	0	0	0	0		
NBR	1	1700	39 .02	36 .02		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	3	5100	1301 .26	964 .19		
EBR	1	1700	57 .03	170 .10		
WBL	1	1700	43 .03	60 .04		
WBT	2	3400	1158 .34*	1695 .50*		
WBR	0	0	0	0		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.43	.60		

562 . Great Park Bl. W. at Marine Wy.

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	0	0	0	0		
NBR	0	0	0	0		
SBL	1	1700	3 .00	6 .00		
SBT	0	0	0	0		
SBR	1	1700	7 .00	112 .07		
EBL	2	3400	24 .01	485 .14*		
EBT	2	3400	297 .09*	186 .05		
EBR	0	0	0	0		
WBL	0	0	0	0		
WBT	2	3400	153 .05	302 .10*		
WBR	0	0	6	39		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.14	.29		

563 . B St. at Irvine Bl.

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	23 .01*	44 .03*		
NBT	0	0	0	0		
NBR	1	1700	17 .01	36 .02		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	1883 .55*	1254 .37		
EBR	1	1700	95 .06	35 .02		
WBL	1	1700	65 .04*	25 .01		
WBT	2	3400	1327 .39	2286 .67*		
WBR	0	0	0	0		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.65	.75		

571 . Portola Springs at Portola Pkwy.

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	243 .07*	343 .10*		
NBT	1	1700	25 .07	0 .05		
NBR	0	0	92	77		
SBL	1	1700	0 .00	0 .00		
SBT	1	1700	36 .02*	0 .00*		
SBR	d	1700	263 .15	116 .07		
EBL	1	1700	72 .04*	185 .11*		
EBT	2	3400	228 .07	303 .09		
EBR	1	1700	162 .10	390 .23		
WBL	1	1700	22 .01	30 .02		
WBT	2	3400	374 .11*	151 .04*		
WBR	d	1700	4 .00	45 .03		
Right Turn Adjustment			SBR	.10*	EBR	.02*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.39	.32		

572 . Modjeska-A St. at Irvine Bl.

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	3	.00	9	.01
NBT	1	1700	23	.01	120	.07*
NBR	1	1700	233	.14	21	.01
SBL	2	3400	0	.00	174	.05*
SBT	1	1700	163	.10*	176	.10
SBR	d	1700	334	.20	105	.06
EBL	1	1700	37	.02	172	.10*
EBT	3	5100	317	.06*	796	.16
EBR	1	1700	3	.00	33	.02
WBL	1	1700	54	.03*	61	.04
WBT	3	5100	264	.05	1755	.34*
WBR	1	1700	240	.14	417	.25
Right Turn Adjustment			Multi	.09*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.33		.61

574 . O St. at LN St.

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	21	.01*	53	.03*
NBT	2	3400	116	.04	265	.09
NBR	0	0	10		31	
SBL	1	1700	7	.00	13	.01
SBT	2	3400	400	.12*	253	.08*
SBR	0	0	14		22	
EBL	1	1700	15	.01	17	.01
EBT	1	1700	4	.05*	6	.03*
EBR	0	0	73		39	
WBL	1	1700	47	.03*	18	.01*
WBT	1	1700	5	.01	5	.01
WBR	0	0	9		8	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.26		.20

575 . O St. at LV St.

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	1		1	
NBT	1	1700	42	.03	178	.11*
NBR	0	0	2		14	
SBL	1	1700	8	.00	16	.01*
SBT	1	1700	114	.07*	132	.08
SBR	0	0	1		1	
EBL	1	1700	1	.00	1	.00
EBT	1	1700	1	.00*	1	.00
EBR	0	0	1		1	
WBL	1	1700	16	.01*	8	.00
WBT	0	0	1		1	
WBR	1	1700	18	.01	12	.01
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.13		.17

576 . O St. at C St.

ITAM 12 2017 Base+688+Opt1_Alt5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	1		1	
NBT	1	1700	50	.03	208	.17*
NBR	0	0	5		76	
SBL	1	1700	5	.00	14	.01*
SBT	1	1700	150	.09*	131	.08
SBR	0	0	1		1	
EBL	1	1700	1	.00	1	.00
EBT	1	1700	1	.00	1	.00*
EBR	0	0	1		1	
WBL	1	1700	7	.00	39	.02*
WBT	0	0	1		1	
WBR	1	1700	2	.00	12	.01
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.14		.25

577 . Pusan Way-Z St. at Irvine Bl.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	101	.06*	77	.05*
NBT	1	1700	47	.03	85	.05
NBR	1	1700	297	.17	271	.16
SBL	1	1700	88	.05	39	.02
SBT	1	1700	82	.05*	41	.02*
SBR	1	1700	30	.02	11	.01
EBL	1	1700	6	.00	13	.01*
EBT	3	5100	1665	.33*	1040	.20
EBR	1	1700	76	.04	89	.05
WBL	1	1700	202	.12*	280	.16
WBT	3	5100	1119	.22	1972	.39*
WBR	1	1700	17	.01	42	.02
Right Turn Adjustment			NBR	.02*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.63		.52

579 . A-02 St. at Irvine Bl.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	24	.01	42	.02
NBT	1	1700	9	.01*	37	.02*
NBR	1	1700	57	.03	72	.04
SBL	1	1700	233	.14*	120	.07*
SBT	1	1700	69	.10	25	.06
SBR	0	0	99		69	
EBL	1	1700	25	.01	68	.04*
EBT	2	3400	1860	.55*	1288	.38
EBR	1	1700	68	.04	26	.02
WBL	2	3400	112	.03*	59	.02
WBT	2	3400	1277	.38	2219	.65*
WBR	1	1700	55	.03	205	.12
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.78		.83

650 . 0 St. at C St.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	2	3400	177 .05	298 .09*		
NBR	0	0	1	18		
SBL	1	1700	38 .02	92 .05*		
SBT	2	3400	452 .13*	272 .08		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1	1700	17 .01*	18 .01*		
WBT	0	0	0	0		
WBR	1	1700	135 .08	102 .06		
Right Turn Adjustment			WBR .01*	WBR .01*		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.20	.21		

651 . C St. at Trabuco Rd.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	39 .02*	68 .04*		
NBT	1	1700	13 .01	28 .03		
NBR	0	0	8	24		
SBL	1	1700	8 .00	10 .01		
SBT	1.5	3400	22 .01*	30 .02*		
SBR	0.5		40 .02	29		
EBL	1	1700	15 .01	25 .01		
EBT	0.5	1700	87 .07*	189 .15*		
EBR	0.5		26	64		
WBL	1	1700	4 .00	17 .01*		
WBT	1.5	3400	65 .02	147 .05		
WBR	0.5		2	7		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.15	.27		

652 . LY Street at Trabuco Rd.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	15 [.01]*	75 [.04]*		
NBT	1	1700	15 .02	38 .07		
NBR	0	0	0	0		
SBL	0	0	0	0		
SBT	1	1700	15 .03*	47 .06*		
SBR	0	0	35	55		
EBL	0	0	35	72		
EBT	1	1700	0 .03*	0 .11*		
EBR	0	0	15	123		
WBL	0	0	0	0		
WBT	0	0	0	0		
WBR	0	0	0	0		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.12	.26		

653 . LY Street at GP Blvd N/S Conn

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	0.5	1700	7 .01*	10 .01*		
NBR	0.5		4	10		
SBL	1	1700	20 .01*	166 .10*		
SBT	1	1700	8 .00	6 .00		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	0.5		4	4		
WBT	0	1700	0 .01*	0 .06*		
WBR	0.5		17	103		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.08	.22		

654 . C St. at LV St.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	2	4		
NBT	1	1700	7 .01	82 .06*		
NBR	0	0	2	9		
SBL	0	0	4	7		
SBT	1	1700	41 .03*	63 .04		
SBR	0	0	4	4		
EBL	0	0	2	4		
EBT	1	1700	4 .01	4 .01		
EBR	0	0	4	3		
WBL	0	0	4	4		
WBT	1	1700	4 .01*	2 .01*		
WBR	0	0	2	4		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.09	.12		

655 . O St. at 8th St.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	2	3400	37 .01	187 .06*		
NBR	0	0	12	26		
SBL	1	1700	8 .00	5 .00		
SBT	2	3400	132 .04*	121 .04		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1	1700	18 .01*	23 .01*		
WBT	0	0	0	0		
WBR	1	1700	3 .00	8 .00		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.10	.12		

656 . C St. at 8th St.

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	4	1		
NBT	1	1700	1 .01	1 .01		
NBR	0	0	6	20		
SBL	0	0	2	6		
SBT	1	1700	5 .01*	3 .01*		
SBR	0	0	4	1		
EBL	0	0	1	1		
EBT	1	1700	16 .01	30 .02		
EBR	0	0	5	2		
WBL	0	0	2	17		
WBT	1	1700	17 .01*	31 .03*		
WBR	0	0	1	1		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.07	.09		

657 . GP Blvd N/S Conn at GP Blvd E/W

ITAM 12 2017 Base+688+Opt1_A1t5 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	0	0	0	0		
NBR	0	0	0	0		
SBL	0	0	1	1		
SBT	1	1700	0 .01*	0 .07*		
SBR	0	0	10	110		
EBL	0	0	10 {.01}*	180 {.11}*		
EBT	1	1700	3 .01	3 .11		
EBR	0	0	0	0		
WBL	0	0	0	0		
WBT	1	1700	3 .00*	3 .00*		
WBR	0	0	1	1		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.07	.23		

Appendix D

Signalized Intersections ITAM Level of Service Calculations

Alternative 6 2017 Base + 688 Acre GP + Connector Road

282 . Jeffrey Rd. at Portola Pkwy.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	803 .24*	545 .16*		
NBT	1	1700	29 .02	11 .01		
NBR	f		15	74		
SBL	1	1700	33 .02	12 .01		
SBT	1	1700	22 .01*	14 .01*		
SBR	1	1700	22 .01	24 .01		
EBL	1	1700	25 .01*	15 .01*		
EBT	2	3400	434 .13	584 .17		
EBR	1	1700	464 .27	421 .25		
WBL	2	3400	37 .01	64 .02		
WBT	2	3400	721 .21*	691 .20*		
WBR	1	1700	36 .02	4 .00		
Clearance Interval			.05*	.05*		
Note: Assumes Right-Turn Overlap for EBR						
TOTAL CAPACITY UTILIZATION			.52	.43		

283 . Jeffrey Rd. at Irvine Bl.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	199 .06	389 .11		
NBT	3	5100	543 .11*	767 .15*		
NBR	f		180	246		
SBL	2	3400	348 .10*	209 .06*		
SBT	3	5100	715 .14	398 .08		
SBR	1	1700	32 .02	62 .04		
EBL	2	3400	70 .02*	67 .02*		
EBT	3	5100	842 .17	1228 .24		
EBR	d	1700	251 .15	260 .15		
WBL	2	3400	314 .09	253 .07		
WBT	3	5100	1669 .33*	1614 .32*		
WBR	d	1700	217 .13	338 .20		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.61	.60		

284 . Jeffrey Rd. at Bryan Av.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	168 .05*	318 .09		
NBT	3	5100	564 .11	1203 .24*		
NBR	d	1700	119 .07	390 .23		
SBL	2	3400	56 .02	84 .02*		
SBT	3	5100	1041 .20*	678 .13		
SBR	1	1700	182 .11	157 .09		
EBL	1	1700	250 .15*	160 .09*		
EBT	2	3400	130 .04	226 .07		
EBR	d	1700	160 .09	154 .09		
WBL	2	3400	438 .13	188 .06		
WBT	1	1700	281 .17*	165 .10*		
WBR	d	1700	112 .07	87 .05		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.62	.50		

285 . Jeffrey Rd. at Trabuco Rd.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	132 .04*	204 .06		
NBT	3	5100	667 .13	1600 .31*		
NBR	d	1700	279 .16	704 .41		
SBL	2	3400	121 .04	44 .01*		
SBT	3	5100	1361 .27*	919 .18		
SBR	1	1700	266 .16	131 .08		
EBL	2	3400	171 .05	304 .09		
EBT	2	3400	440 .13*	512 .15*		
EBR	1	1700	174 .10	165 .10		
WBL	2	3400	595 .18*	346 .10*		
WBT	2	3400	702 .21	415 .12		
WBR	1	1700	52 .03	146 .09		
Right Turn Adjustment				NBR	.02*	
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.67	.64		

286 . Jeffrey Rd. at Roosevelt

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	149	.04*	404	.12
NBT	4	6800	950	.14	2193	.32*
NBR	1	1700	294	.17	576	.34
SBL	2	3400	140	.04	142	.04*
SBT	3	5100	1879	.37*	1195	.23
SBR	d	1700	77	.05	98	.06
EBL	1	1700	60	.04	122	.07
EBT	1	1700	178	.10*	292	.17*
EBR	1	1700	242	.14	262	.15
WBL	2	3400	674	.20*	293	.09*
WBT	1	1700	246	.14	218	.13
WBR	1	1700	172	.10	134	.08
Clearance Interval				.05*	.05*	
Note: Assumes Right-Turn Overlap for EBR						
TOTAL CAPACITY UTILIZATION				.76	.67	

287 . Jeffrey Rd. at I-5 NB Ramps

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	929	.18	2439	.48*
NBR	f		210		290	
SBL	0	0	0		0	
SBT	3	5100	2019	.40*	1442	.28
SBR	f		630		340	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1.5		581	.17*	488	
WBT	0	5100	0		0	.25*
WBR	1.5		511	[.14]	801	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.62	.78	

288 . Jeffrey Rd. at Walnut Av./I-5 SB Ramps289 . Jeffrey Rd. at ICD

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	65	.02*	214	.06
NBT	3	5100	735	.14	1764	.35*
NBR	1	1700	114	.07	207	.12
SBL	2	3400	447	.13	341	.10*
SBT	3	5100	1841	.41*	1014	.30
SBR	0	0	254		617	.36
EBL	2	3400	124	.04	299	.09
EBT	1.5	5100	279	.09*	272	[.08]*
EBR	1.5		199		171	
WBL	2	3400	330	.10*	436	.13*
WBT	1	1700	31	.02	109	.06
WBR	1	1700	271	.16	587	.35
Right Turn Adjustment					WBR	.15*
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.67	.86	

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	170	.05*	292	.09
NBT	3	5100	691	.14	1533	.30*
NBR	1	1700	228	.13	259	.15
SBL	2	3400	341	.10	243	.07*
SBT	3	5100	1612	.32*	1119	.22
SBR	1	1700	388	.23	184	.11
EBL	2	3400	184	.05	350	.10*
EBT	3	5100	751	.15*	808	.16
EBR	f		225		226	
WBL	2	3400	203	.06*	255	.08
WBT	3	5100	732	.14	1444	.28*
WBR	1	1700	145	.09	497	.29
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.63	.80	

290 . Jeffrey Rd. at Barranca Pkwy.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	257 .08*	342 .10*		
NBT	3	5100	810 .19	1577 .34		
NBR	0	0	154	163		
SBL	2	3400	65 .02	81 .02		
SBT	3	5100	1733 .41*	1284 .30*		
SBR	0	0	377	229		
EBL	2	3400	177 .05*	476 .14*		
EBT	2	3400	551 .16	746 .22		
EBR	d	1700	304 .18	250 .15		
WBL	2	3400	163 .05	156 .05		
WBT	2	3400	736 .22*	609 .18*		
WBR	1	1700	53 .03	77 .05		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.81	.77		

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	421 .12*	643 .19		
NBT	3	5100	882 .17	1580 .31*		
NBR	f		181	337		
SBL	2	3400	289 .09	407 .12*		
SBT	3	5100	1873 .37*	1170 .23		
SBR	d	1700	155 .09	203 .12		
EBL	2	3400	148 .04	268 .08		
EBT	2	3400	539 .16*	890 .26*		
EBR	d	1700	516 .30	352 .21		
WBL	2	3400	581 .17*	413 .12*		
WBT	2	3400	885 .26	820 .24		
WBR	d	1700	139 .08	157 .09		
Right Turn Adjustment			EBR	.05*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.92	.86		

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	1118 .22	2142 .42*		
NBR	f		290	110		
SBL	0	0	0	0		
SBT	3	5100	1867 .37*	1443 .28		
SBR	f		1360	440		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	2	3400	1273 .37*	1107 .33*		
WBT	0	0	0	0		
WBR	1	1700	112 .07	338 .20		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.79	.80		

294 . University Dr. at I-405 SB Ramps

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	1050 .21	1751 .34		
NBR	f		1000	1290		
SBL	0	0	0	0		
SBT	3	5100	2722 .53*	2204 .43*		
SBR	f		340	280		
EBL	2	3400	370 .11*	539 .16*		
EBT	0	0	0	0		
EBR	1	1700	108 .06	106 .06		
WBL	0	0	0	0		
WBT	0	0	0	0		
WBR	0	0	0	0		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.69	.64		

300 . Sand Canyon. Av. at Portola Pkwy.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	101 .03*	372 .11*		
NBT	0	0	3	1		
NBR	2	3400	218 .06	398 .12		
SBL	0	0	2	4		
SBT	1	1700	7 .01*	13 .01*		
SBR	0	0	1	3		
EBL	0	0	3	1		
EBT	2	3400	300 .09*	578 .17*		
EBR	f		250	54		
WBL	2	3400	563 .17*	183 .05*		
WBT	2	3400	648 .19	475 .14		
WBR	0	0	4	1		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.35	.39		

301 . Sand Canyon. Av. at Irvine Bl.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	171 .05*	505 .15*		
NBT	3	5100	320 .06	686 .13		
NBR	2	3400	218 .06	461 .14		
SBL	2	3400	288 .08	75 .02		
SBT	2	3400	884 .26*	311 .09*		
SBR	1	1700	158 .09	85 .05		
EBL	2	3400	112 .03	183 .05*		
EBT	4	6800	1053 .15*	913 .13		
EBR	1	1700	324 .19	206 .12		
WBL	2	3400	572 .17*	413 .12		
WBT	3	5100	1171 .23	1510 .30*		
WBR	1	1700	98 .06	231 .14		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.68	.64		

302 . Sand Canyon. Av. at Trabuco Pkwy.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	216 .06*	239 .07		
NBT	3	5100	354 .07	1874 .37*		
NBR	f		442	511		
SBL	2	3400	237 .07	319 .09*		
SBT	3	5100	1787 .35*	625 .12		
SBR	1	1700	270 .16	33 .02		
EBL	2	3400	71 .02	140 .04		
EBT	3	5100	331 .06*	520 .10*		
EBR	f		450	263		
WBL	2	3400	783 .23*	582 .17*		
WBT	3	5100	314 .06	498 .10		
WBR	d	1700	295 .17	176 .10		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.75	.78		

303 . Sand Canyon. Av. at I-5 NB Ramps

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	149 .04*	834 .25*		
NBT	3	5100	699 .14	2128 .42		
NBR	d	1700	9 .01	20 .01		
SBL	1	1700	3 .00	1 .00		
SBT	4	6800	2970 .44*	1420 .21*		
SBR	1	1700	519 .31	227 .13		
EBL	1.5		340	776		
EBT	0.5	3400	18 .11*	9 .23*		
EBR	2	3400	474 .14	355 .10		
WBL	1	1700	6 .00	8 .00		
WBT	1	1700	3 .00*	1 .00*		
WBR	0	0	1	1		
Clearance Interval			.05*	.05*		
Note: Assumes E/W Split Phasing						
TOTAL CAPACITY UTILIZATION			.64	.74		

304 . Sand Canyon. Av. at Marine Wy.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	1	0		
NBT	3	5100	736 .14	2676 .52*		
NBR	1	1700	334 .20	495 .29		
SBL	2	3400	226 .07	305 .09*		
SBT	3	5100	3255 .64*	1520 .30		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	2	3400	185 .05*	440 .13*		
WBT	0	0	0	0		
WBR	1	1700	134 .08	324 .19		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.74	.79		

305 . Sand Canyon. Av. at I-5 SB Ramps

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	4	6800	667 .10	2560 .38*		
NBR	1	1700	96 .06	240 .14		
SBL	2	3400	832 .24	607 .18*		
SBT	4	6800	2574 .38*	1328 .20		
SBR	0	0	0	0		
EBL	2.5		393 .12*	650 .13*		
EBT	0	6800	2	2		
EBR	1.5		876 .26	212		
WBL	0	0	0	0		
WBT	0	0	0	0		
WBR	0	0	0	0		
Right Turn Adjustment			EBR	.14*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.69	.74		

306 . Sand Canyon. Av. at Oak Cyn./Laguna Cyn. R

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	62 .04*	36 .02		
NBT	3	5100	604 .12	1516 .30*		
NBR	1	1700	49 .03	79 .05		
SBL	2	3400	827 .24	294 .09*		
SBT	3	5100	2106 .41*	970 .19		
SBR	d	1700	333 .20	143 .08		
EBL	2	3400	89 .03	367 .11*		
EBT	1	1700	86 .05*	178 .10		
EBR	d	1700	34 .02	85 .05		
WBL	2	3400	75 .02*	67 .02		
WBT	1.5	5100	146 .04	52 .03*		
WBR	1.5		78	863 .25		
Right Turn Adjustment				WBR	.15*	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.57	.73		

307 . Sand Canyon. Av. at ICD

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	227 .07*	219 .06		
NBT	3	5100	523 .10	1056 .21*		
NBR	1	1700	113 .07	56 .03		
SBL	2	3400	280 .08	244 .07*		
SBT	3	5100	1595 .31*	765 .15		
SBR	1	1700	309 .18	320 .19		
EBL	2	3400	152 .04*	269 .08*		
EBT	3	5100	418 .08	541 .11		
EBR	1	1700	111 .07	139 .08		
WBL	2	3400	74 .02	138 .04		
WBT	3	5100	604 .12*	954 .19*		
WBR	1	1700	65 .04	218 .13		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.59	.60		

309 . Sand Canyon. Av. at Barranca Pkwy.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	128	.04*	180	.05*
NBT	3	5100	909	.18	942	.18
NBR	d	1700	101	.06	116	.07
SBL	2	3400	25	.01	60	.02
SBT	3	5100	1393	.27*	1155	.23*
SBR	d	1700	125	.07	166	.10
EBL	2	3400	112	.03*	121	.04
EBT	2	3400	394	.12	604	.18*
EBR	1	1700	133	.08	175	.10
WBL	2	3400	125	.04	159	.05*
WBT	2	3400	697	.21*	494	.15
WBR	1	1700	99	.06	47	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.60		.56

310 . Sand Canyon. Av. at Alton Pkwy.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	316	.09*	355	.10*
NBT	3	5100	1015	.20	743	.15
NBR	1	1700	449	.26	192	.11
SBL	2	3400	271	.08	96	.03
SBT	3	5100	1171	.23*	1183	.23*
SBR	1	1700	118	.07	180	.11
EBL	2	3400	133	.04*	142	.04
EBT	3	5100	490	.10	671	.13*
EBR	1	1700	327	.19	367	.22
WBL	2	3400	532	.16	630	.19*
WBT	2	3400	916	.27*	595	.18
WBR	1	1700	102	.06	185	.11
Right Turn Adjustment					EBR	.01*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.68		.71

311 . Sand Canyon. Av. at I-405 NB Ramps

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	2	3400	1453	.43*	870	.26
NBR	f		650		380	
SBL	0	0	0		0	
SBT	2	3400	675	.20	960	.28*
SBR	f		1320		1240	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	0.5		55		160	
WBT	0	3400	0	.15*	0	[.15]*
WBR	1.5		447		370	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.63		.48

312 . Sand Canyon. Av. at I-405 SB Ramps

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	166	.10	117	.07*
NBT	2	3400	993	.29*	754	.22
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	314	.09	695	.20*
SBR	f		216		443	
EBL	1.5		1130	[.44]*	506	[.27]*
EBT	0	3400	0	.44	0	.27
EBR	0.5		360		415	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.78		.59

313 . Laguna Canyon Rd. at ICD

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	54	.02*	107	.03
NBT	2	3400	50	.01	130	.04*
NBR	d	1700	25	.01	62	.04
SBL	2	3400	38	.01	56	.02*
SBT	2	3400	96	.03*	55	.02
SBR	d	1700	16	.01	29	.02
EBL	2	3400	47	.01*	26	.01*
EBT	3	5100	550	.11	751	.15
EBR	d	1700	91	.05	94	.06
WBL	2	3400	45	.01	22	.01
WBT	3	5100	664	.13*	983	.19*
WBR	d	1700	53	.03	74	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.24		.31

314 . Laguna Canyon Rd. at Barranca Pkwy.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	61	.02*	69	.02*
NBT	2	3400	109	.03	121	.04
NBR	d	1700	42	.02	150	.09
SBL	2	3400	18	.01	45	.01
SBT	2	3400	94	.03*	99	.03*
SBR	d	1700	20	.01	106	.06
EBL	2	3400	41	.01*	39	.01
EBT	2	3400	410	.12	665	.20*
EBR	1	1700	89	.05	46	.03
WBL	2	3400	127	.04	66	.02*
WBT	2	3400	789	.23*	545	.16
WBR	d	1700	40	.02	100	.06
Right Turn Adjustment					NBR	.03*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.34		.35

315 . Laguna Canyon Rd. at Alton Pkwy.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	111	.07*	151	.09*
NBT	2	3400	200	.06	162	.05
NBR	d	1700	79	.05	106	.06
SBL	1	1700	42	.02	42	.02
SBT	2	3400	123	.04*	140	.04*
SBR	d	1700	45	.03	68	.04
EBL	2	3400	103	.03*	54	.02*
EBT	2	3400	561	.17	695	.20
EBR	1	1700	137	.08	101	.06
WBL	2	3400	101	.03	90	.03
WBT	2	3400	999	.29*	754	.22*
WBR	1	1700	48	.03	74	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.48		.42

316 . SR-133 SB Ramps at Irvine B1.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	284	.17*	78	.05*
SBT	0	0	2		0	
SBR	2	3400	235	.07	219	.06
EBL	0	0	0		0	
EBT	4	6800	1341	.20*	1446	.21
EBR	d	1700	277	.16	132	.08
WBL	1	1700	382	.22*	158	.09
WBT	3	5100	1589	.31	2097	.41*
WBR	0	0	0		0	
Right Turn Adjustment					SBR	.01*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.52

317 . SR-133 NB Ramps at Irvine Bl.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	95 .06*	243 .14*		
NBT	0	0	0	0		
NBR	1	1700	157 .09	453 .27		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	1473 .43*	1387 .41		
EBR	f		110	220		
WBL	0	0	0	0		
WBT	3	5100	1915 .39	2067 .44*		
WBR	0	0	60	200		
Right Turn Adjustment			NBR .03*	NBR .11*		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.57	.74		

318 . Banting at Barranca Pkwy.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	19 .01*	34 .01		
NBT	1	1700	13 .01	139 .08*		
NBR	1	1700	20 .01	117 .07		
SBL	2	3400	797 .23	90 .03*		
SBT	2	3400	650 .38*	147 .09		
SBR	0	0	634	173 .10		
EBL	1	1700	18 .01*	304 .18*		
EBT	2	3400	344 .10	873 .26		
EBR	d	1700	14 .01	22 .01		
WBL	1	1700	26 .02	31 .02		
WBT	2	3400	747 .22*	533 .16*		
WBR	f		69	618		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.67	.50		

319 . Banting at Alton Pkwy.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	2 .00	23 .01		
NBT	1	1700	8 .00	76 .04*		
NBR	1	1700	10 .01	91 .05		
SBL	2	3400	49 .01	122 .04*		
SBT	1	1700	96 .06*	9 .01		
SBR	1	1700	215 .13	79 .05		
EBL	2	3400	26 .01*	46 .01		
EBT	2	3400	518 .15	1047 .31*		
EBR	d	1700	25 .01	4 .00		
WBL	1	1700	92 .05	6 .00		
WBT	2	3400	1352 .40*	688 .20		
WBR	d	1700	97 .06	49 .03		
Right Turn Adjustment			SBR .06*	NBR .01*		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.58	.45		

321 . Laguna Canyon Rd. at Old Laguna Cyn. Rd.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	557 .16	253 .07*		
NBT	3	5100	3709 .73*	2994 .59		
NBR	1	1700	56 .03	99 .06		
SBL	2	3400	43 .01*	105 .03		
SBT	3	5100	2692 .53	3423 .67*		
SBR	1	1700	574 .34	334 .20		
EBL	3	5100	256 .05*	358 .07		
EBT	1	1700	31 .02	95 .06*		
EBR	f		183	288		
WBL	1	1700	75 .04	69 .04*		
WBT	2	3400	149 .04*	63 .02		
WBR	d	1700	105 .06	88 .05		
Right Turn Adjustment			WBR .01*			
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.89	.89		

327 . Barranca Pkwy. at Technology

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	402 .12*	68 .02		
NBT	2	3400	636 .19	608 .18*		
NBR	1	1700	166 .10	178 .10		
SBL	1	1700	171 .10	261 .15*		
SBT	2	3400	611 .18*	650 .19		
SBR	1	1700	259 .15	51 .03		
EBL	2	3400	56 .02*	258 .08		
EBT	2	3400	133 .04	281 .08*		
EBR	d	1700	64 .04	364 .21		
WBL	2	3400	46 .01	196 .06*		
WBT	2	3400	289 .09*	101 .03		
WBR	d	1700	98 .06	164 .10		
Right Turn Adjustment				EBR	.02*	
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.46	.54		

328 . Barranca Pkwy. at I-5 HOV Ramp

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	5 .00	14 .01		
NBT	2	3400	992 .29*	794 .23*		
NBR	0	0	0	0		
SBL	0	0	0	0		
SBT	3	5100	730 .14	1073 .21		
SBR	d	1700	35 .02	106 .06		
EBL	1	1700	148 .09*	66 .04*		
EBT	0	0	0	0		
EBR	1	1700	20 .01	7 .00		
WBL	0	0	0	0		
WBT	0	0	0	0		
WBR	0	0	0	0		
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION			.43	.32		

329 . Barranca Pkwy. at ICD

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	151 .04	32 .01*		
NBT	2	3400	750 .22*	415 .12		
NBR	1	1700	189 .11	238 .14		
SBL	2	3400	77 .02*	148 .04		
SBT	2	3400	386 .11	697 .21*		
SBR	1	1700	257 .15	299 .18		
EBL	2	3400	107 .03*	272 .08*		
EBT	3	5100	329 .06	904 .18		
EBR	1	1700	14 .01	286 .17		
WBL	2	3400	226 .07	217 .06		
WBT	3	5100	783 .15*	999 .20*		
WBR	1	1700	221 .13	102 .06		
Clearance Interval			.05*	.05*		
TOTAL CAPACITY UTILIZATION			.47	.55		

330 . Barranca Pkwy. at Pacifica

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	251 .15*	36 .02*		
NBT	2	3400	767 .23	515 .15		
NBR	1	1700	152 .09	510 .30		
SBL	1	1700	19 .01	96 .06		
SBT	2	3400	516 .15*	1076 .32*		
SBR	d	1700	127 .07	19 .01		
EBL	2	3400	11 .00	100 .03		
EBT	2	3400	10 .01	136 .08*		
EBR	0	0	40 .02	334 .20		
WBL	2	3400	314 .09	196 .06*		
WBT	1	1700	302 .18*	29 .02		
WBR	1	1700	392 .23	65 .04		
Right Turn Adjustment				EBR	.10*	
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.53	.63		

331 . ICD at Gateway Bl.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	82	.02	42	.01*
NBT	3	5100	914	.18*	801	.16
NBR	d	1700	70	.04	14	.01
SBL	2	3400	66	.02*	94	.03
SBT	3	5100	453	.09	1103	.22*
SBR	1	1700	52	.03	71	.04
EBL	1	1700	150	.09*	54	.03*
EBT	2	3400	224	.07	82	.02
EBR	1	1700	68	.04	84	.05
WBL	1	1700	8	.00	73	.04
WBT	2	3400	56	.02*	197	.06*
WBR	1	1700	116	.07	304	.18
Right Turn Adjustment Clearance Interval			WBR	.03* .05*	WBR	.07* .05*
TOTAL CAPACITY UTILIZATION					.39	.44

333 . Pacifica at Gateway Bl.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	155	.05	420	.12*
NBT	2	3400	175	.05*	131	.04
NBR	d	1700	11	.01	39	.02
SBL	2	3400	89	.03*	55	.02
SBT	2	3400	79	.02	217	.06*
SBR	d	1700	43	.03	477	.28
EBL	1	1700	647	.38*	110	.06*
EBT	2	3400	380	.11	127	.04
EBR	1	1700	169	.10	145	.09
WBL	1	1700	12	.01	20	.01
WBT	1	1700	152	.09*	268	.16*
WBR	1	1700	108	.06	81	.05
Right Turn Adjustment Clearance Interval					SBR	.17* .05*
TOTAL CAPACITY UTILIZATION					.60	.62

338 . Alton Pkwy. at Irvine Bl.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	187	.06*	711	.21*
NBT	3	5100	595	.12	1157	.23
NBR	f		78		142	
SBL	2	3400	223	.07	170	.05
SBT	3	5100	1241	.24*	612	.12*
SBR	f		545		868	
EBL	2	3400	812	.24*	597	.18*
EBT	3	5100	944	.19	628	.12
EBR	1	1700	573	.34	255	.15
WBL	2	3400	190	.06	102	.03
WBT	3	5100	775	.15*	1361	.27*
WBR	1	1700	276	.16	247	.15
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION					.74	.83

339 . Alton Pkwy. at Toledo Wy.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	55	.03*	19	.01
NBT	3	5100	999	.20	1890	.37*
NBR	f		55		168	
SBL	1	1700	52	.03	48	.03*
SBT	3	5100	1658	.33*	1062	.21
SBR	0	0	32		14	
EBL	1	1700	4	.00	17	.01
EBT	1	1700	3	.02*	23	.05*
EBR	0	0	33		61	
WBL	1	1700	99	.06*	46	.03*
WBT	1	1700	23	.01	7	.00
WBR	1	1700	127	.07	83	.05
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION					.49	.53

340 . Alton Pkwy. at Jeronimo Rd.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	82 .05*	11 .01		
NBT	3	5100	1294 .25	1519 .30*		
NBR	f		237	350		
SBL	2	3400	105 .03	72 .02*		
SBT	3	5100	1454 .29*	1342 .26		
SBR	0	0	39	2		
EBL	1	1700	7 .00	23 .01		
EBT	1	1700	2 .00*	18 .01*		
EBR	f		11	70		
WBL	2	3400	350 .10*	258 .08*		
WBT	1	1700	22 .01	7 .00		
WBR	1	1700	107 .06	117 .07		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.49	.46		

341 . Alton Pkwy. at Barranca Pkwy./Muirlands Bl.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	8 .00	10 .01		
NBT	3	5100	1103 .22*	924 .18*		
NBR	f		143	333		
SBL	2	3400	86 .03*	120 .04*		
SBT	3	5100	997 .20	999 .20		
SBR	f		725	559		
EBL	2	3400	402 .12*	786 .23*		
EBT	2	3400	131 .04	507 .15		
EBR	d	1700	8 .00	5 .00		
WBL	2	3400	215 .06	96 .03		
WBT	2	3400	296 .11*	421 .21*		
WBR	0	0	85	290		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.53	.71		

343 . Alton Pkwy. at Ada

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	308 .09*	134 .04*		
NBT	3	5100	1443 .28	1073 .21		
NBR	d	1700	17 .01	13 .01		
SBL	1	1700	16 .01	15 .01		
SBT	3	5100	1029 .20*	1395 .27*		
SBR	d	1700	45 .03	15 .01		
EBL	1	1700	5 .00	19 .01*		
EBT	1	1700	7 .00	2 .00		
EBR	1	1700	58 .03	263 .15		
WBL	1	1700	13 .01	19 .01		
WBT	1	1700	18 .04*	11 .01*		
WBR	0	0	42	10		
Right Turn Adjustment				EBR	.11*	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.38	.49		

344 . Alton Pkwy. at Technology Dr. W.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	458 .13	384 .11*		
NBT	3	5100	1525 .30*	839 .16		
NBR	1	1700	386 .23	64 .04		
SBL	1	1700	34 .02*	9 .01		
SBT	4	6800	988 .15	1566 .23*		
SBR	1	1700	95 .06	126 .07		
EBL	1	1700	78 .05*	246 .14		
EBT	2	3400	50 .01	47 .01*		
EBR	2	3400	134 .04	518 .15		
WBL	2	3400	68 .02	496 .15*		
WBT	2	3400	47 .01*	80 .02		
WBR	d	1700	16 .01	14 .01		
Right Turn Adjustment				EBR	.03*	
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for EBR						
TOTAL CAPACITY UTILIZATION			.43	.58		

345 . Alton Pkwy. at I-5 NB Ramps

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	2057 .40*	1183 .23		
NBR	f		190	620		
SBL	0	0	0	0		
SBT	3	5100	988 .19	1627 .32*		
SBR	f		230	960		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1.5		502	163 .05*		
WBT	0	5100	0 .20*	0		
WBR	1.5		533	127 [.01]		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.65			.42

346 . Alton Pkwy. at Enterprise

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	3	5100	1031 .20*	1074 .21*		
NBR	1	1700	39 .02	220 .13		
SBL	1	1700	171 .10*	500 .29*		
SBT	3	5100	1328 .26	1304 .26		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	2	3400	182 .05*	136 .04*		
WBT	0	0	0	0		
WBR	2	3400	1199 .35	736 .22		
Right Turn Adjustment			WBR	.20*		
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for WBR						
TOTAL CAPACITY UTILIZATION			.60			.59

348 . Alton Pkwy. at ICD

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	48 .01	30 .01		
NBT	3	5100	582 .11*	816 .16*		
NBR	1	1700	81 .05	265 .16		
SBL	2	3400	187 .06*	397 .12*		
SBT	3	5100	835 .16	799 .16		
SBR	1	1700	251 .15	255 .15		
EBL	2	3400	138 .04	346 .10		
EBT	3	5100	412 .08*	832 .16*		
EBR	1	1700	12 .01	32 .02		
WBL	2	3400	573 .17*	221 .07*		
WBT	3	5100	811 .16	477 .09		
WBR	1	1700	691 .41	312 .18		
Right Turn Adjustment			WBR	.15*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.62			.56

350 . Alton Pkwy. at Pacifica

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	48 .01*	127 .04		
NBT	3	5100	432 .08	935 .18*		
NBR	d	1700	93 .05	193 .11		
SBL	2	3400	233 .07	255 .08*		
SBT	2	3400	1272 .37*	586 .17		
SBR	1	1700	122 .07	171 .10		
EBL	2	3400	56 .02	123 .04		
EBT	2	3400	114 .03*	222 .07*		
EBR	d	1700	70 .04	57 .03		
WBL	1	1700	245 .14*	87 .05*		
WBT	2	3400	200 .06	232 .07		
WBR	d	1700	196 .12	192 .11		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.60			.43

351 . Fortune Dr./I-5 SB Ramps at Enterprise357 . Enterprise Dr. at Fortune Dr./I-405 NB Ramps

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	32	.01*	152	.04*
NBT	2	3400	10	.01	61	.03
NBR	0	0	19	.01	40	
SBL	2	3400	105	.03	245	.07
SBT	1	1700	632	.37*	271	.16*
SBR	f		1222		324	
EBL	1	1700	67	.04*	407	.24*
EBT	2	3400	76	.02	255	.08
EBR	1	1700	47	.03	87	.05
WBL	1	1700	21	.01	101	.06
WBT	2	3400	116	.03*	374	.11*
WBR	1	1700	23	.01	142	.08
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.50	.60	

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	141	.08*	227	.13*
NBT	1	1700	38	.02	232	.14
NBR	f		330		750	
SBL	1	1700	4	.00	28	.02
SBT	2	3400	13	.01*	139	.07*
SBR	0	0	23	.01	92	
EBL	1	1700	49	.03	286	.17
EBT	1	1700	97	.06*	403	.24*
EBR	1	1700	54	.03	121	.07
WBL	1.5		483	[.21]*	107	.06*
WBT	0.5	3400	235	.21	159	.09
WBR	f		32		184	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.41	.55	

358 . ICD at Enterprise Dr.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	2	3400	1896	.56*	1055	.31*
NBR	f		522		1248	
SBL	1	1700	8	.00	62	.04*
SBT	3	5100	664	.13	1544	.30
SBR	f		230		690	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1	1700	36	.02*	296	.17*
WBT	0	0	0		0	
WBR	f		464		175	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.63	.57	

359 . ICD at I-405 SB Ramps

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	1318	.26*	1693	.33
NBR	f		72		60	
SBL	0	0	0		0	
SBT	2	3400	585	.17	1445	.43*
SBR	f		124		400	
EBL	2	3400	1087	.32*	587	.17*
EBT	0	0	0		0	
EBR	f		953		615	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION				.63	.65	

360 . ICD at Research Dr.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	39	.02	131	.08*
NBT	3	5100	875	.17*	1004	.20
NBR	d	1700	7	.00	11	.01
SBL	2	3400	271	.08*	280	.08
SBT	3	5100	878	.17	1465	.29*
SBR	1	1700	106	.06	288	.17
EBL	2	3400	260	.08	73	.02
EBT	1	1700	476	.28*	267	.16*
EBR	d	1700	103	.06	47	.03
WBL	1	1700	13	.01*	31	.02*
WBT	1	1700	62	.04	231	.14
WBR	f		251		730	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.59		.60

362 . Bake Pkwy. at Irvine Bl.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	419	.12	176	.05
NBT	3	5100	1691	.36*	1187	.35*
NBR	0	0	169		771	.45
SBL	2	3400	34	.01*	166	.05*
SBT	3	5100	1079	.21	1317	.26
SBR	1	1700	343	.20	583	.34
EBL	2	3400	423	.12	390	.11
EBT	3	5100	228	.04*	821	.16*
EBR	1	1700	112	.07	287	.17
WBL	2	3400	939	.28*	455	.13*
WBT	4	6800	708	.12	467	.08
WBR	0	0	96		100	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.74		.74

363 . Bake Pkwy. at Toledo Wy.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	270	.16*	23	.01
NBT	3	5100	2089	.41	2086	.41*
NBR	d	1700	48	.03	412	.24
SBL	1	1700	18	.01	45	.03*
SBT	3	5100	2092	.41*	2163	.42
SBR	d	1700	124	.07	19	.01
EBL	2	3400	15	.00	105	.03
EBT	2	3400	6	.00*	202	.06*
EBR	1	1700	8	.00	112	.07
WBL	1	1700	350	.21*	95	.06*
WBT	2	3400	173	.06	18	.01
WBR	0	0	27		59	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.83		.61

364 . Bake Pkwy. at Jeronimo Rd.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	357	.11	44	.01
NBT	3	5100	2503	.49*	2409	.47*
NBR	d	1700	34	.02	303	.18
SBL	1	1700	34	.02*	80	.05*
SBT	4	6800	2156	.34	2267	.34
SBR	0	0	149		46	
EBL	2	3400	29	.01	138	.04
EBT	2	3400	22	.01*	446	.13*
EBR	1	1700	48	.03	363	.21
WBL	1	1700	290	.17*	110	.06*
WBT	2	3400	446	.15	70	.04
WBR	0	0	62		54	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.74		.76

365 . Bake Pkwy. at Muirlands Bl.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	170	.05	86	.03*
NBT	4	6800	2848	.42*	2415	.36
NBR	f		106		299	
SBL	2	3400	52	.02*	177	.05
SBT	4	6800	2373	.35	2682	.39*
SBR	f		159		47	
EBL	2	3400	32	.01*	179	.05
EBT	2	3400	62	.02	555	.16*
EBR	f		35		226	
WBL	2	3400	234	.07	122	.04*
WBT	2	3400	365	.11*	106	.03
WBR	f		93		65	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.61		.67

366 . Bake Pkwy. at Rockfield Bl.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	216	.06	26	.01
NBT	4	6800	3018	.44*	2575	.38*
NBR	f		557		297	
SBL	2	3400	124	.04*	178	.05*
SBT	4	6800	2458	.36	2844	.42
SBR	1	1700	18	.01	11	.01
EBL	1	1700	5	.00	17	.01
EBT	2	3400	11	.00*	85	.03*
EBR	f		14		278	
WBL	2	3400	146	.04*	568	.17*
WBT	2	3400	87	.03	23	.01
WBR	f		86		118	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.57		.68

367 . Bake Pkwy. at I-5 NB Ramps

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	3022	.59*	2726	.53*
NBR	f		310		1020	
SBL	0	0	0		0	
SBT	3	5100	789	.15	1130	.22
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1.5		151	.09*	40	.02*
WBT	0	5100	0		0	
WBR	1.5		738	.22	274	.08
Right Turn Adjustment			WBR	.13*	WBR	.06*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.86		.66

368 . Bake Pkwy. at I-5 SB Ramps

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	490	.10	1379	.29*
NBR	0	0	19		99	
SBL	0	0	0		0	
SBT	3	5100	710	.14*	622	.12
SBR	f		229		516	
EBL	3	5100	2767	.54*	2172	.43*
EBT	0	0	0		1	
EBR	1	1700	414	.24	110	.06
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.73		.77

371 . Bake Pkwy. at Research Dr.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	28	.02*	32	.02
NBT	3	5100	293	.06	533	.10*
NBR	d	1700	6	.00	16	.01
SBL	2	3400	156	.05	73	.02*
SBT	3	5100	537	.11*	349	.07
SBR	1	1700	471	.28	285	.17
EBL	2	3400	138	.04*	467	.14*
EBT	2	3400	117	.03	132	.04
EBR	d	1700	43	.03	42	.02
WBL	1	1700	9	.01	39	.02
WBT	1	1700	141	.08*	293	.17*
WBR	1	1700	119	.07	191	.11
Right Turn Adjustment Clearance Interval			SBR	.14* .05*		.05*
TOTAL CAPACITY UTILIZATION				.44	.48	

372 . Bake Pkwy. at ICD

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	75	.02	116	.03
NBT	3	5100	68	.01*	129	.03*
NBR	d	1700	9	.01	4	.00
SBL	2	3400	233	.07*	243	.07*
SBT	3	5100	208	.04	64	.01
SBR	1	1700	151	.09	125	.07
EBL	2	3400	91	.03*	183	.05
EBT	3	5100	566	.11	1073	.21*
EBR	f		124		163	
WBL	1	1700	4	.00	4	.00
WBT	3	5100	803	.16*	789	.15
WBR	d	1700	176	.10	258	.15
Right Turn Adjustment Clearance Interval			SBR	.01* .05*		.05*
TOTAL CAPACITY UTILIZATION				.33	.36	

406 . Laguna Canyon Rd. at Lake Forest Dr.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	2675	.52*	1789	.35*
NBR	1	1700	135	.08	100	.06
SBL	2	3400	1117	.33*	1320	.39*
SBT	3	5100	1611	.32	2245	.44
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	121	.04*	145	.04*
WBT	0	0	0		0	
WBR	f		1651		1521	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.94	.83	

409 . Bake Pkwy. at Commercentre Dr.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	100	.06*	137	.08*
NBT	2	3400	674	.20	708	.21
NBR	d	1700	583	.34	543	.32
SBL	1	1700	57	.03	60	.04
SBT	2	3400	1105	.33*	1030	.30*
SBR	d	1700	160	.09	252	.15
EBL	1	1700	273	.16*	237	.14*
EBT	2	3400	151	.07	116	.05
EBR	0	0	94		63	
WBL	2	3400	161	.05	217	.06
WBT	1	1700	150	.09*	340	.20*
WBR	0	0	3		5	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.69	.77	

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK VOL	HOUR V/C	PM PK VOL	HOUR V/C
NBL	1	1700	39	.02*	34	.02
NBT	3	5100	721	.15	2541	.51*
NBR	0	0	37		54	
SBL	1	1700	91	.05	96	.06*
SBT	3	5100	3255	.64*	1369	.27
SBR	1	1700	26	.02	6	.00
EBL	1	1700	18	.01	44	.03*
EBT	1	1700	2	.00*	0	.00
EBR	d	1700	0	.00	25	.01
WBL	1	1700	55	.03*	49	.03
WBT	1	1700	5	.00	0	.00*
WBR	1	1700	51	.03	71	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.74		.65

481 . Laguna Canyon Rd. at Technology Dr.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	1 .00	1 .00		
NBT	2	3400	13 .00*	49 .01*		
NBR	d	1700	16 .01	21 .01		
SBL	2	3400	644 .19*	455 .13*		
SBT	2	3400	27 .01	20 .01		
SBR	d	1700	11 .01	5 .00		
EBL	1	1700	1 .00	6 .00		
EBT	1	1700	9 .01	24 .01*		
EBR	0	0	1	1		
WBL	1	1700	13 .01	10 .01*		
WBT	1	1700	49 .03*	25 .01		
WBR	2	3400	246 .07	545 .16		
Right Turn Adjustment				WBR	.04*	
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.27		.25	

482 . Road A at Trabuco Rd.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	11 .01*	14 .01*		
NBT	0	0	0	0		
NBR	1	1700	1 .00	6 .00		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	519 .15	796 .23*		
EBR	d	1700	25 .01	24 .01		
WBL	1	1700	5 .00	7 .00		
WBT	2	3400	899 .26*	592 .17		
WBR	0	0	0	0		
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.32		.29	

483 . Road C at Trabuco Rd.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	32 [.02]*	17 [.01]*		
NBT	0	0	0	0		
NBR	1	1700	48 .03	33 .02		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	536 .16	682 .20*		
EBR	d	1700	15 .01	35 .02		
WBL	1	1700	25 .01	45 .03*		
WBT	2	3400	573 .17*	436 .13		
WBR	0	0	0	0		
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.24		.29	

484 . Sand Canyon Av. at Roosevelt

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	48 .01*	117 .03		
NBT	4	6800	911 .13	1865 .27*		
NBR	d	1700	80 .05	125 .07		
SBL	2	3400	171 .05	121 .04*		
SBT	4	6800	2018 .30*	973 .14		
SBR	d	1700	109 .06	128 .08		
EBL	2	3400	119 .04	153 .05*		
EBT	1	1700	88 .05*	84 .05		
EBR	d	1700	124 .07	74 .04		
WBL	2	3400	98 .03*	94 .03		
WBT	1	1700	43 .03	105 .06*		
WBR	d	1700	90 .05	192 .11		
Right Turn Adjustment			EBR	.01*	WBR	.02*
Clearance Interval			.05*		.05*	
TOTAL CAPACITY UTILIZATION			.45		.49	

485 . Sand Canyon Av. at Nightmist

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	50	.01*	267	.08
NBT	4	6800	899	.13	2503	.37*
NBR	d	1700	44	.03	76	.04
SBL	1	1700	19	.01	19	.01*
SBT	4	6800	2920	.43*	1444	.21
SBR	d	1700	22	.01	49	.03
EBL	2	3400	46	.01	43	.01*
EBT	1	1700	17	.01*	15	.01
EBR	1	1700	391	.23	132	.08
WBL	2	3400	146	.04*	44	.01
WBT	1	1700	7	.00	14	.01*
WBR	d	1700	17	.01	15	.01
Right Turn Adjustment Clearance Interval			EBR	.21* .05*		.05*
TOTAL CAPACITY UTILIZATION				.75	.45	

514 . Alton Pkwy. at Rancho Pkwy.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	16	.00	55	.02
NBT	3	5100	843	.17	1383	.27*
NBR	1	1700	102	.06	161	.09
SBL	2	3400	42	.01	48	.01*
SBT	3	5100	1573	.31*	946	.19
SBR	1	1700	0	.00	14	.01
EBL	1	1700	16	.01	10	.01
EBT	1	1700	16	.01*	10	.01*
EBR	1	1700	69	.04	20	.01
WBL	1	1700	154	.09*	74	.04*
WBT	1	1700	4	.02	12	.03
WBR	0	0	35		37	
Right Turn Adjustment Clearance Interval			EBR	.03* .05*		.05*
TOTAL CAPACITY UTILIZATION				.49	.38	

518 . Alton Pkwy. at Commercentre

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	3	5100	917	.18	1466	.29*
NBR	d	1700	577	.34	490	.29
SBL	1	1700	173	.10	90	.05*
SBT	3	5100	1694	.33*	958	.19
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1.5		326	.10*	652	.19*
WBT	0	5100	0		0	
WBR	1.5		53		184	.11
Right Turn Adjustment Clearance Interval			NBR	.03* .05*		.05*
TOTAL CAPACITY UTILIZATION				.51	.58	

555 . Bake Pkwy. at Rancho Pkwy. S

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	173	.10*	32	.02
NBT	2	3400	880	.26	1822	.54*
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	1617	.48*	1106	.33
SBR	1	1700	227	.13	60	.04
EBL	2	3400	90	.03*	234	.07*
EBT	0	0	0		0	
EBR	1	1700	83	.05	126	.07
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.66	.66	

556 . Ridge Valley at Portola Pkwy.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	134 .08*	143 .08		
NBT	1	1700	10 .01	21 .07*		
NBR	0	0	11	95		
SBL	1	1700	57 .03	38 .02*		
SBT	1	1700	38 .02*	7 .00		
SBR	1	1700	8 .00	6 .00		
EBL	1	1700	11 .01	6 .00		
EBT	2	3400	431 .13*	587 .17*		
EBR	d	1700	84 .05	109 .06		
WBL	1	1700	175 .10*	154 .09*		
WBT	2	3400	580 .17	340 .10		
WBR	d	1700	43 .03	53 .03		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.38		.40

558 . Ridge Valley-0 St. at Irvine Bl.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	174 .05*	129 .04		
NBT	2	3400	102 .03	280 .08*		
NBR	d	1700	37 .02	29 .02		
SBL	1	1700	130 .08	56 .03*		
SBT	2	3400	349 .10*	130 .04		
SBR	f		612	248		
EBL	2	3400	85 .03*	446 .13*		
EBT	3	5100	1273 .25	1134 .22		
EBR	1	1700	166 .10	215 .13		
WBL	2	3400	45 .01	35 .01		
WBT	2	3400	1214 .36*	1743 .51*		
WBR	1	1700	23 .01	73 .04		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.59		.80

559 . 0 St. at Trabuco Rd.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	54 .02*	95 .03*		
NBT	1.5	3400	8 .00	40 .02		
NBR	0.5		18 .01	65 .04		
SBL	1	1700	49 .03	54 .03		
SBT	1.5	5100	21 .01*	42 .02*		
SBR	1.5		729 .21	639 .19		
EBL	2	3400	396 .12*	555 .16*		
EBT	1.5	5100	526 .15	671 .20		
EBR	1.5		45 .03	87 .05		
WBL	1	1700	14 .01	31 .02		
WBT	1.5	3400	603 .19*	475 .15*		
WBR	0.5		47	25		
Right Turn Adjustment			SBR	.11*	SBR	.05*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.50		.46

560 . 0 St. at Marine Wy.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	0	0	0	0		
NBR	0	0	0	0		
SBL	2	3400	37 .01*	48 .01*		
SBT	0	0	0	0		
SBR	1	1700	75 .04	82 .05		
EBL	1	1700	39 .02	148 .09*		
EBT	2	3400	383 .11*	632 .19		
EBR	0	0	0	0		
WBL	0	0	0	0		
WBT	2	3400	215 .06	598 .18*		
WBR	1	1700	11 .01	82 .05		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.17		.33

561 . LY Street at Irvine Bl.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	63 .04*	84 .05*		
NBT	0	0	0	0		
NBR	1	1700	38 .02	37 .02		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	3	5100	1302 .26	963 .19		
EBR	1	1700	64 .04	169 .10		
WBL	1	1700	46 .03	61 .04		
WBT	2	3400	1157 .34*	1686 .50*		
WBR	0	0	0	0		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.43	.60		

562 . Great Park Bl. W. at Marine Wy.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	0	0	0	0		
NBR	0	0	0	0		
SBL	1	1700	33 .02*	6 .00		
SBT	0	0	0	0		
SBR	1	1700	18 .01	90 .05		
EBL	2	3400	21 .01	382 .11*		
EBT	2	3400	267 .08*	184 .05		
EBR	0	0	0	0		
WBL	0	0	0	0		
WBT	2	3400	132 .04	300 .10*		
WBR	0	0	19	38		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.15	.26		

563 . B St. at Irvine Bl.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	23 .01*	44 .03*		
NBT	0	0	0	0		
NBR	1	1700	17 .01	36 .02		
SBL	0	0	0	0		
SBT	0	0	0	0		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	2	3400	1893 .56*	1264 .37		
EBR	1	1700	94 .06	35 .02		
WBL	1	1700	66 .04*	25 .01		
WBT	2	3400	1337 .39	2316 .68*		
WBR	0	0	0	0		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.66	.76		

571 . Portola Springs at Portola Pkwy.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	234 .07*	338 .10*		
NBT	1	1700	24 .07	0 .04		
NBR	0	0	91	75		
SBL	1	1700	0 .00	0 .00		
SBT	1	1700	37 .02*	0 .00*		
SBR	d	1700	262 .15	117 .07		
EBL	1	1700	72 .04*	186 .11*		
EBT	2	3400	229 .07	295 .09		
EBR	1	1700	162 .10	399 .23		
WBL	1	1700	21 .01	31 .02		
WBT	2	3400	364 .11*	144 .04*		
WBR	d	1700	4 .00	44 .03		
Right Turn Adjustment			SBR	.10*	EBR	.02*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.39	.32		

572 . Modjeska-A St. at Irvine Bl.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	3	.00	10	.01
NBT	1	1700	23	.01	128	.08*
NBR	1	1700	234	.14	22	.01
SBL	2	3400	0	.00	170	.05*
SBT	1	1700	171	.10*	177	.10
SBR	d	1700	335	.20	106	.06
EBL	1	1700	37	.02	173	.10*
EBT	3	5100	316	.06*	790	.15
EBR	1	1700	3	.00	33	.02
WBL	1	1700	56	.03*	60	.04
WBT	3	5100	262	.05	1749	.34*
WBR	1	1700	240	.14	410	.24
Right Turn Adjustment			Multi	.09*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.33		.62

574 . 0 St. at LN St.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	21	.01*	51	.03*
NBT	2	3400	115	.04	235	.08
NBR	0	0	10		30	
SBL	1	1700	7	.00	14	.01
SBT	2	3400	364	.11*	225	.07*
SBR	0	0	14		23	
EBL	1	1700	15	.01	17	.01
EBT	1	1700	4	.04*	7	.03*
EBR	0	0	71		37	
WBL	1	1700	45	.03*	22	.01*
WBT	1	1700	5	.01	7	.01
WBR	0	0	10		11	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.24		.19

575 . 0 St. at LV St.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	1		1	
NBT	1	1700	27	.02	121	.08*
NBR	0	0	12		11	
SBL	1	1700	10	.01	19	.01*
SBT	1	1700	71	.04*	79	.05
SBR	0	0	1		1	
EBL	1	1700	1	.00	1	.00
EBT	1	1700	1	.00*	1	.00*
EBR	0	0	1		1	
WBL	1	1700	15	.01*	11	.01*
WBT	0	0	1		1	
WBR	1	1700	5	.00	29	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.10		.15

576 . 0 St. at C St.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	1		1	
NBT	1	1700	46	.03	160	.14*
NBR	0	0	4		76	
SBL	1	1700	6	.00	14	.01*
SBT	1	1700	104	.06*	99	.06
SBR	0	0	1		1	
EBL	1	1700	1	.00	1	.00
EBT	1	1700	1	.00	1	.00*
EBR	0	0	1		1	
WBL	1	1700	6	.00	31	.02*
WBT	0	0	1		1	
WBR	1	1700	4	.00	10	.01
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.11		.22

577 . Pusan Way-Z St. at Irvine Bl.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	97	.06*	76	.04
NBT	1	1700	46	.03	91	.05*
NBR	1	1700	301	.18	287	.17
SBL	1	1700	89	.05	38	.02*
SBT	1	1700	81	.05*	43	.03
SBR	1	1700	29	.02	10	.01
EBL	1	1700	6	.00	13	.01
EBT	3	5100	1664	.33*	1034	.20*
EBR	1	1700	73	.04	95	.06
WBL	1	1700	206	.12*	322	.19*
WBT	3	5100	1118	.22	1954	.38
WBR	1	1700	17	.01	45	.03
Right Turn Adjustment			NBR	.03*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.51

579 . A-02 St. at Irvine Bl.

ITAM 12 2017 Base+688+Conn_Alt6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	24	.01	43	.03
NBT	1	1700	9	.01*	36	.02*
NBR	1	1700	57	.03	73	.04
SBL	1	1700	232	.14*	120	.07*
SBT	1	1700	73	.10	25	.06
SBR	0	0	96		70	
EBL	1	1700	25	.01	69	.04*
EBT	2	3400	1867	.55*	1297	.38
EBR	1	1700	73	.04	26	.02
WBL	2	3400	103	.03*	59	.02
WBT	2	3400	1293	.38	2247	.66*
WBR	1	1700	56	.03	205	.12
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.78		.84

650 . O St. at C St.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	2	3400	183	.05	265	.08*
NBR	0	0	1		16	
SBL	1	1700	39	.02	94	.06*
SBT	2	3400	418	.12*	251	.07
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1	1700	11	.01*	19	.01*
WBT	0	0	0		0	
WBR	1	1700	138	.08	115	.07
Right Turn Adjustment			WBR	.02*	WBR	.01*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION					.20	.21

651 . C St. at Trabuco Rd.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	51	.03*	171	.10*
NBT	1	1700	16	.01	102	.09
NBR	0	0	4		47	
SBL	0	0	4		10	
SBT	1	1700	105	.09*	64	.06*
SBR	0	0	44		36	
EBL	0	0	22		41	
EBT	1	1700	52	.14*	173	.20*
EBR	0	0	170		125	
WBL	0	0	15	[.01]*	21	[.01]*
WBT	1	1700	55	.04	103	.08
WBR	0	0	2		7	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION					.32	.42

652 . LY Street at Trabuco Rd.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	6		64	[.04]*
NBT	1	1700	35	.02	126	.11
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	1	1700	95	.08*	163	.12*
SBR	0	0	34		48	
EBL	0	0	35		77	
EBT	1	1700	0	.03*	0	.12*
EBR	0	0	15		132	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION					.16	.33

653 . LY Street at GP Blvd N/S Conn

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0		0	
NBT	0.5	1700	9	.01*	13	.02*
NBR	0.5		3		16	
SBL	1	1700	67	.04*	280	.16*
SBT	1	1700	18	.01	6	.00
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	0.5		2		4	
WBT	0	1700	0	.02*	0	.10*
WBR	0.5		31		160	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION					.12	.33

654 . C St. at LV St.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	2	3		
NBT	1	1700	7 .01	81 .05		
NBR	0	0	2	6		
SBL	0	0	5	8		
SBT	1	1700	51 .04*	65 .05*		
SBR	0	0	5	5		
EBL	0	0	2	8		
EBT	1	1700	4 .01	6 .01		
EBR	0	0	5	5		
WBL	0	0	5	3		
WBT	1	1700	4 .01*	2 .01*		
WBR	0	0	2	5		
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION			.10	.11		

655 . O St. at 8th St.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	2	3400	30 .01	129 .05*		
NBR	0	0	17	33		
SBL	1	1700	4 .00	7 .00		
SBT	2	3400	88 .03*	79 .02		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1	1700	29 .02*	31 .02*		
WBT	0	0	0	0		
WBR	1	1700	2 .00	11 .01		
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION			.10	.12		

656 . C St. at 8th St.

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	5	3		
NBT	1	1700	1 .01	1 .01		
NBR	0	0	6	16		
SBL	0	0	2	3		
SBT	1	1700	5 .01*	4 .01*		
SBR	0	0	4	2		
EBL	0	0	1	1		
EBT	1	1700	15 .01	35 .02		
EBR	0	0	5	5		
WBL	0	0	4	11		
WBT	1	1700	27 .02*	38 .03*		
WBR	0	0	1	1		
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION			.08	.09		

657 . GP Blvd N/S Conn at GP Blvd E/W

ITAM 12 2017 Base+688+Conn_A1t6 (GreatPark)						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	0	0	0	0		
NBR	0	0	0	0		
SBL	0	0	1	1		
SBT	1	1700	0 .04*	0 .09*		
SBR	0	0	68	150		
EBL	0	0	23	160		
EBT	1	1700	3 .02*	3 .10*		
EBR	0	0	0	0		
WBL	0	0	0	0		
WBT	1	1700	3 .00	3 .00		
WBR	0	0	1	1		
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION			.11	.24		

APPENDIX E

**UNSIGNALIZED INTERSECTION LEVEL OF SERVICE
CALCULATION SHEETS**

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #562 GP Blvd/Marine Wy

Average Delay (sec/veh): 4.0 Worst Case Level Of Service: A[8.4]

Street Name:		GP Blvd			Marine Wy		
Approach:	North Bound	South Bound	East Bound	West Bound			
Movement:	L - T - R	L - T - R	L - T - R	L - T - R			
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled			
Rights:	Include	Include	Include	Include			
Lanes:	0 0 0 0 0	1 0 0 0 1	1 0 2 0 0	0 0 1 1 0			

Volume Module:

Base Vol:	0	0	0	1	0	1	1	1	0	0	1	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1	0	1	1	1	0	0	1	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	1	0	1	1	1	0	0	1	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	1	0	1	1	1	0	0	1	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	1	0	1	1	1	0	0	1	1

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	4	xxxx	1	2	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	1023	xxxx	1089	1634	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	1022	xxxx	1089	1634	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	0.0	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	8.5	xxxx	8.3	7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	A	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			8.4			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #575 O Street/LV Street

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: A[9.3]

Street Name:	O Street						LV Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:

Base Vol:	1	39	1	1	101	1	1	1	1	6	1	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	39	1	1	101	1	1	1	1	6	1	4
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	39	1	1	101	1	1	1	1	6	1	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	1	42	1	1	110	1	1	1	1	7	1	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	42	1	1	110	1	1	1	1	7	1	4

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	111	xxxx	xxxxxx	43	xxxx	xxxxxx	136	158	55	103	158	22
Potent Cap.:	1492	xxxx	xxxxxx	1578	xxxx	xxxxxx	827	738	1006	873	738	1057
Move Cap.:	1492	xxxx	xxxxxx	1578	xxxx	xxxxxx	821	737	1006	870	737	1057
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.00	0.01	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx
Control Del:	7.4	xxxx	xxxxxx	7.3	xxxx	xxxxxx	9.4	xxxx	xxxxxx	9.2	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	850	xxxx	xxxx	972
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxx	0.0
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	9.2	xxxxxx	xxxx	8.7
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.3	xxxxxx	xxxxxx	9.0	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	A	A	A	A	A	A

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #576 O Street/C Street

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: A[9.7]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:

Base Vol:	1	70	1	1	160	1	1	1	1	1	1	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	70	1	1	160	1	1	1	1	1	1	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	70	1	1	160	1	1	1	1	1	1	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1	70	1	1	160	1	1	1	1	1	1	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	70	1	1	160	1	1	1	1	1	1	1

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	161	xxxx	xxxxxx	71	xxxx	xxxxxx	200	236	81	155	236	36
Potent Cap.:	1430	xxxx	xxxxxx	1542	xxxx	xxxxxx	746	669	970	802	669	1036
Move Cap.:	1430	xxxx	xxxxxx	1542	xxxx	xxxxxx	744	668	970	800	668	1036
Volume/Cap:	0.00	xxxx	xxxxxx	0.00	xxxx	xxxxxx	0.00	0.00	0.00	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx
Control Del:	7.5	xxxx	xxxxxx	7.3	xxxx	xxxxxx	9.8	xxxx	xxxxxx	9.5	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	791	xxxx	xxxx	812
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxx	0.0
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	9.6	xxxxxx	xxxx	9.4
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.7	xxxxxx	xxxxxx	9.5	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	A	A	A	A	A	A

Note: Queue reported is the number of cars per lane.

ROUNABOUT REPORT																
General Information								Site Information								
Analyst	M. Macias							Intersection	O Street/C Street							
Agency or Co.	LSA Associates, Inc.							E/W Street Name	C Street							
Date Performed	6/5/2014							N/S Street Name	O Street							
Time Period	Alternative 3 AM							Analysis Year								
Peak Hour Factor	0.92							Project ID	688-Acre Park Development Plan							
Project Description:																
Volume Adjustment and Site Characteristics																
	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	0	0	0		0	1	0		0	2	0		1	1	0	
Lane Assignment					LTR				T				TR			
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Volume (V), veh/h	0	0	0	0	60	0	173	0	0	147	17	0	124	400	0	0
Heavy Veh. Adj. (f_{HV}), %	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Pedestrians Crossing	0				0				0				0			
Critical and Follow-Up Headway Adjustment																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Critical Headway (sec)	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929				
Follow-Up Headway (sec)	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858				
Flow Computations																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Circulating Flow (V_c), pc/h	654			165			139			67						
Exiting Flow (V_{ex}), pc/h	158			0			358			515						
Entry Flow (V_e), pc/h		564			261		86	97		139	448					
Entry Volume veh/h					253		83	94		135	435					
Capacity and v/c Ratios																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Capacity (c_{PCE}), pc/h		0			959		984	984		1057	1057					
Capacity (c), veh/h		0			931		955	955		1026	1026					
v/c Ratio (X)					0.27		0.09	0.10		0.13	0.42					
Delay and Level of Service																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Lane Control Delay (d), s/veh					6.7		4.6	4.7		4.7	8.2					
Lane LOS		F			A		A	A		A	A					
Lane 95% Queue					1.1		0.3	0.3		0.5	2.1					
Approach Delay, s/veh				6.67			4.62			7.36						
Approach LOS, s/veh				A			A			A						
Intersection Delay, s/veh	6.70															
Intersection LOS	A															

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #651 C Street/Trabuco Rd.

Cycle (sec): 100 Critical Vol./Cap.(X): 0.409

Loss Time (sec): 0 Average Delay (sec/veh): 10.4

Optimal Cycle: 0 Level Of Service: B

Street Name: C Street

Trabuco Rd

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Stop Sign Stop Sign Stop Sign Stop Sign

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 0 1 0

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Volume Module:

Base Vol: 66 12 4 4 104 82 26 72 190 16 113 2

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 66 12 4 4 104 82 26 72 190 16 113 2

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 66 12 4 4 104 82 26 72 190 16 113 2

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 72 13 4 4 113 89 28 78 207 17 123 2

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 72 13 4 4 113 89 28 78 207 17 123 2

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 72 13 4 4 113 89 28 78 207 17 123 2

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Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 0.75 0.25 1.00 0.56 0.44 1.00 0.27 0.73 1.00 0.98 0.02

Final Sat.: 525 436 145 544 349 275 578 191 505 556 595 11

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Capacity Analysis Module:

Vol/Sat: 0.14 0.03 0.03 0.01 0.32 0.32 0.05 0.41 0.41 0.03 0.21 0.21

Crit Moves: **** **** **** ****

Delay/Veh: 10.0 8.6 8.6 9.0 10.6 10.6 9.0 10.9 10.9 9.1 9.7 9.7

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 10.0 8.6 8.6 9.0 10.6 10.6 9.0 10.9 10.9 9.1 9.7 9.7

LOS by Move: B A A A B B A B B A A A

ApproachDel: 9.8 10.5 10.7 9.6

Delay Adj: 1.00 1.00 1.00 1.00

ApprAdjDel: 9.8 10.5 10.7 9.6

LOS by Appr: A B B A

AllWayAvgQ: 0.1 0.0 0.0 0.0 0.4 0.4 0.0 0.6 0.6 0.0 0.2 0.2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #652 LY Street/Trabuco Rd

Average Delay (sec/veh): 2.7 Worst Case Level Of Service: A[9.3]

Street Name:	LY Street						Trabuco Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0

Volume Module:

Base Vol:	1	10	0	0	74	129	80	0	6	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	10	0	0	74	129	80	0	6	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	10	0	0	74	129	80	0	6	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	1	11	0	0	80	140	87	0	7	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	11	0	0	80	140	87	0	7	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	6.4	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	221	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	93	93	80	167	234	11
Potent Cap.:	1360	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	911	800	985	802	670	1076
Move Cap.:	1360	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	911	800	985	796	670	1076
Volume/Cap:	0.00	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.10	0.00	0.01	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.3	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Control Del:	7.6	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	9.4	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	A	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxx	xxxx	985	xxxx	0	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxxxx	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	8.7	xxxxxx	xxxxxx	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.3	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	A	*	*	*	*	*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #654 C Street/LV Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.087
 Loss Time (sec): 0 Average Delay (sec/veh): 7.4
 Optimal Cycle: 0 Level Of Service: A

C Street						LV Street						
North Bound			South Bound			East Bound			West Bound			
Approach:	L - T - R		L - T - R		L - T - R		L - T - R		L - T - R			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:												
Base Vol:	6	9	5	2	66	2	1	4	15	36	12	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	9	5	2	66	2	1	4	15	36	12	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	9	5	2	66	2	1	4	15	36	12	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	7	10	5	2	72	2	1	4	16	39	13	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	10	5	2	72	2	1	4	16	39	13	2
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	7	10	5	2	72	2	1	4	16	39	13	2

Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.30	0.45	0.25	0.03	0.94	0.03	0.05	0.20	0.75	0.72	0.24	0.04
Final Sat.:	262	393	218	25	821	25	47	189	707	598	199	33

Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.09	0.09	0.09	0.02	0.02	0.02	0.07	0.07	0.07
Crit Moves:	****			****			****			****		
Delay/Veh:	7.1	7.1	7.1	7.4	7.4	7.4	6.8	6.8	6.8	7.5	7.5	7.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.1	7.1	7.1	7.4	7.4	7.4	6.8	6.8	6.8	7.5	7.5	7.5
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	7.1			7.4			6.8			7.5		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.1			7.4			6.8			7.5		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #655 O Street/8th Street

Average Delay (sec/veh): 3.5 Worst Case Level Of Service: A[9.6]

Street Name:	O Street			8th Street									
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Lanes:	1	0	1	1	0	1	1	0	1	0	0	1	0

Volume Module:

Base Vol:	0	23	45	15	86	0	0	0	0	74	0	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	23	45	15	86	0	0	0	0	74	0	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	23	45	15	86	0	0	0	0	74	0	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	25	49	16	93	0	0	0	0	80	0	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	25	49	16	93	0	0	0	0	80	0	8

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	6.8	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	74	xxxx	xxxxx	139	200	47	129	176	37
Potent Cap.:	xxxx	xxxx	xxxxx	1538	xxxx	xxxxx	824	699	1019	858	722	1034
Move Cap.:	xxxx	xxxx	xxxxx	1538	xxxx	xxxxx	811	692	1019	851	714	1034
Volume/Cap:	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.00	0.09	0.00	0.01

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.7	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0	xxxx	xxxx	1034
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.0
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.5
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.6	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	A	*	*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #656 8th Street /C Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.097
 Loss Time (sec): 0 Average Delay (sec/veh): 7.3
 Optimal Cycle: 0 Level Of Service: A

Street Name: 8th Street C Street
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Stop Sign Stop Sign Stop Sign Stop Sign
 Rights: Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 0 0 1 0 0 0 0 1 0 0 0 1 0 0 0 0

Volume Module:
 Base Vol: 1 0 3 0 0 0 0 0 30 1 1 80 0
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 1 0 3 0 0 0 0 0 30 1 1 80 0
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 1 0 3 0 0 0 0 0 30 1 1 80 0
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
 PHF Volume: 1 0 3 0 0 0 0 0 33 1 1 87 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 1 0 3 0 0 0 0 0 33 1 1 87 0
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 FinalVolume: 1 0 3 0 0 0 0 0 33 1 1 87 0

Saturation Flow Module:
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Lanes: 0.25 0.00 0.75 0.00 1.00 0.00 0.00 0.97 0.03 0.01 0.99 0.00
 Final Sat.: 233 0 700 0 844 0 0 875 29 11 901 0

Capacity Analysis Module:
 Vol/Sat: 0.00 xxxx 0.00 xxxx 0.00 xxxx 0.04 0.04 0.10 0.10 xxxx
 Crit Moves: **** **** **** ****
 Delay/Veh: 6.8 0.0 6.8 0.0 0.0 0.0 0.0 7.1 7.1 7.4 7.4 0.0
 Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 6.8 0.0 6.8 0.0 0.0 0.0 0.0 7.1 7.1 7.4 7.4 0.0
 LOS by Move: A * A * * * * A A A A *
 ApproachDel: 6.8 xxxxxx 7.1 7.4
 Delay Adj: xxxxxx 1.00 1.00
 ApprAdjDel: 6.8 xxxxxx 7.1 7.4
 LOS by Appr: A * A A
 AllWayAvgQ: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1 0.1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #657 GP Blvd N/S Conn/GP Blvd E/W

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: [0.0]

Street Name:	GP Blvd N/S Conn						GP Blvd EW					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	1	0	0	0	0	0	0	0	0

Volume Module:

Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	0	0	0	0	0	0	0	0	0

Critical Gap Module:

Critical Gp:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FollowUpTim:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Capacity Module:

Cnflct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Potent Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
Move Cap.:	1	1	1	1	1	1	1	1	1	1	1	1
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Del:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	0	0	0	0	0	0	0	0	0	0	0	0
SharedQueue:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shrd ConDel:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Shared LOS:												
ApproachDel:	0.0			0.0			0.0			0.0		

ApproachLOS:

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #562 GP Blvd/Marine Wy

Average Delay (sec/veh): 4.0 Worst Case Level Of Service: A[8.4]

Street Name:	GP Blvd						Marine Wy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	0	1	0	2	0	0	1

Volume Module:

Base Vol:	0	0	0	1	0	1	1	1	0	0	1	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1	0	1	1	1	0	0	1	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	1	0	1	1	1	0	0	1	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	1	0	1	1	1	0	0	1	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	1	0	1	1	1	0	0	1	1

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	4	xxxx	1	2	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	1023	xxxx	1089	1634	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	1022	xxxx	1089	1634	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	0.0	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	8.5	xxxx	8.3	7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	A	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			8.4			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #575 O Street/LV Street

Average Delay (sec/veh): 2.0 Worst Case Level Of Service: A[9.6]

Street Name:	O Street						LV Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:

Base Vol:	1	129	9	11	59	1	1	1	1	11	1	31
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	129	9	11	59	1	1	1	1	11	1	31
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	129	9	11	59	1	1	1	1	11	1	31
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	1	140	10	12	64	1	1	1	1	12	1	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	140	10	12	64	1	1	1	1	12	1	34

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	65	xxxx	xxxxxx	150	xxxx	xxxxxx	161	241	33	204	236	75
Potent Cap.:	1550	xxxx	xxxxxx	1444	xxxx	xxxxxx	794	664	1040	742	668	978
Move Cap.:	1550	xxxx	xxxxxx	1444	xxxx	xxxxxx	760	658	1040	735	662	978
Volume/Cap:	0.00	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.00	0.02	0.00	0.03

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx
Control Del:	7.3	xxxx	xxxxxx	7.5	xxxx	xxxxxx	9.7	xxxx	xxxxxx	10.0	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	806	xxxx	xxxx	963
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxx	0.1
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	9.5	xxxxxx	xxxx	8.9
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.6	xxxxxx	xxxxxx	9.2	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	A	A	A	A	A	A

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #576 O Street/C Street

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[10.5]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:

Base Vol:	1	230	1	1	170	1	1	1	1	1	1	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	230	1	1	170	1	1	1	1	1	1	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	230	1	1	170	1	1	1	1	1	1	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1	230	1	1	170	1	1	1	1	1	1	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	230	1	1	170	1	1	1	1	1	1	1

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	171	xxxx	xxxxxx	231	xxxx	xxxxxx	290	406	86	320	406	116
Potent Cap.:	1418	xxxx	xxxxxx	1349	xxxx	xxxxxx	645	538	963	614	538	921
Move Cap.:	1418	xxxx	xxxxxx	1349	xxxx	xxxxxx	643	537	963	612	537	921
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.00	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx
Control Del:	7.5	xxxx	xxxxxx	7.7	xxxx	xxxxxx	10.6	xxxx	xxxxxx	10.9	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	B	*	*	B	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	689	xxxx	xxxx	678
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxx	0.0
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	10.2	xxxxxx	xxxx	10.3
Shared LOS:	*	*	*	*	*	*	*	*	B	*	*	B
ApproachDel:	xxxxxx			xxxxxx			10.4			10.5		
ApproachLOS:	*			*			B			B		

Note: Queue reported is the number of cars per lane.

ROUNABOUT REPORT																
General Information								Site Information								
Analyst	M. Macias							Intersection	O Street/C Street							
Agency or Co.	LSA Associates, Inc.							E/W Street Name	C Street							
Date Performed	6/5/2014							N/S Street Name	O Street							
Time Period	Alternative 3 PM							Analysis Year								
Peak Hour Factor	0.92							Project ID	688-Acre Park Development Plan							
Project Description:																
Volume Adjustment and Site Characteristics																
	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	0	0	0		0	1	0		0	2	0		1	1	0	
Lane Assignment					LTR				T				TR			
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Volume (V), veh/h	0	0	0	0	31	0	156	0	0	234	35	0	175	229	0	0
Heavy Veh. Adj. (f_{HV}), %	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Pedestrians Crossing	0				0				0				0			
Critical and Follow-Up Headway Adjustment																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Critical Headway (sec)	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929				
Follow-Up Headway (sec)	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858				
Flow Computations																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Circulating Flow (V_c), pc/h	487			262			196			35						
Exiting Flow (V_{ex}), pc/h	235			0			437			291						
Entry Flow (V_e), pc/h		564			209		142	160		196	256					
Entry Volume veh/h					203		138	155		190	249					
Capacity and v/c Ratios																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Capacity (c_{PCE}), pc/h		0			870		929	929		1091	1091					
Capacity (c), veh/h		0			844		902	902		1060	1060					
v/c Ratio (X)					0.24		0.15	0.17		0.18	0.23					
Delay and Level of Service																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Lane Control Delay (d), s/veh					6.8		5.5	5.7		5.0	5.6					
Lane LOS		F			A		A	A		A	A					
Lane 95% Queue					0.9		0.5	0.6		0.7	0.9					
Approach Delay, s/veh				6.81			5.58			5.36						
Approach LOS, s/veh				A			A			A						
Intersection Delay, s/veh	5.74															
Intersection LOS	A															

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #651 C Street/Trabuco Rd.

Cycle (sec): 100 Critical Vol./Cap.(X): 0.448

Loss Time (sec): 0 Average Delay (sec/veh): 11.3

Optimal Cycle: 0 Level Of Service: B

Street Name: C Street

Trabuco Rd

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Stop Sign Stop Sign Stop Sign Stop Sign

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 0 1 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 195 119 25 4 53 33 59 111 149 11 65 4

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 195 119 25 4 53 33 59 111 149 11 65 4

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 195 119 25 4 53 33 59 111 149 11 65 4

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 212 129 27 4 58 36 64 121 162 12 71 4

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 212 129 27 4 58 36 64 121 162 12 71 4

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 212 129 27 4 58 36 64 121 162 12 71 4

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Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 0.83 0.17 1.00 0.62 0.38 1.00 0.43 0.57 1.00 0.94 0.06

Final Sat.: 552 502 106 507 352 219 541 269 362 503 514 32

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.38 0.26 0.26 0.01 0.16 0.16 0.12 0.45 0.45 0.02 0.14 0.14

Crit Moves: **** **** **** ****

Delay/Veh: 12.7 10.2 10.2 9.4 9.7 9.7 9.9 12.3 12.3 9.6 9.8 9.8

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 12.7 10.2 10.2 9.4 9.7 9.7 9.9 12.3 12.3 9.6 9.8 9.8

LOS by Move: B B B A A A A B B A A A

ApproachDel: 11.6 9.7 11.9 9.8

Delay Adj: 1.00 1.00 1.00

ApprAdjDel: 11.6 9.7 11.9 9.8

LOS by Appr: B A B A

AllWayAvgQ: 0.6 0.3 0.3 0.0 0.2 0.2 0.1 0.7 0.7 0.0 0.1 0.1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #652 LY Street/Trabuco Rd

Average Delay (sec/veh): 4.7 Worst Case Level Of Service: A[9.8]

Street Name:	LY Street						Trabuco Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0

Volume Module:

Base Vol:	5	57	0	0	35	67	140	0	6	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	5	57	0	0	35	67	140	0	6	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	57	0	0	35	67	140	0	6	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	5	62	0	0	38	73	152	0	7	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	5	62	0	0	38	73	152	0	7	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	6.4	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	111	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	111	111	38	151	184	62
Potent Cap.:	1492	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	891	783	1040	822	714	1009
Move Cap.:	1492	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	888	780	1040	814	712	1009
Volume/Cap:	0.00	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.17	0.00	0.01	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.6	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Control Del:	7.4	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	9.9	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	A	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxx	xxxx	1040	xxxx	0	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxx	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	8.5	xxxxxx	xxxx	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.8	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	A	*	*	*	*	*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #654 C Street/LV Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.144
 Loss Time (sec): 0 Average Delay (sec/veh): 7.6
 Optimal Cycle: 0 Level Of Service: A

Street Name:	C Street						LV Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	0	0	0	1	0	0	0

Volume Module:	C Street			C Street			LV Street			LV Street		
Base Vol:	14	84	17	7	61	6	9	16	16	13	11	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	14	84	17	7	61	6	9	16	16	13	11	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	84	17	7	61	6	9	16	16	13	11	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	15	91	18	8	66	7	10	17	17	14	12	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	91	18	8	66	7	10	17	17	14	12	8
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	91	18	8	66	7	10	17	17	14	12	8

Saturation Flow Module:	C Street			C Street			LV Street			LV Street		
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.12	0.73	0.15	0.09	0.83	0.08	0.22	0.39	0.39	0.42	0.35	0.23
Final Sat.:	105	633	128	80	699	69	181	322	322	334	283	180

Capacity Analysis Module:	C Street			C Street			LV Street			LV Street		
Vol/Sat:	0.14	0.14	0.14	0.09	0.09	0.09	0.05	0.05	0.05	0.04	0.04	0.04
Crit Moves:	****			****			****			****		
Delay/Veh:	7.8	7.8	7.8	7.6	7.6	7.6	7.4	7.4	7.4	7.5	7.5	7.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.8	7.8	7.8	7.6	7.6	7.6	7.4	7.4	7.4	7.5	7.5	7.5
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	7.8			7.6			7.4			7.5		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.8			7.6			7.4			7.5		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #655 O Street/8th Street

Average Delay (sec/veh): 3.9 Worst Case Level Of Service: B[10.7]

Street Name:	O Street			8th Street									
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Lanes:	1	0	1	1	0	1	1	0	1	0	0	1	0

Volume Module:

Base Vol:	0	98	131	19	51	0	0	0	0	119	0	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	98	131	19	51	0	0	0	0	119	0	32
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	98	131	19	51	0	0	0	0	119	0	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	107	142	21	55	0	0	0	0	129	0	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	107	142	21	55	0	0	0	0	129	0	35

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	6.8	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	249	xxxx	xxxxx	150	346	28	247	274	124
Potent Cap.:	xxxx	xxxx	xxxxx	1329	xxxx	xxxxx	809	581	1048	726	636	909
Move Cap.:	xxxx	xxxx	xxxxx	1329	xxxx	xxxxx	769	572	1048	717	626	909
Volume/Cap:	xxxx	xxxx	xxxx	0.02	xxxx	xxxx	0.00	0.00	0.00	0.18	0.00	0.04

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.7	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.1	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	B	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0	xxxx	xxxx	909
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.1
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.1
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	10.7	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	B	*	*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #656 8th Street /C Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.135
 Loss Time (sec): 0 Average Delay (sec/veh): 7.6
 Optimal Cycle: 0 Level Of Service: A

Street Name: 8th Street C Street
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Stop Sign Stop Sign Stop Sign Stop Sign
 Rights: Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 0 1 0 0 0 0 0 0

Volume Module:
 Base Vol: 1 0 3 0 0 0 0 0 90 1 1 110 0
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 1 0 3 0 0 0 0 0 90 1 1 110 0
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 1 0 3 0 0 0 0 0 90 1 1 110 0
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
 PHF Volume: 1 0 3 0 0 0 0 0 98 1 1 120 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 1 0 3 0 0 0 0 0 98 1 1 120 0
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 FinalVolume: 1 0 3 0 0 0 0 0 98 1 1 120 0

Saturation Flow Module:
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Lanes: 0.25 0.00 0.75 0.00 1.00 0.00 0.00 0.99 0.01 0.01 0.99 0.00
 Final Sat.: 217 0 651 0 791 0 0 884 10 8 888 0

Capacity Analysis Module:
 Vol/Sat: 0.01 xxxx 0.01 xxxx 0.00 xxxx xxxx 0.11 0.11 0.13 0.13 xxxx
 Crit Moves: **** ****
 Delay/Veh: 7.0 0.0 7.0 0.0 0.0 0.0 0.0 7.5 7.5 7.6 7.6 0.0
 Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 7.0 0.0 7.0 0.0 0.0 0.0 0.0 7.5 7.5 7.6 7.6 0.0
 LOS by Move: A * A * * * * A A A A *
 ApproachDel: 7.0 xxxxxx 7.5 7.6
 Delay Adj: 1.00 xxxxxx 1.00 1.00
 ApprAdjDel: 7.0 xxxxxx 7.5 7.6
 LOS by Appr: A * A A
 AllWayAvgQ: 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1 0.1 0.2 0.2 0.2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #657 GP Blvd N/S Conn/GP Blvd E/W

Average Delay (sec/veh): 2.1 Worst Case Level Of Service: A[9.3]

Street Name:	GP Blvd N/S Conn						GP Blvd EW					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	1	0	0	0	0	0	0	0	0

Volume Module:

Base Vol:	0	7	174	6	4	0	0	0	0	46	0	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	7	174	6	4	0	0	0	0	46	0	3
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	7	174	6	4	0	0	0	0	46	0	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	8	189	7	4	0	0	0	0	50	0	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	8	189	7	4	0	0	0	0	50	0	3

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	197	xxxx	xxxxx	xxxx	xxxx	xxxxx	120	xxxx	102
Potent Cap.:	xxxx	xxxx	xxxxx	1388	xxxx	xxxxx	xxxx	xxxx	xxxxx	881	xxxx	958
Move Cap.:	xxxx	xxxx	xxxxx	1388	xxxx	xxxxx	xxxx	xxxx	xxxxx	878	xxxx	958
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.06	xxxx	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	0.0
Control Del:	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.3	xxxx	8.8
LOS by Move:	*	*	*	A	*	*	*	*	*	A	*	A
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.3	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	A	*	A

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #562 GP Blvd/Marine Wy

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: A[9.4]

Street Name:	GP Blvd			Marine Wy									
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled			
Rights:	Include			Include			Include			Include			
Lanes:	0	0	0	0	0	0	1	0	0	0	2	0	2

Volume Module:

Base Vol:	0	0	0	3	0	7	32	297	0	0	153	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	3	0	7	32	297	0	0	153	8
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	3	0	7	32	297	0	0	153	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	3	0	7	32	297	0	0	153	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	3	0	7	32	297	0	0	153	8

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	370	xxxx	81	161	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	609	xxxx	970	1430	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	599	xxxx	970	1430	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.01	xxxx	0.01	0.02	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	0.0	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	11.0	xxxx	8.7	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	A	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			9.4			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #575 O Street/LV Street

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: A[9.4]

Street Name:	O Street			LV Street									
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1	0

Volume Module:

Base Vol:	1	45	12	8	104	1	1	1	1	16	1	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	45	12	8	104	1	1	1	1	16	1	5
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	45	12	8	104	1	1	1	1	16	1	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	1	49	13	9	113	1	1	1	1	17	1	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	49	13	9	113	1	1	1	1	17	1	5

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	114	xxxx	xxxxxx	62	xxxx	xxxxxx	158	195	57	132	189	31
Potent Cap.:	1488	xxxx	xxxxxx	1554	xxxx	xxxxxx	798	704	1004	832	709	1043
Move Cap.:	1488	xxxx	xxxxxx	1554	xxxx	xxxxxx	789	699	1004	827	705	1043
Volume/Cap:	0.00	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.00	0.02	0.00	0.01

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.1	xxxx	xxxxxx
Control Del:	7.4	xxxx	xxxxxx	7.3	xxxx	xxxxxx	9.6	xxxx	xxxxxx	9.4	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	824	xxxx	xxxx	966
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxx	0.0
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	9.4	xxxxxx	xxxx	8.8
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.4	xxxxxx	xxxxxx	9.3	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	A	A	A	A	A	A

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #576 O Street/C Street

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: A[9.6]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:

Base Vol:	1	66	4	6	145	1	1	1	1	5	1	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	66	4	6	145	1	1	1	1	5	1	4
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	66	4	6	145	1	1	1	1	5	1	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1	66	4	6	145	1	1	1	1	5	1	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	66	4	6	145	1	1	1	1	5	1	4

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	146	xxxx	xxxxxx	70	xxxx	xxxxxx	193	230	73	155	228	35
Potent Cap.:	1448	xxxx	xxxxxx	1544	xxxx	xxxxxx	755	674	981	802	675	1037
Move Cap.:	1448	xxxx	xxxxxx	1544	xxxx	xxxxxx	748	671	981	798	672	1037
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.00	0.01	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx
Control Del:	7.5	xxxx	xxxxxx	7.3	xxxx	xxxxxx	9.8	xxxx	xxxxxx	9.5	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	797	xxxx	xxxx	935
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxx	0.0
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	9.5	xxxxxx	xxxx	8.9
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.6	xxxxxx	xxxxxx	9.2	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	A	A	A	A	A	A

Note: Queue reported is the number of cars per lane.

ROUNABOUT REPORT																
General Information								Site Information								
Analyst	M. Macias							Intersection	O Street/C Street							
Agency or Co.	LSA Associates, Inc.							E/W Street Name	C Street							
Date Performed	6/5/2014							N/S Street Name	O Street							
Time Period	Alternative 4 AM							Analysis Year								
Peak Hour Factor	0.92							Project ID	688-Acre Park Development Plan							
Project Description:																
Volume Adjustment and Site Characteristics																
	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	0	0	0		0	1	0		0	2	0		1	1	0	
Lane Assignment					LTR				T				TR			
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Volume (V), veh/h	0	0	0	0	12	0	135	0	0	182	1	0	38	411	0	0
Heavy Veh. Adj. (f_{HV}), %	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Pedestrians Crossing	0				0				0				0			
Critical and Follow-Up Headway Adjustment																
	EB				WB				NB				SB			
	Left	Right	Bypass		Left	Right	Bypass		Left	Right	Bypass		Left	Right	Bypass	
Critical Headway (sec)	5.1929	5.1929	5.1929		5.1929	5.1929	5.1929		5.1929	5.1929	5.1929		5.1929	5.1929	5.1929	
Follow-Up Headway (sec)	3.1858	3.1858	3.1858		3.1858	3.1858	3.1858		3.1858	3.1858	3.1858		3.1858	3.1858	3.1858	
Flow Computations																
	EB				WB				NB				SB			
	Left	Right	Bypass		Left	Right	Bypass		Left	Right	Bypass		Left	Right	Bypass	
Circulating Flow (V_c), pc/h	516				204				43				13			
Exiting Flow (V_{ex}), pc/h	44				0				355				474			
Entry Flow (V_e), pc/h		564				165			96	109			43	460		
Entry Volume veh/h						160			93	106			42	447		
Capacity and v/c Ratios																
	EB				WB				NB				SB			
	Left	Right	Bypass		Left	Right	Bypass		Left	Right	Bypass		Left	Right	Bypass	
Capacity (c_{PCE}), pc/h		0				922			1083	1083			1115	1115		
Capacity (c), veh/h		0				895			1051	1051			1082	1082		
v/c Ratio (X)						0.18			0.09	0.10			0.04	0.41		
Delay and Level of Service																
	EB				WB				NB				SB			
	Left	Right	Bypass		Left	Right	Bypass		Left	Right	Bypass		Left	Right	Bypass	
Lane Control Delay (d), s/veh						5.8			4.2	4.3			3.7	7.7		
Lane LOS		F				A			A	A			A	A		
Lane 95% Queue						0.6			0.3	0.3			0.1	2.1		
Approach Delay, s/veh					5.79				4.26				7.36			
Approach LOS, s/veh					A				A				A			
Intersection Delay, s/veh	6.34															
Intersection LOS	A															

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #651 C Street/Trabuco Rd.

Cycle (sec): 100 Critical Vol./Cap.(X): 0.333
 Loss Time (sec): 0 Average Delay (sec/veh): 9.3
 Optimal Cycle: 0 Level Of Service: A

Street Name:	C Street						Trabuco Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	0	1	0	0

Volume Module:	C Street			C Street			Trabuco Rd			Trabuco Rd		
Base Vol:	53	16	4	3	99	43	22	53	174	17	64	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	53	16	4	3	99	43	22	53	174	17	64	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	53	16	4	3	99	43	22	53	174	17	64	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	58	17	4	3	108	47	24	58	189	18	70	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	58	17	4	3	108	47	24	58	189	18	70	2
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	58	17	4	3	108	47	24	58	189	18	70	2

Saturation Flow Module:	C Street			C Street			Trabuco Rd			Trabuco Rd		
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.80	0.20	1.00	0.70	0.30	1.00	0.23	0.77	1.00	0.97	0.03
Final Sat.:	564	501	125	574	454	197	608	173	568	586	622	19

Capacity Analysis Module:	C Street			C Street			Trabuco Rd			Trabuco Rd		
Vol/Sat:	0.10	0.03	0.03	0.01	0.24	0.24	0.04	0.33	0.33	0.03	0.11	0.11
Crit Moves:	****			****			****			****		
Delay/Veh:	9.4	8.3	8.3	8.7	9.5	9.5	8.7	9.6	9.6	8.8	8.7	8.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.4	8.3	8.3	8.7	9.5	9.5	8.7	9.6	9.6	8.8	8.7	8.7
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	9.1			9.5			9.5			8.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9.1			9.5			9.5			8.7		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.1	0.0	0.0	0.0	0.3	0.3	0.0	0.5	0.5	0.0	0.1	0.1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #652 LY Street/Trabuco Rd

Average Delay (sec/veh): 3.1 Worst Case Level Of Service: A[9.0]

Street Name:	LY Street						Trabuco Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0

Volume Module:

Base Vol:	10	20	0	0	47	44	33	0	17	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	20	0	0	47	44	33	0	17	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	20	0	0	47	44	33	0	17	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	11	22	0	0	51	48	36	0	18	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	11	22	0	0	51	48	36	0	18	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	6.4	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	99	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	95	95	51	128	142	22
Potent Cap.:	1507	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	910	799	1023	850	752	1061
Move Cap.:	1507	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	905	794	1023	830	747	1061
Volume/Cap:	0.01	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.04	0.00	0.02	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Control Del:	7.4	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	9.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	A	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxx	xxxx	1023	xxxx	0	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.1	xxxxxx	xxxx	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	8.6	xxxxxx	xxxx	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.0	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	A	*	*	*	*	*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #653 LY Street/Loop Road

Average Delay (sec/veh): 4.6 Worst Case Level Of Service: A[8.6]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1	0	1	0	0	0	0	0	1	0

Volume Module:

Base Vol:	0	8	2	21	19	0	0	0	0	5	0	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	8	2	21	19	0	0	0	0	5	0	15
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	8	2	21	19	0	0	0	0	5	0	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	9	2	23	21	0	0	0	0	5	0	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	9	2	23	21	0	0	0	0	5	0	16

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	11	xxxx	xxxxx	xxxx	xxxx	xxxxx	76	76	10
Potent Cap.:	xxxx	xxxx	xxxxx	1622	xxxx	xxxxx	xxxx	xxxx	xxxxx	932	818	1078
Move Cap.:	xxxx	xxxx	xxxxx	1622	xxxx	xxxxx	xxxx	xxxx	xxxxx	922	807	1078
Volume/Cap:	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	0.00	0.02

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT		LT - LTR - RT	LT - LTR - RT	LT - LTR - RT		LT - LTR - RT	LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	1034	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	8.6	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx				8.6	
ApproachLOS:	*			*			*				A	

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #654 C Street/LV Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.073
 Loss Time (sec): 0 Average Delay (sec/veh): 7.1
 Optimal Cycle: 0 Level Of Service: A

Street Name:	C Street						LV Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:	C Street			C Street			LV Street			LV Street		
Base Vol:	2	7	2	5	51	5	2	4	5	5	4	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	7	2	5	51	5	2	4	5	5	4	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	7	2	5	51	5	2	4	5	5	4	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	2	8	2	5	55	5	2	4	5	5	4	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	8	2	5	55	5	2	4	5	5	4	2
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	2	8	2	5	55	5	2	4	5	5	4	2

Saturation Flow Module:	C Street			C Street			LV Street			LV Street		
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.18	0.64	0.18	0.08	0.84	0.08	0.18	0.36	0.46	0.46	0.36	0.18
Final Sat.:	165	578	165	75	762	75	168	335	419	397	318	159

Capacity Analysis Module:	C Street			C Street			LV Street			LV Street		
Vol/Sat:	0.01	0.01	0.01	0.07	0.07	0.07	0.01	0.01	0.01	0.01	0.01	0.01
Crit Moves:	****			****			****					****
Delay/Veh:	7.0	7.0	7.0	7.2	7.2	7.2	6.9	6.9	6.9	7.1	7.1	7.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.0	7.0	7.0	7.2	7.2	7.2	6.9	6.9	6.9	7.1	7.1	7.1
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	7.0			7.2			6.9			7.1		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.0			7.2			6.9			7.1		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #655 O Street/8th Street

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: A[9.3]

Street Name:	O Street			8th Street								
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	1	0	1	0	1	0	1	0	0

Volume Module:

Base Vol:	0	47	16	4	122	0	0	0	0	28	0	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	47	16	4	122	0	0	0	0	28	0	3
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	47	16	4	122	0	0	0	0	28	0	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	51	17	4	133	0	0	0	0	30	0	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	51	17	4	133	0	0	0	0	30	0	3

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	6.8	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	68	xxxx	xxxxx	167	210	66	135	201	34
Potent Cap.:	xxxx	xxxx	xxxxx	1545	xxxx	xxxxx	787	691	990	851	699	1038
Move Cap.:	xxxx	xxxx	xxxxx	1545	xxxx	xxxxx	783	689	990	849	697	1038
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.00	0.04	0.00	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.4	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0	xxxx	xxxx	1038
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.0
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.5
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.3	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	A	*	*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #656 8th Street /C Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.039
 Loss Time (sec): 0 Average Delay (sec/veh): 7.0
 Optimal Cycle: 0 Level Of Service: A

Street Name:		8th Street						C Street								
Approach:		North Bound			South Bound			East Bound			West Bound					
Movement:		L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:		Stop Sign			Stop Sign			Stop Sign			Stop Sign					
Rights:		Include			Include			Include			Include					
Min. Green:		0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:		0	0	1	0	0	0	0	1	0	0	0	0	1	0	0

Volume Module:		8th Street						C Street					
Base Vol:		5	1	6	2	5	4	1	15	5	4	27	1
Growth Adj:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:		5	1	6	2	5	4	1	15	5	4	27	1
Added Vol:		0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:		0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:		5	1	6	2	5	4	1	15	5	4	27	1
User Adj:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:		0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:		5	1	7	2	5	4	1	16	5	4	29	1
Reduct Vol:		0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:		5	1	7	2	5	4	1	16	5	4	29	1
PCE Adj:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:		5	1	7	2	5	4	1	16	5	4	29	1

Saturation Flow Module:		8th Street						C Street					
Adjustment:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:		0.42	0.08	0.50	0.18	0.46	0.36	0.05	0.71	0.24	0.13	0.84	0.03
Final Sat.:		388	78	465	168	419	335	44	663	221	112	758	28

Capacity Analysis Module:		8th Street						C Street					
Vol/Sat:		0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.04	0.04	0.04
Crit Moves:		****			****			****			****		
Delay/Veh:		6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	7.1	7.1	7.1
Delay Adj:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:		6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	7.1	7.1	7.1
LOS by Move:		A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		6.9			6.9			6.9			7.1		
Delay Adj:		1.00			1.00			1.00			1.00		
ApprAdjDel:		6.9			6.9			6.9			7.1		
LOS by Appr:		A			A			A			A		
AllWayAvgQ:		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #657 GP Blvd N/S Conn/GP Blvd E/W

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: A[8.6]

Street Name:	GP Blvd N/S Conn						GP Blvd EW					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	1	0	0	0	0	0	0	0	0

Volume Module:

Base Vol:	0	10	3	1	10	0	0	0	0	3	0	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	10	3	1	10	0	0	0	0	3	0	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	10	3	1	10	0	0	0	0	3	0	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	11	3	1	11	0	0	0	0	3	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	11	3	1	11	0	0	0	0	3	0	1

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	14	xxxx	xxxxx	xxxx	xxxx	xxxxx	26	xxxx	13
Potent Cap.:	xxxx	xxxx	xxxxx	1617	xxxx	xxxxx	xxxx	xxxx	xxxxx	995	xxxx	1074
Move Cap.:	xxxx	xxxx	xxxxx	1617	xxxx	xxxxx	xxxx	xxxx	xxxxx	995	xxxx	1074
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	0.0
Control Del:	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	8.4
LOS by Move:	*	*	*	A	*	*	*	*	*	A	*	A
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			8.6		
ApproachLOS:	*			*			*			A		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #562 GP Blvd/Marine Wy

Average Delay (sec/veh): 5.4 Worst Case Level Of Service: B[11.7]

Street Name:	GP Blvd			Marine Wy									
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled			
Rights:	Include			Include			Include			Include			
Lanes:	0	0	0	0	0	0	1	0	0	0	2	0	2

Volume Module:

Base Vol:	0	0	0	6	0	112	485	186	0	0	302	39
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	6	0	112	485	186	0	0	302	39
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	6	0	112	485	186	0	0	302	39
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	6	0	112	485	186	0	0	302	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	6	0	112	485	186	0	0	302	39

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	1385	xxxx	171	341	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	137	xxxx	850	1229	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	95	xxxx	850	1229	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.06	xxxx	0.13	0.39	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.2	xxxx	0.5	1.9	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	45.5	xxxx	9.9	9.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	E	*	A	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			11.7			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #575 O Street/LV Street

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[10.4]

Street Name:	O Street			LV Street								
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:

Base Vol:	1	184	14	16	135	1	1	1	1	15	1	26
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	184	14	16	135	1	1	1	1	15	1	26
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	184	14	16	135	1	1	1	1	15	1	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	1	200	15	17	147	1	1	1	1	16	1	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	200	15	17	147	1	1	1	1	16	1	28

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	148	xxxx	xxxxxx	215	xxxx	xxxxxx	285	399	74	318	392	108
Potent Cap.:	1446	xxxx	xxxxxx	1367	xxxx	xxxxxx	651	542	979	616	547	932
Move Cap.:	1446	xxxx	xxxxxx	1367	xxxx	xxxxxx	623	534	979	608	539	932
Volume/Cap:	0.00	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.00	0.03	0.00	0.03

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.1	xxxx	xxxxxx
Control Del:	7.5	xxxx	xxxxxx	7.7	xxxx	xxxxxx	10.8	xxxx	xxxxxx	11.1	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	B	*	*	B	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	692	xxxx	xxxx	908
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxx	0.1
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	10.2	xxxxxx	xxxx	9.1
Shared LOS:	*	*	*	*	*	*	*	*	B	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	10.4	xxxxxx	xxxxxx	9.8	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	B	*	*	A	*	*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #576 O Street/C Street

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: B[11.2]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:

Base Vol:	1	208	74	16	150	1	1	1	1	40	1	12
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	208	74	16	150	1	1	1	1	40	1	12
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	208	74	16	150	1	1	1	1	40	1	12
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1	208	74	16	150	1	1	1	1	40	1	12
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	208	74	16	150	1	1	1	1	40	1	12

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	151	xxxx	xxxxxx	282	xxxx	xxxxxx	289	467	76	355	430	141
Potent Cap.:	1442	xxxx	xxxxxx	1292	xxxx	xxxxxx	646	497	977	581	521	888
Move Cap.:	1442	xxxx	xxxxxx	1292	xxxx	xxxxxx	630	490	977	574	514	888
Volume/Cap:	0.00	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.00	0.07	0.00	0.01

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.2	xxxx	xxxxxx
Control Del:	7.5	xxxx	xxxxxx	7.8	xxxx	xxxxxx	10.7	xxxx	xxxxxx	11.7	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	B	*	*	B	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	653	xxxx	xxxx	841
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxx	0.0
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	10.5	xxxxxx	xxxx	9.4
Shared LOS:	*	*	*	*	*	*	*	*	B	*	*	A
ApproachDel:	xxxxxx			xxxxxx			10.6			11.2		
ApproachLOS:	*			*			B			B		

Note: Queue reported is the number of cars per lane.

ROUNABOUT REPORT																
General Information								Site Information								
Analyst	M. Macias							Intersection	O Street/C Street							
Agency or Co.	LSA Associates, Inc.							E/W Street Name	C Street							
Date Performed	6/5/2014							N/S Street Name	O Street							
Time Period	Alternative 4 PM							Analysis Year								
Peak Hour Factor	0.92							Project ID	688-Acre Park Development Plan							
Project Description:																
Volume Adjustment and Site Characteristics																
	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	0	0	0		0	1	0		0	2	0		1	1	0	
Lane Assignment					LTR				T				TR			
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Volume (V), veh/h	0	0	0	0	19	0	114	0	0	266	16	0	94	261	0	0
Heavy Veh. Adj. (f_{HV}), %	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Pedestrians Crossing	0				0				0				0			
Critical and Follow-Up Headway Adjustment																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Critical Headway (sec)	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929				
Follow-Up Headway (sec)	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858				
Flow Computations																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Circulating Flow (V_c), pc/h	418			298			105			21						
Exiting Flow (V_{ex}), pc/h	123			0			425			313						
Entry Flow (V_e), pc/h		564			149		148	167		105	292					
Entry Volume veh/h					145		144	162		102	283					
Capacity and v/c Ratios																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Capacity (c_{PCE}), pc/h		0			839		1017	1017		1106	1106					
Capacity (c), veh/h		0			815		988	988		1074	1074					
v/c Ratio (X)					0.18		0.15	0.16		0.09	0.26					
Delay and Level of Service																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Lane Control Delay (d), s/veh					6.3		5.0	5.2		4.2	5.9					
Lane LOS		F			A		A	A		A	A					
Lane 95% Queue					0.6		0.5	0.6		0.3	1.1					
Approach Delay, s/veh				6.26			5.09			5.42						
Approach LOS, s/veh				A			A			A						
Intersection Delay, s/veh	5.44															
Intersection LOS	A															

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #651 C Street/Trabuco Rd.

Cycle (sec): 100 Critical Vol./Cap.(X): 0.511

Loss Time (sec): 0 Average Delay (sec/veh): 12.0

Optimal Cycle: 0 Level Of Service: B

Street Name: C Street

Trabuco Rd

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Stop Sign Stop Sign Stop Sign Stop Sign

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 0 1 0

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Volume Module:

Base Vol: 175 104 46 9 67 35 39 155 129 24 111 7

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 175 104 46 9 67 35 39 155 129 24 111 7

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 175 104 46 9 67 35 39 155 129 24 111 7

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 190 113 50 10 73 38 42 168 140 26 121 8

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 190 113 50 10 73 38 42 168 140 26 121 8

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 190 113 50 10 73 38 42 168 140 26 121 8

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Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 0.69 0.31 1.00 0.66 0.34 1.00 0.55 0.45 1.00 0.94 0.06

Final Sat.: 525 405 179 485 355 186 527 330 275 499 509 32

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Capacity Analysis Module:

Vol/Sat: 0.36 0.28 0.28 0.02 0.21 0.21 0.08 0.51 0.51 0.05 0.24 0.24

Crit Moves: **** **** **** ****

Delay/Veh: 12.8 10.7 10.7 9.8 10.4 10.4 9.8 13.9 13.9 9.9 10.8 10.8

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 12.8 10.7 10.7 9.8 10.4 10.4 9.8 13.9 13.9 9.9 10.8 10.8

LOS by Move: B B B A B B A B B A B B

ApproachDel: 11.8 10.3 13.4 10.6

Delay Adj: 1.00 1.00 1.00

ApprAdjDel: 11.8 10.3 13.4 10.6

LOS by Appr: B B B B

AllWayAvgQ: 0.5 0.3 0.3 0.0 0.2 0.2 0.1 0.9 0.9 0.0 0.3 0.3

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #652 LY Street/Trabuco Rd

Average Delay (sec/veh): 5.6 Worst Case Level Of Service: A[10.0]

Street Name:	LY Street						Trabuco Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0

Volume Module:

Base Vol:	80	60	0	0	66	53	73	0	118	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	80	60	0	0	66	53	73	0	118	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	80	60	0	0	66	53	73	0	118	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	87	65	0	0	72	58	79	0	128	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	87	65	0	0	72	58	79	0	128	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	6.4	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	129	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	311	311	72	404	368	65
Potent Cap.:	1469	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	686	607	996	561	564	1004
Move Cap.:	1469	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	655	571	996	467	530	1004
Volume/Cap:	0.06	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.12	0.00	0.13	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.4	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Control Del:	7.6	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	11.3	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	A	*	*	*	*	*	B	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxx	xxxx	996	xxxx	0	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.4	xxxxxx	xxxxxx	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	9.1	xxxxxx	xxxxxx	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	10.0	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	A	*	A	*	*	*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #653 LY Street/Loop Road

Average Delay (sec/veh): 7.1 Worst Case Level Of Service: A[8.9]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1	0	1	0	0	0	0	0	1	0

Volume Module:

Base Vol:	0	18	12	163	7	0	0	0	0	3	0	106
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	18	12	163	7	0	0	0	0	3	0	106
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	18	12	163	7	0	0	0	0	3	0	106
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	20	13	177	8	0	0	0	0	3	0	115
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	20	13	177	8	0	0	0	0	3	0	115

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	33	xxxx	xxxxx	xxxx	xxxx	xxxxx	388	388	26
Potent Cap.:	xxxx	xxxx	xxxxx	1592	xxxx	xxxxx	xxxx	xxxx	xxxxx	619	550	1056
Move Cap.:	xxxx	xxxx	xxxxx	1592	xxxx	xxxxx	xxxx	xxxx	xxxxx	567	489	1056
Volume/Cap:	xxxx	xxxx	xxxx	0.11	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	0.00	0.11

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	1031	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.4	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	8.9	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx				8.9	
ApproachLOS:	*			*			*				A	

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #654 C Street/LV Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.115
 Loss Time (sec): 0 Average Delay (sec/veh): 7.5
 Optimal Cycle: 0 Level Of Service: A

C Street						LV Street									
North Bound			South Bound			East Bound			West Bound						
Approach:	L	T	R	L	T	R	L	T	R	L	T	R			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	0	0	1	0	0	0	0	0	1	0	0	0			

Volume Module:												
Base Vol:	4	82	9	8	72	4	4	3	3	4	2	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	82	9	8	72	4	4	3	3	4	2	4
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	82	9	8	72	4	4	3	3	4	2	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	4	89	10	9	78	4	4	3	3	4	2	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	89	10	9	78	4	4	3	3	4	2	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	4	89	10	9	78	4	4	3	3	4	2	4

Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.04	0.87	0.09	0.09	0.86	0.05	0.40	0.30	0.30	0.40	0.20	0.40
Final Sat.:	38	774	85	84	759	42	328	246	246	333	166	333

Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.12	0.10	0.10	0.10	0.01	0.01	0.01	0.01	0.01	0.01
Crit Moves:	****			****			****			****		
Delay/Veh:	7.5	7.5	7.5	7.5	7.5	7.5	7.3	7.3	7.3	7.2	7.2	7.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.5	7.5	7.5	7.5	7.5	7.5	7.3	7.3	7.3	7.2	7.2	7.2
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	7.5			7.5			7.3			7.2		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.5			7.5			7.3			7.2		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #655 O Street/8th Street

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: B[10.3]

Street Name:	O Street			8th Street									
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Lanes:	1	0	1	1	0	1	1	0	1	0	0	1	0

Volume Module:

Base Vol:	0	186	26	5	132	0	0	0	0	32	0	9
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	186	26	5	132	0	0	0	0	32	0	9
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	186	26	5	132	0	0	0	0	32	0	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	202	28	5	143	0	0	0	0	35	0	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	202	28	5	143	0	0	0	0	35	0	10

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	6.8	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	230	xxxx	xxxxx	255	385	72	299	371	115
Potent Cap.:	xxxx	xxxx	xxxxx	1349	xxxx	xxxxx	682	552	982	674	562	922
Move Cap.:	xxxx	xxxx	xxxxx	1349	xxxx	xxxxx	673	550	982	672	560	922
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.00	0.05	0.00	0.01

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.7	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	B	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0	xxxx	xxxx	922
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.0
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.9
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	10.3	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	B	*	*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #656 8th Street /C Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.060
 Loss Time (sec): 0 Average Delay (sec/veh): 7.1
 Optimal Cycle: 0 Level Of Service: A

8th Street						C Street						
North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0

Volume Module:												
Base Vol:	2	1	18	4	4	1	1	27	3	12	36	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	1	18	4	4	1	1	27	3	12	36	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	1	18	4	4	1	1	27	3	12	36	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	2	1	20	4	4	1	1	29	3	13	39	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	1	20	4	4	1	1	29	3	13	39	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	2	1	20	4	4	1	1	29	3	13	39	1

Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.09	0.05	0.86	0.45	0.44	0.11	0.03	0.87	0.10	0.24	0.74	0.02
Final Sat.:	93	47	840	380	380	95	29	785	87	217	650	18

Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.01	0.01	0.01	0.04	0.04	0.04	0.06	0.06	0.06
Crit Moves:	****			****			****			****		
Delay/Veh:	6.7	6.7	6.7	7.2	7.2	7.2	7.1	7.1	7.1	7.3	7.3	7.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	6.7	6.7	6.7	7.2	7.2	7.2	7.1	7.1	7.1	7.3	7.3	7.3
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	6.7			7.2			7.1			7.3		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	6.7			7.2			7.1			7.3		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #657 GP Blvd N/S Conn/GP Blvd E/W

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: A[9.5]

Street Name:	GP Blvd N/S Conn						GP Blvd EW					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	1	0	0	0	0	0	0	0	0

Volume Module:

Base Vol:	0	180	3	1	10	0	0	0	0	3	0	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	180	3	1	10	0	0	0	0	3	0	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	180	3	1	10	0	0	0	0	3	0	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	196	3	1	11	0	0	0	0	3	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	196	3	1	11	0	0	0	0	3	0	1

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	199	xxxx	xxxxx	xxxx	xxxx	xxxxx	210	xxxx	197
Potent Cap.:	xxxx	xxxx	xxxxx	1386	xxxx	xxxxx	xxxx	xxxx	xxxxx	783	xxxx	849
Move Cap.:	xxxx	xxxx	xxxxx	1386	xxxx	xxxxx	xxxx	xxxx	xxxxx	782	xxxx	849
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	0.0
Control Del:	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.6	xxxx	9.2
LOS by Move:	*	*	*	A	*	*	*	*	*	A	*	A
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.5		
ApproachLOS:	*			*			*			A		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #562 GP Blvd/Marine Wy

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: A[9.4]

Street Name:			GP Blvd			Marine Wy								
Approach:			North Bound			South Bound			East Bound			West Bound		
Movement:			L - T - R			L - T - R			L - T - R			L - T - R		
Control:			Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:			Include			Include			Include			Include		
Lanes:			0 0 0 0 0			1 0 0 0 1			2 0 2 0 0			0 0 1 1 0		

Volume Module:

Base Vol:	0	0	0	3	0	7	24	297	0	0	153	6
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	3	0	7	24	297	0	0	153	6
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	3	0	7	24	297	0	0	153	6
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	3	0	7	24	297	0	0	153	6
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	3	0	7	24	297	0	0	153	6

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	353	xxxx	80	159	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	624	xxxx	971	1433	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	616	xxxx	971	1433	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	0.01	0.02	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	0.0	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	10.9	xxxx	8.7	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	A	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			9.4			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #575 O Street/LV Street

Average Delay (sec/veh): 2.0 Worst Case Level Of Service: A[9.5]

Street Name:	O Street						LV Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:

Base Vol:	1	42	2	8	114	1	1	1	1	16	1	18
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	42	2	8	114	1	1	1	1	16	1	18
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	42	2	8	114	1	1	1	1	16	1	18
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	1	46	2	9	124	1	1	1	1	17	1	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	46	2	9	124	1	1	1	1	17	1	20

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	125	xxxx	xxxxxx	48	xxxx	xxxxxx	167	192	62	129	191	24
Potent Cap.:	1474	xxxx	xxxxxx	1572	xxxx	xxxxxx	786	707	996	837	707	1054
Move Cap.:	1474	xxxx	xxxxxx	1572	xxxx	xxxxxx	767	702	996	831	703	1054
Volume/Cap:	0.00	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.00	0.02	0.00	0.02

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.1	xxxx	xxxxxx
Control Del:	7.4	xxxx	xxxxxx	7.3	xxxx	xxxxxx	9.7	xxxx	xxxxxx	9.4	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	824	xxxx	xxxx	1027
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxx	0.1
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	9.4	xxxxxx	xxxx	8.6
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.5	xxxxxx	xxxxxx	9.0	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	A	A	A	A	A	A

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #576 O Street/C Street

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: A[9.6]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:

Base Vol:	1	50	5	5	150	1	1	1	1	7	1	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	50	5	5	150	1	1	1	1	7	1	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	50	5	5	150	1	1	1	1	7	1	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1	50	5	5	150	1	1	1	1	7	1	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	50	5	5	150	1	1	1	1	7	1	2

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	151	xxxx	xxxxxx	55	xxxx	xxxxxx	188	218	76	140	216	28
Potent Cap.:	1442	xxxx	xxxxxx	1563	xxxx	xxxxxx	761	684	977	822	686	1048
Move Cap.:	1442	xxxx	xxxxxx	1563	xxxx	xxxxxx	756	681	977	818	683	1048
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.00	0.01	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx
Control Del:	7.5	xxxx	xxxxxx	7.3	xxxx	xxxxxx	9.8	xxxx	xxxxxx	9.4	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	803	xxxx	xxxx	890
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxx	0.0
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	9.5	xxxxxx	xxxx	9.1
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.6	xxxxxx	xxxxxx	9.3	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	A	A	A	A	A	A

Note: Queue reported is the number of cars per lane.

ROUNABOUT REPORT																
General Information								Site Information								
Analyst	M. Macias							Intersection	O Street/C Street							
Agency or Co.	LSA Associates, Inc.							E/W Street Name	C Street							
Date Performed	6/5/2014							N/S Street Name	O Street							
Time Period	Alternative 5 AM							Analysis Year								
Peak Hour Factor	0.92							Project ID	688-Acre Park Development Plan							
Project Description:																
Volume Adjustment and Site Characteristics																
	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	0	0	0		0	1	0		0	2	0		1	1	0	
Lane Assignment					LTR				T				TR			
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Volume (V), veh/h	0	0	0	0	17	0	135	0	0	177	1	0	38	452	0	0
Heavy Veh. Adj. (f_{HV}), %	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Pedestrians Crossing	0				0				0				0			
Critical and Follow-Up Headway Adjustment																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Critical Headway (sec)	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929				
Follow-Up Headway (sec)	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858				
Flow Computations																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Circulating Flow (V_c), pc/h	568			198			43			19						
Exiting Flow (V_{ex}), pc/h	44			0			349			525						
Entry Flow (V_e), pc/h		564			170		94	106		43	506					
Entry Volume veh/h					165		91	103		42	491					
Capacity and v/c Ratios																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Capacity (c_{PCE}), pc/h		0			927		1083	1083		1109	1109					
Capacity (c), veh/h		0			900		1051	1051		1076	1076					
v/c Ratio (X)					0.18		0.09	0.10		0.04	0.46					
Delay and Level of Service																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Lane Control Delay (d), s/veh					5.8		4.2	4.3		3.7	8.4					
Lane LOS		F			A		A	A		A	A					
Lane 95% Queue					0.7		0.3	0.3		0.1	2.4					
Approach Delay, s/veh				5.81			4.24			8.03						
Approach LOS, s/veh				A			A			A						
Intersection Delay, s/veh	6.80															
Intersection LOS	A															

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #651 C Street/Trabuco Rd.

Cycle (sec): 100 Critical Vol./Cap.(X): 0.166

Loss Time (sec): 0 Average Delay (sec/veh): 8.2

Optimal Cycle: 0 Level Of Service: A

Street Name: C Street

Trabuco Rd

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Stop Sign Stop Sign Stop Sign Stop Sign

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 0 1 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 39 13 8 8 22 40 15 87 26 4 65 2

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 39 13 8 8 22 40 15 87 26 4 65 2

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 39 13 8 8 22 40 15 87 26 4 65 2

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 42 14 9 9 24 43 16 95 28 4 71 2

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 42 14 9 9 24 43 16 95 28 4 71 2

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 42 14 9 9 24 43 16 95 28 4 71 2

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Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 0.62 0.38 1.00 0.35 0.65 1.00 0.77 0.23 1.00 0.97 0.03

Final Sat.: 622 444 273 622 265 482 649 568 170 642 688 21

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Capacity Analysis Module:

Vol/Sat: 0.07 0.03 0.03 0.01 0.09 0.09 0.03 0.17 0.17 0.01 0.10 0.10

Crit Moves: **** **** **** ****

Delay/Veh: 8.7 7.7 7.7 8.4 7.8 7.8 8.3 8.4 8.4 8.2 8.2 8.2

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 8.7 7.7 7.7 8.4 7.8 7.8 8.3 8.4 8.4 8.2 8.2 8.2

LOS by Move: A A A A A A A A A A A A

ApproachDel: 8.3 7.8 8.4 8.2

Delay Adj: 1.00 1.00 1.00

ApprAdjDel: 8.3 7.8 8.4 8.2

LOS by Appr: A A A A

AllWayAvgQ: 0.1 0.0 0.0 0.0 0.1 0.1 0.0 0.2 0.2 0.0 0.1 0.1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #652 LY Street/Trabuco Rd

Average Delay (sec/veh): 4.2 Worst Case Level Of Service: A[8.8]

Street Name:	LY Street						Trabuco Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0

Volume Module:

Base Vol:	15	15	0	0	15	35	35	0	15	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	15	0	0	15	35	35	0	15	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	15	15	0	0	15	35	35	0	15	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	16	16	0	0	16	38	38	0	16	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	16	16	0	0	16	38	38	0	16	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	6.4	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	54	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	65	65	16	92	103	16
Potent Cap.:	1564	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	945	829	1069	896	791	1069
Move Cap.:	1564	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	938	821	1069	876	782	1069
Volume/Cap:	0.01	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.04	0.00	0.02	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Control Del:	7.3	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	9.0	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	A	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxx	xxxx	1069	xxxx	0	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxx	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	8.4	xxxxxx	xxxx	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	8.8	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	A	*	*	*	*	*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #653 LY Street/Loop Road

Average Delay (sec/veh): 5.4 Worst Case Level Of Service: A[8.5]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1	0	1	0	0	0	0	0	1	0

Volume Module:

Base Vol:	0	7	4	20	8	0	0	0	0	4	0	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	7	4	20	8	0	0	0	0	4	0	17
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	7	4	20	8	0	0	0	0	4	0	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	8	4	22	9	0	0	0	0	4	0	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	8	4	22	9	0	0	0	0	4	0	18

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	12	xxxx	xxxxx	xxxx	xxxx	xxxxx	62	62	10
Potent Cap.:	xxxx	xxxx	xxxxx	1620	xxxx	xxxxx	xxxx	xxxx	xxxxx	949	833	1078
Move Cap.:	xxxx	xxxx	xxxxx	1620	xxxx	xxxxx	xxxx	xxxx	xxxxx	940	822	1078
Volume/Cap:	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.02

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT		LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT		LT - LTR - RT	LT - LTR - RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	1048	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	8.5	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx				8.5	
ApproachLOS:	*			*			*				A	

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #654 C Street/LV Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.058
 Loss Time (sec): 0 Average Delay (sec/veh): 7.1
 Optimal Cycle: 0 Level Of Service: A

Street Name:	C Street						LV Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:	C Street			C Street			LV Street			LV Street		
Base Vol:	2	7	2	4	41	4	2	4	4	4	4	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	7	2	4	41	4	2	4	4	4	4	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	7	2	4	41	4	2	4	4	4	4	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	2	8	2	4	45	4	2	4	4	4	4	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	8	2	4	45	4	2	4	4	4	4	2
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	2	8	2	4	45	4	2	4	4	4	4	2

Saturation Flow Module:	C Street			C Street			LV Street			LV Street		
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.18	0.64	0.18	0.08	0.84	0.08	0.20	0.40	0.40	0.40	0.40	0.20
Final Sat.:	166	580	166	75	764	75	185	369	369	354	354	177

Capacity Analysis Module:	C Street			C Street			LV Street			LV Street		
Vol/Sat:	0.01	0.01	0.01	0.06	0.06	0.06	0.01	0.01	0.01	0.01	0.01	0.01
Crit Moves:	****			****			****			****		
Delay/Veh:	7.0	7.0	7.0	7.2	7.2	7.2	6.9	6.9	6.9	7.0	7.0	7.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.0	7.0	7.0	7.2	7.2	7.2	6.9	6.9	6.9	7.0	7.0	7.0
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	7.0			7.2			6.9			7.0		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.0			7.2			6.9			7.0		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #655 O Street/8th Street

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: A[9.2]

Street Name:	O Street			8th Street									
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Lanes:	1	0	1	1	0	1	1	0	1	0	0	1	0

Volume Module:

Base Vol:	0	37	12	8	132	0	0	0	0	18	0	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	37	12	8	132	0	0	0	0	18	0	3
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	37	12	8	132	0	0	0	0	18	0	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	40	13	9	143	0	0	0	0	20	0	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	40	13	9	143	0	0	0	0	20	0	3

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	6.8	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	53	xxxx	xxxxx	181	214	72	136	208	27
Potent Cap.:	xxxx	xxxx	xxxxx	1565	xxxx	xxxxx	769	687	982	849	693	1049
Move Cap.:	xxxx	xxxx	xxxxx	1565	xxxx	xxxxx	764	683	982	846	689	1049
Volume/Cap:	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.00	0.02	0.00	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.4	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0	xxxx	xxxx	1049
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.0
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.4
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.2	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	A	*	*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #656 8th Street /C Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.026
 Loss Time (sec): 0 Average Delay (sec/veh): 6.9
 Optimal Cycle: 0 Level Of Service: A

Street Name:	8th Street						C Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:	8th Street NB			8th Street SB			C Street EB			C Street WB		
Base Vol:	4	1	6	2	5	4	1	16	5	2	17	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	1	6	2	5	4	1	16	5	2	17	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	1	6	2	5	4	1	16	5	2	17	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	4	1	7	2	5	4	1	17	5	2	18	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	1	7	2	5	4	1	17	5	2	18	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	4	1	7	2	5	4	1	17	5	2	18	1

Saturation Flow Module:	8th Street NB			8th Street SB			C Street EB			C Street WB		
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.36	0.09	0.55	0.18	0.46	0.36	0.04	0.73	0.23	0.10	0.85	0.05
Final Sat.:	345	86	518	169	424	339	42	677	212	90	769	45

Capacity Analysis Module:	8th Street NB			8th Street SB			C Street EB			C Street WB		
Vol/Sat:	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03	0.03	0.02	0.02	0.02
Crit Moves:	****			****			****			****		
Delay/Veh:	6.8	6.8	6.8	6.9	6.9	6.9	6.9	6.9	6.9	7.1	7.1	7.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	6.8	6.8	6.8	6.9	6.9	6.9	6.9	6.9	6.9	7.1	7.1	7.1
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	6.8			6.9			6.9			7.1		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	6.8			6.9			6.9			7.1		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #657 GP Blvd N/S Conn/GP Blvd E/W

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: A[8.6]

Street Name:	GP Blvd N/S Conn						GP Blvd EW					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	1	0	0	0	0	0	0	0	0

Volume Module:

Base Vol:	0	10	3	1	10	0	0	0	0	3	0	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	10	3	1	10	0	0	0	0	3	0	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	10	3	1	10	0	0	0	0	3	0	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	11	3	1	11	0	0	0	0	3	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	11	3	1	11	0	0	0	0	3	0	1

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	14	xxxx	xxxxx	xxxx	xxxx	xxxxx	26	xxxx	13
Potent Cap.:	xxxx	xxxx	xxxxx	1617	xxxx	xxxxx	xxxx	xxxx	xxxxx	995	xxxx	1074
Move Cap.:	xxxx	xxxx	xxxxx	1617	xxxx	xxxxx	xxxx	xxxx	xxxxx	995	xxxx	1074
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	0.0
Control Del:	xxxxx	xxxx	xxxxx	7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	8.4
LOS by Move:	*	*	*	A	*	*	*	*	*	A	*	A
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			8.6		
ApproachLOS:	*			*			*			A		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #562 GP Blvd/Marine Wy

Average Delay (sec/veh): 5.4 Worst Case Level Of Service: B[11.7]

Street Name:	GP Blvd			Marine Wy									
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled			
Rights:	Include			Include			Include			Include			
Lanes:	0	0	0	0	0	0	1	0	0	0	2	0	2

Volume Module:

Base Vol:	0	0	0	6	0	112	485	186	0	0	302	39
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	6	0	112	485	186	0	0	302	39
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	6	0	112	485	186	0	0	302	39
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	6	0	112	485	186	0	0	302	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	6	0	112	485	186	0	0	302	39

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	1385	xxxx	171	341	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	137	xxxx	850	1229	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	95	xxxx	850	1229	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.06	xxxx	0.13	0.39	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.2	xxxx	0.5	1.9	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	45.5	xxxx	9.9	9.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	E	*	A	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			11.7			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #575 O Street/LV Street

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[10.3]

Street Name:	O Street			LV Street								
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:

Base Vol:	1	178	14	16	132	1	1	1	1	8	1	12
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	178	14	16	132	1	1	1	1	8	1	12
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	178	14	16	132	1	1	1	1	8	1	12
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	1	193	15	17	143	1	1	1	1	9	1	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	193	15	17	143	1	1	1	1	9	1	13

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	145	xxxx	xxxxxx	209	xxxx	xxxxxx	278	390	72	310	383	104
Potent Cap.:	1450	xxxx	xxxxxx	1374	xxxx	xxxxxx	657	549	982	624	554	937
Move Cap.:	1450	xxxx	xxxxxx	1374	xxxx	xxxxxx	641	541	982	616	546	937
Volume/Cap:	0.00	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.00	0.01	0.00	0.01

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx
Control Del:	7.5	xxxx	xxxxxx	7.7	xxxx	xxxxxx	10.6	xxxx	xxxxxx	10.9	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	B	*	*	B	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	698	xxxx	xxxx	888
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxx	0.0
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	10.2	xxxxxx	xxxx	9.1
Shared LOS:	*	*	*	*	*	*	*	*	B	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	10.3	xxxxxx	xxxxxx	9.8	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	B	*	*	A	*	*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #576 O Street/C Street

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: B[11.0]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:

Base Vol:	1	208	76	14	131	1	1	1	1	39	1	12
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	208	76	14	131	1	1	1	1	39	1	12
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	208	76	14	131	1	1	1	1	39	1	12
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1	208	76	14	131	1	1	1	1	39	1	12
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	208	76	14	131	1	1	1	1	39	1	12

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	132	xxxx	xxxxxx	284	xxxx	xxxxxx	266	446	66	342	408	142
Potent Cap.:	1466	xxxx	xxxxxx	1290	xxxx	xxxxxx	671	510	991	593	536	886
Move Cap.:	1466	xxxx	xxxxxx	1290	xxxx	xxxxxx	655	505	991	586	530	886
Volume/Cap:	0.00	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.00	0.07	0.00	0.01

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.2	xxxx	xxxxxx
Control Del:	7.5	xxxx	xxxxxx	7.8	xxxx	xxxxxx	10.5	xxxx	xxxxxx	11.6	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	B	*	*	B	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	669	xxxx	xxxx	843
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxx	0.0
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	10.4	xxxxxx	xxxx	9.3
Shared LOS:	*	*	*	*	*	*	*	*	B	*	*	A
ApproachDel:	xxxxxx			xxxxxx			10.4			11.0		
ApproachLOS:	*			*			B			B		

Note: Queue reported is the number of cars per lane.

ROUNABOUT REPORT																
General Information								Site Information								
Analyst	M. Macias							Intersection	O Street/C Street							
Agency or Co.	LSA Associates, Inc.							E/W Street Name	C Street							
Date Performed	6/5/2014							N/S Street Name	O Street							
Time Period	Alternative 5 PM							Analysis Year								
Peak Hour Factor	0.92							Project ID	688-Acre Park Development Plan							
Project Description:																
Volume Adjustment and Site Characteristics																
	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	0	0	0		0	1	0		0	2	0		1	1	0	
Lane Assignment					LTR				T				TR			
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Volume (V), veh/h	0	0	0	0	18		102	0	0	298	18	0	92	272	0	0
Heavy Veh. Adj. (f_{HV}), %	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Pedestrians Crossing	0				0				0				0			
Critical and Follow-Up Headway Adjustment																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Critical Headway (sec)	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929				
Follow-Up Headway (sec)	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858				
Flow Computations																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Circulating Flow (V_c), pc/h	428			334			103			134						
Exiting Flow (V_{ex}), pc/h	123			114			448			325						
Entry Flow (V_e), pc/h		491			249		166	188		103	305					
Entry Volume veh/h					242		161	183		100	296					
Capacity and v/c Ratios																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Capacity (c_{PCE}), pc/h		0			809		1019	1019		988	988					
Capacity (c), veh/h		0			786		990	990		959	959					
v/c Ratio (X)					0.31		0.16	0.18		0.10	0.31					
Delay and Level of Service																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Lane Control Delay (d), s/veh					8.1		5.2	5.4		4.7	7.0					
Lane LOS		F			A		A	A		A	A					
Lane 95% Queue					1.3		0.6	0.7		0.3	1.3					
Approach Delay, s/veh				8.14			5.27			6.40						
Approach LOS, s/veh				A			A			A						
Intersection Delay, s/veh	6.43															
Intersection LOS	A															

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #651 C Street/Trabuco Rd.

Cycle (sec): 100 Critical Vol./Cap.(X): 0.399

Loss Time (sec): 0 Average Delay (sec/veh): 10.0

Optimal Cycle: 0 Level Of Service: B

Street Name: C Street

Trabuco Rd

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Stop Sign Stop Sign Stop Sign Stop Sign

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 0

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Volume Module:

Base Vol: 68 28 24 10 30 29 25 189 64 17 147 7

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 68 28 24 10 30 29 25 189 64 17 147 7

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 68 28 24 10 30 29 25 189 64 17 147 7

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 74 30 26 11 33 32 27 205 70 18 160 8

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 74 30 26 11 33 32 27 205 70 18 160 8

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 74 30 26 11 33 32 27 205 70 18 160 8

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Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 0.54 0.46 1.00 0.51 0.49 1.00 0.75 0.25 1.00 0.95 0.05

Final Sat.: 538 330 283 526 305 295 606 514 174 591 622 30

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Capacity Analysis Module:

Vol/Sat: 0.14 0.09 0.09 0.02 0.11 0.11 0.04 0.40 0.40 0.03 0.26 0.26

Crit Moves: **** **** **** ****

Delay/Veh: 9.9 8.7 8.7 9.2 8.9 8.9 8.7 11.0 11.0 8.8 9.8 9.8

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 9.9 8.7 8.7 9.2 8.9 8.9 8.7 11.0 11.0 8.8 9.8 9.8

LOS by Move: A A A A A A A B B A A A

ApproachDel: 9.4 8.9 10.8 9.7

Delay Adj: 1.00 1.00 1.00

ApprAdjDel: 9.4 8.9 10.8 9.7

LOS by Appr: A A B A

AllWayAvgQ: 0.1 0.1 0.1 0.0 0.1 0.1 0.0 0.6 0.6 0.0 0.3 0.3

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #652 LY Street/Trabuco Rd

Average Delay (sec/veh): 6.0 Worst Case Level Of Service: A[9.7]

Street Name:	LY Street						Trabuco Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0

Volume Module:

Base Vol:	75	38	0	0	47	55	72	0	123	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	75	38	0	0	47	55	72	0	123	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	75	38	0	0	47	55	72	0	123	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	82	41	0	0	51	60	78	0	134	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	82	41	0	0	51	60	78	0	134	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	6.4	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	111	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	255	255	51	352	315	41
Potent Cap.:	1492	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	738	652	1023	606	604	1035
Move Cap.:	1492	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	707	616	1023	505	571	1035
Volume/Cap:	0.05	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.11	0.00	0.13	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.4	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Control Del:	7.6	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	10.7	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	A	*	*	*	*	*	B	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxx	xxxx	1023	xxxx	0	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.4	xxxxxx	xxxxxx	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	9.0	xxxxxx	xxxxxx	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.7	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	A	*	A	*	*	*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #653 LY Street/Loop Road

Average Delay (sec/veh): 7.4 Worst Case Level Of Service: A[8.9]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1	0	1	0	0	0	0	0	1	0

Volume Module:

Base Vol:	0	10	10	166	6	0	0	0	0	4	0	103
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	10	10	166	6	0	0	0	0	4	0	103
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	10	10	166	6	0	0	0	0	4	0	103
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	11	11	180	7	0	0	0	0	4	0	112
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	11	11	180	7	0	0	0	0	4	0	112

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	22	xxxx	xxxxx	xxxx	xxxx	xxxxx	384	384	16
Potent Cap.:	xxxx	xxxx	xxxxx	1607	xxxx	xxxxx	xxxx	xxxx	xxxxx	623	553	1069
Move Cap.:	xxxx	xxxx	xxxxx	1607	xxxx	xxxxx	xxxx	xxxx	xxxxx	569	491	1069
Volume/Cap:	xxxx	xxxx	xxxx	0.11	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	0.00	0.10

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	1035	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.4	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	8.9	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx				8.9	
ApproachLOS:	*			*			*				A	

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #654 C Street/LV Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.115
 Loss Time (sec): 0 Average Delay (sec/veh): 7.4
 Optimal Cycle: 0 Level Of Service: A

Street Name:	C Street						LV Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	0	0	0	1	0	0	0

Volume Module:	C Street			C Street			LV Street			LV Street		
Base Vol:	4	82	9	7	63	4	4	4	3	4	2	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	82	9	7	63	4	4	4	3	4	2	4
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	82	9	7	63	4	4	4	3	4	2	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	4	89	10	8	68	4	4	4	3	4	2	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	89	10	8	68	4	4	4	3	4	2	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	4	89	10	8	68	4	4	4	3	4	2	4

Saturation Flow Module:	C Street			C Street			LV Street			LV Street		
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.04	0.87	0.09	0.09	0.86	0.05	0.37	0.36	0.27	0.40	0.20	0.40
Final Sat.:	38	776	85	84	754	48	300	300	225	335	168	335

Capacity Analysis Module:	C Street			C Street			LV Street			LV Street		
Vol/Sat:	0.11	0.11	0.11	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
Crit Moves:	****			****			****			****		
Delay/Veh:	7.5	7.5	7.5	7.4	7.4	7.4	7.2	7.2	7.2	7.2	7.2	7.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.5	7.5	7.5	7.4	7.4	7.4	7.2	7.2	7.2	7.2	7.2	7.2
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	7.5			7.4			7.2			7.2		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.5			7.4			7.2			7.2		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #655 O Street/8th Street

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[10.1]

Street Name:	O Street			8th Street								
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	1	0	1	0	1	0	1	0	0

Volume Module:

Base Vol:	0	187	26	5	121	0	0	0	0	23	0	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	187	26	5	121	0	0	0	0	23	0	8
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	187	26	5	121	0	0	0	0	23	0	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	203	28	5	132	0	0	0	0	25	0	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	203	28	5	132	0	0	0	0	25	0	9

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	6.8	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	232	xxxx	xxxxx	244	374	66	294	360	116
Potent Cap.:	xxxx	xxxx	xxxxx	1348	xxxx	xxxxx	695	560	991	679	570	921
Move Cap.:	xxxx	xxxx	xxxxx	1348	xxxx	xxxxx	686	558	991	677	568	921
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.00	0.04	0.00	0.01

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.5	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	B	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0	xxxx	xxxx	921
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.0
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.9
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	10.1	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	B	*	*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #656 8th Street /C Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.061
 Loss Time (sec): 0 Average Delay (sec/veh): 7.1
 Optimal Cycle: 0 Level Of Service: A

Street Name:	8th Street						C Street								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0

Volume Module:	8th Street NB			8th Street SB			C Street EB			C Street WB		
Base Vol:	1	1	20	6	3	1	1	30	2	17	31	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	1	20	6	3	1	1	30	2	17	31	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	1	20	6	3	1	1	30	2	17	31	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	1	1	22	7	3	1	1	33	2	18	34	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1	1	22	7	3	1	1	33	2	18	34	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	1	1	22	7	3	1	1	33	2	18	34	1

Saturation Flow Module:	8th Street NB			8th Street SB			C Street EB			C Street WB		
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.04	0.05	0.91	0.60	0.30	0.10	0.03	0.91	0.06	0.35	0.63	0.02
Final Sat.:	45	45	899	508	254	85	27	814	54	305	556	18

Capacity Analysis Module:	8th Street NB			8th Street SB			C Street EB			C Street WB		
Vol/Sat:	0.02	0.02	0.02	0.01	0.01	0.01	0.04	0.04	0.04	0.06	0.06	0.06
Crit Moves:	****			****			****			****		
Delay/Veh:	6.6	6.6	6.6	7.2	7.2	7.2	7.1	7.1	7.1	7.3	7.3	7.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	6.6	6.6	6.6	7.2	7.2	7.2	7.1	7.1	7.1	7.3	7.3	7.3
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	6.6			7.2			7.1			7.3		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	6.6			7.2			7.1			7.3		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #657 GP Blvd N/S Conn/GP Blvd E/W

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[10.1]

Street Name:	GP Blvd N/S Conn						GP Blvd EW					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	1	0	0	0	0	0	0	0	0

Volume Module:

Base Vol:	0	180	3	1	110	0	0	0	0	3	0	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	180	3	1	110	0	0	0	0	3	0	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	180	3	1	110	0	0	0	0	3	0	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	196	3	1	120	0	0	0	0	3	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	196	3	1	120	0	0	0	0	3	0	1

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	199	xxxx	xxxxx	xxxx	xxxx	xxxxx	319	xxxx	197
Potent Cap.:	xxxx	xxxx	xxxxx	1386	xxxx	xxxxx	xxxx	xxxx	xxxxx	678	xxxx	849
Move Cap.:	xxxx	xxxx	xxxxx	1386	xxxx	xxxxx	xxxx	xxxx	xxxxx	678	xxxx	849
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	0.0
Control Del:	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.3	xxxx	9.2
LOS by Move:	*	*	*	A	*	*	*	*	*	B	*	A
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			10.1		
ApproachLOS:	*			*			*			B		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #562 GP Blvd/Marine Wy

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[10.1]

Street Name:	GP Blvd			Marine Wy								
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	0	0	0	1	0	0	0	0	0

Volume Module:

Base Vol:	0	0	0	33	0	18	21	267	0	0	132	19
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	33	0	18	21	267	0	0	132	19
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	33	0	18	21	267	0	0	132	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	33	0	18	21	267	0	0	132	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	33	0	18	21	267	0	0	132	19

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	317	xxxx	76	151	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	657	xxxx	977	1442	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	649	xxxx	977	1442	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.05	xxxx	0.02	0.01	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.2	xxxx	0.1	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	10.8	xxxx	8.8	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	A	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			10.1			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #575 O Street/LV Street

Average Delay (sec/veh): 2.0 Worst Case Level Of Service: A[9.2]

Street Name:	O Street						LV Street						
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1	0

Volume Module:

Base Vol:	1	27	12	10	71	1	1	1	1	15	1	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	27	12	10	71	1	1	1	1	15	1	5
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	27	12	10	71	1	1	1	1	15	1	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	1	29	13	11	77	1	1	1	1	16	1	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	29	13	11	77	1	1	1	1	16	1	5

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	78	xxxx	xxxxxx	42	xxxx	xxxxxx	117	144	39	99	138	21
Potent Cap.:	1533	xxxx	xxxxxx	1580	xxxx	xxxxxx	853	751	1030	878	757	1058
Move Cap.:	1533	xxxx	xxxxxx	1580	xxxx	xxxxxx	843	745	1030	871	751	1058
Volume/Cap:	0.00	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.00	0.02	0.00	0.01

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.1	xxxx	xxxxxx
Control Del:	7.4	xxxx	xxxxxx	7.3	xxxx	xxxxxx	9.3	xxxx	xxxxxx	9.2	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	865	xxxx	xxxx	990
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxx	0.0
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	9.2	xxxxxx	xxxx	8.7
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.2	xxxxxx	xxxxxx	9.1	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	A	A	A	A	A	A

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #576 O Street/C Street

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: A[9.3]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:

Base Vol:	1	46	4	6	104	1	1	1	1	6	1	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	46	4	6	104	1	1	1	1	6	1	4
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	46	4	6	104	1	1	1	1	6	1	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1	46	4	6	104	1	1	1	1	6	1	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	46	4	6	104	1	1	1	1	6	1	4

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	105	xxxx	xxxxxx	50	xxxx	xxxxxx	142	169	53	115	167	25
Potent Cap.:	1499	xxxx	xxxxxx	1570	xxxx	xxxxxx	819	728	1010	856	729	1052
Move Cap.:	1499	xxxx	xxxxxx	1570	xxxx	xxxxxx	812	725	1010	852	726	1052
Volume/Cap:	0.00	xxxx	xxxxxx	0.00	xxxx	xxxxxx	0.00	0.00	0.00	0.01	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx
Control Del:	7.4	xxxx	xxxxxx	7.3	xxxx	xxxxxx	9.4	xxxx	xxxxxx	9.3	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	844	xxxx	xxxx	965
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxx	0.0
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	9.3	xxxxxx	xxxx	8.7
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.3	xxxxxx	xxxxxx	9.0	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	A	A	A	A	A	A

Note: Queue reported is the number of cars per lane.

ROUNABOUT REPORT																
General Information								Site Information								
Analyst	M. Macias							Intersection	O Street/C Street							
Agency or Co.	LSA Associates, Inc.							E/W Street Name	C Street							
Date Performed	6/5/2014							N/S Street Name	O Street							
Time Period	Alternative 6 AM							Analysis Year								
Peak Hour Factor	0.92							Project ID	688-Acre Park Development Plan							
Project Description:																
Volume Adjustment and Site Characteristics																
	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	0	0	0		0	1	0		0	2	0		1	1	0	
Lane Assignment					LTR				T				TR			
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Volume (V), veh/h	0	0	0	0	11	0	138	0	0	183	1	0	39	418	0	0
Heavy Veh. Adj. (f_{HV}), %	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Pedestrians Crossing	0				0				0				0			
Critical and Follow-Up Headway Adjustment																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Critical Headway (sec)	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929				
Follow-Up Headway (sec)	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858				
Flow Computations																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Circulating Flow (V_c), pc/h	524			205			44			12						
Exiting Flow (V_{ex}), pc/h	45			0			359			480						
Entry Flow (V_e), pc/h		491			167		97	109		44	468					
Entry Volume veh/h					162		94	106		43	454					
Capacity and v/c Ratios																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Capacity (c_{PCE}), pc/h		0			921		1082	1082		1116	1116					
Capacity (c), veh/h		0			894		1050	1050		1084	1084					
v/c Ratio (X)					0.18		0.09	0.10		0.04	0.42					
Delay and Level of Service																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Lane Control Delay (d), s/veh					5.8		4.2	4.3		3.7	7.8					
Lane LOS		F			A		A	A		A	A					
Lane 95% Queue					0.7		0.3	0.3		0.1	2.1					
Approach Delay, s/veh				5.82			4.27			7.43						
Approach LOS, s/veh				A			A			A						
Intersection Delay, s/veh	6.39															
Intersection LOS	A															

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #651 C Street/Trabuco Rd.

Cycle (sec): 100 Critical Vol./Cap.(X): 0.326

Loss Time (sec): 0 Average Delay (sec/veh): 9.3

Optimal Cycle: 0 Level Of Service: A

Street Name: C Street

Trabuco Rd

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Stop Sign Stop Sign Stop Sign Stop Sign

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 0 1 0

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Volume Module:

Base Vol: 51 16 4 4 105 44 22 52 170 15 55 2

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 51 16 4 4 105 44 22 52 170 15 55 2

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 51 16 4 4 105 44 22 52 170 15 55 2

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 55 17 4 4 114 48 24 57 185 16 60 2

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 55 17 4 4 114 48 24 57 185 16 60 2

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 55 17 4 4 114 48 24 57 185 16 60 2

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Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 0.80 0.20 1.00 0.70 0.30 1.00 0.23 0.77 1.00 0.96 0.04

Final Sat.: 568 505 126 580 463 194 608 173 567 583 616 22

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Capacity Analysis Module:

Vol/Sat: 0.10 0.03 0.03 0.01 0.25 0.25 0.04 0.33 0.33 0.03 0.10 0.10

Crit Moves: **** **** **** ****

Delay/Veh: 9.3 8.2 8.2 8.7 9.5 9.5 8.7 9.5 9.5 8.8 8.6 8.6

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 9.3 8.2 8.2 8.7 9.5 9.5 8.7 9.5 9.5 8.8 8.6 8.6

LOS by Move: A A A A A A A A A A A A

ApproachDel: 9.0 9.5 9.5 8.7

Delay Adj: 1.00 1.00 1.00 1.00

ApprAdjDel: 9.0 9.5 9.5 8.7

LOS by Appr: A A A A

AllWayAvgQ: 0.1 0.0 0.0 0.0 0.3 0.3 0.0 0.4 0.4 0.0 0.1 0.1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #652 LY Street/Trabuco Rd

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: A[9.3]

Street Name:	LY Street						Trabuco Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0

Volume Module:

Base Vol:	6	35	0	0	95	34	35	0	15	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	6	35	0	0	95	34	35	0	15	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	6	35	0	0	95	34	35	0	15	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	7	38	0	0	103	37	38	0	16	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	7	38	0	0	103	37	38	0	16	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	6.4	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	140	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	154	154	103	181	191	38
Potent Cap.:	1455	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	842	741	957	785	707	1040
Move Cap.:	1455	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	839	738	957	769	704	1040
Volume/Cap:	0.00	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.05	0.00	0.02	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Control Del:	7.5	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	9.5	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	A	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxx	xxxx	957	xxxx	0	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.1	xxxxxx	xxxxxx	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	8.8	xxxxxx	xxxxxx	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.3	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	A	*	*	*	*	*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #653 LY Street/Loop Road

Average Delay (sec/veh): 5.9 Worst Case Level Of Service: A[8.5]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1	0	1	0	0	0	0	0	1	0

Volume Module:

Base Vol:	0	9	3	67	18	0	0	0	0	2	0	31
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	9	3	67	18	0	0	0	0	2	0	31
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	9	3	67	18	0	0	0	0	2	0	31
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	10	3	73	20	0	0	0	0	2	0	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	10	3	73	20	0	0	0	0	2	0	34

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	13	xxxx	xxxxx	xxxx	xxxx	xxxxx	177	177	11
Potent Cap.:	xxxx	xxxx	xxxxx	1619	xxxx	xxxxx	xxxx	xxxx	xxxxx	818	721	1075
Move Cap.:	xxxx	xxxx	xxxxx	1619	xxxx	xxxxx	xxxx	xxxx	xxxxx	790	688	1075
Volume/Cap:	xxxx	xxxx	xxxx	0.04	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.03

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	1052	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	8.5	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx				8.5	
ApproachLOS:	*			*			*				A	

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #654 C Street/LV Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.073
 Loss Time (sec): 0 Average Delay (sec/veh): 7.1
 Optimal Cycle: 0 Level Of Service: A

Street Name:	C Street						LV Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	0	0	0	1	0	0	0

Volume Module:	C Street			C Street			LV Street			LV Street		
Base Vol:	2	7	2	5	51	5	2	4	5	5	4	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	7	2	5	51	5	2	4	5	5	4	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	7	2	5	51	5	2	4	5	5	4	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	2	8	2	5	55	5	2	4	5	5	4	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	8	2	5	55	5	2	4	5	5	4	2
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	2	8	2	5	55	5	2	4	5	5	4	2

Saturation Flow Module:	C Street			C Street			LV Street			LV Street		
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.18	0.64	0.18	0.08	0.84	0.08	0.18	0.36	0.46	0.46	0.36	0.18
Final Sat.:	165	578	165	75	762	75	168	335	419	397	318	159

Capacity Analysis Module:	C Street			C Street			LV Street			LV Street		
Vol/Sat:	0.01	0.01	0.01	0.07	0.07	0.07	0.01	0.01	0.01	0.01	0.01	0.01
Crit Moves:	****			****			****			****		
Delay/Veh:	7.0	7.0	7.0	7.2	7.2	7.2	6.9	6.9	6.9	7.1	7.1	7.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.0	7.0	7.0	7.2	7.2	7.2	6.9	6.9	6.9	7.1	7.1	7.1
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	7.0			7.2			6.9			7.1		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.0			7.2			6.9			7.1		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #655 O Street/8th Street

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: A[9.1]

Street Name:	O Street			8th Street									
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Lanes:	1	0	1	1	0	1	1	0	1	0	0	1	0

Volume Module:

Base Vol:	0	30	17	4	88	0	0	0	0	29	0	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	30	17	4	88	0	0	0	0	29	0	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	30	17	4	88	0	0	0	0	29	0	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	33	18	4	96	0	0	0	0	32	0	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	33	18	4	96	0	0	0	0	32	0	2

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	6.8	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	51	xxxx	xxxxx	121	155	48	98	146	26
Potent Cap.:	xxxx	xxxx	xxxxx	1568	xxxx	xxxxx	848	740	1017	896	749	1051
Move Cap.:	xxxx	xxxx	xxxxx	1568	xxxx	xxxxx	844	738	1017	894	747	1051
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.00	0.04	0.00	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.2	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0	xxxx	xxxx	1051
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.0
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.4
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.1	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	A	*	*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #656 8th Street /C Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.039
 Loss Time (sec): 0 Average Delay (sec/veh): 7.0
 Optimal Cycle: 0 Level Of Service: A

8th Street						C Street						
North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:												
Base Vol:	5	1	6	2	5	4	1	15	5	4	27	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	5	1	6	2	5	4	1	15	5	4	27	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	1	6	2	5	4	1	15	5	4	27	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	5	1	7	2	5	4	1	16	5	4	29	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	1	7	2	5	4	1	16	5	4	29	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	5	1	7	2	5	4	1	16	5	4	29	1

Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.42	0.08	0.50	0.18	0.46	0.36	0.05	0.71	0.24	0.13	0.84	0.03
Final Sat.:	388	78	465	168	419	335	44	663	221	112	758	28

Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.04	0.04	0.04
Crit Moves:	****			****			****			****		
Delay/Veh:	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	7.1	7.1	7.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	7.1	7.1	7.1
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	6.9			6.9			6.9			7.1		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	6.9			6.9			6.9			7.1		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #657 GP Blvd N/S Conn/GP Blvd E/W

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: A[9.3]

Street Name:	GP Blvd N/S Conn						GP Blvd EW					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	1	0	0	0	1	0	0	0	1

Volume Module:

Base Vol:	0	23	3	1	68	0	23	3	0	3	0	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	23	3	1	68	0	23	3	0	3	0	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	23	3	1	68	0	23	3	0	3	0	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	25	3	1	74	0	25	3	0	3	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	25	3	1	74	0	25	3	0	3	0	1

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	xxxxx	7.1	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	xxxxx	3.5	xxxx	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	28	xxxx	xxxxx	103	104	xxxxx	104	xxxx	27
Potent Cap.:	xxxx	xxxx	xxxxx	1598	xxxx	xxxxx	882	790	xxxxx	880	xxxx	1055
Move Cap.:	xxxx	xxxx	xxxxx	1598	xxxx	xxxxx	881	789	xxxxx	877	xxxx	1055
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.03	0.00	xxxx	0.00	xxxx	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	0.0
Control Del:	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.1	xxxx	8.4
LOS by Move:	*	*	*	A	*	*	*	*	*	A	*	A
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	869	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	A	*	*	*	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	9.3	xxxxxx	xxxxxx	8.9	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	A	*	*	A	*	*	A	*	A

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #562 GP Blvd/Marine Wy

Average Delay (sec/veh): 4.6 Worst Case Level Of Service: B[11.1]

Street Name:	GP Blvd			Marine Wy									
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled			
Rights:	Include			Include			Include			Include			
Lanes:	0	0	0	0	0	0	1	0	0	0	2	0	2

Volume Module:

Base Vol:	0	0	0	6	0	90	382	184	0	0	300	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	6	0	90	382	184	0	0	300	38
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	6	0	90	382	184	0	0	300	38
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	6	0	90	382	184	0	0	300	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	6	0	90	382	184	0	0	300	38

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	1175	xxxx	169	338	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	188	xxxx	852	1232	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	143	xxxx	852	1232	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.04	xxxx	0.11	0.31	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	0.4	1.3	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	31.4	xxxx	9.7	9.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	D	*	A	A	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			11.1			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #575 O Street/LV Street

Average Delay (sec/veh): 2.0 Worst Case Level Of Service: A[9.8]

Street Name:	O Street						LV Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:

Base Vol:	1	121	11	19	79	1	1	1	1	11	1	29
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	121	11	19	79	1	1	1	1	11	1	29
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	121	11	19	79	1	1	1	1	11	1	29
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	1	132	12	21	86	1	1	1	1	12	1	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	132	12	21	86	1	1	1	1	12	1	32

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	87	xxxx	xxxxxx	143	xxxx	xxxxxx	196	273	43	224	268	72
Potent Cap.:	1522	xxxx	xxxxxx	1451	xxxx	xxxxxx	751	637	1024	717	641	982
Move Cap.:	1522	xxxx	xxxxxx	1451	xxxx	xxxxxx	717	628	1024	707	632	982
Volume/Cap:	0.00	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.00	0.02	0.00	0.03

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.1	xxxx	xxxxxx
Control Del:	7.4	xxxx	xxxxxx	7.5	xxxx	xxxxxx	10.0	xxxx	xxxxxx	10.2	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	B	*	*	B	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	778	xxxx	xxxx	965
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxx	0.1
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	9.6	xxxxxx	xxxx	8.9
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.8	9.2	9.2	9.2	9.2	9.2
ApproachLOS:	*	*	*	*	*	*	A	A	A	A	A	A

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #576 O Street/C Street

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: B[10.6]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:

Base Vol:	1	160	76	14	99	1	1	1	1	31	1	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	160	76	14	99	1	1	1	1	31	1	10
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	160	76	14	99	1	1	1	1	31	1	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	1	174	83	15	108	1	1	1	1	34	1	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	174	83	15	108	1	1	1	1	34	1	11

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	109	xxxx	xxxxxx	257	xxxx	xxxxxx	228	397	54	302	357	128
Potent Cap.:	1494	xxxx	xxxxxx	1320	xxxx	xxxxxx	713	543	1008	633	573	904
Move Cap.:	1494	xxxx	xxxxxx	1320	xxxx	xxxxxx	697	537	1008	625	566	904
Volume/Cap:	0.00	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.00	0.05	0.00	0.01

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	0.2	xxxx	xxxxxx
Control Del:	7.4	xxxx	xxxxxx	7.8	xxxx	xxxxxx	10.2	xxxx	xxxxxx	11.1	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	B	*	*	B	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	700	xxxx	xxxx	858
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.0	xxxxxx	xxxx	0.0
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	10.2	xxxxxx	xxxx	9.3
Shared LOS:	*	*	*	*	*	*	*	*	B	*	*	A
ApproachDel:	xxxxxx			xxxxxx			10.2			10.6		
ApproachLOS:	*			*			B			B		

Note: Queue reported is the number of cars per lane.

ROUNABOUT REPORT																
General Information								Site Information								
Analyst	M. Macias							Intersection	O Street/C Street							
Agency or Co.	LSA Associates, Inc.							E/W Street Name	C Street							
Date Performed	6/5/2014							N/S Street Name	O Street							
Time Period	Alternative 6 PM							Analysis Year								
Peak Hour Factor	0.92							Project ID	688-Acre Park Development Plan							
Project Description:																
Volume Adjustment and Site Characteristics																
	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	0	0	0		0	1	0		0	2	0		1	1	0	
Lane Assignment					LTR				T				TR			
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Volume (V), veh/h	0	0	0	0	19		115	0	0	265	16	0	94	251	0	0
Heavy Veh. Adj. (f_{HV}), %	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Pedestrians Crossing	0				0				0				0			
Critical and Follow-Up Headway Adjustment																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Critical Headway (sec)	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929	5.1929				
Follow-Up Headway (sec)	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858	3.1858				
Flow Computations																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Circulating Flow (V_c), pc/h	407			297			105									
Exiting Flow (V_{ex}), pc/h	123			-36685			425			302						
Entry Flow (V_e), pc/h		564					148	167		105	281					
Entry Volume veh/h							144	162		102	273					
Capacity and v/c Ratios																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Capacity (c_{PCE}), pc/h		0			840		1017	1017								
Capacity (c), veh/h		0			815		988	988								
v/c Ratio (X)							0.15	0.16								
Delay and Level of Service																
	EB			WB			NB			SB						
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass				
Lane Control Delay (d), s/veh							5.0	5.2								
Lane LOS		F					A	A								
Lane 95% Queue							0.5	0.6								
Approach Delay, s/veh							5.09									
Approach LOS, s/veh							A									
Intersection Delay, s/veh	7.99															
Intersection LOS	A															

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #651 C Street/Trabuco Rd.

Cycle (sec): 100 Critical Vol./Cap.(X): 0.534
 Loss Time (sec): 0 Average Delay (sec/veh): 12.2
 Optimal Cycle: 0 Level Of Service: B

Street Name:	C Street						Trabuco Rd											
Approach:	North Bound			South Bound			East Bound			West Bound								
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R			
Control:	Stop Sign						Stop Sign						Stop Sign					
Rights:	Include						Include						Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0			

Volume Module:	C Street						Trabuco Rd					
Base Vol:	171	102	47	10	64	36	41	173	125	21	103	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	171	102	47	10	64	36	41	173	125	21	103	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	171	102	47	10	64	36	41	173	125	21	103	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	186	111	51	11	70	39	45	188	136	23	112	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	186	111	51	11	70	39	45	188	136	23	112	8
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	186	111	51	11	70	39	45	188	136	23	112	8

Saturation Flow Module:	C Street						Trabuco Rd					
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.68	0.32	1.00	0.64	0.36	1.00	0.58	0.42	1.00	0.94	0.06
Final Sat.:	524	400	184	484	346	195	530	352	255	497	506	34

Capacity Analysis Module:	C Street						Trabuco Rd					
Vol/Sat:	0.36	0.28	0.28	0.02	0.20	0.20	0.08	0.53	0.53	0.05	0.22	0.22
Crit Moves:	****						****					
Delay/Veh:	12.7	10.7	10.7	9.8	10.3	10.3	9.8	14.4	14.4	9.8	10.6	10.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.7	10.7	10.7	9.8	10.3	10.3	9.8	14.4	14.4	9.8	10.6	10.6
LOS by Move:	B	B	B	A	B	B	A	B	B	A	B	B
ApproachDel:	11.7			10.3			13.8			10.5		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.7			10.3			13.8			10.5		
LOS by Appr:	B			B			B			B		
AllWayAvgQ:	0.5	0.3	0.3	0.0	0.2	0.2	0.1	1.0	1.0	0.0	0.2	0.2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #652 LY Street/Trabuco Rd

Average Delay (sec/veh): 4.6 Worst Case Level Of Service: B[11.0]

Street Name:	LY Street						Trabuco Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0

Volume Module:

Base Vol:	64	126	0	0	163	48	77	0	132	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	64	126	0	0	163	48	77	0	132	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	64	126	0	0	163	48	77	0	132	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	70	137	0	0	177	52	84	0	143	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	70	137	0	0	177	52	84	0	143	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	6.4	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	229	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	453	453	177	551	505	137
Potent Cap.:	1351	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	568	505	871	448	472	917
Move Cap.:	1351	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	546	479	871	360	448	917
Volume/Cap:	0.05	xxxx	xxxx	xxxx	xxxx	xxxx	0.15	0.00	0.16	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.2	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	0.5	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Control Del:	7.8	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	12.8	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	A	*	*	*	*	*	B	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	871	xxxx	0	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	0.6	xxxxxx	xxxx	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	9.9	xxxxxx	xxxx	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	11.0	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	B	*	*	*	*	*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #653 LY Street/Loop Road

Average Delay (sec/veh): 7.7 Worst Case Level Of Service: A[9.3]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1	0	1	0	0	0	0	0	1	0

Volume Module:

Base Vol:	0	13	16	280	6	0	0	0	0	4	0	160
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	13	16	280	6	0	0	0	0	4	0	160
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	13	16	280	6	0	0	0	0	4	0	160
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	14	17	304	7	0	0	0	0	4	0	174
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	14	17	304	7	0	0	0	0	4	0	174

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	32	xxxx	xxxxx	xxxx	xxxx	xxxxx	638	638	23
Potent Cap.:	xxxx	xxxx	xxxxx	1594	xxxx	xxxxx	xxxx	xxxx	xxxxx	444	397	1060
Move Cap.:	xxxx	xxxx	xxxxx	1594	xxxx	xxxxx	xxxx	xxxx	xxxxx	379	321	1060
Volume/Cap:	xxxx	xxxx	xxxx	0.19	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	0.00	0.16

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.7	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT		LT - LTR - RT	LT - LTR - RT	LT - LTR - RT		LT - LTR - RT	LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	1015	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.6	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.3	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx				9.3	
ApproachLOS:	*			*			*				A	

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #654 C Street/LV Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.110
 Loss Time (sec): 0 Average Delay (sec/veh): 7.4
 Optimal Cycle: 0 Level Of Service: A

C Street						LV Street									
North Bound			South Bound			East Bound			West Bound						
Approach:	L	T	R	L	T	R	L	T	R	L	T	R			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	0	0	1	0	0	0	0	0	1	0	0	0			

Volume Module:												
Base Vol:	3	81	6	8	65	5	8	6	5	3	2	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	81	6	8	65	5	8	6	5	3	2	5
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	81	6	8	65	5	8	6	5	3	2	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	3	88	7	9	71	5	9	7	5	3	2	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	88	7	9	71	5	9	7	5	3	2	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	88	7	9	71	5	9	7	5	3	2	5

Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.03	0.90	0.07	0.10	0.84	0.06	0.42	0.32	0.26	0.30	0.20	0.50
Final Sat.:	30	800	59	91	735	57	346	260	216	255	170	426

Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.11	0.10	0.10	0.10	0.03	0.03	0.03	0.01	0.01	0.01
Crit Moves:	****			****			****			****		
Delay/Veh:	7.5	7.5	7.5	7.5	7.5	7.5	7.3	7.3	7.3	7.1	7.1	7.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.5	7.5	7.5	7.5	7.5	7.5	7.3	7.3	7.3	7.1	7.1	7.1
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	7.5			7.5			7.3			7.1		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	7.5			7.5			7.3			7.1		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #655 O Street/8th Street

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: A[9.7]

Street Name:	O Street			8th Street									
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Lanes:	1	0	1	1	0	1	1	0	1	0	0	1	0

Volume Module:

Base Vol:	0	129	33	7	79	0	0	0	0	31	0	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	129	33	7	79	0	0	0	0	31	0	11
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	129	33	7	79	0	0	0	0	31	0	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	140	36	8	86	0	0	0	0	34	0	12
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	140	36	8	86	0	0	0	0	34	0	12

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	6.8	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	176	xxxx	xxxxx	171	277	43	216	259	88
Potent Cap.:	xxxx	xxxx	xxxxx	1412	xxxx	xxxxx	782	634	1025	758	649	959
Move Cap.:	xxxx	xxxx	xxxxx	1412	xxxx	xxxxx	769	631	1025	755	645	959
Volume/Cap:	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.00	0.04	0.00	0.01

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.0	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0	xxxx	xxxx	959
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.0
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.8
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	A
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.7	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	A	*	*

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #656 8th Street /C Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.061
 Loss Time (sec): 0 Average Delay (sec/veh): 7.1
 Optimal Cycle: 0 Level Of Service: A

8th Street						C Street						
North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0

Volume Module:												
Base Vol:	3	1	16	3	4	2	1	35	5	11	38	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	1	16	3	4	2	1	35	5	11	38	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	1	16	3	4	2	1	35	5	11	38	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	3	1	17	3	4	2	1	38	5	12	41	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	1	17	3	4	2	1	38	5	12	41	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	1	17	3	4	2	1	38	5	12	41	1

Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.15	0.05	0.80	0.33	0.45	0.22	0.02	0.86	0.12	0.22	0.76	0.02
Final Sat.:	144	48	767	289	386	193	22	772	110	195	672	18

Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.01	0.01	0.01	0.05	0.05	0.05	0.06	0.06	0.06
Crit Moves:	****			****			****			****		
Delay/Veh:	6.7	6.7	6.7	7.1	7.1	7.1	7.1	7.1	7.1	7.3	7.3	7.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	6.7	6.7	6.7	7.1	7.1	7.1	7.1	7.1	7.1	7.3	7.3	7.3
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	6.7			7.1			7.1			7.3		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	6.7			7.1			7.1			7.3		
LOS by Appr:	A			A			A			A		
AllWayAvgQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #657 GP Blvd N/S Conn/GP Blvd E/W

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[10.2]

Street Name:	GP Blvd N/S Conn						GP Blvd EW					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	0	1	0	0	0	0	0	0	0	0

Volume Module:

Base Vol:	0	160	3	1	150	0	0	0	0	3	0	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	160	3	1	150	0	0	0	0	3	0	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	160	3	1	150	0	0	0	0	3	0	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	0	174	3	1	163	0	0	0	0	3	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	174	3	1	163	0	0	0	0	3	0	1

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	177	xxxx	xxxxx	xxxx	xxxx	xxxxx	341	xxxx	176
Potent Cap.:	xxxx	xxxx	xxxxx	1411	xxxx	xxxxx	xxxx	xxxx	xxxxx	659	xxxx	873
Move Cap.:	xxxx	xxxx	xxxxx	1411	xxxx	xxxxx	xxxx	xxxx	xxxxx	659	xxxx	873
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	0.0
Control Del:	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.5	xxxx	9.1
LOS by Move:	*	*	*	A	*	*	*	*	*	B	*	A
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	10.2	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	B	*	*

Note: Queue reported is the number of cars per lane.

APPENDIX F

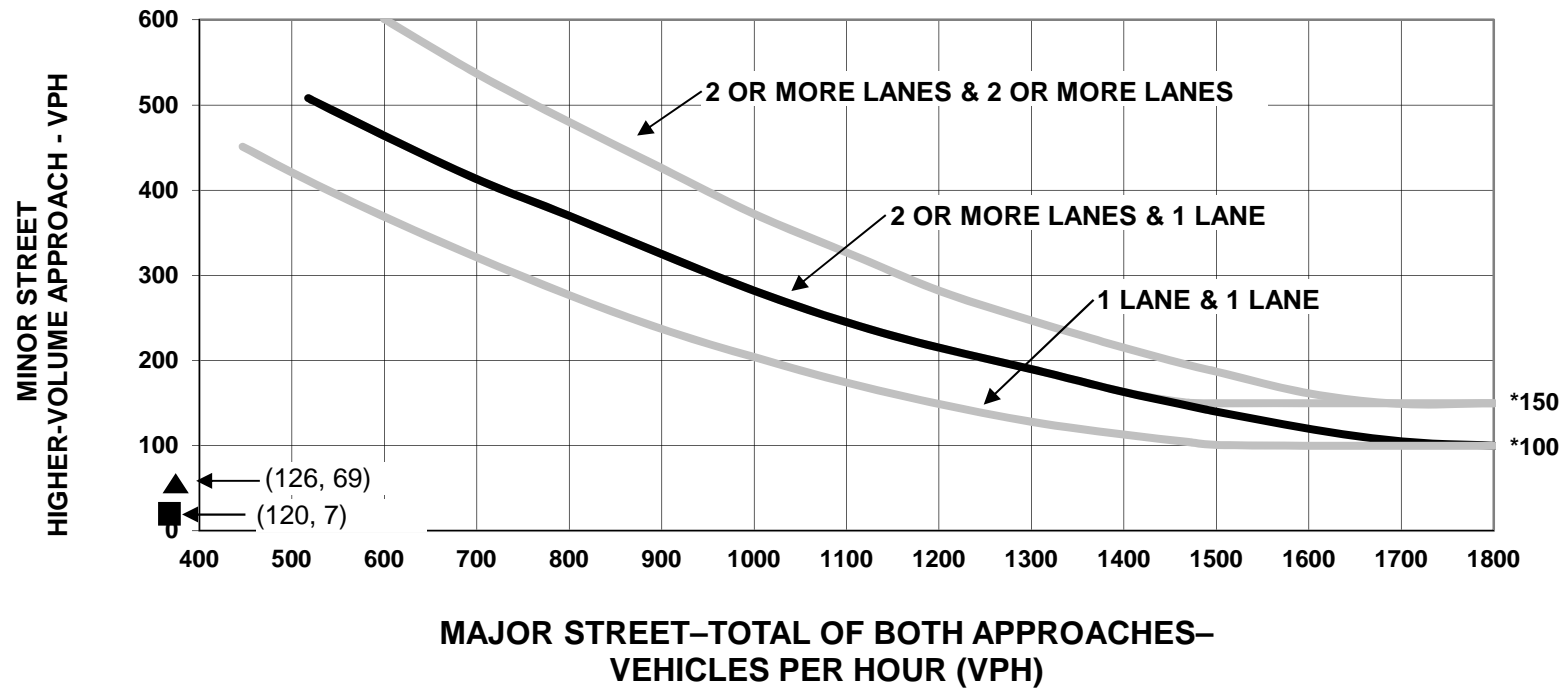
**SPECIAL ISSUES – ALTERNATIVE ACCESS TO PARKING
AREAS 3 & 4**

Figure 24 - Signal Warrant Analysis

Intersection 664: C St./Parking Area 4 (North)

Post-2035 - Base Condition + 688 Acre Park Development Plan

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

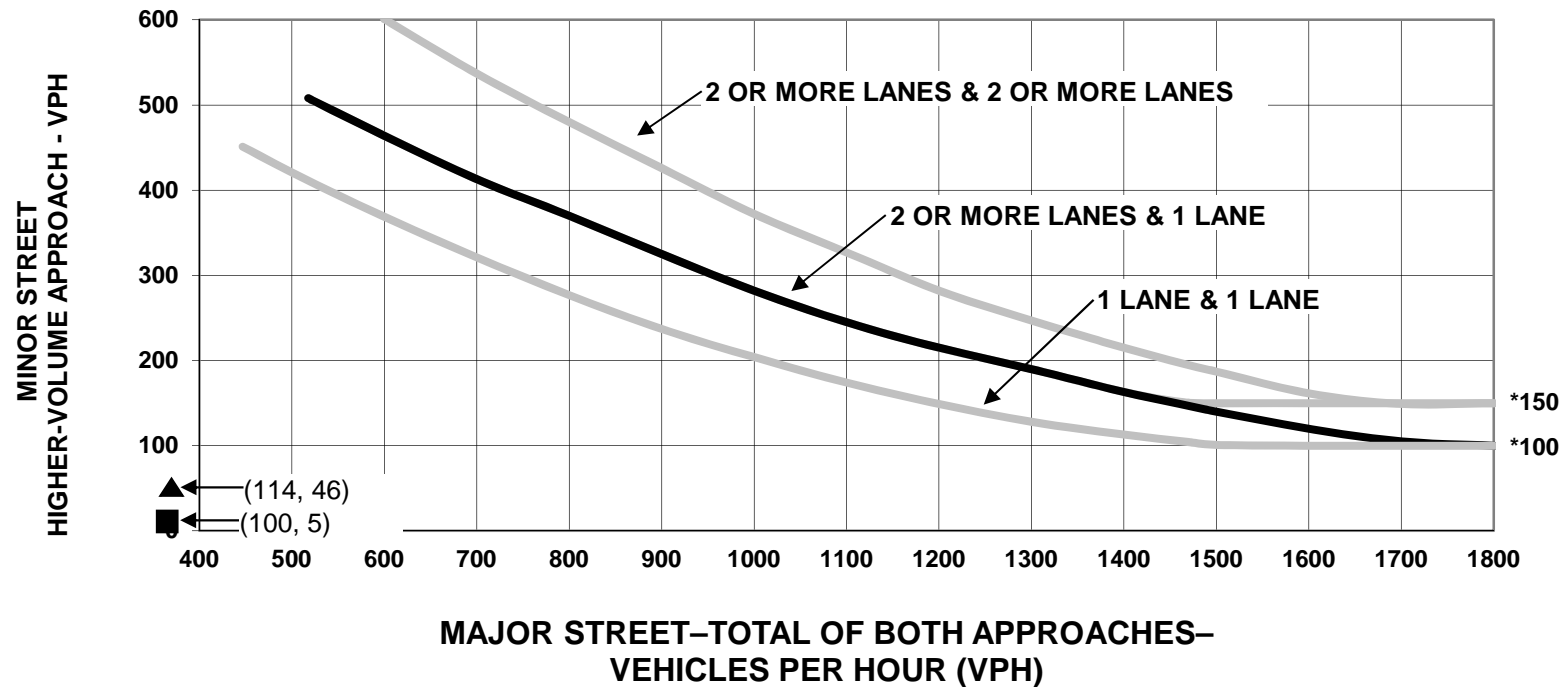
- A.M. Peak Hour
- ▲ P.M. Peak Hour

Figure 25 - Signal Warrant Analysis

Intersection 665: C St./Parking Area 4 (South)

Post-2035 - Base Condition + 688 Acre Park Development Plan

Figure 4C-3, Warrant, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Legend

- A.M. Peak Hour
- ▲ P.M. Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #664 C Street/Parking Area 4 (North)

Average Delay (sec/veh): 2.8 Worst Case Level Of Service: A[9.7]

Street Name:	C Street						Parking Area 4 (North)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:

Base Vol:	1	16	3	33	57	10	2	3	1	1	2	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	16	3	33	57	10	2	3	1	1	2	4
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	16	3	33	57	10	2	3	1	1	2	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	1	17	3	36	62	11	2	3	1	1	2	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	17	3	36	62	11	2	3	1	1	2	4

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	73	xxxx	xxxxxx	21	xxxx	xxxxxx	164	162	67	163	166	19
Potent Cap.:	1540	xxxx	xxxxxx	1608	xxxx	xxxxxx	806	734	1002	807	731	1065
Move Cap.:	1540	xxxx	xxxxxx	1608	xxxx	xxxxxx	786	717	1002	789	713	1065
Volume/Cap:	0.00	xxxx	xxxx	0.02	xxxx	xxxx	0.00	0.00	0.00	0.00	0.00	0.00

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxxx	0.1	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Control Del:	7.3	xxxx	xxxxxx	7.3	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	777	xxxxxx	xxxx	894	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	0.0	xxxxxx	xxxxxx	0.0	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	9.7	xxxxxx	xxxxxx	9.1	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	A	*	*	A	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.7	xxxxxx	xxxxxx	9.1	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	A	A	A	A	A	A

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #665 C Street/Parking Area 4 (South)

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: A[9.4]

Street Name:	C Street						Parking Area 4 (South)					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0

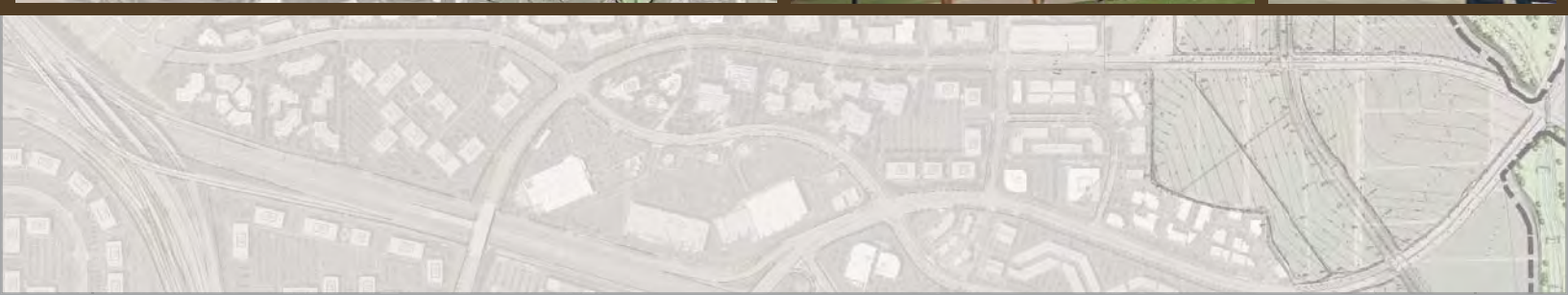
Volume Module:	C Street			C Street			Parking Area 4 (South)			Parking Area 4 (South)		
Base Vol:	2	18	13	7	55	5	1	3	1	1	2	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	18	13	7	55	5	1	3	1	1	2	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	18	13	7	55	5	1	3	1	1	2	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	2	20	14	8	60	5	1	3	1	1	2	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	20	14	8	60	5	1	3	1	1	2	1

Critical Gap Module:	C Street			C Street			Parking Area 4 (South)			Parking Area 4 (South)		
Critical Gp:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:	C Street			C Street			Parking Area 4 (South)			Parking Area 4 (South)		
Cnflct Vol:	65	xxxx	xxxxxx	34	xxxx	xxxxxx	110	116	63	111	111	27
Potent Cap.:	1550	xxxx	xxxxxx	1591	xxxx	xxxxxx	873	778	1008	872	782	1055
Move Cap.:	1550	xxxx	xxxxxx	1591	xxxx	xxxxxx	866	773	1008	864	778	1055
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.00	0.00	0.00	0.00

Level Of Service Module:	C Street			C Street			Parking Area 4 (South)			Parking Area 4 (South)		
2Way95thQ:	0.0	xxxx	xxxxxx	0.0	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
Control Del:	7.3	xxxx	xxxxxx	7.3	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	830	xxxxxx	xxxx	855	xxxxxx
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	0.0	xxxxxx	xxxxxx	0.0	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	9.4	xxxxxx	xxxxxx	9.2	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	A	*	*	A	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	9.4				9.2	
ApproachLOS:	*	*	*	*	*	*	A				A	

Note: Queue reported is the number of cars per lane.



City of Irvine

Addendum No.10 – Minor Modification to the Orange County Great Park Master Plan for the Community Ice Facility



February 2016

City of Irvine

**ADDENDUM NO. 10 – MINOR MODIFICATION TO
THE ORANGE COUNTY GREAT PARK MASTER
PLAN FOR THE COMMUNITY ICE FACILITY**

February 2016

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ADDENDUM NO. 10

**ORANGE COUNTY GREAT PARK
MASTER PLAN**

**MINOR MODIFICATION TO THE ORANGE COUNTY GREAT PARK MASTER PLAN FOR
THE COMMUNITY ICE FACILITY**

SCH #2002101020

**Prepared by:
City of Irvine
Community Development Department
One Civic Center
Plaza Irvine, CA
92606**

**Contact:
Barry Curtis, AICP
Manager of Planning Services**

FEBRUARY 2016

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1. Environmental Impact Report Addendum Summary

1.1 PURPOSE AND SCOPE

This Initial Study/Addendum provides the basis for augmenting the previously certified Final Environmental Impact Report (FEIR)(State Clearinghouse No. 2002101020) for the Orange County Great Park (OCGP) (subject of Addendum No. 4 and, because the OCGP Master Plan was modified in 2014, subject to Addendum No. 9) and serves as the California Environmental Quality Act (CEQA) documentation for the following:

- Minor Modification to OCGP Master Plan (00661956-PMPC)
- Adoption of this Addendum No. 10

The requested modification to the OCGP Master Plan does not propose any changes to approved and environmentally reviewed development intensities within the OCGP Master Plan area. This Addendum has been prepared pursuant to the provisions of CEQA (Public Resources Code Sections 21000 et seq.), the State CEQA Guidelines, and the City of Irvine (City) Local Guidelines for Implementing CEQA (Local CEQA Guidelines).

The term “proposed Project” refers to the proposed modifications to/expansion of the Community Ice Rink, while the term “project” refers to the total Marine Corps Air Station (MCAS) El Toro reuse plan analyzed in the OCGP FEIR (and its subsequent addenda) consisting of approximately 4,700 acres. The term “OCGP FEIR” refers to the 2003 Orange County Great Park FEIR as updated by its prior Addenda (i.e., Addendum No. 1 through Addendum No. 9) and two Supplemental Environmental Impact Reports (SEIRs). The term “Project site” refers to the location of the Community Ice Facility while “project site” refers to the OCGP Master Plan area.

1.2 ENVIRONMENTAL PROCEDURES

Pursuant to CEQA, the State CEQA Guidelines, and the Local CEQA Guidelines, this Initial Study/Addendum focuses on the proposed expansion of the Community Ice Facility to determine if the proposed Project would cause a change in the environmental impact conclusions of the OCGP FEIR, and if any change in circumstances or new information exists that would substantially change the conclusions of the OCGP FEIR.

Pursuant to Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines, when an Environmental Impact Report (EIR) has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for the project unless the lead agency determines, on the basis of substantial evidence, that one or more of the following conditions are met:

1. EIR Addendum Summary

- (1) Substantial changes are proposed in the project that will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;*
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken that will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or*
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, suggests any of the following:*
 - a) The project would have one or more significant effects not discussed in the previous EIR or negative declaration.*
 - b) Significant effects previously examined would be substantially more severe than identified in the previous EIR.*
 - c) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives.*
 - d) Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.*

Section 15164 of the State CEQA Guidelines states that an Addendum to an EIR shall be prepared "if some changes or additions are necessary, but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred." This Initial Study/Addendum reviews the changes proposed by the proposed Project and any changes to the existing conditions that have occurred since the OCGP FEIR was last augmented by OCGP Master Plan Modification No. 2 (approved by the Planning Commission in July 2014); and the Park Design for the 688-acre OCGP Improvement Area (approved by the City Council in July 2014). It also reviews any new information of substantial importance that was not known and could not have been known with exercise of reasonable diligence at the time that the OCGP FEIR was certified. It further examines whether, as a result of any changes or any new information, a subsequent or supplemental EIR may be required. This examination includes an analysis of the provisions of Section 21166 of CEQA and Section 15162 of the State CEQA Guidelines and their applicability to the proposed Project. This Initial Study/Addendum relies on the attached Environmental Analysis, which addresses environmental checklist issues on a section-by-section basis.

The City Environmental Checklist Form has been completed by the City and included in Section 3, *Environmental Checklist*. The Environmental Checklist Form is marked with the findings of the City's Community Development Director as to the environmental effects of the proposed Project in comparison

1. EIR Addendum Summary

with the findings of the OCGP FEIR. The checklist has been prepared pursuant to Section 15168(c)(4) of CEQA, which states that “where the subsequent activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR.”

Using that approach, the City of Irvine, the Lead Agency, determined that an Addendum to the previously approved OCGP FEIR is the appropriate environmental clearance for the proposed Project.

1.3 PREVIOUS ENVIRONMENTAL DOCUMENTATION

The OCGP FEIR was originally certified by the City of Irvine in May 2003. The project analyzed in the OCGP FEIR consisted of the following actions: (1) Annexation, General Plan Amendment, Pre-Zoning (prior to annexation), and Zoning of the unincorporated portion of Planning Area (PA) 51; (2) Annexation of the unincorporated portion of PA 35 (Irvine Ranch Water District Parcel); (3) General Plan Amendment and Zone Change for PA 30 (the overall site originally included PAs 30 and 51, which were later merged into a single PA 51; for purposes of this document, both PA 30 and PA 51 will be referred to as the PA 51); and (4) Approval of the form of a Development Agreement vesting approval of overlay uses and intensities in consideration for dedication of land for public purposes and for developing and funding certain infrastructure improvements and maintenance of the public uses by the purchaser/developer and subsequent landowners and funding for specific park, roadways, and other circulation facilities and infrastructure. Together, these actions establish the policy and legislative structure to guide the development of the former MCAS El Toro property.

The OCGP FEIR mitigation measures are provided in the adopted Mitigation Monitoring and Reporting Program included in Appendix A. The table includes:

- Mitigation measure number and a description of the action;
- Timing for implementation;
- Approving authority and reviewing agency(s), if any; and
- Method of compliance

Subsequent to certification of the OCGP FEIR, 9 Addenda (i.e., Addendum No. 1 through Addendum No. 9) and two supplemental Environmental Impact Reports (SEIR and SSEIR) were approved and certified to address the potential environmental impacts associated with modifications to the OCGP FEIR. A brief overview of these documents is provided below.

- Addendum No. 1, approved by the City on May 18, 2006, augmented the OCGP FEIR to address the potential for environmental issues associated with the implementation of the OCGP Redevelopment Project Area Plan.
- Addendum No. 2 was approved by the City Council on October 24, 2006. This addendum analyzed the potential for environmental issues associated with adjustments to the boundary between the public and private areas of the OCGP; revisions to Zoning Ordinance text and figures related to PAs 30 and 51; the creation of a mixed-use zoning category called the Lifelong Learning District (LLD) within PA 51; and technical changes to the General Plan, as described in Section 2.3 of Addendum No. 2.

1. EIR Addendum Summary

- Addendum No. 3, approved by the City Planning Commission on May 17, 2007, addressed the potential for environmental issues associated with a proposal for the approval of Vesting Tentative Tract Map No. 17008 (Master Subdivision map).
- Addendum No. 4 was approved by the City Planning Commission on August 2, 2007. This addendum analyzed the development of the OCGP (Great Park Master Plan), which provides a conceptual design for the future build out of the 1,145-acre park with passive and active features.
- Addendum No. 5, approved by the City Council on July 22, 2008, analyzed changes to figures in the General Plan to reflect the Bake Parkway/Marine Way intersection relocation and the Rockfield Boulevard reconfiguration in the southern portion of PA 30, and amendments to the Orange County Transportation Authority's (OCTA) Master Plan of Arterial Highways; the City-Heritage Fields Development Agreement; and related changes to the City's General Plan and Zoning Ordinance.
- Addendum No. 6 was approved by the City Planning Commission on October 16, 2008, and analyzed the potential for environmental issues associated with requested entitlements: including amended Vesting Tentative Tract Map No. 17008, Vesting Tentative Tract Map No. 17283, Modification to OCGP Streetscape Design Guidelines, the Master Landscape and Trails Plan, and the Master Plan for Nonresidential Development within the LLD.
- Addendum No. 7 to the 2003 OCGP EIR, approved by the City on June 29, 2010, was prepared in connection with revisions to the North Irvine Transportation Mitigation (NITM) Program. The update removed planned traffic improvements at seven intersections from the list of traffic mitigation measures in the OCGP FEIR.

In 2011, Heritage Fields sought from the City a series of entitlements, including a General Plan amendment, a zone change, seven subdivision maps, six master plans and five park plan approvals associated with the private development of a portion of the Heritage Fields-owned property within PA 51 and former PA 30 (Modified Project). A supplement to the OCGP FEIR (SEIR) was prepared in connection with those entitlement applications. The SEIR was approved and certified by the City Council on August 30, 2011.

Addendum No. 8 was prepared analyzing the potential environmental issues associated with a minor modification to the Great Park Master Plan and Park Design, which was associated with implementation of the Western Sector Park Development Plan Phase I. The minor modification proposed transferring nonresidential square footage from the central area (i.e., Cultural Terrace) to the southwestern area of the OCGP (i.e., Sports Park); removing the Air Museum and Concessions/Retail and replacing them with the Artist in Residency Facility, the proposed Community Ice Facility, and the proposed Nature Education Garden; and replacing the existing Air Museum Hangar with Hangar 244. Addendum No. 8 was approved by the City on October 20, 2011.

In 2012, a Second Supplemental EIR (a supplement to the OCGP FEIR [SSEIR]) was prepared to analyze the 2012 Modified Project as compared to the 2011 Approved Project. The SSEIR addressed the environmental impacts associated with the implementation of the Heritage Fields 2012 General Plan Amendment and Zone Change Project, including the 688-acre OCGP Improvement Area. The 2012 Modified Project consisted of the reduction of 410,400 square feet of nonresidential intensity and a corresponding addition of 3,412 dwelling units, as well as 1,194 density bonus units for a total of 4,606 new dwelling units (i.e., 9,500 total dwelling units). The Modified Project proposed relocation of certain portions of the approved Wildlife Corridor Feature (Segments 2 and 3). The SSEIR also analyzed the

1. EIR Addendum Summary

potential impacts associated with two options for the Main Street development along Trabuco Road east of "O" Street. Additionally, the 2012 Modified Project included implementation of recreational facilities in the previously approved Sports Park District of the OCGP. PA 30 and PA 51 were also combined into a single PA, Combined PA 51, to create a cohesive development governed by a unified set of land use and development regulations. On November 26, 2013, the City Council certified the SSEIR.

Concurrent with the certification of the SSEIR, on November 26, 2013, the City Council also approved a contractual agreement (ALA II) with Heritage Fields that obligated Heritage Fields to construct 688 acres of the Great Park (the Design Package). The ALA II included provisions that allowed the City to unilaterally require program changes within the 688-acre OCGP Improvement Area, with respect to the following elements of the Design Package: a) sand volleyball, parking, and sports courts within the Sports Park subarea; b) the dog park and mini-amphitheater within the Bosque subarea. On March 18, 2014, the City Council approved the Unilateral Changes to the Design Package of the contractual agreement (ALA II). This action will be reflected in the discretionary action that the Planning Commission will be asked to make with regard to the Master Plan modification. Because CEQA clearance for the Design Package was established through the SSEIR, this Addendum document analyzes the Unilateral and Program Changes as approved by the City Council. The SSEIR served as the environmental clearance for the ALA II and its implementation.

Addendum No. 9 to the 2003 OCGP EIR, approved by the City in July , 2014, addressed potential environmental impacts associated with the modifications to the 688-acre OCGP Improvement Area, which included both the Unilateral Program Changes allowed in the ALA II and other staff-recommended changes to OCGP Improvement Area 1. The proposed modifications to the OCGP Improvement Area were within the Bosque and Sports Park Districts. Additionally, two design features of the Project that would be incorporated upon project implementation included dual 250-foot-long eastbound left-turn pockets at Marine Way and Great Park Boulevard West (Great Park Street 1) and a 250-foot-long westbound right-turn lane at the Marine Way right-in/right-out driveway, west of Great Park Boulevard (West) (Great Park Street 1).

The OCGP FEIR, as augmented by Addenda 1 through 9 (collectively, Addenda) and all of the associated technical documents, reports, and analyses are on file and can be reviewed at the City Community Development Department at One Civic Center Plaza, Irvine, California 92623.

1.4 ENVIRONMENTAL SETTING

The OCGP is in the central portion of Orange County, approximately 45 miles southeast of the County of Los Angeles. The project area is generally bounded by the Woodbury residential development to the west, the Portola Springs residential development to the north (under construction), the Irvine Spectrum to the south, and the City of Lake Forest to the east. Other nearby local jurisdictions include the Cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo, and Tustin.

The Irvine Station, a major multimodal transit center linking OCTA bus, Metrolink commuter rail, and Amtrak rail services, is adjacent to the Southern California Regional Rail Authority (SCRRA) Metrolink tracks, which run south of the Project site.

The existing facilities and uses within the OCGP Master Plan area include existing portions of the Western Sector Park Development Plan (WSPDP) Phase I (e.g., the Balloon Park, Hangar 244, artist

1. EIR Addendum Summary

lofts, Central and West Timeline, North and South Lawns, Farm & Food Lab, Palm Court, and support parking). Consistent with the City's Zoning Ordinance, there are interim uses of the land and existing buildings which include Tierra Verde Industries, a composting and electronic waste recycling facility; agriculture; and a special event parking lot.

1.5 CONCLUSIONS OF ADDENDUM

Addendum No. 10 analyzes the potential impacts of the proposed modifications to the Community Ice Facility. The first phase of the OCGP, referred to as WSPDP Phase 1, includes sports fields, supportive uses, and displays consistent with the approved Master Plan. A community ice rink facility (Area L) and western picnic area (Area E) are included in the description of uses approved for this area of the OCGP. This area is bounded by "LV" Street to the north, 8th Street to the south, "G" Street to the east (a new north/south roadway between the special event parking area and the Project site, proposed as part of the project), and Ridge Valley to the west. The Community Ice Facility (approved as part of the modifications analyzed in Addendum No. 8) would include three sheets of ice, seating for up to 1,200 people at one rink and 100 each for the other two rinks (i.e., 1,400 total seats), and special events held up to 6 weekdays per year. An expansion to the approved Community Ice Facility portion of the Western Sector is proposed. The project proposes four sheets of ice, seating for up to 2,500 people at one rink and 500 each for the others (i.e., 4,000 total seats), and special events held up to 12 times per year. Section 4.0 of this document discusses the findings of the analysis in comparison to the OCGP FEIR.

The environmental analysis contained in this document focuses on the following environmental topics: Aesthetics, Agriculture and Forestry Resources, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Greenhouse Gas Emission, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Public Services, Transportation/Traffic, and Utilities and Service Systems. The analysis concluded that the proposed modifications reflect a development program that is consistent with the existing land use designations and does not deviate from the development program for the area. No new uses or significant changes are proposed as part of the proposed Project, beyond those previously studied and disclosed, that would create new adverse impacts related to any of the above environmental topics or a substantial increase in the severity of previously identified significant effects.

Also, there are no mitigation measures or alternatives previously found not to be feasible that would in fact be feasible, and would substantially reduce one or more significant effects of the project, and there are no mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR that would substantially reduce one or more significant effects on the environment. Therefore, no new mitigation measures are proposed, even though all original applicable mitigation measures from the OCGP FEIR and new mitigation measures; existing plans, programs, or policies (PPPs); and project design features (PDFs) from the supplemental EIRs (SEIR and SSEIR) have been carried forward into this document to further help reduce or avoid potential significant impacts.

2. Project Description

2.1 PROJECT LOCATION

The Orange County Great Park (OCGP), within PA 51, is northeast of the freeway junction at Interstate 5 (I-5), State Route 133 (SR-133), and Interstate 405 (I-405). The OCGP is in the central portion of County of Orange, approximately 45 miles southeast of the County of Los Angeles. Other nearby local jurisdictions include the Cities of Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Aliso Viejo, and Tustin. Figure 2-1 shows the regional location of the OCGP.

A Community Ice Facility (Area L) and Western Picnic Area (Area E) are included in the approved OCGP Master Plan and WSPDP. Figure 2-2 provides an aerial photograph showing the relationship between the OCGP Master Plan, the WSPDP, and the Project site. The proposed Project would combine Area L and Area E. The proposed 14.06-acre Community Ice Facility site (Project site) is bounded by "LV" Street to the north, 8th Street to the south, "G" Street to the east (a new north/south roadway between the special event parking area and the project site, proposed as part of the project) and Ridge Valley to the west. Figure 2-3 provides the proposed Site Plan and shows the surrounding streets.

Surrounding land uses include the OCGP Balloon and Visitors Center to the east, commercial retail to the south, and the California Highway Patrol Orange County Communication Center, the California Department of Transportation (Caltrans) District 12 Management Center, and the Irvine Unified School District Office to the west, across SR-133.

2.2 PROJECT CHARACTERISTICS

2.2.1 Project Background

On May 27, 2003, the City Council certified the OCGP FEIR and adopted a General Plan amendment (GPA) and zone change (ZC) to implement the development of the OCGP. To develop at the maximum intensities allowed in the Overlay Plan shown in the General Plan and Zoning Ordinance, the land use entitlements required that the property owner enter into a development agreement with the City, which required, among other things, the dedication of land and the development or funding of certain infrastructure improvements.

Addendum No. 8 was prepared analyzing the potential environmental issues associated with a minor modification to the OCGP Master Plan and Park Design, which was associated with implementation of the WSPDP Phase I. The minor modification proposed transferring nonresidential square footage from the central area (i.e., Cultural Terrace) to the southwestern area of the OCGP (i.e., Sports Park); removing the Air Museum and Concessions/Retail, and replacing them with the Artist in Residency Facility, the proposed Community Ice Facility, and the proposed Nature Education Garden; and replacing the existing Air Museum Hangar with Hangar 244. Addendum No. 8 was approved by the City on October 20, 2011. The Community Ice Facility approved as part of the modification evaluated in Addendum No. 8, included three sheets of ice, seating for up to 1,200 people at one rink and 100 each for the other rinks (i.e., 1,400 total seats), and special events held up to 6 weekdays per year. The facility was approximately 117,635 square feet.

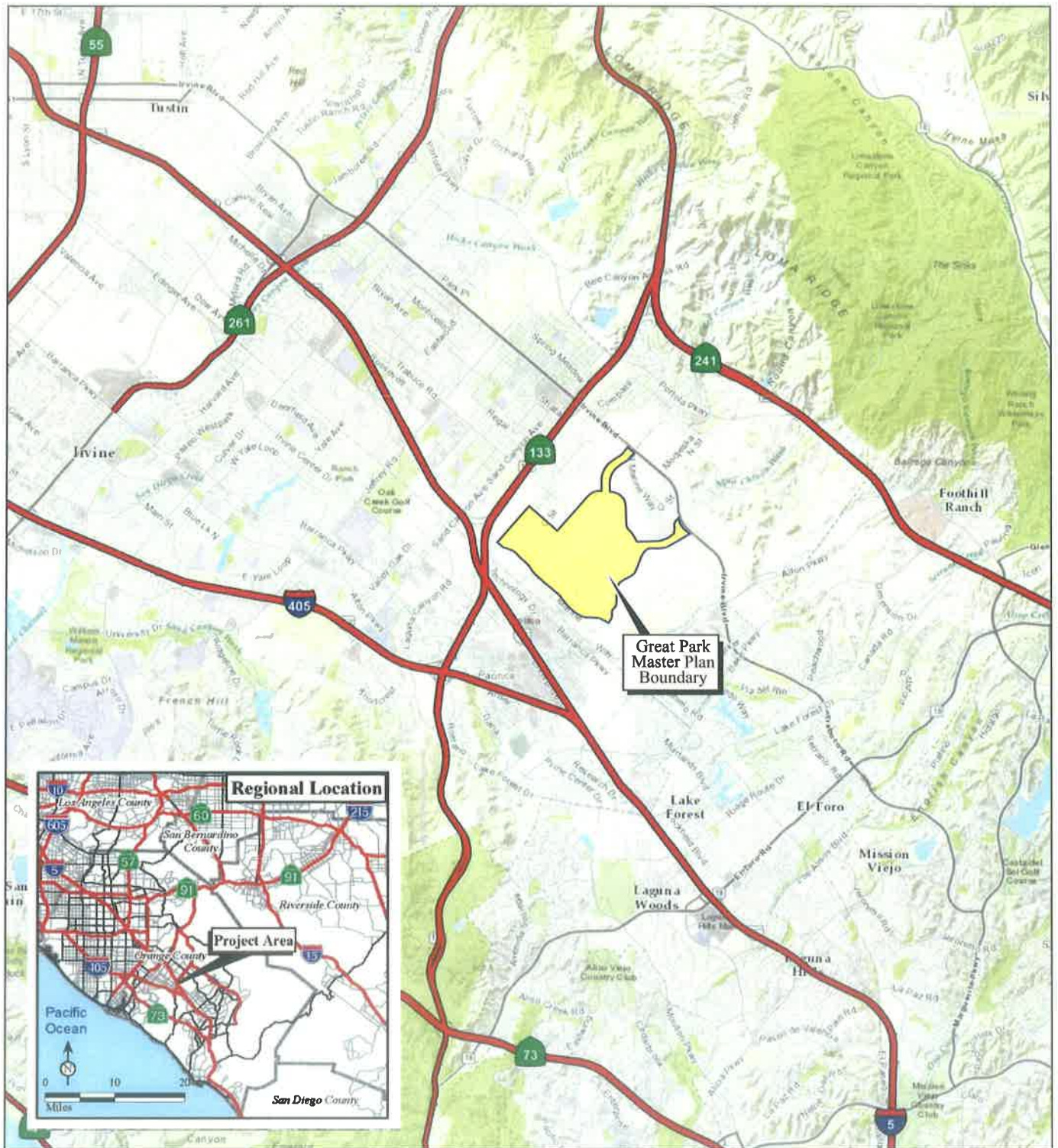
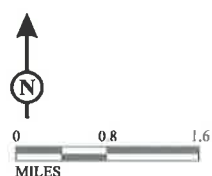


FIGURE 2-1

LSA



SOURCE: ESRI

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OCGP Community Ice Facility
Project Location



FIGURE 2-2

LSA

LEGEND

- Master Plan Boundary
- Project Site
- Western Sector Park Development Plan (WSPDP) Area



0 1500 3000
FEET

SOURCE: Bing Maps

I:\RNK1501\G\Env\Aerial Photograph.cdr (2/5/16)

OCGP Community Ice Facility
OCGP Master Plan Boundary and WSPDP Area

2. *Project Description*

Currently, a refined program for the Project site proposes a larger Community Ice Facility with four sheets of ice as well as an additional spectator seating component and more special events. Environmental review is required to support the minor modification to the Master Plan for the proposed Project.

2.2.2 Project Components

This Addendum (Addendum No. 10) addresses the potential for environmental impacts associated with the proposed expansion of the Community Ice Facility. The approved OCGP Master Plan and WSPDP include plans for a future 117,635 square feet Community Ice Facility with three sheets of ice at the proposed location on the west side of the park. The approved Community Ice Facility included seating for up to 1,200 people at one rink and 100 for the other two rinks (i.e., 1,400 total seats), and special events held up to 6 weekdays per year.

The proposed Project would support the development of a four-sheet Community Ice Facility consisting of approximately 270,000 square feet, with the following uses that would be accessory to the sheets of ice (i.e., the primary services provided on the site):

- Locker Facilities;
- Lobby, skating support and retail spaces, including a pro shop, party rooms, and a restaurant;
- Dedicated Figure Skating room;
- Administrative space;
- Mechanical/Electrical space; and
- Training and team space.

One ice sheet/rink would be developed to Olympic standards (e.g., 100 feet by 200 feet), with a 2,500-seat seating area. Each of the remaining three ice sheets/rinks would be developed to National Hockey League (NHL) standards (e.g., 85 feet x 200 feet), with a 500-seat seating area (4,000 seats total). The Community Ice Facility would include the development of no less than 665 parking spaces on the premises.

Access to the proposed Community Ice Facility would be provided via a right-turn in/right-turn out (RIRO) only driveway on Ridge Valley and a full access driveway on "G" Street, which would be a new local roadway on the eastern boundary of the Project site between "LV" Street to the north and 8th Street to the south. It is located between Ridge Valley Street and "C" Street. The facility would maintain a strong presence along future "LV" Street. Proposed uses across the street include Community Commercial, Multi-use, and Medical and Science uses.

Although the proposed Project would increase the square footage and spectator seating in the community ice rink, the proposed Project would not result in new uses not previously anticipated in the OCGP Master Plan and the overall uses within the OCGP will not be exceeded. The proposed addition of building area for the Community Ice Facility site will not result in the maximum building square footage allocated for the overall uses within the OCGP being exceeded.

The proposed Project also entails cleanup actions to the OCGP Master Plan Building Summary Table to reflect further refinement of existing/planned building areas as a result of the availability of more detailed information. The changes to the OCGP Master Plan Building Summary Table are shown in Table 2.2-1.

2. Project Description

Table 2.2-1: OCGP Building Summary Table Update

	2007 Master Plan	2011 Modifications	2014 Modifications	2016 Modifications	Accessory
Sports Park					
Field House	26,000	26,000	26,000	0	
Sports Park (688-Acre) (2014 Mod)					
Building A			(see accessory)		22,416
Building B			(see accessory)		4,022
Building C			(see accessory)		1,630
Building D1			(see accessory)		1,736
Building D2			(see accessory)		1,512
Building E			(see accessory)		21,618
Building F1			(see accessory)		1,490
Building F2			(see accessory)		429
Building F3			(see accessory)		976
Building G			(see accessory)		7,660
Building H1			(see accessory)		3,254
Building H2			(see accessory)		1,218
Ice Facility					
Ice Rink Facility		117,635	117,635	0	
Rinks				124,600	
Mechanical				(see accessory)	11,200
Locker Facilities				(see accessory)	17,600
Accessory/Support Uses				(see accessory)	46,250
Admin Offices				(see accessory)	3,500
Figure Skating				1,200	
Training Space				(see accessory)	10,000
Jr. Team Space				(see accessory)	5,000
Ducks Training				14,245	
Circulation/Walls				(see accessory)	35,039
Total Ice Facility				140,045	128,589
Maintenance					
Main	37,500	37,500	37,500	(see accessory)	37,500
Botanic Garden	7,200	7,200	7,200	(see accessory)	7,200
Upper Canyon	7,200	7,200	7,200	(see accessory)	7,200
Pump House (lake)	4,400	4,400	4,400	(see accessory)	4,400
Civic Museum					
Air Museum (proposed)	60,000	0			
Hangars 242 & 245		12,800	12,800	12,800	
Hangar 244	10,540	10,370	10,370	10,370	
Library	39,000	39,000	39,000	39,000	
Civic/Museum 1	81,000	60,000	60,000	60,000	
Civic/Museum 2	108,400	82,000	82,000	82,000	
Civic/Museum 3	85,000	52,695	52,695	52,695	
Botanic Garden Building	13,900	13,900	13,900	13,900	
Tea House	800	800	800	800	
Concessions/Retail	13,060	(see accessory)			13,060
Nature Education Center		22,500	22,500	0	
Remaining Intensity				82,390	
Total	494,000	494,000	494,000	494,000	

2. *Project Description*

The proposed cleanup actions are in keeping with previous OCGP Master Plan modifications that have refined building areas to reflect accessory areas of planned facilities, as details and uses of structures are determined. As these cleanup actions are ministerial in nature and have been fully analyzed in this and previous environmental analyses, this aspect of the Project is not further analyzed in Chapters 3 and 4 of this Addendum.

To accommodate the proposed larger facility with four sheets of ice, the project components include the following requested actions:

Minor Modification to OCGP Master Plan

The OCGP Master Plan covers approximately 1,145.3 acres at the former MCAS El Toro. In October 2011, a Community Ice Facility was approved as part of a minor modification to the OCGP Master Plan. Addendum No. 8 to the OCGP FEIR was approved concurrently to address potential environmental impacts associated with the minor modification to the OCGP Master Plan. The Master Plan anticipated a 117,635 square feet, three sheet, Community Ice Facility. The proposed minor modification of the Master Plan would increase the Community Ice Facility's square footage from 117,635 square feet to 270,000 square feet to accommodate an additional sheet of ice and accessory uses. Although the proposed Project would increase the square footage and spectator seating in the community ice rink, the proposed Project would not result in new uses not previously anticipated in the OCGP Master Plan and there would be a corresponding decrease in the square footage of another use within the OCGP. The proposed addition of building square feet for the Community Ice Facility site would be deducted from other approved uses so that the maximum building square footage allocated for the overall uses within the OCGP will not be exceeded.

2.3 DISCRETIONARY APPROVALS

Implementation of the Project includes the following discretionary actions to be undertaken by the City:

- Approval of Minor Modification to OCGP Master Plan (00661956-PMPC)
- Adoption of Addendum No. 10

The OCGP FEIR lists additional discretionary actions to be taken by the City and other public agencies at, or as part of, the completion of the project (OCGP FEIR pages 3-29 and 3-30). The actions and responsible public agencies include, but are not necessarily limited to, these approvals:

- Master plans and subdivisions for development (City)
- Community facilities districts or other assessment districts (City)
- Actions to improve interim use activities (City and United States Department of the Navy [DON])
- Transfer of parcels within PA 51 (DON)
- Clean Water Act section 404 permits (United States Army Corps of Engineers [USACE])
- Endangered Species Act compliance (United States Fish and Wildlife Service [USFWS])
- Clean Water Act section 401 and National Pollutant Discharge Elimination System (NPDES) permits (Regional Water Quality Control Board)

2. Project Description

- California Fish and Game Code 1602 permits (California Department of Fish and Game [CDFG])
- Revisions to the Orange County Master Plan of Arterial Highways (OCTA)

The City Environmental Information Form and Environmental Checklist Form have been completed by the City and are included on the following pages. The Environmental Checklist Form is marked with the findings of the Community Development Department as to the environmental effects of the proposed changes to the project in comparison with the findings of the certified OCGP FEIR.

As explained above, this comparative analysis has been undertaken pursuant to the provisions of CEQA to provide the City with the factual basis for determining whether any changes in the project, any changes in the circumstances, or any new information require additional environmental review or preparation of a subsequent or supplemental EIR. The basis for each of the findings listed in the attached Environmental Checklist Form in Section 3 is explained in Section 4 of the Addendum.

3. Environmental Checklist

3.1 CITY OF IRVINE INITIAL STUDY AND ENVIRONMENTAL EVALUATION

The City of Irvine Environmental Information Form and Environmental Checklist Form have been completed by the City and are included on the following pages. The Environmental Checklist Form is marked with the findings of the Community Development Department as to the environmental effects of the proposed expansion of the Community Ice Facility in comparison with the findings of the OCGP FEIR.

As explained above, this comparative analysis has been undertaken, pursuant to the provisions of CEQA, to provide the City with the factual basis for determining whether any changes in the project, any changes in the circumstances under which the project is undertaken, or any new information requires additional environmental review or preparation of a subsequent or supplemental EIR. The basis for each of the findings listed in the attached Environmental Checklist Form is explained in Section 4 of this Addendum.

1. Project Title:

Addendum No. 10: Minor Modification to the Orange County Great Park Master Plan for the Community Ice Facility.

2. Lead Agency Name and Address

City of Irvine Community Development Department
One Civic Center Plaza
Irvine, California 92623

3. Contact Person and Phone Number:

Barry Curtis, AICP, Manager of Planning Services, (949) 724-7453

4. Project Location:

The Community Ice Facility would be located between Ridge Valley and the existing Festival Site paved area opportunity pad area. The Project site would be bounded by 8th Street to the southwest, a regraded "G" Street to the southeast, the future "LV" Street to the northeast, and Ridge Valley to the northwest.

5. Project Sponsor's Name and Address:

City of Irvine Community Development Department
One Civic Center Plaza
Irvine, California 92623

3. Environmental Checklist

6. General Plan Designation:

Orange County Great Park

7. Zoning:

1.9 Orange County Great Park

8. Description of Project

See Section 2.2.2, *Project Components*

9. Surrounding Land Uses and Setting (briefly describe the project's surroundings):

The OCGP is in the central portion of Orange County, approximately 45 miles southeast of the County of Los Angeles. The OCGP is generally bounded by the Irvine Spectrum to the south, the City of Lake Forest to the east, the Woodbury residential community to the west, and the Portola Springs residential development to the north.

The Project site for the Community Ice Facility would be bounded by 8th Street to the southwest, "G" Street (part of the proposed Project) to the southeast, the future "LV" Street to the northeast, and the future Ridge Valley Street to the northwest.

10. Other Public Agencies Whose Approval Is Required (e.g., permits, financing approval, or participation agreement):

N/A

3. *Environmental Checklist*

3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture & Forest Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

3.3 DETERMINATION

On the basis of this initial evaluation:

- ☐ I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed Project MAY have a significant effect on the environment and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☒ I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further beyond an Addendum to the earlier EIR is required.


Barry Curtis, AICP, Manager of Planning Services

2.17.16
Date

3. Environmental Checklist

3.4 EVALUATION OF ENVIRONMENTAL IMPACTS

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 1 5063(c) (3) (D). In this case, a brief discussion should identify the following:
 - a) **Earlier Analysis Used.** Identify and state where they are available for review.
 - b) **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) **Mitigation Measures.** For effects that are "Less Than Significant With Mitigation Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

3. *Environmental Checklist*

- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significant.

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
I. AESTHETICS: Would the project:						
a) Have a substantial adverse effect on a scenic vista?					X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway or local scenic expressway, scenic highway, or eligible scenic highway?					X	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?					X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?					X	
II. AGRICULTURE AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Mode (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:						
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?						X

3. Environmental Checklist

	Subsequent or Supplemental EIR				Addendum to EIR	
ENVIRONMENTAL ISSUES	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
b) Conflict with existing zoning for agricultural use or with a Williamson Act contract?						X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland-zoned Timberland Production (as defined by Government Code section 51104(g))?						X
d) Result in the loss of forest land or conversion of forest land to nonforest use?						X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to nonagricultural use or conversion of forest land to nonforest use?					X	
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:						
a) Conflict with or obstruct implementation of the applicable air quality plan?						X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?					X	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?					X	
d) Expose sensitive receptors to substantial pollutant concentrations?					X	
e) Create objectionable odors affecting a substantial number of people?						X

3. Environmental Checklist

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
IV. BIOLOGICAL RESOURCES: Would the project:						
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?						X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?						X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means?						X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?					X	
e) Conflict with any local policies or ordinances protecting biological resources (e.g., a tree preservation policy or ordinance)?						X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?						X

3. Environmental Checklist

	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
ENVIRONMENTAL ISSUES						
V. CULTURAL RESOURCES: Would the project:						
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the CEQA Guidelines?					X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the CEQA Guidelines?					X	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?					X	
d) Disturb any human remains, including those interred outside of formal cemeteries?					X	
VI. GEOLOGY AND SOILS: Would the project:						
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:						
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42)						X
ii) Strong seismic ground shaking?					X	
iii) Seismic-related ground failure, including liquefaction?						X
iv) Landslides?						X
b) Result in substantial soil erosion or the loss of topsoil?					X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?						X

3. Environmental Checklist

	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
ENVIRONMENTAL ISSUES						
d) Be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?					X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?						X
VII. GREENHOUSE GAS EMISSIONS: Would the project:						
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?						*
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?						*
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:						
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?					X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?						X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within .25 mile of an existing or proposed school?						X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?					X	

3. *Environmental Checklist*

	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
ENVIRONMENTAL ISSUES						
e) For a project located within an airport land use plan, would the project result in a safety hazard for people residing or working in the project area?						X
f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?						X
g) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?						X
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed						X
IX. HYDROLOGY AND WATER QUALITY: Would the project:						
a) Violate any water quality standards or waste discharge requirements?					X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?						X
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on-site or off-site?					X	

3. Environmental Checklist

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?					X	
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of pollutant runoff?					X	
f) Otherwise substantially degrade water quality?					X	
g) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?						X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?						X
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?						X
j) Expose people or structures to inundation by seiche or mudflow?						X
X. LAND USE AND PLANNING: Would the project						
a) Physically divide an established community?						X
b) Conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?					X	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?						X

3. *Environmental Checklist*

	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
ENVIRONMENTAL ISSUES						
XI. MINERAL RESOURCES: Would the project:						
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?						X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use?						X
XII. NOISE: Would the project result in:						
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?					X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?					X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?					X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?					X	
e) For a project located within an airport land use plan, would the project expose people residing or working in the project area to excessive noise levels?						X
f) For a project within the vicinity of a private airstrip, heliport, or helistop, would the project expose people residing or working in the project area to excessive noise levels?						X

3. Environmental Checklist

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
XIII. POPULATION AND HOUSING: Would the project:						
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through the extension of roads or other infrastructure)?					X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?						X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?						X
XIV. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:						
a) Fire protection?					X	
b) Police protection?					X	
c) Schools?					X	
d) Parks?					X	
e) Other public facilities?					X	
XV. RECREATION: Would the project:						
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?					X	
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?					X	

3. Environmental Checklist

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
XVI. TRANSPORTATION/TRAFFIC: Would the project:						
a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle					X	
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?					X	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or change in location that results in substantial safety						X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?						X
e) Result in inadequate emergency access?					X	
f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus stops/routes, bicycle lanes, sidewalks,						X
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:						
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?					X	

3. Environmental Checklist

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?					X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?					X	
d) Have sufficient water supplies available to serve the project (including large scale developments as defined by Public Resources Code Section 21151.9 and described in Question No. 20 of the Environmental Checklist) from existing entitlements and resources, or are new or expanded entitlements needed?					X	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?					X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?					X	
g) Comply with Federal, State, and local statutes and regulations related to solid waste?					X	
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE						
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the					X	

3. *Environmental Checklist*

ENVIRONMENTAL ISSUES	Subsequent or Supplemental EIR				Addendum to EIR	
	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Showing Greater Significant Effects than Previous EIR	New Information Showing Ability to Reduce Significant Effects in Previous EIR	Less Than Significant Impacts/No Changes or New Information Requiring Preparation of an EIR	No Impact
major periods of California history or prehistory?						
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)					X	
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?					X	

* The Environmental Checklist questions above related to greenhouse gas (GHG) emissions are not answered because GHG emissions was not an issue identified and analyzed in the May 2003 certified OCGP Final Environmental Impact Report (FEIR) for a general plan amendment (GPA) and zone change (ZC) to implement the development of the Orange County Great Park. At the time of the FEIR certification, GHG emissions had been recognized as an environmental issue since the 1970s when the United States Congress enacted the National Climate Program Act (92 Stat.601, 1978) which required the President to establish a program to assist in understanding and responding to natural and human-induced climate processes, and since the 1980s when the Intergovernmental Panel on Climate Change (IPCC) was formed to assess scientific information related to climate change. Thus, issues related to climate change were known, or could have been known, at the time of the certification of the OCGP FEIR.

When an EIR has been certified for a project, no subsequent environmental document needs to be prepared by the lead agency (the City) unless there is substantial evidence that one or more of the following has occurred:

1. Substantial changes are proposed in the project involving new significant environmental effects or a substantial increase in the severity of previously significant effects;
2. Substantial changes occur with response to the project due to involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

3. Environmental Checklist

3. New information of substantial importance, which was unknown or could not have been known with the exercise of reasonable diligence at the time the previous EIR was adopted shows any of the following:
 - a. The project will have one or more significant effects not discussed in the previous EIR;
 - b. Significant effects previously examined will be substantially more severe than shown in the previous EIR.
 - c. Mitigation measures or alternatives previously found to be infeasible would be feasible, and would substantially reduce one or more significance effects of the project, but the project proponents declined to adopt the mitigation measure or alternative; or
 - d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents declined to adopt the mitigation measure or alternative.

In this case, the proposed Project does not meet the Section 15162 criteria for preparing a subsequent environmental document and no analysis of GHG emissions is required based on the following supporting information:

1. As documented throughout this Initial Study, the proposed Project does not include substantial changes proposed that involve new significant environmental impacts or a substantial increase in the severity of previously identified significant effects. As for GHG emissions, the issue was not considered potentially significant in 2003 and the GHG emissions associated with the OCGP Master Plan Minor Modification have not increased beyond those expected with the 2003 approved project, because the proposed changes allowed by the OCGP Master Plan Minor Modification has not increased over that allowed by the 2003 approved project.
2. GHG emissions has been recognized as an environmental issue for at least three decades and the approved project contribution to GHG emissions is not new information that was unknown or could not have been known with the exercise of reasonable diligence at the time the EIR was certified in 2003.
3. A GHG analysis that analyzed the projected emissions for both the public and private development in PA 51 (which includes former PA 30) was prepared in connection with the Supplement to the OCGP FEIR (SEIR) that was circulated for public review on June 2, 2011. That analysis concluded that the emissions per service population falls below the 4.8 MTons per service population threshold proposed by South Coast Air Quality Management District (SCAQMD) and utilized as a threshold of significance by the City in the SEIR.
4. In 2012 a GHG analysis was conducted that compared the 2012 Modified Project's GHG emissions to the impacts of the 2011 Approve Project's GHG emissions. The significance of the 2012 Modified Project's emissions was assessed using the SCAQMD's threshold of 4.8 MTons of CO₂e per service population per year. Similar to the 2011 Approved Project, the analysis concluded that the 2012 Modified Project's construction and operational emissions, with and without the optional conversion, were below the SCAQMD's efficiency metric of 4.8 MTons per service population per year. Therefore, under both scenarios, the 2012 Modified Project would have a less than significant impact on GHG emissions.

3. Environmental Checklist

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4. Discussion of Checklist and Mitigation Measures

This section provides evidence to substantiate the conclusions set forth in the Environmental Checklist. It briefly summarizes the conclusions of the 2003 Orange County Great Park FEIR, as updated by its prior Addenda and Supplemental EIRs (SEIR and SSEIR). Collectively all of these CEQA documents are known as, "OCGP FEIR". Finally this section discusses whether the proposed Project is consistent with the findings contained in the OCGP FEIR.

4.1 AESTHETICS

4.1.1 Environmental Setting

The OCGP FEIR addressed the potential aesthetic and visual impacts associated with the development of the former MCAS El Toro. The OCGP FEIR discussed the visual setting associated with the location of the OCGP Master Plan area adjacent to various arterial and State and federal highways. None of these roadways are designated as a County or State scenic highway; however, Sand Canyon Avenue is designated as a highway with rural/natural character. The City's General Plan also designates I-5 as an urban character Scenic Highway.

Generally, views of the former military base are from the surrounding highways. From these highways, a variety of land uses, structures, and facilities of differing ages, sizes, and architectural styles can be viewed. Although agricultural areas are adjacent to and within the base, the predominant views are associated with the military use of the base, including runways, aprons, hangars, warehouses, barracks housing, recreational facilities, single-family housing, offices, and commercial structures. However, since certification of the 2003 OCGP FEIR, many of the base facilities have been demolished along with portions of the runway. Additionally, the OCGP WSPDP (Phase 1) has been established on the western edge of the former military base. The newly constructed Beacon Park residential neighborhood, located in Development District 1-North, is less than one mile north of the proposed Project site. Additionally, grading of the future sports park has commenced.

The City of Lake Forest and the James A. Musick Branch Jail are located to the southeast of the OCGP; the Irvine Spectrum is to the east and south; and existing and developing residential areas are to the north and west of the project site. Further to the south are the residential developments of the cities of Laguna Woods and Laguna Hills. Portions of these residential developments are at higher elevations and have panoramic views of the Project site.

There are minimal light sources within the OCGP Master Plan area. Existing lighting is mostly associated with outdoor nighttime parking areas, field lighting and security lighting.

4.1.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR discussed the potential aesthetic effects associated with development of the project site under the adopted Overlay Plan and found that future development of PA 51 would introduce new sources of light within the project area. These sources include street lighting along planned roadways and various forms of exterior lighting, including security lighting, parking lots, educational facilities, institutional and commercial developments, and lighting associated with athletic fields. The OCGP FEIR concluded that significant light impacts would occur if proposed light sources were directed into or located near

4. Discussion of Checklist and Mitigation Measures

existing or planned residential uses, which are sensitive to light intrusion during nighttime hours. However, it further noted that with the mitigation ultimately adopted by the City, these potential impacts would be less than significant.

The OCGP Master Plan (the subject of Addendum No. 4) identified one potential source of nighttime illumination not previously identified in the OCGP FEIR described as illuminated iconic park elements, such as the helium tethered balloon. However, it was noted that such lighting is focused on the iconic element and not away from it. Lighting of this type would exhibit a degree of luminosity substantially lower than some of the other types already considered in the OCGP FEIR, such as lighting associated with athletic fields. As a consequence, the extent of any impact associated with the illumination of iconic park elements has already been adequately addressed in the OCGP FEIR.

No other significant or potentially significant aesthetic impacts were identified in the previous CEQA documents.

4.1.3 Impacts Associated with the Expansion of the Community Ice Facility

The proposed Project consists of expanding the approved Community Ice Facility (Area L) into the future Western Picnic Area (Area E) to accommodate the additional sheet of ice as well as accessory uses. The Community Ice Facility's square footage would increase from approximately 117,635 square feet to approximately 270,000 square feet. Additionally, the 6.8-acre Western Sector Picnic Area would be removed from the Master Plan.

The approved OCGP Master Plan and WSPDP include plans for a future 117,635-square-foot Community Ice Facility with three sheets of ice at the proposed location within the WSPDP. The approved Community Ice Facility included seating for up to 1,200 people at one rink and 100 for the other two rinks (i.e., 1,400 total seats), and special events held up to 6 weekdays per year. The proposed Project would support the development of a four-sheet Community Ice Facility consisting of approximately 270,000 square feet, with accessory uses. The facility would include parking lot lighting, pedestrian lighting, and security lighting on the exterior of the building.

There are no scenic routes, scenic resources, or unique geologic or topographic features within the Project site.

The proposed Project would not introduce additional new light sources or highly reflective building materials that would result in new sources of potential glare beyond those already considered by the OCGP FEIR and Addenda. The proposed Project would incorporate and/or comply with Mitigation Measures A1, A1, and PPP-1 in order to avoid and reduce potential impacts related to light and glare to a less than significant level. No other significant or potentially significant aesthetic impacts besides new sources of lighting are anticipated.

4.1.4 Findings

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the Proposed project would require a major change to the certified OCGP FEIR. The proposed modification to the OCGP Master Plan and the WSPDP, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any

4. Discussions of Checklist and Mitigation Measures

new significant environmental impact nor will there be a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to aesthetics effects that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the project will have one more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant aesthetic effects identified in and considered by the approved OCGP FEIR.

4.1.5 Mitigation from the OCGP FEIR and Applicability to the Expanded Community Ice Facility

The OCGP FEIR identified Mitigation Measures A1 and A2, which, if implemented, would reduce the effects of the proposed Project to a less than significant level. Those mitigation measures were modified in the SEIR, to make them consistent with the City of Irvine adopted conditions of approval.

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

- A1** Prior to issuance of building permits, lighting plans and signage plans for residential or nonresidential new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent residential areas occurs.
- A2** Prior to the issuance of building permits for residential and nonresidential development, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.

4. Discussion of Checklist and Mitigation Measures

Additionally, the SSEIR identified the following measure as existing plans, programs, or policies (PPP) that apply to the proposed Project and will help reduce or avoid potential aesthetics and light and glare impacts. The following PPP, as applicable, will be incorporated into the proposed Project upon project implementation.

PPP 1-1 Prior to issuance of building permits, the applicant shall demonstrate it has met the Irvine Uniform Security Code requirements for lighting by providing the below listed items for a complete review by the Police Department. Failure to provide a complete lighting package will result in the delay of satisfaction of this condition (City Standard Condition 3.6).

- a. Electrical plan showing light fixture locations, type of light fixture, height of light fixture, and point-by-point photometric lighting analysis overlaid on the landscape plan with a tree legend. The photometric plan should only show those fixtures used to meet the Irvine Uniform Security Code requirements.
- b. Corresponding fixture cut-sheets (specifications) of those lights used to meet the Irvine Uniform Security Code.
- c. Site plan demonstrating that landscaping shall not be planted so as to obscure required light levels.
- d. Site plans that are full-scale and legible.

4.2 AGRICULTURE AND FORESTRY RESOURCES

4.2.1 Environmental Setting

The OCGP FEIR identified approximately 659 acres of designated Prime Farmland, 70 acres of designated Unique Farmland, and 99 acres of designated Farmland of Statewide Importance (as defined below). No agricultural land within the project area is currently covered by Williamson Act contracts.

The OCGP FEIR described the Farmland Mapping and Monitoring Program (FMMP Program) of the California Department of Conservation Division of Land Resources Protection classifications of agricultural lands present within the project area as follows (California Department of Conservation, 2014):

- **Prime Farmland:** Land which has the best combination of physical and chemical features able to sustain long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Farmland of Statewide Importance:** Similar to Prime Farmland, except this land has minor shortcomings such as greater slopes or less ability to store soil moisture than Prime Farmland. Land must have been used for production of irrigated crops at some time during the four years prior to the mapping date.
- **Unique Farmland:** Lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in

4. Discussions of Checklist and Mitigation Measures

some climate zones in California. This land is used for the production of specific high economic value crops such as oranges, olives, avocados, rice, grapes, or cut flowers. Land must have been cropped at some time during the four years prior to the mapping date.

- **Farmland of Local Importance:** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- **Grazing Land:** Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.

Although the OCGP FEIR identified approximately 659 acres of designated Prime Farmland, 70 acres of designated Unique Farmland, and 99 acres of designated Farmland of Statewide Importance within OCGP overall, based on information provided through the California Department of Conservation's FMMP, land within the OCGP Master Plan area project site falls into the Urban and Built-Up Land agricultural land use designation. The location of all of the OCGP land classifications are identified in Figure 4.2-1, Farmland Map.

City of Irvine Policies and Programs

The project site is designated for a variety of urban uses in the City General Plan. The OCGP Master Plan encourages agriculture as an interim land use prior to development of the land. The City General Plan Objective L-10, as amended in 2002 and presented in the OCGP FEIR, includes the following policies to "encourage the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development".

Policy (a): Provide for farming opportunities in the community, where feasible and appropriate, through an Agricultural Legacy Program facilitating limited scale agricultural operations and programs on public lands. The program may include components such as edible landscape, metro-farming, heritage farming, model farming, education and community service farming and other farm or farm market programs. Locations for implementation of the Agricultural Legacy Program to be considered should, at a minimum, include:

- Designated open space spine network
- Designated open space areas not subject to the Natural Community Conservation Plan (NCCP)
- Other appropriate publicly owned lands

Policy (b): Consider creating a "working model" farm to act as a center for education and enjoyment of all age groups pursuant to the Agricultural Legacy Program in conjunction with the City's planning efforts concerning the reuse of MCAS El Toro, or with the South Coast Research Extension owned by UC Regents.

Policy (c): Permit agricultural use of land that is unsuitable for building because it is within flood plains, or is subject to hazards to public health, safety, and welfare or similar constraints precluding development. Conversion from agricultural use may be allowed where the identified hazard conditions have been eliminated.



LSA



0 1250 2500
FEET

SOURCE: Bing Maps

I:\RNK1501\G\Env\WSPDP Farmland.cdr (2/8/2016)

LEGEND

USDA FMMP Classification

- P - Prime Farmland
- S - Farmland of Statewide Importance
- U - Unique Farmland
- G - Grazing Land

FIGURE 4.2-1

OCGP Community Ice Facility
Farmland Map

4. Discussions of Checklist and Mitigation Measures

Policy (d): Permit agriculture uses, on an interim basis, on land designated for development, and consider agricultural uses as part of the City's planning efforts for the reuse of MCAS El Toro.

Policy (e): Encourage and support federal and State legislation proposed for the purpose of preservation of agricultural lands that are compatible with the City's goals and objectives.

Policy (f): Allow for conversion of interim and permanent agricultural uses to development to provide land for the construction of housing units consistent with the Land Use and Housing Elements, and the development of commercial and industrial buildings consistent with the provision of job opportunities as described in the Land Use Element, where such conversion does not conflict with other L-10 policies.

Policy (g): Pursue the open space policies contained in the Conservation and Open Space Element and address any open space or aesthetic impacts from the conversion of interim and permanent agricultural uses to development as part of the City's existing policies for the preservation of open space and existing policies for mitigation of views and aesthetic impacts under the policies in the Conservation and Open Space Element.

4.2.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR determined the Overlay Plan would preserve in perpetuity 303 acres¹ of land for agricultural use, of which 251 acres are classified as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. The locations of the 303 acres of permanent agricultural land are listed below and can be found in the OCGP FEIR as Figure 5.8-1.

- **Former PA 30:** 13 acres within Planning Area Zone (PAZ) 26; and
- **PA 51:** 90 acres within PAZ 4; 200 acres within PAZ 1.

The Overlay Plan also resulted in the permanent loss of 802 acres of designated farmland comprised of 651 acres of Prime Farmland, 63 acres of Unique Farmland, and 88 acres of Farmland of Statewide Importance. This impact was considered significant and unavoidable in the OCGP FEIR.

It was determined the Overlay Plan resulted in a significant impact associated with the conversion of agricultural land to nonagricultural use. The OCGP FEIR noted the context of agricultural production in Orange County, including development pressures that have contributed to the decrease in agricultural production in the County over time, which suggested that conversion of agricultural land to urban uses would occur with or without the development of the OCGP.

Addendum No. 5 determined that the removal of 173 acres of designated Prime Farmland in PAZ 1 would not result in new significant impacts to agricultural resources (Section 4.2.3 of Addendum No. 5). Despite the Prime Farmland designation, none of the soils in PAZ 1 were used for agricultural production. In addition, existing regulatory programs, namely the City of Irvine General Plan Objective L-10 and establishment of the Irvine Agricultural Legacy Program, addressed and mitigated the loss of agricultural land. Since certification of the OCGP FEIR, an additional 508 acres within PA 1 (Orchard Hills) has been designated "Exclusive Agriculture" and added to the Agricultural Legacy Program. As a result, overall

¹ There is a typographical error within the OCGP FEIR: Table 1-2 on page 1-8 and Table 3-4 on pages 3-12 and 3-13 identify the total agricultural land as 303 acres (correct acreage); however, on page 5.8-10 the agricultural use acreage is noted as 307.

4. Discussion of Checklist and Mitigation Measures

acreage enrolled within the Agricultural Legacy Program was greater than that assumed in the certified OCGP FEIR.

4.2.3 Impacts Associated with the Expanded Community Ice Facility

Similar to the 2011 approved modification of the OCGP Master Plan, the Project contains a Community Ice Facility. The proposed Project consists of modifications to the Community Ice Facility to include a fourth sheet of ice. The proposed land use is consistent with the OCGP Master Plan and is evaluated in the FEIR and Addenda, and the proposed modifications do not introduce new uses or designations that would conflict with zoning (1.9 Orange County Great Park) or result in conversion of agriculture land or forest land to non-agriculture and non-forest land. The General Plan land use designation of the proposed Project site is "Orange County Great Park" and the proposed Project is consistent with the land uses approved in concert with the certification and updates to the OCGP FEIR.

The proposed modifications to the Community Ice Facility involve increasing the number of ice sheets from three to four. This modification would reflect a development program that is consistent with the General Plan Land Use and Zoning designations for PA 51 and would occur within areas that are not designated for agriculture use. No new uses and facilities are proposed that would affect the agriculture and forestry resources, as none exists within the Project area. Consequently, the proposed Project would not result in any additional impact, beyond that previously studied and disclosed, on agricultural resources. The proposed Project would not result in conflicts with agricultural zoning, convert farmland to non-farmland uses, result in a loss of forest land, or create any new impacts to agriculture and forest resources beyond those evaluated in the OCGP FEIR.

4.2.4 Findings

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the Proposed project would require a major change to the certified OCGP FEIR. The proposed modification to the OCGP Master Plan and the WSPDP, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor will there be a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to agricultural resources that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the Project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Addendum has analyzed all available relevant information and has determined that there is no new information of substantial importance that was unknown and could not have been known

4. Discussions of Checklist and Mitigation Measures

with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the Project, but the Project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the Project or additional mitigation measures that would substantially reduce one or more of the significant effects on agriculture and forest resources identified in and considered by the approved OCGP FEIR.

4.2.5 Mitigation from the OCGP FEIR and Applicability to the Expanded Community Ice Facility

Mitigation Measures AG1 through AG3 will be implemented in conjunction with Master Plan review and subsequent development permits.

AG1 In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operators, disclosure statements shall include the following for subdivisions proposed adjacent to existing agricultural operations:

Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information:

- Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants.

AG2 Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.

AG3 Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operation and adjacent urban uses.

Additionally, the SSEIR identified the following measure as existing PPP that apply to the proposed Project and will help reduce or avoid potential agriculture and forestry resources impacts. The following PPP, as applicable, will be incorporated into the proposed Project upon project implementation.

PPP2-1 The City shall continue to implement the Agricultural Legacy Program outlined in City of Irvine General Plan Open Space and Conservation Element. Objective L-10 is intended to mitigate the conversion of agricultural land to nonagricultural uses citywide by facilitating limited-scale agricultural operations and programs on public lands within Irvine. As part of the Agricultural Legacy Program, specific sites in Irvine will be identified and made available for metro- farming within five years. Metro-farming generally includes small-scale agricultural operations and

4. Discussion of Checklist and Mitigation Measures

activities that can be accommodated in an urban environment. Such activities could include, but not limited to, small-scale specialty farming, model farming, heritage farming, and community service/educational farming.

4.3 AIR QUALITY

4.3.1 Environmental Setting

The OCGP FEIR described the air quality conditions regarding the following regulated pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxides (NO_2), sulfur dioxide (SO_2), lead and particulate matter (PM), which is subdivided into two classes based on particle size: PM equal to or less than 10 micrometers in diameter (PM_{10}) and PM equal to or less than 2.5 micrometers in diameter ($PM_{2.5}$).

The proposed Project site is located in the Orange County portion of the South Coast Air Basin. Table 4.3-1 shows the pollutants and associated attainment status for the South Coast Air Basin. Orange County is designated as a federal non-attainment area for O_3 , and $PM_{2.5}$, maintenance for CO and PM_{10} , and an attainment area for SO_2 , NO_2 , and lead. Orange County is designated as a State non-attainment area for O_3 , PM_{10} , and $PM_{2.5}$, and an attainment area for CO, SO_2 , NO_2 , and lead.

Table 4.3-1. Attainment Status for the Orange County Portion of the South Coast Air Basin

Pollutant	Attainment Status	
	Federal	State
O_3 – 1-Hour	–	Non-attainment
O_3 – 8-hour	Nonattainment (Extreme)	Non-attainment
PM_{10}	Attainment/Maintenance	Non-attainment
$PM_{2.5}$	Nonattainment	Non-attainment
CO	Attainment/Maintenance	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Lead	Attainment	Attainment

Sources: EPA (2014); ARB (2014).

ARB = California Air Resources Board

CO = carbon monoxide

EPA = United States Environmental Protection Agency

NO_2 = nitrogen dioxides

O_3 = ozone

PM_{10} = PM equal to or less than 10 micrometers in diameter

$PM_{2.5}$ = PM equal to or less than 2.5 micrometers in diameter

SO_2 = sulfur dioxide

4.3.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR identified significant air quality impacts associated with construction and operation of the Overlay Plan. The OCGP FEIR described the construction air impacts after mitigation as significant and unavoidable. Addenda No. 3 and 4 included an analysis to determine the projected emissions associated with more recent, precise and refined information regarding the Revised Overlay Plan and OCGP Conceptual Master Plan. The Addenda determined that earthmoving activities would be consistent with

4. Discussions of Checklist and Mitigation Measures

the emissions inventory assumed in the certified OCGP FEIR and within the scope of the original air quality analysis.

The analysis was conducted using URBEMIS 2007 Version 9.2, which was in accordance with SCAQMD's recommendations for preparation of air quality analyses at the time the document was developed. The emission estimates from Addendum No. 4 are provided in Table 4.3-2.

Table 4.3-2. Comparison of Daily Construction Emissions for OCGP Construction Activities

Emissions Inventory	Emission Totals (lbs/day)				
	CO	NO _x	PM ₁₀	VOC	SO _x
OCGP FEIR	280	840	1,440	4,660	40
OCGP Site Grading	174	343	663	37	<1
SCAQMD Significance Threshold	550	100	150	75	150
Over (Under)	(376)	243	513	(38)	(149)
Significant for OCGP FEIR?	No	Yes	Yes	Yes	No
Significant for OCGP Equipment Mix?	No	Yes	Yes	No	No

Source: PCR Services Corporation (2007).

CO = carbon monoxide

FEIR = Final Environmental Impact Report

NO_x = nitrogen oxides

OCGP = Orange County Great Park

PM₁₀ = PM equal to or less than 10 micrometers in diameter

SCAQMD = South Coast Air Quality Management District

SO_x = sulfur dioxide

VOC = volatile organic compounds

As shown in Table 4.3-2 above and as Addendum No. 4 concluded, no new significant impacts and no substantial increase in the severity of previously identified impacts would occur as a result of implementation of the OCGP.

The site grading and demolition would most likely occur in a phased approach, over the course of several years. A technical consultant (PCR) also conducted an analysis for Addendum No. 4 to determine whether the construction emissions inventory for a maximum worst case day (consisting of concurrent grading of the OCGP Master Plan along with site grading activities for Heritage Fields, the Agua Chinon, and the wildlife corridor and runway demolition activities) is consistent with the emissions inventory presented in the OCGP FEIR and is within the scope of the original air quality impact assessment.

The emissions from the concurrent construction activities are presented in Table 4.3-3. Concurrent grading and demolition activities estimated for Addendum No. 4 resulted in a slight decrease in equipment exhaust emissions and fugitive dust PM₁₀ emissions, as compared to those levels estimated for the OCGP FEIR.

4. Discussion of Checklist and Mitigation Measures

Table 4.3-3. Comparison of Daily Construction Emissions for Concurrent OCGP Construction Activities

Emissions Inventory	Emission Totals (lbs/day)				
	CO	NO _x	PM ₁₀	VOC	SO _x
Certified EIR	280	840	1,440	4,660	40
OCGP Site Grading	174	343	663	37	<1
Heritage Fields Site Grading	171	332	663	37	<1
Runway Demolition	66	165	76	17	<1
Total	411	839	1,402	91	<1
SCAQMD Significance Threshold	550	100	150	75	150
Over (Under)	(139)	739	1,252	16	(149)
Significant for OCGP	No	Yes	Yes	Yes	No
Significant for concurrent activities?	No	Yes	Yes	Yes	No

Source: PCR Services Corporation (2007).

CO = carbon monoxide

EIR = Environmental Impact Report

lbs = pounds

NO_x = nitrogen oxides

OCGP = Orange County Great Park

PM₁₀ = PM equal to or less than 10 micrometers in diameter

SCAQMD = South Coast Air Quality Management District

SO_x = sulfur dioxide

VOC = volatile organic compounds

Among the various sources of a project's operational emissions, those attributable to mobile sources (i.e. vehicular traffic) comprise the largest proportion of emissions. Mobile source emissions are a function of both the number and trip length characteristics of vehicle trips directly and indirectly associated with the project under consideration. Operational emissions for project area and mobile sources were estimated at above the significance thresholds for volatile organic compounds (VOC), nitrogen oxides (NO_x), CO, and PM₁₀, and are described in the OCGP FEIR and Addenda as significant and unavoidable after mitigation. In addition, the OCGP FEIR included the results of the CO "hotspots" analysis, in which no intersections in the traffic study area were expected to result in one-hour or eight-hour CO concentrations above the State standard of 20 parts per million (ppm) for one-hour concentrations and 9 ppm for eight-hour concentrations. No other construction- and operations-related significant air quality impacts were identified in the OCGP FEIR.

The SSEIR stated that the 2012 Modified Project would also result in significant and unavoidable short-term construction air quality impacts due to emissions of VOC, NO_x, CO, PM₁₀ and PM_{2.5} at levels above the applicable thresholds. PPPs 3-1 through 3-4 and Mitigation Measures AQ-1 and AQ-2 would reduce construction emissions to the extent feasible. However, the impact would remain significant and unavoidable even after mitigation.

In addition, long-term operation of the 2012 Modified Project (with and without optional conversion) would result in significant and unavoidable impacts due to emissions of VOC, NO_x, CO, and PM_{2.5}. PPP 3-5, PDFs 4-7, and 4-8, and Mitigation Measures AQ-3 through AQ-5 would reduce operational phase air quality impacts to the extent feasible. However, the impact would remain significant and unavoidable even after mitigation.

4. Discussions of Checklist and Mitigation Measures

4.3.3 Impacts Associated with the Expanded Community Ice Facility

Construction Impacts

The OCGP Community Ice Facility would generate air pollutant emissions for both the construction and operations phases of the project. The previous project description for the OCGP Community Ice Facility involved the development of three ice sheets on a 12.1 acre site, whereas the current project description envisions the development of four ice sheets as well as accessory facilities that support this recreational use on a 14.06 acre site. The proposed Project also includes construction of G Street. Construction activities produce emissions from off-road construction vehicle exhaust, asphalt off-gassing, application of architectural coatings, fugitive dust, and exhaust from on-road vehicles associated with construction workers making material delivery trips. Construction emissions were quantified using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2.

The emissions for the construction phase for both the previous and current OCGP ice facilities are presented below in Table 4.3-4. The OCGP Community Ice Facility would require off-road vehicles for site preparation, grading, trenching, and building construction for both the current and previously proposed ice facility. As such, the maximum daily emissions for both facilities would result in comparable levels of emissions with the exception of VOCs which are greater for the currently proposed OCGP Community Ice Facility due to the more extensive application of architectural coatings.

Table 4.3-4. Comparison of Daily Construction Emissions for OCGP Ice Facilities

Emissions Inventory	Maximum Daily Emission Totals, lbs/day				
	CO	NO _x	PM ₁₀	VOC	SO _x
Previously Proposed OCGP Ice Facility	50	75	12	56	<1
Currently Proposed OCGP Ice Facility	50	75	12	123	<1
Net Change in Emissions	0	0	0	67	<1

Source: LSA Associates, Inc. (2016).

CO = carbon monoxide

lbs = pounds

NO_x = nitrogen oxides

OCGP = Orange County Great Park

PM₁₀ = PM equal to or less than 10 micrometers in diameter

SO_x = sulfur dioxide

VOC = volatile organic compounds

The net increase in construction-related emissions for the proposed Project are shown in comparison with the emissions generated for the concurrent OCGP construction activities in Table 4.3-5. As shown in the table, the proposed Project would not increase the maximum daily air pollutant emissions generated above the significance thresholds established by SCAQMD. The OCGP FEIR concluded that air pollutant emissions associated with construction and demolition activities of the Overlay Plan were considered a significant and unavoidable impact. The construction air emissions associated with the proposed Project are anticipated to not significantly increase overall emissions and would result in total Master Plan emissions similar to those addressed in the OCGP FEIR and, therefore, would not result in any new significant impacts.

Table 4.3-5. Comparison of Daily Construction Emissions for Concurrent OCGP Construction Activities

4. Discussion of Checklist and Mitigation Measures

Emissions Inventory	Emission Totals (lbs/day)				
	CO	NO _x	PM ₁₀	VOC	SO _x
Certified EIR	280	840	1,440	4,660	40
OCGP Community Ice Facility Increase	0	0	0	67	0
OCGP Site Grading	174	343	663	37	<1
Heritage Fields Site Grading	171	332	663	37	<1
Runway Demolition	66	165	76	17	<1
Total	411	839	1,402	158	<1
SCAQMD Significance Threshold	550	100	150	75	150
Over (Under)	(139)	739	1,252	83	(149)
Significant for OCGP	No	Yes	Yes	Yes	No
Significant for the Proposed Project?	No	No	No	No	No

Source: LSA Associates, Inc. (2016).

CO = carbon monoxide

EIR = Environmental Impact Report

lbs = pounds

NO_x = nitrogen oxides

OCGP = Orange County Great Park

PM₁₀ = PM equal to or less than 10 micrometers in diameter

SCAQMD = South Coast Air Quality Management District

SO_x = sulfur dioxide

VOC = volatile organic compounds

Regional Operational Impacts

Operation of the proposed Project would result in long-term regional emissions associated with area and mobile sources. Area-source emissions would be associated with equipment used for landscaping and maintenance of the park. Mobile-source emissions would include project-generated vehicle trips associated with workers, recreational users, and visitors to the project site. Mobile-source emissions from vehicle trips to the project site would be the primary source of criteria pollutant emissions.

The emission estimates in the OCGP FEIR documents were all developed using different models recommended by SCAQMD at the time of the analysis. Therefore, the comparison of emissions from those documents will be affected by changes to the project description, as well as any changes to assumptions in the model.

Operational emissions associated with the proposed Project were quantified using CalEEMod, Version 2013.2.2. The operational emissions associated with the activities for the proposed Project were quantified using CalEEMod to determine the net change in operational emissions associated with the proposed Project. Mobile sources of emissions are attributable to vehicle trips from worker commutes, visitors, and supply deliveries. Mobile-source emissions from vehicle trips to the project site would be the primary source of criteria pollutant emissions. *The Limited Scope Traffic Impact Analysis Great Park Community Ice Facility* states that the previously proposed three ice sheet facility would generate 240 average daily trips (ADT), whereas the currently proposed four ice sheet facility would generate 960 ADT. The emissions for the operations phase for both the previously and currently proposed OCGP ice facilities are presented below in Table 4.3-6.

Table 4.3-6. Comparison of Daily Operations Phase Emissions for OCGP Ice Facilities

	Emissions (lbs/day)
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4. Discussions of Checklist and Mitigation Measures

Source	CO	NO _x	PM ₁₀	VOC	SO _x
Previously Proposed OCGP Ice Facility	6	1	1	9	<1
Currently Proposed OCGP Ice Facility	24	4	4	15	<1
Net Change in Emissions	18	3	3	6	<1

Source: LSA Associates, Inc. (2016).

CO = carbon monoxide

lbs = pounds

NO_x = nitrogen oxides

OCGP = Orange County Great Park

PM₁₀ = PM equal to or less than 10 micrometers in diameter

SO_x = sulfur dioxide

VOC = volatile organic compounds

Regional area- and mobile-source emissions were modeled based on proposed land use types and sizes as indicated in the Project Description (Section 2.0 of this Addendum) and the change in trip generation from the Traffic Study (LSA, 2016). Emissions associated with the proposed Project and the Master Plan emissions from the EIR are shown in Table 4.3-7 and are evaluated against the SCAQMD operations phase significance thresholds.

Table 4.3-7. Summary of Modeled Long-Term Operational Emissions

Source	Emissions (lbs/day)				
	CO	NO _x	PM ₁₀	VOC	SO _x
Certified EIR	2,300	1,200	13,700	1,280	20
Net Emissions from the Proposed Project	18	3	3	6	<1
Total	2,318	1,203	13,703	1,286	20
SCAQMD Significance Threshold	550	100	150	75	150
Significant for OCGP	Yes	Yes	Yes	Yes	No
Significant for concurrent activities?	No	No	No	No	No

Source: LSA Associates, Inc. (2016).

As shown in Table 4.3-7, the proposed Project would not increase emissions above SCAQMD's significance thresholds and is, therefore, not considered to substantially increase the maximum daily air pollutant emissions generated during operational activities. The OCGP FEIR concluded that air pollutant emissions associated with operational activities of the Overlay Plan were considered a significant and unavoidable impact. The additional emissions associated with the proposed Project would not change the overall magnitude of emissions generated by the operation of the land uses proposed in the Master Plan. As such, the operational air emissions associated with the proposed Project and Master Plan are anticipated to be comparable to those addressed in the OCGP FEIR and, therefore, would not adversely contribute to the impacts otherwise caused by the project analyzed in the OCGP FEIR.

Consistency Determination with the Air Quality Management Plan

The OCGP FEIR included a consistency evaluation with the SCAQMD's Air Quality Management Plan (AQMP). The consistency evaluation concluded development of the adopted Overlay Plan would have a negligible impact on the overall air quality within the South Coast Air Basin. Since the approval of the OCGP, the SCAQMD has adopted a revised AQMP. The applicable AQMP for the proposed Project was adopted by the SCAQMD in December 2012. The 2012 AQMP is the legally enforceable blueprint for how the region will meet and maintain federal ozone and PM_{2.5} air quality standards in the South Coast Air Basin.

4. Discussion of Checklist and Mitigation Measures

Projects that are consistent with the land use development assumptions used in the AQMP are considered to not conflict with or obstruct the attainment of the air quality levels identified in the plan. As demonstrated by the less-than-significant increases in operations phase emissions shown in Table 4.3-6, the proposed Project would not result in a substantial increase in vehicle miles traveled (VMT) or new land uses that would change the consistency evaluation in the OCGP FEIR.

Localized Construction Impacts

As stated previously, the proposed Project would not increase the maximum daily air pollutant emissions generated during construction activities. However, the OCGP FEIR identified significant localized air quality impacts based on the extent and schedule of construction activities, primarily from particulate matter (PM₁₀ and PM_{2.5}) emissions associated with fugitive dust. The OCGP FEIR concluded that air pollutant emissions were considered a significant unavoidable adverse impact. The construction air emissions associated with the proposed Project are anticipated to be comparable to those addressed in the OCGP FEIR, and therefore would not adversely contribute to the impacts otherwise caused by the project analyzed in the OCGP FEIR.

Localized Operational Impacts

The OCGP FEIR did not identify significant localized air quality impacts for operational activities. Because the proposed Project would not result in a substantial increase in operations phase regional emissions, the proposed Project would likewise not increase the concentrations of air pollutant emissions generated during operational activities.

Odors

The OCGP FEIR identified that development of former PA 30 and PA 51 would not handle large amounts of solid waste, chemicals associated with heavy industry, or other uses that would generate objectionable odors and that no significant odor impacts would occur. The proposed Project would not result in new activities or new land uses that would change the odor evaluation in the OCGP FEIR and Addenda.

4.3.4 Findings

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the Proposed project would require a major change to the certified OCGP FEIR. The proposed modification to the OCGP Master Plan and the WSPDP, which does not include any major change to park development areas identified in the approved OCGP Master Plan, would not result in any new significant environmental impact nor would there be a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to Air Quality that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous EIR. All available relevant information has been analyzed, and there is no new information of substantial

4. Discussions of Checklist and Mitigation Measures

importance, that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was approved, augmented, and/or updated, indicating that the proposed Project would have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous EIR. All available relevant information has been analyzed, and there is no new information of substantial importance, that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that; 1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or 2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant air quality effects identified in and considered by the OCGP FEIR.

4.3.5 Mitigation from the OCGP FEIR and Applicability to the Expanded Community Ice Facility

The OCGP FEIR identified Mitigation Measures AQ1 through AQ5, which reduce the air quality effects of construction and operations of development under the adopted Plan. However, as noted above, the OCGP FEIR found that short-term and long-term air quality impacts would remain significant and unavoidable. The measures are applicable to future development under the proposed Project. However, the mitigation measures were modified in the SEIR to account for the latest improvements in emission control technologies and updated SCAQMD recommendations for reducing air pollutant emissions.

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

Construction Phase

AQ1 Prior to the start of demolition and construction within the project area, adjacent sensitive receptors shall be informed of the planned demolition and construction activities. Measures to avoid significantly impacting these receptors shall be developed and implemented by the project proponent in coordination with these uses. Other applicable mitigation measures such as erection of fences around construction areas; staggered use of equipment near sensitive receptors; diversion of truck trips away from receptors; etc.; shall be employed as necessary. Compliance with this measure shall be verified by the Director of Community Development.

AQ2 Prior to the commencement of construction activities required to demolish and/or remove existing DON structure, including, runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plans shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be

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implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Utilize off-road construction equipment that conforms to Tier 3 of the United States Environmental Protection Agency (USEPA), or higher emissions standards for construction equipment over 50 horsepower (hp) that are commercially available. The construction contractor shall be made aware of this requirement prior to the start of construction activities. Use of commercially available Tier 3 or higher off-road equipment, which is:
 - Year 2006 or newer construction equipment for engines rated equal to 175 hp and greater;
 - Year 2007 and newer construction equipment for engines rated equal to 100 hp but less than 175 hp; and
 - Year 2008 and newer construction equipment for engines rated equal to or greater than 50 hp but less than 100 hp.

The use of such equipment shall be stated on all grading plans. The construction contractor shall maintain a list of all operating equipment in use on the project site. The construction equipment list shall state the makes, models, and numbers of construction equipment on-site.

- Water exposed soils at least three times daily and maintain equipment and vehicle engines in good condition and in proper tune.
- Wash off trucks leaving the site.
- Replace ground cover on construction sites when it is determined that the site will be undisturbed for lengthy periods.
- Reduce speeds on unpaved roads to less than 15 miles per hour.
- Halt all grading and excavation operations when wind speeds exceed 25 miles per hour.
- Suspend all emission generating activities during smog alerts.
- Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible.
- Properly maintain diesel-powered on-site mobile equipment.
- Prohibit nonessential idling of construction equipment to five minutes or less in compliance with California Air Resources Board's Rule 2449.
- Sweep streets with SCAQMD Rule 1186 compliant PM₁₀-efficient vacuum units at the end of the day if substantial visible soil material is carried over to the adjacent streets.

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- Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible.
- Use of low-VOC asphalt.
- Maintain a minimum 24-inch freeboard on trucks hauling dirt, sand, soil, or other loose materials and tarp materials with a fabric cover or other suitable means. Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic.
- Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible.
- Reroute construction trucks away from congested streets, whenever feasible.
- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off- site, whenever feasible.
- Use coatings and solvents with a volatile organic compound (VOC) content lower than required under SCAQMD Rule 1113 (i.e., Super Compliant Paints). All architectural coatings shall be applied either by (1) using a high-volume, low-pressure spray method operated at an air pressure between 0.1 and 10 pounds per square inch gauge to achieve a 65 percent application efficiency; or (2) manual application using a paintbrush, hand-roller, trowel, spatula, dauber, rag, or sponge, to achieve a 100 percent applicant efficiency. The construction contractor shall also use precoated/natural colored building, where feasible. Use of low-VOC paints and spray method shall be included as a note on architectural building plans.

Operational Phase

AQ3 Prior to the issuance of building permits for any future development, the applicant shall submit, and the Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Utilize built-in energy-efficient appliances to reduce energy consumption and emissions.
- Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions.
- Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible.
- Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning.

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- Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible.
- Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods.
- Centralize space heating and cooling for multiple-family dwelling units and commercial space.
- Orient buildings north/south for reducing energy-related combustion emissions.
- Use solar energy, when feasible.
- Use high rating insulation in walls and ceilings.

AQ4 Prior to the issuance of building permits, future sales information on available housing and employment opportunities within the project area shall be provided to employees and residents of the project area, so as to encourage employees to live within the residential developments planned on-site and future residents to find employment nearby.

AQ5 Prior to the issuance of building permits, the applicant shall demonstrate to the satisfaction of the Director of Community Development that future employment generating nonresidential development shall include measures to reduce vehicle trips including: the promotion of carpool incentives and alternative work schedules, easy access to public transit systems, trail linkages between uses, low-emissions vehicle fleets, and the provision of on-site facilities such as banking and food courts, and bicycle parking facilities, and other transportation demand management measures, as deemed appropriate.

Additionally, the SSEIR identified the following measures as existing PPPs that apply to the proposed Project and will help reduce or avoid potential air quality impacts. Of the PPPs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

PPP 3-1 SCAQMD Rule 201 – Permit to Construct: The SCAQMD requires developers who build, install, or replace any equipment or agricultural permit unit, which may cause new emissions of or reduce, eliminate, or control emissions of air contaminants to obtain a permit to construct from the Executive Officer.

PPP 3-2 SCAQMD Rule 402 – Nuisance Odors: The SCAQMD prohibits the discharge of any quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property to be emitted within the SoCAB.

PPP 3-3 SCAQMD Rule 403 – Fugitive Dust (PM₁₀ and PM_{2.5}): The SCAQMD prohibits any person to cause or allow the emissions of fugitive dust from any active operation, open storage

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pile, or disturb surface area such that: (a) the dust remains visible in the atmosphere beyond the property line of the emission source; or (b) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook) if the dust emission is the result of movement of a motorized vehicle.

PPP 3-4 SCAQMD Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities: This rule specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos- containing materials (ACM). All operators are required to maintain records, including waste shipment records, and are required to use appropriate warning labels, signs, and markings.

PPP 3-5 SCAQMD Rule 445 – Wood-Burning Devices: SCAQMD prohibits installation of wood-burning devices such as fire places and wood-burning stoves in new development unless the development is located at an elevation above 3,000 feet or if existing infrastructure for natural gas service is not available within 150-feet of the development. All fireplaces installed within the proposed Project site will be natural gas fueled fireplaces.

The SSEIR also identified the following measures as PDFs that apply to the proposed Project and will help reduce or avoid potential air quality impacts. Of the PDFs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

PDF 4-1 Compact/Mixed-Use Development: The California Energy Commission (CEC) considers compact development forms beneficial for minimizing energy consumption that leads to GHG emissions. In fact, the CEC's report on the connections between land use and climate change identifies density as the project feature most predictive of the number of vehicle trips and vehicle miles traveled ("VMT") by project occupants. Like the 2011 Approved Project, the 2012 Modified Project increases the density of development on the proposed Project site. Doing so will tend to reduce VMT on a local and regional basis. For the purpose of this analysis, it was assumed that there would be only a 25 percent reduction in VMT, which is within the range observed in Southern California.

PDF 4-2 High Rate of Internal Trip Capture: With the inclusion of a mix of land uses including office, commercial, industrial, and residential in the proposed Project site, the 2012 Modified Project significantly reduces trips outside the proposed Project site. This reduces trip length and congestion on the local circulation system outside the proposed Project site.

PDF 4-7 Energy Star Appliances: EnergyStar appliances (excluding refrigerators) (e.g., dishwashers, clothes washers, clothes dryers, air conditions, furnaces, and water heaters), shall be offered or installed in all residential dwelling units.

PDF 4-8 Building Energy Efficiency: Residential dwellings and nonresidential buildings will be constructed so that they achieve 15 percent higher energy efficiency than the applicable standards set forth in the 2008 California Building and Energy Efficiency Standards (Title 24, Part 6 of the California Building Code) or meet the standards in effect at the time of issuance of building permit. The Energy Commission's 2013 Building Energy Efficiency

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Standards are 25 percent more efficient than the 2008 standards for residential construction and 30 percent more efficient for nonresidential construction. The 2013 Energy Efficiency Standards, which take effect on January 1, 2014, offer builders more efficient windows, insulation, lighting, ventilation systems and other options that would reduce energy consumption in homes and businesses.

4.4 BIOLOGICAL RESOURCES

4.4.1 Environmental Setting

The OCGP FEIR described the biological resources within PA 51 (including former PA 30), including a 995-acre parcel of land in the easternmost portion of PA 51 retained in federal ownership and designated as both "habitat reserve" and a part of the Orange County Central-Coastal Subregion NCCP/Habitat Conservation Plan (HCP). The areas outside the habitat reserve were described as: 1) providing minimal native or undisturbed habitat, and, 2) consisting of agricultural, ornamental, and domestic landscapes.

The OCGP FEIR identified nine vegetative communities within the project site, including Venturan-Diegan sage scrub, southern cactus scrub, chaparral, woodland, riparian scrub, grassland, open water, agriculture, and predominately disturbed or developed areas. Several sensitive plant species and a large number of mature trees also were identified as potentially occurring within the project site. The sensitive plant species potentially occurring in PA 51 included the southern tarplant, Palmer's grappling hook, many-stemmed dudleya, Coulter's Matilija poppy, Catalina mariposa lily, and intermediate mariposa lily. The OCGP FEIR also noted the Coulter's saltbush, Laguna Beach dudleya, San Fernando Valley spineflower, and the Lewis's evening-primrose as having a moderate potential for occurrence. Species with a low potential for occurrence included the Los Angeles sunflower, south coast saltscale, Santa Monica Mountains dudleya, heart-leafed pitcher sage, coast wooly-heads, slender-horned spineflower, Santa Barbara morning glory, tecate cypress, and salt spring checkerbloom.

The OCGP FEIR documented an observation of one sensitive wildlife species, a burrowing owl. This individual, observed during the protocol focus studies for a nearby development proposal, was outside the habitat reserve at the southwest end of PA 51 along Serrano Creek. Forty other sensitive wildlife species or species of local concern were identified as having a potential to occur on the site.

The OCGP FEIR also described the Wildlife Corridor Concept Plan that would be incorporated into the eastern portion of the project site (Refer to pp. 5.9-9 through 5.9-14 of the OCGP FEIR) and explained the guidelines pursuant to which the ultimate corridor will be designed and constructed. The subject guidelines were primarily concerned with the creation and revegetation of wildlife habitats that would flourish in the proposed areas and serve as protective cover for target wildlife species that will presumably utilize the proposed corridor. A preliminary design concept for the creation and/or revegetation of the proposed route was also prepared consistent with the guidelines described below (Draft Irvine Wildlife Corridor Master Plan, November 2002). The draft recommended a series of actions to improve the environmental quality for wildlife:

- Creation (establishes historical ecosystems on lands that did not previously support that ecosystem or on severely altered sites)
- Revegetation

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- Reduce the amount of noise pollution and urban influence.
- Remove and restore the unnecessary developed (paved) areas within the corridor right-of-way.
- Create a protective habitat along the entire length of the corridor.
- Apply minimum height/width requirements based on the specific wildlife species.

OCGP FEIR Mitigation Measure BIO3 ensures that the City will continue to work with State and federal agencies to implement the revegetation/restoration plan necessary to create a viable wildlife corridor within the Project area. The City has prepared the Irvine Wildlife Corridor Master Plan, which is independent of this project.

4.4.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR concluded that implementation of the overall project could result in the occurrence of the following potentially significant effects:

- The southern tarplant, a federal species of concern, might be adversely affected by the overall OCGP Master Plan project development.
- Although very limited in aerial extent and highly disturbed, isolated riparian habitat remnants that could be adversely impacted by the OCGP Master Plan project implementation.

The project site contains a large number of trees, many of them mature, representing a wide range of species. The OCGP project implementation may result in damage and destruction to the trees. A significant impact related to conflicts with the City of Irvine's Urban Forestry Ordinance could occur.

Addendum No. 4 (OCGP Master Plan) stated that the OCGP Master Plan portion of the overall OCGP project included essentially the same land uses and encompassed the same land area as depicted in the OCGP FEIR. Therefore, it concluded that, the OCGP FEIR adequately described the nature and severity of the environmental effects of OCGP Master Plan implementation on biological resources.

OCGP FEIR Mitigation Measure BIO1 stated that prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. MM BIO1 also stated that prior to approval of a subdivision map for development within, or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement or, if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the USFWS and the CDFG. Mitigation Measure BIO1 would continue to apply to this proposed Project (see Mitigation Measure BIO1, below).

The OCGP FEIR also stated that prior to approval of a subdivision map for each project area, a jurisdictional wetland delineation shall be performed for all areas within the Master Plan subarea that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a Wetland Mitigation Plan prepared and accepted by the appropriate agency (i.e., USACE, USFWS, CDFG). For wetlands impacted, on-site replacement,

4. *Discussion of Checklist and Mitigation Measures*

recreation (i.e., within the proposed wildlife corridor), and/or revegetation is deemed acceptable by the appropriate jurisdictional agencies. Accordingly, Mitigation Measure BIO2 below would also continue to apply to the proposed Project.

The OCGP FEIR required that several focus surveys be conducted on PA 51 (including former PA 30) for sensitive plant and wildlife species prior to development. PCR Services prepared a *Biological Resources Assessment for Lennar Heritage Fields, Orange County, California* in November of 2005 and an updated assessment was prepared in June of 2006.¹ This biological resources assessment complies with mitigation measures BIO1, requiring a focus survey for the southern tarplant, mountain plover, and burrowing owl, and BIO2 requiring a wetlands delineation to be prepared for all areas within the Master Plan subarea that contain the potential for wetland habitat and/or jurisdictional waters. The subject study and each of its constituent focused technical studies cover a land area of approximately 3,700 acres and includes the OCGP Master Plan.

Jurisdictional Wetlands and Waters of the United States

A Jurisdictional Delineation for the site has been performed (*Investigation of Jurisdictional Wetlands and Waters of the U.S. Lennar Heritage Fields*, June 2006 PCR). The property supports six intermittent drainage systems and a variety of associated ephemeral tributaries. Five of the drainages have their headwaters in undeveloped areas of the Lomas de Santiago Foothills to the north. San Diego Creek originates in an eastern portion of the watershed that is occupied by substantial residential and commercial development. Disturbances such as channelization of large stretches of the drainages and dumping of debris and trash into portions of drainages have significantly altered several waterways and obscured many drainage features. Other disturbances on site include vegetation clearing to create roads and structures, agricultural runoff, and invasion by exotic species. Current and historic land uses associated with the establishment of the former MCAS El Toro (military structures, roads, agriculture, and residential development) have significantly changed the overall drainage patterns within the San Diego Creek watershed. The cumulative impact to each wash or creek has resulted in habitat and water quality impairment within the San Diego Creek watershed.

These impacts include increased sediment and debris transport due to concrete-lined stream channels, increased flow velocities and scouring, increased bank erosion, increases in the presence of non-native plant species, and an overall reduction in the amount and the quality of the riparian habitat within the watershed. Alternatively, the disturbances have increased the amount of jurisdictional areas due to the creation of freshwater marsh habitat resulting from impoundment of storm water runoff within and adjacent to drainages. In total, the site contains 31,102.11 linear feet of jurisdictional streambed that includes 22.02 acres of USACE jurisdictional "Waters of the U.S.," and, of which, 1.66-acres meet the three parameter definition of a jurisdictional wetland. CDFG jurisdictional streambed and associated riparian habitat total 38.61 acres.

¹ This report is available for review at the City of Irvine.

4. Discussions of Checklist and Mitigation Measures

Sensitive Biological Resources

There are numerous plant and wildlife species present, or potentially present within the project area that have received special recognition by federal, State, or local resource conservation agencies and organizations. Their status is principally due to the species decline or limited population size, usually resulting from habitat loss. Protected sensitive species are those species identified by either State or federal resource management agencies, or both, as threatened or endangered under provisions of the California and Federal Endangered Species Acts, respectively.

Sensitive species that occur or could potentially occur within the project area are based on one or more of the following:

- The direct observation of the species within the project area during one of the biological surveys.
- A record reported in the California Natural Diversity Database (CNDDDB).
- The project area is within a known distribution of a species and contains appropriate habitat.

Sensitive Plant Communities

The OCGP Master Plan area is dominated by highly disturbed habitat types and only small areas of native vegetation exist. A total of 9.7 acres of southern willow scrub occurs in scattered patches throughout the project site. Southern willow scrub is a high priority inventory community in the CNDDDB. This community is considered sensitive because it has experienced a sharp decline in California and because it has the ability to support a number of sensitive bird species such as least Bell's vireo and southwestern willow flycatcher.

Sensitive Plant Species

Sensitive plants include those that are either candidates or are currently listed by the CDFG and USFWS and those that are considered sensitive by the California Native Plant Society (CNPS). Several sensitive plant species were reported in the CNDDDB from the surrounding region. In accordance with the mitigation measures of the OCGP FEIR, focused surveys for southern tarplant were conducted on June 3 and June 8, 2005. No species were found. The highly disturbed character of the site and reduced presence of habitat capable of supporting sensitive plant species make it highly unlikely that any listed plant species will occur on the site.

Sensitive Wildlife Species

Forty-nine sensitive wildlife species were reported in the CNDDDB as occurring with the USGS 7.5-minute El Toro quadrangle map and the eight surrounding maps. Habitat suitability assessments for these species were conducted concurrently with the site investigation throughout the 2005 fieldwork. The intent of the habitat assessment was to evaluate habitat for its ability to support sensitive species and ascertain which sensitive species are likely to be present within the project area based on expected habitat use, geographic range, and information collected in the vicinity of the project area.

4. Discussion of Checklist and Mitigation Measures

The OCGP Master Plan is not within a proposed or listed critical habitat area. Six sensitive wildlife species were observed within the project area during initial field investigations: northern harrier (*Circus cyaneus*), merlin (*Falco columbarius*), Cooper's hawk (*Accipiter cooperii*), California horned lark (*Eremophila alpestris actia*), cactus wren (*Campylorhynchus brunneicapillus*), and loggerhead shrike (*Lanius ludovicianus*). Three of these species (northern harrier, merlin, and Cooper's hawk) were also observed during wintering bird surveys. In addition, the golden eagle (*Aquila chrysaetos*), burrowing owl (*Athene cunicularia*), and ferruginous hawk (*Buteo regalis*) were observed utilizing the site during these subsequent wintering bird surveys. Surveys for mountain plover (*Charadrius montanus*), in accordance with the OCGP FEIR mitigation measures, were conducted during the wintering bird surveys as part of Addendum No. 3; no individuals of this species, were observed on site during those field investigations.

In a follow-up report ³on wintering birds dated October 30, 2006 with surveys conducted between October 2005 and March 2006, PCR Services searched the site for activity. No burrowing owls were observed until February 2006. Although the project site is open, its vegetation becomes dense and over two feet tall in most areas. A single owl occupied a burrow during the late winter but abandoned the area as the vegetation surrounding the burrow became three feet high and very dense. There was no indication that breeding activity had been initiated. Because the habitat became unsuitable as a natural result of not being mowed, PCR Services determined that no mitigation would be required.

Summary of the Biological Status of the Site

The OCGP FEIR required that focus surveys be conducted on the project site for several sensitive plant and wildlife species prior to development. The required surveys were carried out during 2005 and 2006. No species of endangered plants or wildlife were recorded on site during these investigations, conducted by PCR Services. The sensitive plant community of willow scrub extant on site is heavily disturbed and fragmented. As such, PCR Services did not recommend attempting to preserve any of the remnant stands or streambeds as they currently exist. It was also determined that the presence of several sensitive species would be addressed through mitigation designed to avoid disturbance of nesting avian species. PCR Services' findings did not indicate a need to consult formally with the USFWS.

4.4.3 Impacts Associated with the Expansion of the OCGP Community Ice Facility

The proposed Project consists of expanding the approved Community Ice Facility (Area L) into the future Western Picnic Area (Area E) to accommodate the additional sheet of ice and as well as accessory uses. The Community Ice Facility's square footage would increase from approximately 117,635 to approximately 270,000 square feet. Additionally, the 6.8-acre Western Sector Picnic Area would be removed from the Master Plan.

The approved OCGP Master Plan and WSPDP include plans for a future 117,635-square-foot Community Ice Facility with three sheets of ice at the proposed location within the WSPDP. The approved Community Ice Facility included seating for up to 1,200 at one rink and 100 for the other two (1,400 total seats), and special events up to 6 weekdays per year. The proposed Project would support the development of a four-sheet Community Ice Facility consisting of approximately 270,000 square feet, with accessory uses. The facility would include parking lot lighting, pedestrian lighting, and security lighting on the exterior of the building.

4. Discussions of Checklist and Mitigation Measures

The Project encompasses the same land area proposed for park development as depicted in the OCGP FEIR. Therefore, the OCGP FEIR adequately describes the nature and severity of the environmental effects of the proposed expansion of the OCGP Community Ice Facility, the subject of this Addendum, on biological resources.

The proposed Project would not cause a substantial adverse change in the significance of any impacts to any sensitive species, riparian habitat or other sensitive natural community, and/or federally protected wetlands, as none exists within the Project site. Additionally, the proposed Project would not cause a substantial adverse change in the significance of any impacts related to the movement of any native resident or migratory fish or wildlife species; conflict with any local policies or ordinances protecting biological resources and adopted Habitat Conservation Plan. Additionally, the proposed expansion of the Community Ice Facility would not result in any changes within the Wildlife Corridor. Consequently, no changes to the OCGP FEIR would be required as a result of the proposed modifications. Therefore, the discussion of impacts related to biological resources disclosed in the OCGP FEIR remains valid and the proposed additional ice sheet would not result in any significant impacts or require changes to the OCGP FEIR.

4.4.4 Findings

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the Proposed project would require a major change to the certified OCGP FEIR. The proposed modification to the OCGP Master Plan and the WSPDP, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor will there be a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to biological resources that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the Project will have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. This Environmental Evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project

4. Discussion of Checklist and Mitigation Measures

proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the project or additional mitigation measures that would substantially reduce one or more of the significant biological effects identified in and considered by the certified OCGP FEIR.

4.4.5 Mitigation from the OCGP FEIR and Applicability to the Expanded Community Ice Facility

Mitigation measures BIO1 through BIO4 will be implemented in conjunction with master plan review and subsequent development permits.

- BIO1** Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. Prior to approval of a subdivision map for development within or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owl, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement, or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG).
- BIO2** Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan subarea that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., USACE, USFWS, CDFG). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, recreation (i.e., within the proposed wildlife corridor), and/or revegetation as deemed acceptable by the appropriate jurisdictional agencies.
- BIO3** The City shall continue to work with State and federal agencies during the implementation of the proposed project to implement the revegetation/restoration plan for the wildlife corridor. Measures (e.g., sight and sound barriers, including artificial sound walls and natural diversions [e.g., hedges and tree lines]) shall be incorporated into corridor design to ensure the viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the Final FEIR.
- BIO4** Prior to issuance of a grading permit for each project area, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered Significant Trees under the City of Irvine's Urban Forestry Ordinance (UFO) (Sections 5-7-401 et al.) and the UFO shall apply to all trees included in this inventory.

4. Discussions of Checklist and Mitigation Measures

4.5 CULTURAL RESOURCES

4.5.1 Environmental Setting

Archaeological and Historical Resources

This discussion of cultural resources includes archaeological and historical resources. The OCGP FEIR presented information pertaining to the regional setting of former MCAS El Toro from both a prehistoric and historic perspective. The OCGP FEIR reported the presence of ten prehistoric archaeological sites and eight isolated prehistoric artifacts that have been recorded in the northeastern habitat preserve portions of PA 51. These sites are generally on the ridges between Borrego Canyon Wash and the Agua Chinon Wash.

The former MCAS El Toro was surveyed to determine whether any of the structures would be eligible for the National Register. Generally, a structure that has achieved significance in the past 50 years is not considered eligible for the National Register unless it is of exceptional importance. The evaluation was expanded to include eligibility under the Legacy Cold War Project (Public Law No. 101-511, Section 8120). Portions of PA 51, including former PA 30, (the former MCAS El Toro) were established during World War II, and no structure earlier than this period is at the former MCAS El Toro. Therefore, the historical significance of any structures at the former military base would be as part of the Cold War Legacy. Surveys conducted by the USACE and the DON in conjunction with the bases closure concluded there were no structures eligible for designation as Cold War Legacy or for inclusion in the National Register.

Paleontological Resources

The OCGP FEIR reported that a majority of PA 51, including former PA 31, is on the Tustin Plain, a coastal alluvial plain. Alluvium from the Late Pleistocene to Holocene Epochs immediately underlies the majority of the project area, including the part occupying the coastal plain and washes in the eastern portion of PA 51. The Pleistocene Alluvium formation is widespread and believed to extend to depths of 1,000 feet in former PA 30. A significant deposit of Pleistocene terrestrial vertebrates was recovered during excavation of a flood control basin four miles from former PA 30; thus, it is possible that similar beds underlie the former PA 30 (OCGP FEIR 5.10-2).

The eastern portion of PA 51 is in the western foothills of the northern Santa Ana Mountains. The hills and ridges in the eastern part of PA 51 are composed of older, underlying marine and non-marine rock units of early Oligocene to late Pleistocene (23 million to 2 million years ago). In order of decreasing geologic age, these latter rock units include the undifferentiated Sespe and Vaqueros Formations, Topanga and Monterey Formations, Oso Member of the Capistrano Formation, Niguel Formation, and Non marine Terrace Deposits. Non marine Terrace Deposits also underlie the terraces at the south corner of PA 51.

The northwestern corner of PA 51 contains a small portion of the Santa Ana Mountains foothills, which were separated from the main formation by erosion. This small portion is composed of undifferentiated late Cretaceous (135 million years ago) Marine Williams Formation. The rock units underlying portions of PA 51 have previously yielded important fossil remains at recorded fossil sites on and near the site. There are three recorded fossil sites in PA 51. These sites occur in undifferentiated Sespe and Vaqueros

4. Discussion of Checklist and Mitigation Measures

Formations and in the Topanga Formation. Fossil types include marine invertebrates and vertebrates, continental vertebrates, land plants, and land mammals. The three recorded fossil sites lie within the proposed habitat preserve portion of PA 51.

4.5.2 Impacts Identified in the OCGP FEIR

Archaeological and Historical Resources

The OCGP FEIR determined that development according to the adopted Overlay Plan would not cause a substantial adverse change in the significance of any historical structure. The consequence of grading activities associated with future development, however, could potentially result in a substantial adverse change in the significance of an archaeological resource. The OCGP FEIR also stated that grading activities could uncover previously unknown human remains, including those interred outside formal cemeteries.

Although the entire project area was the subject of previous cultural resources investigations as part of the Base Realignment and Closure process, it was later determined that an updated survey and report was necessary to supplement the previous work. PCR Services performed an additional Phase I and II cultural resources investigation, the results of which can be found in the *Cultural Resources Update and Review, Heritage Fields/The Great Park, City of Irvine, Orange County, California* report dated September 2006.

Later, the OCGP Master Plan reflected a development program that was consistent with the General Plan Land Use and Zoning designations for PA 51. Earth moving activities were also projected to be the same as that analyzed in the OCGP FEIR.

Paleontological Resources

The OCGP FEIR stated that earthmoving operations associated with grading and trenching have the greatest potential to impact buried paleontological resources in the moderately to highly sensitive areas in the coastal plain and washes, northeastern, northwestern, and southern portions of PA 51. The OCGP FEIR considered the potential impact associated with earthmoving operations as a significant impact for which mitigation was necessary.

The OCGP Master Plan findings were also consistent with the OCGP FEIR, and the mitigation measures proposed in the OCGP FEIR were applicable and necessary in addressing potential impacts of future development.

The SSEIR document did not analyze cultural resources, because cultural resources was screened out during the initial environmental assessment and initial study process.

4.5.3 Impacts Associated with the Expanded Community Ice Facility

The proposed Project is located within the OCGP Master Plan area. Therefore, the OCGP FEIR adequately describes the nature and severity of the environmental effects of OCGP Master Plan and its current minor modification associated with the expansion of the Community Ice Facility, the subject of this Addendum, on cultural resources.

4. Discussions of Checklist and Mitigation Measures

Archaeological and Historical Resources

The proposed Project would not cause a substantial adverse change in the significance of any historical structure, but grading associated with construction could still potentially result in substantial adverse change in the significance of an unknown (i.e., buried) archaeological resource, or uncover previously unknown human remains. As such, the cultural resources mitigation measures developed for the OCGP FEIR remain applicable to, and sufficient to mitigate impacts associated with development of the expanded Community Ice Facility.

The proposed expansion of the Community Ice Facility reflects a development program that is consistent with the General Plan Land Use and Zoning designations for PA 51. Therefore, the discussion of impacts on archaeological and historical resources disclosed in the OCGP FEIR remains valid and the proposed additional ice sheet would not result in any significant impacts or require changes to the OCGP FEIR.

Paleontological Resources

The OCGP Master Plan and the proposed expansion of the Community Ice Facility reflect a development program that is consistent with the General Plan Land Use and Zoning designations for PA 51. Further, the extent of earth movement activities required to facilitate development of the expansion of the Community Ice Facility is projected to be essentially the same as that assessed and presented in the OCGP FEIR and Addenda. Given the foregoing, the discussion of potential impacts on paleontological resources attributable to the Great Park portion of the overall OCGP Project disclosed in the OCGP FEIR remains valid. As such, the paleontological mitigation measure developed for the OCGP FEIR remains applicable to, and sufficient to mitigate impacts associated with development of the expanded Community Ice Facility.

4.5.4 Findings

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the Proposed project would require a major change to the certified OCGP FEIR. The proposed modification to the OCGP Master Plan and the WSPDP, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor will there be a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to cultural or paleontological resources that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

4. *Discussion of Checklist and Mitigation Measures*

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant cultural and paleontological effects identified in and considered by the OCGP FEIR.

4.5.5 Mitigation from the OCGP FEIR and Applicability to the Expanded Community Ice Facility

Cultural Resources

The OCGP FEIR identified mitigation measures CULT1 through CULT4 which, if fulfilled, would reduce the effects of the proposed Project to a level less than significant.

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

CULT1 Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PAs 51 and 30. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

CULT2 Monitoring of excavation and grading activities associated with future development in PAs 51 and 30 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure CULT1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and an assessment of their importance under CEQA and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.

CULT3 Prior to the issuance of grading permits and/or building permits for any future development in PAs 51 and 30, a detailed mitigation program shall be submitted by the applicant to the City to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City has standard conditions applied prior to the issuance of grading

4. Discussions of Checklist and Mitigation Measures

permits when a project includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.

CULT4 Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City to address the accidental discovery or recognition of any human remains. The program shall include the following:

There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- The county coroner must be contacted to determine that no investigation of the cause of death is required, and

If the coroner determines the remains to be Native American:

- The coroner shall contact the Native American Heritage Commission within 24 hours.
- The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
- The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for the means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
- Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
 - The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission;
 - The descendant identified fails to make a recommendation; or
 - The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

Compliance with this measure shall be verified by the Community Development Department.

Paleontological Resources

The OCGP FEIR identified Mitigation Measure P1, which, if fulfilled, would reduce the effects of the proposed Project to a level less than significant.

4. Discussion of Checklist and Mitigation Measures

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

- P1** Prior to issuance of a grading permit for any portion of the project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. (A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a project site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.

When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossil specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screening-washing operation on-site.

Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.

4.6 GEOLOGY AND SOILS

4.6.1 Environmental Setting

The OCGP FEIR describes the topography of the OCGP as nearly flat and gently sloping down to the west to southwest with elevations ranging from 450 feet above mean sea level (msl) to 200 feet above msl. The proposed Project is located in PA 51, which includes some slopes of the Santa Ana foothills which reach elevations of 750 feet above msl. Alluvial soils of six major soil associations consisting predominantly of varying sands, silts, and clayey silty sands are present within PA 51. The foothill portions of the project area are underlain by sedimentary bedrock units, mantled by only a thin soil cover.

The OCGP FEIR identified the primary potential seismic hazard in the area as ground motion. Seismic Response Area (SRA) designations are used by the City to assess the geologic and seismic risk associated with potential development. A majority of PA 51 is within SRA-2 (denser soils/deeper groundwater) and is considered suitable for development.

No known active faults crossing or projecting into the project area were identified; however, the proposed Project site is within the seismically active southern California region and two active faults, Whittier-Elsinore Fault and Newport-Inglewood Fault, are located within 14 miles of the site.

4. Discussions of Checklist and Mitigation Measures

4.6.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR disclosed the potential for future development of the OCGP area to result in the exposure of people or structures to strong ground shaking in the event of a major earthquake along anyone of the active faults in the region. The OCGP FEIR noted that new construction would be required to adhere to current seismic safety building codes which address seismic concerns. Existing buildings within PA 51 do not meet current seismic codes; therefore, the temporary or permanent reuse of the existing buildings and the associated exposure of people or structures to potential substantial adverse effects due to strong seismic-related ground shaking were considered significant impacts.

Because of the documented landslides in the northeastern Santa Ana foothills area of the site, the OCGP FEIR analysis concluded that the OCGP project would result in a significant impact associated with landslides in the affected area of PA 51 east of Irvine Boulevard, where future development of habitable structures could occur under the adopted Overlay Plan. The OCGP FEIR also concluded future development has the potential to result in soil erosion or the loss of topsoils and risk to life and property with the presence of expansive soils, and that these impacts are considered significant.

The conclusions drawn in the OCGP Master Plan were consistent to those in the OCGP FEIR. No new impacts were identified, and the OCGP FEIR had adequately described the environmental impacts of the project relative to soils, geologic hazards, and seismic safety, as well as the severity of the impacts.

4.6.3 Impacts Associated with the Expanded Community Ice Facility

The geology and soil conditions on the Project site are the same as the geology and soil conditions analyzed in the OCGP FEIR and Addenda. In addition, the proposed Project includes the same land uses and development areas that were analyzed as part of the adopted WSPDP and OCGP Master Plan. Impacts related to seismic hazards, landslides, expansive soils, and loss of topsoil or soil erosion are not intensified by the Project; therefore, the conclusions drawn in the OCGP FEIR adequately describe the environmental effects of the Project relative to soils, geologic hazards, and seismic safety, as well as the severity of the impacts. The proposed Project would incorporate the specific engineering techniques identified in the OCGP EIR that would avoid risk associated with geologic conditions. The proposed Project would also comply with the most current California Building Code (CBC). There are no new or increased significant adverse project-specific or cumulative impacts with regard to geology and soils that are identified as a result of the implementation of the proposed Project. There is no new information relative to geology and soils that was not in existence at the time the FEIR was prepared. Therefore, implementation of the proposed Project would be consistent with the FEIR, and no new mitigation measures are required in relation to impacts to geology and soils.

4.6.4 Findings

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the Proposed project would require a major change to the certified OCGP FEIR. The proposed modification to the OCGP Master Plan and the WSPDP, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor will there be a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

4. *Discussion of Checklist and Mitigation Measures*

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to geology and soils that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant geological effects identified in and considered by the OCGP FEIR.

4.6.5 Mitigation from the OCGP FEIR and Applicability to the Expanded Community Ice Facility

The OCGP FEIR identified Mitigation Measures GS1 through GS4, which, if fulfilled, would reduce the effects of development under the adopted Overlay Plan to a level of less than significant.

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

- GS1** Prior to issuance of a building permit, the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.
- GS2** Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.

4. Discussions of Checklist and Mitigation Measures

1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be conducted. The purpose of the subsurface evaluation is to:

- a. Further evaluate the subsurface conditions in the area of the proposed structures.
- b. Provide specific data on potential geologic and geotechnical hazards.
- c. Provide information pertaining to the engineering characteristics of earth materials in the project area.

From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural section, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:

- Seismic Ground Shaking - Measures to prevent risk of loss, injury or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults.
- Erosion or Loss of Topsoil - Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances.
- Where Expansive Soils Exist - Measures for the design of foundation, slabs, flatwork and other improvements subject to drainage from expansive soils.

Compliance with this measure shall be verified by the Community Development Department.

- GS3** Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of any existing structure if a building permit is not issued, a seismic evaluation of the structure including recommendations for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.

- GS4** Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specifically address erosion control and surface runoff for both construction and long-term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

4. Discussion of Checklist and Mitigation Measures

4.7 GREENHOUSE GAS EMISSIONS

As discussed in more detail in Section 3.4, the proposed Project does not meet the Section 15162 criteria for preparing a subsequent environmental document and no analysis of GHG emissions is required. However, the SSEIR included an analysis of GHG emissions and a discussion of measures that are applicable to the proposed Project. The SSEIR identified the following measures as existing PPP that apply to the proposed Project and will help reduce or avoid potential GHG impacts:

Of the PPPs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

PPP 4-1 City of Irvine Construction and Demolition (“C&D”) Debris Recycling and Reuse Ordinance: The C&D ordinance requires that (1) all residential projects of more than one unit, (2) nonresidential developments on 5,000 sf or larger, and (3) nonresidential demolition/renovations with more than 10,000 sf of building, recycle or reuse a minimum of 75 percent of concrete and asphalt and 50 percent of nonhazardous debris generated.

PPP 4-2 SCAQMD Rule 445 – Wood-Burning Devices: SCAQMD prohibits installation of wood-burning devices such as fireplaces and wood-burning stoves in new development unless the development is at an elevation above 3,000 feet or if existing infrastructure for natural gas service is not available within 150 feet of the development. All fireplaces installed within the proposed Project site will be natural gas-fueled fireplaces.

PPP 4-3 Building and Energy Efficiency Standards (CCR Title 24): Prior to the issuance of a building permit for residential, commercial, or office structures in the proposed Project site, development plans for these structures shall be required to demonstrate that the project meets the 2008 Building and Energy Efficiency Standards. Commonly known as Title 24, these standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2008 standards are approximately 15 percent more energy efficient than the 2005 Building and Energy Efficiency Standards. Plans submitted for building permits shall include written notes demonstrating compliance with the 2008 energy standards and shall be reviewed and approved by the Public Utilities Department prior to issuance of building permits. Design strategies to meet this standard may include maximizing solar orientation for daylighting and passive heating/cooling, installing appropriate shading devices and landscaping, utilizing natural ventilation, and installing cool roofs. Other techniques include installing insulation (high R value) and radiant heat barriers, low-e window glazing, or double-paned windows.

PPP 4-4 Title 24 Code Cycles: Net-Zero Buildings (Residential and Nonresidential): The California Public Utilities Commission adopted its Long-Term Energy Efficiency Strategic Plan on September 18, 2008, presenting a roadmap for all new residential and commercial construction to achieve a zero-net energy standard. This Plan outlines the goal of reaching zero-net energy in residential construction by 2020 and in commercial construction by 2030. Achieving this goal will require increased stringency in each code cycle of California’s Energy Code (Title 24).

4. Discussions of Checklist and Mitigation Measures

- PPP 4-5 California Renewable Portfolio Standard:** The California Air Resources Board (CARB) Renewable Portfolio Standard (RPS) is a foundational element of the State's emissions reduction plan. In 2002, Senate Bill 1078 established the California RPS program, requiring 20 percent renewable energy by 2017. In 2006, Senate Bill 107 advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II. On September 15, 2009, Governor Arnold Schwarzenegger signed Executive Order S-21-09 directing CARB to adopt regulations increasing RPS to 33 percent by 2020. These mandates apply directly to investor-owned utilities, which in the case of the 2012 Modified Project is Southern California Edison (SCE).
- PPP 4-6 California Low Carbon Fuel Standard:** On January 18, 2007, Gov. Schwarzenegger issued Executive Order S-1-07 requiring the establishment of a Low Carbon Fuel Standard (LCFS) for transportation fuels. This statewide goal requires that California's transportation fuels reduce their carbon intensity by at least 10 percent by 2020. Regulatory proceedings and implementation of the LCFS have been directed to CARB. The LCFS has been identified by CARB as a discrete early action item in the Scoping Plan. CARB expects the LCFS to achieve the minimum 10 percent reduction goal; however, many of the early action items outlined in the Scoping Plan work in tandem with one another. To avoid the potential for double-counting emission reductions associated with Assembly Bill (AB) 1493 (Pavley), the Scoping Plan has modified the aggregate reduction expected from the LCFS to 9.1 percent.
- PPP 4-7 Federal Corporate Average Fuel Economy (CAFE) Standards:** The 2007 Energy Bill creates new federal requirements for increases in fleetwide fuel economy for passenger vehicles and light trucks. The federal legislation requires a fleetwide average of 35 miles per gallon (mpg) to be achieved by 2020. The National Highway Traffic Safety Administration is directed to phase in requirements to achieve this goal. Analysis by CARB suggests that this will require an annual improvement of approximately 3.4 percent between 2008 and 2020.
- PPP 4-8 California Assembly Bill 1493 – Pavley Standards:** On July 22, 2002, Governor Gray Davis signed AB 1493 requiring CARB to develop and adopt regulations designed to reduce GHGs emitted by passenger vehicles and light-duty trucks beginning with the 2009 model year. The standards set within the Pavley regulations are expected to reduce GHG emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016. California had petitioned the USEPA in December 2005 to allow these more stringent standards and California executive agencies have repeated their commitment to higher mileage standards. On July 1, 2009, the USEPA granted California a waiver that will enable the State to enforce stricter tailpipe emissions on new motor vehicles.
- PPP 4-9 SB 375:** Senate Bill (SB) 375 requires the reduction of GHG emissions from light trucks and automobiles through land use and transportation efforts that will reduce VMT. In essence, SB 375's goal is to control GHGs by curbing urban sprawl and through better land use planning. SB 375 essentially becomes the land use contribution to the GHG reduction requirements of AB 32, California's global warming bill enacted in 2006. The Modified Project is consistent with SB 375 strategies to reduce VMT and associated GHG emissions in that it represents a compact, mixed-use development, improves the jobs/housing balance in the City and the Orange County Council of Governments Subregion, and provides access to mass transit. According to SCAG's 2008 Regional Comprehensive Plan, SCAG's Land Use

4. *Discussion of Checklist and Mitigation Measures*

and Housing Action Plan can be expected to result in a 10 percent reduction in VMT in 2035 when compared to current trends.

PPP 4-11 Comprehensive Signal Retiming and Coordination Program: Emissions are highest at the lowest travel speeds. The City is currently retiming and coordinating signals throughout Irvine under its ITEMS (Irvine Traffic Engineering System) program. A program to retime and coordinate traffic signals would produce more even traffic flows, so that vehicles are not starting and stopping constantly. These types of programs can improve vehicular level of service (LOS), thereby decreasing emissions for the same volume of vehicles.

PPP 4-12 Waste Reduction: The City adopted a Zero Waste program in 2007 to approach waste management. The City recovers approximately 66 percent of its waste for recycling and composting, which exceeds the state's AB 939 waste diversion goals. Furthermore, waste haulers establish rate schedules according to bin size and frequency of collection. Commercial customers that subscribe to smaller bins (e.g., 2 cubic-yard bins) are routinely charged less by haulers. This pricing structure encourages waste reduction and recycling, and tends to minimize hauler pickups.

The SSEIR also identified the following measures as PDFs that apply to the proposed Project and will help reduce or avoid potential GHG impacts:

Of the PDFs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

PDF 4-1 Compact/Mixed-Use Development: The California Energy Commission (CEC) considers compact development forms beneficial for minimizing energy consumption that leads to GHG emissions. In fact, the CEC's report on the connections between land use and climate change identifies density as the project feature most predictive of the number of vehicle trips and VMT by project occupants. The 2012 Modified Project intensified the residential development on the proposed Project site as compared to the 2011 Approved Project, and locates additional housing opportunities near major employment and transportation centers. Doing so will tend to reduce VMT on a local and regional basis.

PDF 4-2 High Rate of Internal Trip Capture: With the inclusion of a mix of land uses including office, commercial, industrial, and residential in the proposed Project site, the 2012 Modified Project significantly reduces trips outside the proposed Project site. This reduces trip length and congestion on the local circulation system outside the proposed Project site.

PDF 4-3 Low-Flow Fixtures: The 2012 Modified Project incorporates low-flow water fixtures that will meet the requirements of the California Green Building Standards Code standards. Prior to issuance of building permit, the Applicant or its successor shall submit evidence to the satisfaction of the Director of Community Development that toilets, urinals, sinks, showers, and other water fixtures installed on-site are low-flow water fixtures that meet the California Green Building Standards Code standards.

4. Discussions of Checklist and Mitigation Measures

- PDF 4-4 Landscaping and Irrigation Systems:** The 2012 Modified Project incorporates automated, high-efficiency landscaping irrigation systems on all master landscaped areas that reduce water use, such as evapotranspiration “smart” weather-based irrigation controllers, and bubbler irrigation; low-angle, low-flow spray heads; moisture sensors; and use of a California-friendly landscape palette. Prior to approval of landscape plans, the Applicant or its successor shall submit evidence to the satisfaction of the City’s Director of Community Development that such landscaping irrigation systems will be installed so as to make the 2012 Modified Project consistent with the intent of the California Water Conservation in Landscaping Act of 2006 (AB 1881), including provisions to reduce the wasteful, uneconomic, inefficient, and unnecessary consumption of water.
- PDF 4-5 Use of Reclaimed Water on All Master Landscaped Areas:** Prior to approval of landscape plans, the Applicant or its successor shall submit evidence to the satisfaction of the City’s Director of Community Development and the Irvine Ranch Water District (IRWD) that the landscape plans incorporate the use of reclaimed water in all master landscaped areas, including master landscaped commercial, multifamily, common, roadways, and park areas. Master landscapes shall also incorporate weather-based controllers and efficient irrigation system designs to reduce overwatering, combined with the application of a California-friendly landscape palette.
- PDF 4-6 Material Recovery:** The 2012 Modified Project incorporates measures to reduce waste generated by proposed Project site residents, occupants and visitors, and to encourage recycling of solid wastes, utilizing the Orange County Integrated Waste Management Department’s material recovery facilities to recycle glass, plastic, cans, junk mail, paper, cardboard, greenwaste (e.g., grass, weeds, leaves, branches, yard trimmings, and scrap wood), and scrap metal. Future employees, residents, and customers would participate in these programs. These measures include the requirement to include on-site recycling facilities at all commercial, retail, industrial, and multifamily residential developments. In addition, educational materials identifying available recycling programs shall be distributed to all land uses, including single-family residential.
- PDF 4-7 Energy Star Appliances:** EnergyStar appliances (excluding refrigerators) (e.g., dishwashers, clothes washers, clothes dryers, air conditions, furnaces, and water heaters, shall be offered or installed in all residential dwelling units.
- PDF 4-8 Building Energy Efficiency:** Residential dwellings and nonresidential buildings will be constructed so that they achieve 15 percent higher energy efficiency than the applicable standards set forth in the 2008 California Building and Energy Efficiency Standards (Title 24, Part 6 of the California Building Code) or meet the standards in effect at the time of issuance of building permit. The Energy Commission’s 2013 Building Energy Efficiency Standards are 25 percent more efficient than the 2008 standards for residential construction and 30 percent more efficient for nonresidential construction. The 2013 Energy Efficiency Standards, which take effect on January 1, 2014, offer builders more efficient windows, insulation, lighting, ventilation systems and other options that would reduce energy consumption in homes and businesses.

4. *Discussion of Checklist and Mitigation Measures*

PDF 4-9 Carbon Sequestration: The 2012 Modified Project incorporates landscaping and a plant palette that will foster carbon sequestration within the proposed Project site that is comparable to the landscaping and plant palette that was already incorporated into the 2011 Approved Project.

PDF 4-10 Softscape Landscaped Areas: Consistent with the sustainable practices and modern landscaping standards, and consistent with the landscaping used in the 2011 Approved Project, the 2012 Modified Project reduces softscape (e.g., plants/horticultural elements of landscape design) landscaped areas by 28 percent as compared to the default assumption in CalEEMod.

4.8 HAZARDS AND HAZARDOUS MATERIALS

4.8.1 Environmental Setting

Hazardous Materials and Hazardous Wastes

The OCGP FEIR discussed an environmental baseline survey (EBS) that was conducted for the project area. Information was used from the Base Realignment and Closure Business Plan for Marine Corps Air Station (MCAS) EI Toro dated May 2002; the EBS dated 1995; and an update to the EBS-April 2003 Draft Final EBS. The 2003 EBS identified “76 potential release locations, all of which require further evaluation for potential releases to the environment and subsequent remediation, if required” (Refer to OCGP FEIR p. 5.5-5).

The Installation Restoration Program (IRP) for the former MCAS EI Toro was authorized in 1984. The IRP outlined hazardous remediation needs and identified 24 sites (Sites 1-22, 24, and 25) for investigation at the former MCAS EI Toro. The IRP sites were originally divided into two categories: No Further Action sites (Table 4.8-1) and Action Required sites (Table 4.8-2). The IRP Sites identified as Action Required sites are depicted on Figure 4.8-1, *Installation Restoration Program Sites*. The Action Required IRP sites that are located within the 688-acre OCGP Improvement Area include sites 5 and 16.

IRP Site 5 (Perimeter Landfill), which covers approximately 1.8 acres, operated between 1955 and the late-1960s as a cut-and-fill disposal facility. Typical of municipal landfills, Site 5 contains a variety of materials. Reportedly, almost any waste generated at former MCAS EI Toro may have been disposed at IRP Site 5, including burnable trash; municipal solid waste; cleaning fluids; scrap metals; paint residues; and unspecified fuels, oils, and solvents. Wastes were typically burned in place to reduce volume prior to burial. A Remedial Action Completion Report (RACR) dated August 2012 has been prepared and documents that the landfill has been remediated and is protective of human health and the environment. An Operations and Maintenance/Long-Term Monitoring (LTM) Plan dated November 2010 has been prepared and approved by the Department of Toxic Substances Control. The post-construction LTM activities at IRP Site 5 monitor the effectiveness of the landfill cap, surface-water drainage structures, landfill gas monitoring system, groundwater monitoring network, and site security features.

4. Discussions of Checklist and Mitigation Measures

Table 4.8-1. No Further Action IRP Sites and Zoning

IRP Site	IRP Designation	Adopted Overlay Plan Zoning District
4	Ferrocene Spill Area	8.1 Trails and Transit Oriented District
6	Drop Tank Drainage Area No. 1	8.1 Trails and Transit Oriented District
7	Drop Tank Drainage Area No. 2	1.9 Orange County Great Park
9	Crash Crew Pit No. 1	1.9 Orange County Great Park
10	Petroleum Disposal Area	1.9 Orange County Great Park
13	Oil Change Area	1.9 Orange County Great Park
14	Battery Acid Disposal Area	1.9 Orange County Great Park
15	Suspended Fuel Tanks	1.9 Orange County Great Park
19	Air Craft Expeditionary Refueling	8.1 Trails and Transit Oriented District
20	Hobby Shop	8.1 Trails and Transit Oriented District
21	Materials Management Group	6.1 Institutional
22	Tactical Air Fuel Dispensing System	1.9 Orange County Great Park

Source: OCGP FEIR, Table 5.5-3, p. 5.5-21; SEMA Associates (June 7, 2006) (rev June 2008).

IRP = Installation Restoration Program

Table 4.8-2. Action Required IRP Sites and Zoning

IRP Site	IRP Designation	Adopted Overlay Plan Zoning District
1	EOD Range	1.4 Preservation
2	Magazine Road Landfill	1.4 Preservation
3	Original Landfill	8.1 Trails and Transit Oriented District
5	Perimeter Road Landfill	1.9 Orange County Great Park
8	DRMO Storage Yard	6.1 Institutional 8.1 Trails and Transit Oriented District
11	Transformer Storage Area	1.9 Orange County Great Park
12	Sludge Drying Beds	6.1 Institutional
16	Crash Crew Pit No. 2	1.9 Orange County Great Park
17	Communications Station Landfill	1.4 Preservation
24	VOC Source Area	6.1 Institutional 1.9 Orange County Great Park 8.1 Trails and Transit Oriented District

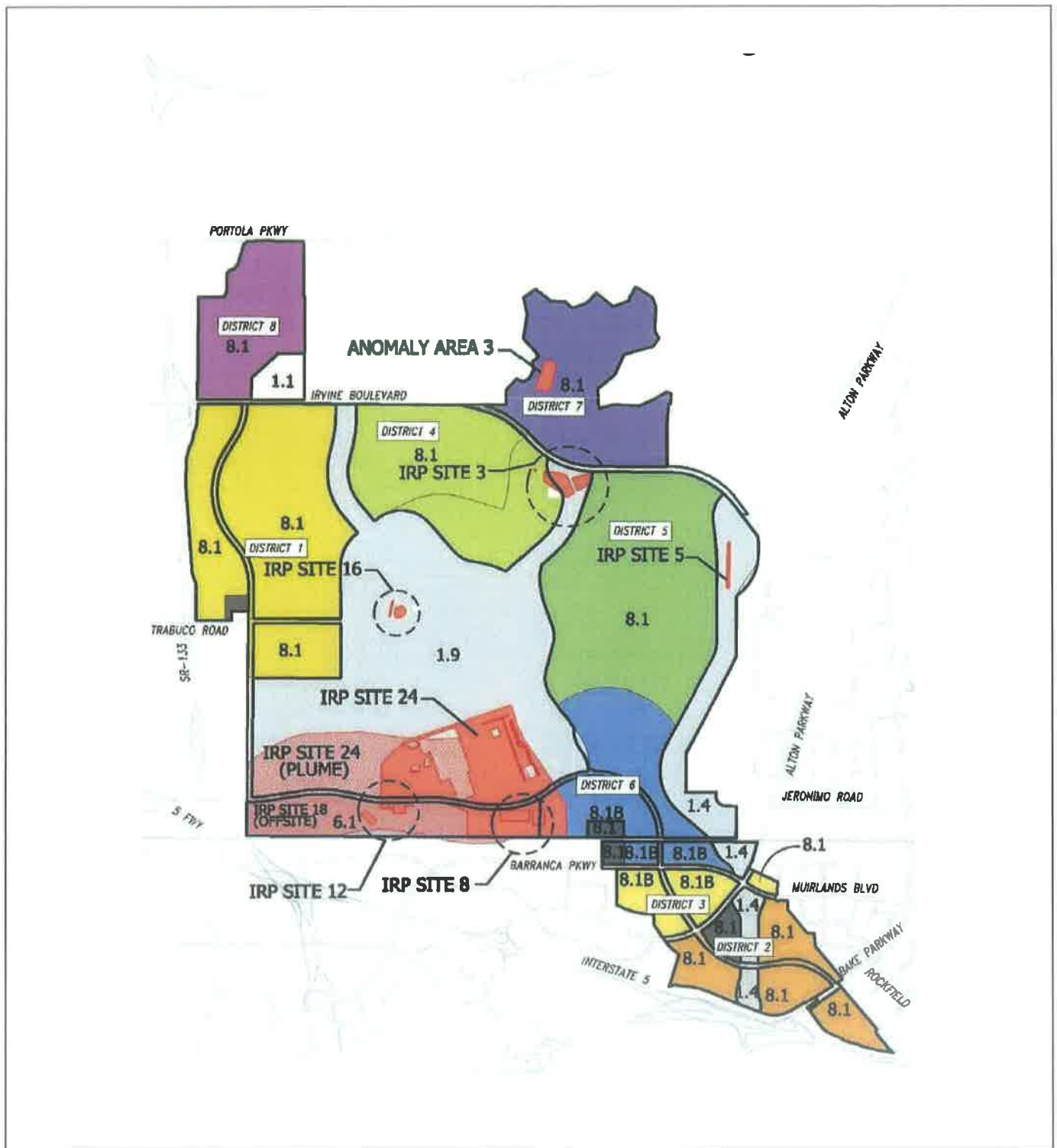
Source: OCGP FEIR, Table 5.5-4, p. 5.5-22; SEMA Associates (June 7, 2006) (rev June 2008).

DRMO = Defense Reutilization and Marketing Office

EOD = Explosive Ordnance Disposal

IRP = Installation Restoration Program

VOC = volatile organic compound



LSA

FIGURE 4.8-1



0 1750 3500
FEET

SOURCE: Bing Maps

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OCGP Community Ice Facility
Installation Restoration Program (IRP) Sites

4. Discussions of Checklist and Mitigation Measures

At IRP Site 16 (Crash Crew Pit No. 2), aviation fuels (JP-5, AVGAS), chlorinated solvents, hydraulic fluid, crankcase oil, white phosphorus, magnesium phosphate, and napalm were burned in unlined pits for fire training from 1972 to 1985. The Draft Remedial Action Completion Report (RACR) prepared for Site 16 documents that the deep vadose zone (from 10 feet below ground surface [bgs] to groundwater, which is present at approximately 170 feet bgs) response action (i.e., monitoring) is complete and No Further Action is required for the deep vadose zone at Site 16. The Draft RACR Report meets the requirements of a Closure Report as specified in the Final Record of Decision (ROD). The Final ROD documented No Further Action for surface and shallow soil (0-10 feet bgs) at IRP Site 16. Based on the results of soil gas monitoring, petroleum corrective actions including soil vapor extraction and MPE remediation, and modeling results, it is unlikely for VOCs to further impact groundwater (due to infiltration) at concentrations exceeding drinking water standards. As a result, it has been recommended that the requirements for positive drainage within the Main Pit on Site 16 be eliminated.

Of the 404 underground storage tanks (USTs) identified at the Base, 357 had been remediated and received findings of "no further action" at the time the OCGP FEIR was prepared. Of the 39 aboveground storage tanks (ASTs) on the property, 36 had been remediated and received findings of "no further action."

Evaluation and remediation of previously identified Installation Restoration Program (IRP) sites within the project site continues with the resulting changes in the condition of the property largely anticipated in the OCGP FEIR. Subsequent to certification of the OCGP FEIR, the DON completed environmental related findings that support the suitability to transfer (FOST) real property made available through the Base Realignment and Closure process and to support the lease of areas not yet suitable for transfer.¹ Please see Figure 4.8-1 for IRP locations.

The areas suitable for lease encompassed locations of concern identified in the 1995 and 2003 EBS, and in the OCGP FEIR, where future evaluation and/or actions are ongoing or required. These areas were identified as "carve-outs" in the DON documentation.²

Subsequent to certification of the OCGP FEIR, a total of seven FOSTs have documented that all necessary remediation has been completed to protect human health and the environment on approximately 3,478 acres of the former MCAS El Toro. Information concerning remediation is subject to periodic change as additional information is generated from cleanup programs and activities that are being planned for, or are in progress.

Emergency Plans

The OCGP FEIR described the former MCAS El Toro site (PA 51, including former PA 30) as a potential emergency response staging area because of its capacity for processing and storing large quantities of cargo. The Orange County Emergency Plan, which incorporates the statewide standardized emergency management system (SEMS), guides multijurisdictional response to emergency conditions. No

¹ U.S. Department of the Navy, 2004. *Final Finding of Suitability to Transfer, Parcel IV and Portions of Parcels I, II, and III, Former Marine Corps Air Station, El Toro, California*, July 2004; *Final Finding of Suitability to Lease for Carve-outs Within Parcels I, II, and III, Former Marine Corps Air Station, El Toro, California*, July 2004.

² U.S. Department of the Navy, 2004a. *Final Finding of Suitability to Lease for Carve-outs within Parcels I, II, and III, Former Marine Corps Air Station, El Toro, California*, July 2004.

4. Discussion of Checklist and Mitigation Measures

substantial change to the description of the setting regarding emergency plans has occurred that would alter the analysis and conclusions of the OCGP FEIR on emergency plans and response.

Wildland Fires

The OCGP FEIR identified high fire hazard areas within open space, undeveloped land northeast of and adjacent to PA 51. The City has no construction records of existing buildings and structures on the property. No substantial change to the description of the setting relative to wild land fires has occurred that would alter the analysis and conclusions of the OCGP FEIR regarding wild land fires.

4.8.2 Impacts Identified in the OCGP FEIR

Hazardous Materials and Wastes

The OCGP FEIR identified no significant impacts associated with the No Further Action IRP sites, which are listed in Table 4.8-1. Table 4.8-2 identifies each Action Required IRP site and its location relative to the adopted Overlay Plan. The OCGP FEIR disclosed the following environmental consequences of the adopted Overlay Plan as significant impacts:

- Construction activities involving demolition and possible substantial remodeling of existing structures in the project area as the project area develops could result in the disturbance of structures and soils containing asbestos-containing building materials (ACM) and lead-based paint.
- IRP site 24 is located in the 6.1 Institutional and 1.9 Orange County Great Park zoning districts. The site may be conveyed with temporary restrictions on use that are not appropriate for transportation facility use. This is considered a significant impact.
- Future uses of IRP site 3 may be potentially constrained by the implementation of institutional controls.
- IRP site 16 (Crash Crew Pit No.2) is located in the 1.9 Orange County Great Park zoning district. The site may be conveyed with temporary restrictions on use that are not appropriate for recreational land uses.

Emergency Plans

The OCGP FEIR determined the Overlay Plan would not be expected to interfere with emergency response and evacuation plans on the basis that other sites within Orange County are already designated as emergency staging areas and portions of the OCGP would remain available to non-aviation emergency response equipment. Accordingly, the OCGP FEIR concluded that the adopted Overlay Plan would not result in a significant impact related to emergency response and evacuation plans.

Wildland Fires

The OCGP FEIR concluded that the Habitat Reserve, Wildlife Corridor, and Recreational areas in the northeastern portion of PA 51 would be exposed to the highest level of fire risk from wildland fires under the adopted Overlay Plan, and that reuse of existing buildings require inspection for conformance to fire life safety code requirements. The OCGP FEIR identified the wild land fire impacts as potentially significant.

4. Discussions of Checklist and Mitigation Measures

4.8.3 Impacts Associated with the Expanded Community Ice Facility

The proposed Project is located within the OCGP Master Plan area. Therefore, the OCGP FEIR adequately describes the nature and severity of the environmental effects of the OCGP Master Plan and its current minor modification associated with the expansion of the Community Ice Facility, the subject of this Addendum, related to hazards and hazardous materials.

Hazardous Materials and Wastes

Implementation of the proposed Project would not cause any direct impacts to hazards and hazardous materials beyond those identified in the OCGP FEIR. As discussed above, since certification of the OCGP FEIR, a total of seven FOSTs have documented that all necessary remediation has been completed to protect human health and the environment on approximately 3,478 acres of the former MCAS El Toro. Information concerning remediation is subject to periodic change as additional information is generated from cleanup programs and activities that are being planned, or are in progress. The proposed Project site is located near IRP Site 18, a volatile organic compound (VOC) Groundwater Contamination Plume. This plume of Trichloroethylene (TCE) extends below the ground surface into the aquifer system on-site of the former MCAS El Toro/OCGP Master Plan area. This contamination does not impact the existing or proposed land uses on the Project site and would not impact, or be impacted by, the proposed expansion of the Community Ice Facility. In addition, any hazardous materials used during the operation of the Community Ice Facility would be in compliance with existing State and federal laws. The use, transport, storage, and disposal of such chemicals are strictly regulated by federal, State, and local laws and regulations. Overall, the proposed modification to the OCGP Master Plan would not change the OCGP FEIR conclusions; with mitigation measures HH1, HH2, HH5, and HH6, the Project would result in less than significant impacts related to hazardous materials and wastes. No new or modified mitigation measures are required.

Emergency Plans

Construction and operation of the expanded Community Ice Facility would not be expected to interfere with emergency response and evacuation plans since other sites within Orange County are already designated emergency staging areas and portions of the OCGP would remain available to emergency response equipment. Accordingly, the proposed Project would not change the OCGP FEIR conclusions; the proposed Project would not result in a significant impact related to emergency response and evacuation plans.

Wildland Fires

Under the OCGP Master Plan, the Habitat Reserve, Wildlife Corridor, and recreational areas in the northeastern portion of PA 51 would be exposed to the highest level of fire risk from wildland fires and would require inspection for conformance to fire life safety code requirements.

As the potential significant wildland fire impacts of the OCGP Master Plan are similar to those disclosed in the OCGP FEIR, the proposed Project would not substantially change the findings and conclusions of the OCGP FEIR regarding wildland fires.

4. Discussion of Checklist and Mitigation Measures

4.8.4 Findings

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the Proposed project would require a major change to the certified OCGP FEIR. The proposed modification to the OCGP Master Plan and the WSPDP, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact, nor will there be a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to hazards or hazardous materials that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant hazards or hazardous materials effects identified in and considered by the OCGP FEIR.

4.8.5 Mitigation from the OCGP FEIR and Applicability to the Expanded Community Ice Facility

The OCGP FEIR identified six mitigation measures to reduce the effects of the adopted Overlay Plan on public health and safety, specifically environmental effects associated with hazardous materials and waste, emergency response, and wildland fires, to a level less than significant. However, the mitigation measures were modified and new measures were adopted in the SEIR. An explanation for the new mitigation measures is provided below. In addition, the SSEIR proposed to make two minor modifications to Mitigation Measures HH2 and HH3 adopted by the City for the 2011 Approved Project. The modification to HH2 was made to update the reference to the SSEIR. The modification to HH3 was made to note that the high fire hazard maps are occasionally updated and does not affect the substance of the mitigation measure.

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The certified OCGP FEIR's Mitigation Measure HH1 was updated because much of the abatement it required has been completed. In addition, many of its requirements are triggered upon the transfer of the property from the DON to the City, and that transfer has already occurred for a substantial portion of the property associated with the Modified Project. The new Mitigation Measure HH1 is provided below.

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

- HH1** For any remaining structures known to contain asbestos-containing materials (ACMs) that will be renovated and/or demolished, Heritage Fields shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, State, and local regulatory requirements.

Prior to occupancy, renovation or demolition of any remaining structures constructed before October 1988, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by Heritage Fields. This requirement can be waived if an architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building materials, and to the best of their knowledge, no ACMs were used as a building materials, if the asbestos survey identifies ACMs, the applicant shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, State and local regulatory requirements.

Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.

Any renovation and/or lead-based paint (LBP) abatement activities on residential units at former MCAS El Toro shall be conducted in accordance with all applicable federal, State, and local regulatory requirements. The certified OCGP FEIR's Mitigation Measure HH2 required updating because its requirements were triggered upon the transfer of the property from the DON to the City, and that transfer has already occurred for a substantial portion of the property associated with the Modified Project. In addition, since the certified OCGP FEIR was prepared, FOSTs 4, 5, 6, and 7 have been issued and each specifies in detail the nature of the restrictions and institutional controls that must be implemented. The new Mitigation Measure HH2 is provided below:

- HH2** The portions of the Proposed Project site located on the active Installation Restoration Program (IRP) Sites listed in Table 5.5-2, *Action Required IRP Sites and Zoning – 2012 Modified Project*, of the DSSEIR for the 2012 Modified Project shall be used only in accordance with the requirements of the applicable Final FOST or Finding of Suitability to Lease, including in strict compliance with all lease restrictions (such as restrictions against soil or groundwater disturbance without approval from the DON and regulators) and all institutional controls (e.g., restrictions against disturbing the integrity of physical remedial components like caps or groundwater treatment systems and other restrictions imposed by the DON).

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- HH3** The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wild land fire hazards will be subject to OCFA Guidelines for "Development Within and Exclusion from Very High Fire Severity Zones" and "Fuel Modification Plans and Maintenance." Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures and based on the revised Fire Hazard Maps, the 2012 Modified Project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.
- HH4** Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.
- HH5** Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event that unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director of Community Development of the City in a timely manner. Additionally, said Protocol Plan shall be revised should the discovery of previously unknown hazardous materials be made during any of the above mentioned development activities.
- HH6** The City shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells on the former MCAS El Toro in a geographic information systems database (GIS). The City will review all permit applications on the former air station for monitoring well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to monitoring wells will be limited to authorized personnel.

Additionally, the SSEIR identified the following measures as existing PPP that apply to the proposed Project and will help reduce or avoid potential hazards and hazardous materials impacts:

Of the PPPs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

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- PPP 5-1** If any underground storage tanks (USTs) are encountered during site grading and excavation activities, they shall be removed in accordance with the existing standards and regulations of, and oversight by, the Orange County Health Care Agency (OCHCA), based on compliance authority granted through the California Code of Regulations, Title 23, Division 3, Chapter 16, Underground Tank Regulations. The process for UST removal is detailed in OCHCA's "Underground Storage Tanks: The Basics." Soil samples from areas where storage tanks have been removed or where soil contamination is suspected shall be analyzed for hydrocarbons including gasoline and diesel in accordance with procedures set forth by OCHCA. If hydrocarbons are identified in the soil, the appropriate response/remedial measures will be implemented as directed by OCHCA with support review from the Regional Water Quality Control Board until all specified requirements are satisfied and a Tank Closure Letter is issued. Any aboveground storage tank (AST) in existence at the commencement of site development shall be removed in accordance with all applicable regulations under the oversight of the OCFA. Compliance requirements relative to the removal/closure of storage tanks are set forth through California Health and Safety Code Sections 25280 through 25299.
- PPP 5-2** During demolition, grading, and excavation, workers shall comply with the requirements of Title 8 of the California Code of Regulations, Section 1532.1, which provides for exposure limits, exposure monitoring, respiratory protection, and good working practice by workers exposed to lead. Lead-contaminated debris and other wastes shall be managed and disposed of in accordance with the applicable provision(s) of the California Health and Safety Code.
- PPP 5-3** Prior to approval of a conditional use permit, project applicants shall prepare a Fire Master Plan for submittal to the OCFA consistent with OCFA Guideline B-09 (Fire Master Plans for Commercial and Residential Development).
- PPP 5-4** Federal law requires compliance with Rule 29 of the Code of Federal Regulations (CFR) Part 1926. Prior to site demolition activities, building materials shall be carefully assessed for the presence of lead-based paint, and its removal, where necessary, must comply with State and federal regulations, including Occupational Safety and Health Administration (OSHA) 29 CFR Part 1926. The OSHA rule establishes standards for occupational health and environmental controls for lead exposure. The standard also includes requirements addressing exposure assessment, methods of compliance, respiratory protection, protective clothing and equipment, hygiene facilities and practices, medical surveillance, medical removal protection, employee information and training, signs, recordkeeping, and observation of monitoring. Furthermore, the requirements of California Code of Regulations, Title 17, Division 1, Chapter 8, identify procedures that must be followed for accreditation, certification, and work practices for lead-based paint and lead hazards. Section 36100 thereof specifically sets forth requirements for lead-based paint abatement in public and residential buildings.
- PPP 5-5** Prior to site demolition activities, building materials must be carefully assessed for the presence of ACM, and removal of this material, where necessary, must comply with State and federal regulations, including SCAQMD Rule 1403, which specifies work practices with the goal of minimizing asbestos emissions during building demolition and renovation activities, including the removal and associated disturbance of ACMs. The requirements for demolition and renovation activities include asbestos surveying; notification; ACM removal procedures and time

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schedules; ACM handling and cleanup procedures; and storage, disposal, and landfill disposal requirements for asbestos-containing waste materials.

PPP 5-6 During site decommissioning and demolition activities, hazardous wastes must be managed in accordance with the requirements of Title 22, Division 4.5 of the California Code of Regulations. Title 22 sets forth the requirements with which hazardous-waste generators, transporters, and owners or operators of treatment, storage, or disposal facilities must comply. These regulations include the requirements for packaging, storage, labeling, reporting, and general management of hazardous waste prior to shipment. In addition, the regulations identify standards applicable to transporters of hazardous waste such as the requirements for transporting shipments of hazardous waste, manifesting, vehicle registration, and emergency accidental discharges during transportation.

PPP 5-7 During demolition, grading, and excavation, workers shall comply with the requirements of Title 8 of the California Code of Regulations, Section 1529, which provides for exposure limits, exposure monitoring, respiratory protection, and good working practices by workers exposed to asbestos. Asbestos-contaminated debris and other wastes shall be managed and disposed of in accordance with the applicable provision(s) of the California Health and Safety Code.

PPP 5-8 Evidence of soil and/or groundwater contamination (e.g., chemical odors and staining) unrelated to above/underground storage tank releases may be encountered during site development. The appropriate agency (e.g., OCHCA, DTSC, or the Regional Water Quality Control Board [RWQCB]) shall be notified if these conditions are encountered during construction or grading activities. With their oversight, an environmental site assessment shall be completed and a determination shall be made as to whether cleanup is required. Cleanup activities are required to be consistent with all applicable federal, State and local rules, regulations, and laws. A cleanup would not be considered complete until confirmatory samples of soil and/or groundwater reveal levels of contamination below the standards established by the oversight agency. Alternatively, a risk assessment may be prepared for the site to determine that there are no human or environmental risks associated with leaving contamination below specific levels in place. Construction in the impacted area shall not proceed until a "no further action" clearance letter or similar determination is issued by the oversight agency, or until a land use covenant is implemented.

4.9 HYDROLOGY AND WATER QUALITY

4.9.1 Environmental Setting

The OCGP FEIR describes the project site as being within the San Diego Creek watershed, which includes the San Diego Creek, Peters Canyon Channel, and the tributaries to these water courses. The major drainage channels that traverse the site (PA 51) are the Marshburn Channel, Bee Canyon Channel, Agua Chinon Channel, and Borrego Canyon Channel.

San Diego Creek and Upper Newport Bay are listed as impaired water bodies under Section 303(d) of the Clean Water Act. Accordingly, Total Maximum Daily Load (TMDL) for pollutants that have impaired these water bodies has been established and was included in the OCGP FEIR (OCGP FEIR Table 5.7-2). The OCGP FEIR also noted that the County of Orange and the City of Irvine hold a Nationwide Pollution

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Discharge Elimination System (NPDES) permit for the storm drain systems, and that the State has issued a NPDES general permit relating to construction activities on sites over five acres in the area. Lastly, the flood control improvements associated with the SR-133 toll road were noted in the OCGP FEIR as having reduced the 100-year flood zone north and west of the property.

4.9.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR identified several significant impacts on hydrology and water quality associated with future development under the adopted Overlay Plan before mitigation. First, grading and excavation activities required for future development could result in the exposure of bare soils to both wind- and water-related erosion and associated significant water quality impacts (specifically, a violation of water quality standards or waste discharge requirements). Compliance with City grading and water quality regulations, including the NPDES discharge permitting requirements and preparation of a Storm Water Pollution Prevention Plan (SWPPP) and a Water Quality Management Plan (WQMP), are the primary means of controlling the potential impacts of grading and excavation activities. These City requirements, which are described in mitigation measures H/WQ1 and H/WQ2, will reduce the impact to a less-than-significant level.

According to the OCGP FEIR, the existing drainage patterns and stream courses would not be substantially altered by future development under the adopted Overlay Plan. In addition, the potential for inundation is reduced by improvements to upstream flood-control facilities. Without project-related flood-control facilities, the rate or amount of surface runoff due to new development would result in flooding on- and off-site, depending on the nature of the specific development. Although this impact was identified as significant, the effect of increased runoff would be reduced to a less-than-significant level through preparation and implementation of hydraulic studies, recommendations for each specific development and the construction of flood-control improvements commensurate with each specific development (Mitigation Measure H/WQ3).

The impact analysis for the Overlay Plan assumed development of the land use patterns created by the zoning designations for the Overlay Plan area and a backbone storm drain system. The storm drain system took into consideration and included improvements identified in the San Diego Creek Flood Control Master Plan. The drainage plan for the Overlay Plan area included improvements to the major drainages, including Marshburn Channel, Bee Canyon Channel, Agua Chinon Channel, and the Borrego Channel, the Wildlife Corridor and Serrano Creek, and San Diego Creek, as described in the OCGP FEIR and addenda.

While conceptually defined in the OCGP FEIR, the foregoing area-wide drainage and flood control facility system has since been undergoing increasingly more definitive design engineering refinement. The latest formal expression of these system enhancements is memorialized in the following documents: Master Plan of Drainage, Fuscoe Engineering February 23, 2007, Orange County Great Park - Hydrology/Hydraulic Report, Fuscoe Engineering June 12, 2007 (collectively, Fuscoe Reports); PAs 30 and 51 Bee Canyon, Agua Chinon, Borrego, Serrano and Upper San Diego Creek Update, RBF Consulting February 27, 2008, and PA 51 Marshburn Watershed Update, RBF Consulting March 14, 2008 (collectively, RBF Reports). These reports refine the drainage control system components described in the OCGP FEIR. The on-site channels will continue to drain the project site under existing conditions. Additional backbone storm drain facilities will be designed to accommodate the changes in the land use

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surface runoff within the Great Park Neighborhoods development. The post development hydrology was analyzed per the Orange County Hydrology Manual for a 100-year peak storm design event.

OCGP FEIR Mitigation Measure H/WQ3 states that prior to approval of the first tentative tract or parcel map in the project area, detailed hydrologic and hydraulic analysis shall be conducted. Studies and analyses shall be prepared in accordance with Orange County Flood Control District (OCFCD) methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. In compliance with the mitigation measure, the Fuscoe Reports, and RBF Reports were prepared.

4.9.3 Impacts Associated with the Expanded Community Ice Facility

The proposed Project is located within the OCGP Master Plan area. Therefore, the OCGP FEIR adequately describes the nature and severity of the environmental effects of OCGP Master Plan and its current minor modification associated with the expansion of the Community Ice Facility, the subject of this Addendum, related to hydrology and water quality.

Grading and construction activities for the expansion of the Community Ice Facility have the potential to compact soil, which can alter drainage patterns and increase runoff during construction. Construction activities also have the potential to introduce pollutants of concern (e.g., sediments, trash, petroleum products, concrete waste [dry and wet], sanitary waste, and chemicals) into surface waters within the project site. As described in mitigation measures H/WQ1 and H/WQ2, the proposed Project would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) and implement construction Best Management Practices (BMPs) aimed at reducing pollutants of concern in storm water runoff, including those impacts associated with short-term hydrologic changes (e.g., increased runoff). The requirements of the current Construction General Permit are similar to, but more stringent than, the requirements of the permit in place at the time the OCGP FEIR was certified. Compliance with the current General Permit would ensure that no potential short-term construction impacts to hydrology and water quality would occur. Compliance with the current Construction General Permit would ensure consistency with the findings of the OCGP FEIR. Therefore, in consideration of the information above, the proposed Project would not require major revisions to the OCGP FEIR and would not result in new or substantially greater construction-related hydrology or water quality impacts than what was previously identified in the OCGP FEIR.

Development projects have the potential to alter the hydrologic regime of a project area by increasing runoff, decreasing infiltration, altering the volumes and timing of storm water runoff, and increasing postdevelopment downstream erosion, which includes secondary impacts (e.g., increasing turbidity and causing adverse impacts to aquatic and riparian habitat). Project operations also have the potential to introduce pollutants of concern into surface waters within the project area (e.g., suspended solids and sediments, trash and debris, nutrients, pesticides, heavy metals, oils and grease, and oxygen-demanding compounds). As described in mitigation measures H/WQ1 and H/WQ2, the proposed Project would be required to ascertain its impact on the project site's hydrologic regime and include the findings as part of the Water Quality Management Plan. If a hydrologic condition of concern exists, then the Water Quality Management Plan must evaluate whether the proposed project would adversely impact downstream erosion, sedimentation, or stream habitat. If adverse impacts are likely to occur, the proposed Project

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must implement BMPs to address the project's impacts from hydromodification. The proposed Project would also be required to implement BMPs to limit pollutants generated by its operation. The requirements of the updated NPDES Permit, the Drainage Area Management Plan (DAMP), and the Local Implementation Plan (LIP) expand upon and are more stringent than the requirements of the previous permit.

Compliance with the Municipal NPDES Permit, the DAMP, and the LIP would require implementation of BMPs to target pollutants of concern in stormwater runoff from the project site, which would ensure that potential operational impacts to hydrology and water quality are less than significant. Compliance with the approved Municipal Permit, the DAMP, and the LIP would also ensure consistency with the findings of the OCGP FEIR. Therefore, in consideration of the information above, the proposed Project would not require major revisions to the OCGP FEIR and would not result in new or substantially greater operation-related hydrology or water quality impacts than what was previously identified in the OCGP FEIR. Therefore, no mitigation is required for the proposed Project.

4.9.4 Findings

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the Proposed project would require a major change to the certified OCGP FEIR. The proposed modification to the OCGP Master Plan and the WSPDP, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor will there be a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to hydrology and/or water quality that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional

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mitigation measures that would substantially reduce one or more of the significant effects on hydrology and/or water quality identified in and considered by the OCGP FEIR.

4.9.5 Mitigation from the OCGP FEIR and Applicability to the Expanded Community Ice Facility

The OCGP FEIR identified four mitigation measures to reduce the effects of the project on hydrology and water quality. All of the mitigation measures are applicable to the proposed Project and would be carried forward to future development of the project site. Implementation of Mitigation Measures H/WQ 1 through H/WQ 4 would reduce project impacts to a less than significant level. The mitigation measures were modified in the SEIR.

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

H/WQ1 Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City-adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area ... and residential construction sites that result in the disturbance of five acres or more ... shall be required to develop and implement BMPs ... to control erosion and siltation and contaminated runoff from the construction sites." Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of 1 acre or more.

The City's standard conditions of approval indicate that a SWPPP shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.

Additionally, prior to the issuance of a grading permit, project applicants must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the BMPs that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and nonstructural measures specified in the Countywide NPDES DAMP Appendix which are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, lessee, etc.), and shall reference the location(s) of structural BMPs.

Also in accordance with standard City project permitting and approval procedures, Notices of Intent (NOI) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the

4. Discussions of Checklist and Mitigation Measures

satisfaction of the Director of Community Development of any disturbance of one acre or more of soil in the project area. Also in force during the period of construction would be the General Dewatering NPDES permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.

The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement those additional requirements that may be imposed by the RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

H/WQ2 Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana RWQCB Basin Plan, including the Total Maximum Daily Load (TMDL) Implementation Plan adopted for this watershed.

H/WQ3 Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrologic and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

H/WQ4 Prior to issuance of a building permit for any unit within the 100-year floodplain, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the Flood Insurance Rate Maps (FIRMs) revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.

After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to the Federal Emergency Management Agency (FEMA) to complete the LOMR process.

Additionally, the SSEIR identified the following measures as existing PPP that apply to the proposed Project and will help reduce or avoid potential hydrology and water quality impacts:

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Of the PPPs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

PPP 6-1 Prior to the issuance of a precise grading permit, the applicant shall submit a hydrology and hydraulic analysis of the site. The analysis shall be prepared by a professional civil engineer versed in flood control analysis and shall include the following information and analysis (Standard Condition A.6):

- a. Hydrology/hydraulic analysis of 100-year surface water elevation at the project site to determine building elevation or flood proofing elevation.
- b. Analysis of existing and post-development peak 100-year storm flow rates, including mitigation measures to reduce peak flows to existing conditions.

An analysis demonstrating that the volume of water ponded on the site and stored underground in the drainage system outside of the building envelope in the proposed condition is greater than or equal to the corresponding volume in the existing condition. The water surface used to determine the ponded volume shall be based on the water surface in the major flood control facility that the site is tributary to.

PPP 6-2 Prior to the issuance of a precise grading permit, the applicant shall submit a groundwater survey of the site. The analysis shall be prepared by a geotechnical engineer versed in groundwater analysis and shall include the following information and analysis (Standard Condition A.7):

- a. Potential for perched groundwater intrusion into the shallow groundwater zone upon buildout.
- b. Analysis for relief of groundwater buildup and properties of soil materials on-site.
- c. Impact of groundwater potential on building and structural foundations.
- d. Proposed mitigation to avoid potential for groundwater intrusion within 5 feet of the bottom of the footings.

PPP 6-3 This project will result in soil disturbance of 1 or more acres of land that has not been addressed by an underlying subdivision map. Prior to the issuance of preliminary or precise grading permits, the applicant shall provide the City Engineer with evidence that a NOI and relevant Permit Registration Documents have been filed with the State Water Resources Control Board and that a Waste Discharge Identification ("WDID") Number is issued. Such evidence shall consist of a copy of the NOI Receipt letter with WDID retrieved from the State Water Resources Control Board Stormwater Multi-Application and Report Tracking System (SMARTS) website or the RWQCB, or a letter from either agency stating that the NOI has been filed (Standard Condition A.10).

PPP 6-4 Prior to the issuance of precise grading permits, the applicant shall submit, and the Director of Community Development shall have approved, a project WQMP. The WQMP shall identify the BMPs that will be used on the site to control predictable pollutant runoff (Standard Condition A.13).

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4.10 LAND USE AND PLANNING

4.10.1 Environmental Setting

The OCGP FEIR described the existing and former land uses in PA 51, including former PA 30, and other areas adjoining and surrounding these planning areas. Subsequent to the City's approval of the GPA/ZC for the Overlay Plan, DON initiated an auction process for the sale of the former MCAS El Toro property. To facilitate the transfer, the property was divided and presented to prospective buyers as four distinct parcels. Interested parties were invited to bid on one or more of the parcels. In 2005, Heritage Fields, El Toro, LLC successfully purchased all four parcels from the DON (3,671 acres), and entered into a Development Agreement with the City on July 12, 2005. The Development Agreement sets forth the terms and conditions of subsequent development and implementation of the Great Park, including dedication in fee of 1,096 acres of the property for development of the Great Park Master Plan.

The existing facilities and uses within the OCGP Master Plan area include existing portions of the Western Sector Park Development Plan (WSPDP) Phase I (e.g., the Balloon Park, Hangar 244, artist lofts, Central and West Timeline, North and South Lawns, Farm & Food Lab, Palm Court, and support parking). Consistent with the City's Zoning Ordinance, there are interim uses of the land and existing buildings which include Tierra Verde Industries, a composting and electronic waste recycling facility; agriculture; and a special event parking lot.

4.10.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR identified no significant impact to established communities. There were no residents living within the PA 51 at the time the OCGP FEIR was prepared. There are now residents living within Development District 1-North, however, there are no residents living within the proposed Project site. The OCGP FEIR analyzed certain amendments to the City's General Plan that were adopted on May 27, 2003, as part of the City's adoption of the Overlay Plan. The adopted Overlay Plan was determined to be consistent with each element of the General Plan.

Additionally, the detailed General Plan and Zoning Ordinance consistency analysis conducted in the SSEIR also concluded that the 2012 Modified Project was consistent with the applicable goals and policies of the General Plan. The 2012 Modified Project proposed to include various changes to the City's Zoning Ordinance, not consistent with the zoning at that time, which could potentially create a significant land use impact. However, it was concluded that implementation of the zone changes that were proposed would bring the zoning into compliance and no impact would result.

4.10.3 Impacts Associated with the Expanded Community Ice Facility

The proposed Project is consistent with the land uses approved in concert with the certification and Addenda to the OCGP FEIR. The proposed Project would implement approved development, and therefore would not affect the goals, objectives or policies, or the facilities and services described in any of the General Plan Elements. No changes or new impacts would occur. In addition, the proposed Project does not contain elements that would alter the findings, conclusions and mitigation measures since all proposed Project development remains within the previously established OCGP Master Plan boundaries. Although the proposed Project would increase the square footage and spectator seating in the community

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ice rink, the proposed Project would not result in new uses not previously anticipated in the OCGP Master Plan and there would be a corresponding decrease in the square footage of another use within the OCGP. The proposed addition of building square feet for the Community Ice Facility site would be deducted from other approved uses so that the maximum building square footage allocated for the overall uses within the OCGP will not be exceeded. The proposed Project also includes the construction of "G" Street, a new north/ south roadway between the special event parking area and the Project site. No new uses and facilities are proposed that would physically divide an established community; conflict with any applicable land use plan, policy or regulations; or conflict with any applicable habitat conservation plan or natural community conservation plan. The following analysis discusses the proposed Project, consisting of an additional sheet of ice for the Community Ice Facility, "G" Street, and the removal of the WSPDP picnic area, in consideration of each General Plan Element:

Circulation Element: The goal of the Circulation Element is "to provide a balanced transportation system." The proposed Project also includes the construction of "G" Street, a new north/south roadway between the special event parking area and the Project site. The construction of "G" Street would facilitate movement between the parking area and the Project site. "G" Street would be constructed to the City's current standards.

Housing Element: The goal of the Housing Element is to "provide for safe and decent housing for all economic segments of the community." The proposed Project would not increase or decrease the number of residential units approved for the project analyzed in the OCGP FEIR since only parkland is affected by the proposed modifications.

Cultural Resources: The proposed Project would not affect the adopted goals, objectives, and policies of this element. Development would be required to comply with this element's requirements and to implement mitigation measures found in the OCGP FEIR. With implementation of OCGP FEIR measures P1 and CULT1 through CULT4, the impacts of new development on paleontological and cultural resources would be less than significant. Furthermore, the proper disposition of such resources, if any are encountered prior to or during construction would be ensured; and through the information recovered, the community's understanding and appreciation for its historic and prehistoric heritage would have been enhanced.

Noise Element: The proposed Project would not affect the goal of this element (i.e., "to contribute to a healthy and safe environment by minimizing noise impacts") or the mobile noise, stationary noise, and noise abatement objectives and implementing policies of the element. The proposed Project modifies the existing set of planned park uses, but not in a way that would increase or decrease noise to a significant extent.

Public Facilities and Services Element: The proposed Project would not affect facilities or services described in the Urban Service Plan for the adopted Overlay Plan. As no substantive change in the Urban Service Plan is necessary, and that plan was a principle means of demonstrating consistency with the Public Facilities and Services Element, the proposed Project also is consistent with this element of the General Plan. In fact, development of the proposed Project facilitates accomplishment of the Public Facilities and Services Element by assisting in achieving the objectives and policies that ensure a full range of necessary public facilities and services that are convenient to the users.

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Integrated Waste Management Element: This element seeks to “encourage solid waste reduction and provide for the efficient recycling and disposal of refuse and solid waste material without deteriorating the environment.” The proposed Project would not affect the adopted objectives and implementing policies regarding solid waste, waste, wastewater, and solid waste facility siting requirements.

Growth Management Element: The goal of the Growth Management Element is to “ensure that growth and development are integrally planned with, and phased concurrently with, the City of Irvine’s ability to provide an adequate circulation system and public facilities.” When the OCGP FEIR was certified, it disclosed that, although it included changes to the Master Plan of Arterial Highways. The OCGP project would not change any of the objectives or implementing policies of the Growth Management Element. The proposed Project likewise would not alter any of the objectives or implementing policies because it would remain consistent with the development phasing already a part of the overall development plan.

Parks and Recreation Element: The goal of the Parks and Recreation Element is to “provide park and recreation opportunities at a level that maximizes available funds and enables residents of all ages to utilize their leisure time in a rewarding, relaxing, and creative manner.” The proposed Project facilitates achievement of this objective by adopting changes to the OCGP Master Plan that are necessary to proceed forward with development of the Community Ice Facility that is a component of the approved OCGP Master Plan.

Conservation and Open Space Element: The goal of this element is to “maintain and preserve the environmental systems as a major feature in the City.” This goal would continue to be achieved through the implementation of objectives L-1 through L-12 and corresponding policies. Objective L-10 encourages “the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development.” The proposed Project would not alter any of the objectives or implementing policies.

Seismic Element: The goal of the Seismic Element is to “minimize the loss of life, disruption of goods and services, and the destruction of property associated with an earthquake.” Five SRA designations are used to describe the magnitude and types of potential seismic hazards present within the City, and provide policy guidance. The OCGP FEIR reported that the majority of the El Toro property was in category SRA-2. The OCGP FEIR reported that no objectives or implementing policies would be changed as a result of the OCGP project. Likewise, the proposed Project would not alter that finding/conclusion because all proposed Project development remains within the previously established OCGP Master Plan boundaries.

Safety Element: The goal of the Safety Element is to “minimize the danger to life and property from manmade and natural hazards, including fire hazards, flood hazards, non-seismic geologic hazards, and air hazards.” The OCGP FEIR disclosed the need for fuel modification to mitigate potential wildland fire hazards and drainage improvements to lessen flood hazards associated with implementation of the project, and concluded no objectives or implementing policies would be changed as a result of the adopted Overlay Plan. Likewise, the proposed Project would not alter any of the objectives or implementing policies.

4.10.4 Findings

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no

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evidence that the Proposed project would require a major change to the certified OCGP FEIR. The proposed modification to the OCGP Master Plan, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor will there be a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to Land Use and Planning that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant effects on Land Use and Planning quality identified in and considered by the OCGP FEIR.

4.10.5 Mitigation from the OCGP FEIR and Applicability to the Expanded Community Ice Facility

The OCGP FEIR identified no significant land use impacts; therefore, no mitigation measures were proposed. However, the following existing PPPs and PDFs would help reduce and avoid potential impacts related to land use and planning.

Of the PPPs and PDFs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

- Aesthetics PPP 1-1
- Air Quality PPP 3-1 through 3-5
- Greenhouse Gas Emissions PPP 4-1 through 4-12
- Hazards and Hazardous Materials PPP 5-1 through 5-8
- Hydrology and Water Quality PPP 6-1
- Noise PPP 8-1 through 8-3

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- Public Services PPP 10-1 through 10-10
- Utilities and Service Systems PPP 13-1 through 13-8
- Greenhouse Gas Emissions PDFs 4-5, 4-7 and 4-8

4.11 NOISE

4.11.1 Environmental Setting

The OCGP FEIR described mobile noise sources from nearby freeways, roadways, rail facilities, and vehicle use at adjacent commercial businesses, light industrial facilities, and agricultural lands as the dominant noise source in the project area. Stationary sources of noise included temporary and intermittent noise from construction activities and agricultural operations, noise associated with the industrial/business parks to the east and the business park and entertainment uses to the south.

The OCGP FEIR presented the results of a noise survey, in which noise measurements were conducted at nine locations. Ambient noise levels at the four surveyed representative residential locations ranged from 58 A-weighted decibels (dBA) to 65 dBA Community Noise Equivalent Level (CNEL) (Refer to OCGP FEIR p. 5.4-18, Figure 5.4-6, and Table 5.4-7). The audible noise sources included local traffic, distant traffic, birds, aircraft, and human voices, all of which were characterized as typical of suburban areas.

4.11.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR concluded that development of the Overlay Plan would not result in any significant noise effects. The noise assessment considered a worst-case condition of simultaneous demolition and construction activities with the combined sound level of 20 pieces of large mobile equipment operating at a distance of 5,000 feet; 5 concrete breakers operating at a distance of 6,000 feet; and 2 crusher plants operating at a distance of 10,000 feet from the nearest off-project area residential location. The distances represented the closest possible location of the construction equipment to the nearest off-project area residences during a heavy construction period. The nearest off-site residential uses (sensitive noise source) were located approximately 4,000 feet from the property boundary. Under this scenario, the analysis estimated sound levels of approximately 56 dBA at the nearest off-site residential location. (Refer to OCGP FEIR, p. 5.4-24 and Table 5.4-8)

As buildout of the project site was assumed to occur over time (years 2007–2025), construction-related noise impacts on residential areas within the proposed Project site were also estimated. Using the same construction equipment assumptions and a distance of 600 feet from the nearest residential area, the combined effect of the equipment was estimated at a sound level of 70 dBA at the nearest on-site residential locations during a heavy construction period. While the City of Irvine Noise Ordinance does not specify a limit on construction noise levels, it stipulates the days and hours during which construction activities may occur and when construction would not be allowed unless a temporary waiver is requested and granted; specifically, construction is allowed Monday through Friday between 7:00 a.m. and 7:00 p.m., and on Saturdays between 9:00 a.m. and 6:00 p.m.; no construction is allowed outside those hours, on Sundays, or on federal holidays unless a temporary waiver is granted by the Chief Building Official or authorized representative (Refer to OCGP FEIR, p. 5.4-31.)

The SSEIR concluded that operational noise levels of the Modified Project would not create a substantial

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permanent increase in ambient noise levels or expose persons to noise levels in excess of the exterior or interior noise level standards established in the City's Noise Ordinance and the Noise Element of the City's General Plan. In terms of ambient noise levels at sensitive receptors, the SSEIR concluded that with preparation of a noise study (interior and exterior noise) prior to obtaining building permits (Mitigation Measure N-1), the Modified Project's impacts would be less than significant. The SSEIR also indicated that with implementation of plans, programs and policies and project design features, the Modified Project's construction noise impacts to off-site noise-sensitive receptors would be less than significant. It was also concluded that the Modified Project would not result in cumulative noise impacts.

4.11.3 Impacts Associated with the Expanded Community Ice Facility

The OCGP FEIR noise assessment considered a worst-case condition of simultaneous demolition and construction activities. The worst-case assumptions described for the adopted Overlay Plan provide conservative assumptions for the proposed Project; no new information about future demolition and construction has become available that would increase the number of pieces of equipment to be operated simultaneously.

Construction Noise

Construction activities associated with the proposed Project would result in a short-term increase in ambient noise levels in proximity to construction activities on the proposed Project site. The proposed Project is approximately 1,600 feet from the nearest off site noise-sensitive use (i.e., residences along Sand Canyon Avenue). Noise is generally a concern if emanated within 1,000 feet between the noise source and the receptor. The newly constructed Beacon Park residential neighborhood, located in Development District 1-North, is less than one mile (approximately 2,725 feet) north of the proposed Project site. Construction noise from the proposed Project will be substantially attenuated by the large distance from the project site to these noise sensitive uses. In addition, the Eastern Transportation Corridor (i.e., Route 133) is adjacent to these residences and will mask the noise generated from the construction of the Project. Consequently, the proposed Project would not increase the forecasted noise levels generated during construction activities for the development of the Master Plan. Therefore, the construction noise levels associated with the proposed Project are anticipated to be less than those addressed in the OCGP FEIR and would not result in any significant impacts.

Construction Vibration

The OCGP FEIR identified that nuisance vibration (i.e., human annoyance) from construction activities associated with the adopted Overlay Plan would result in noticeable vibration levels in proximity to the construction activities. However, vibration annoyance from construction activities would be temporary, and occur during the daytime in proximity to construction activities; therefore, nuisance vibration would be less than significant. Existing structures are located sufficient distance away from construction activities such that structural damage from vibration would not occur (i.e., the nearest residence is 1,800 feet¹ from the construction activities). The proposed Project, consisting of modifications to the Community Ice Facility would not generate significantly higher levels of vibration. Therefore, the construction vibration

¹ At the property line, the nearest residential use is 1,600 feet from the Project site. For the purposes of the vibration analysis, the distance is measured to the nearest residential structure, which is 1,800 feet from the Project site.

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levels associated with the proposed Project are anticipated to be similar to those addressed in the OCGP FEIR, and would not result in any significant impacts.

Operation Noise

Current information regarding the noise impacts within the proposed Project site were previously evaluated in the OCGP FEIR. The OCGP FEIR concluded that noise associated with land uses would not be significant with use of acoustical design features (e.g., sound insulating construction, perimeter barrier walls, acoustical equipment enclosures, and operational restrictions) incorporated to comply with the local regulations. Stationary sources of noise associated with heating, ventilation, and air conditioning units and other sources would be attenuated by the large distance (approximately 1,600 feet) between the project site and off-site noise-sensitive land uses. Sports events held at the project site will occur in a closed structure which would substantially attenuate noise associated with spectator cheering, loudspeakers, and other sources of noise produced from competitive sports events. Additionally, the nearest off-site noise-sensitive uses are approximately 1,600 feet away, which would substantially attenuate noise generated within the enclosed facility. Therefore, noise levels associated with the proposed Project are anticipated to be similar to or less than those addressed in the OCGP FEIR and would not result in any significant impacts.

Traffic Noise

The Environmental Noise Assessment prepared for the OCGP FEIR identified a traffic noise screening analysis threshold of 1.5 dBA for all project-related traffic noise level increases where the resulting noise levels would be in excess of 65 dBA, and required further analysis where that screening threshold was met within residential and other sensitive areas. Although changes in noise levels of 3 dBA are considered "barely perceptible," and changes of 5 dBA are considered "clearly noticeable," the OCGP FEIR used this 1.5 dBA noise level screening threshold to be conservative. The OCGP FEIR concluded that the development within PA 51 would cause no significant impact on account of traffic noise.

The proposed expansion of the Community Ice Facility would increase project-related noise from mobile sources by a maximum of 96 vehicle trips in the PM peak hour and 720 trips throughout the day compared to the previously proposed ice facility based on the *Limited Scope Traffic Impact Analysis Great Park Community Ice Facility*. This increase in the magnitude of vehicle traffic would not result in traffic noise level changes that would substantially increase project-related traffic noise generated by the proposed Project or result in traffic noise levels that exceed 65 dBA at noise sensitive receptors. Therefore, noise levels associated with the proposed Project are anticipated to be similar to those addressed in the OCGP FEIR and would not result in any new significant impacts.

Airport Noise

The former MCAS El Toro operations have ceased and no public airport, public use airport, or airport land use plan exists in the proposed Project vicinity. Therefore, noise levels associated with the proposed Project are anticipated to be similar to those addressed in the OCGP FEIR and would not result in any significant impacts.

4. Discussion of Checklist and Mitigation Measures

Land Use Compatibility

In October 2011, a Community Ice Facility was approved as part of a minor modification to the OCGP Master Plan. Addendum No. 8 to the OCGP FEIR was approved concurrently to address potential environmental impacts associated with the minor modification to the OCGP Master Plan. The Master Plan anticipated a 117,635 square feet, three sheet, Community Ice Facility. The proposed minor modification of the Master Plan would increase the Community Ice Facility's square footage from 117,635 square feet to 270,000 square feet to accommodate an additional sheet of ice and accessory uses. Although the proposed Project would increase the square footage and spectator seating in the community ice rink, the proposed Project would not result in new uses not previously anticipated in the OCGP Master Plan and there would be a corresponding decrease in the square footage of another use within the OCGP. The proposed addition of building square feet for the Community Ice Facility site would be deducted from other approved uses so that the maximum building square footage allocated for the overall uses within the OCGP will not be exceeded. Because the OCGP FEIR did not identify any significant impacts related to land use compatibility, the proposed Project, consisting of modifications to the Community Ice Facility, is also compatible with the Irvine General Plan and zoning code for noise and vibration compatibility.

4.11.4 Findings

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the Proposed project would require a major change to the certified OCGP FEIR. The proposed modification to the OCGP Master Plan, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor will there be a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to noise that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional

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mitigation measures that would substantially reduce one or more of the significant noise effects identified in and considered by the OCGP FEIR.

4.11.5 Mitigation from the OCGP FEIR and Applicability to the Expanded Community Ice Facility

The OCGP FEIR identified no significant noise impacts; therefore no mitigation measures were proposed. However, the SEIR identified the following measures that apply to the proposed Project and will help reduce or avoid potential noise impacts:

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

- N-1** Prior to the issuance of building permits for lots facing or located near major highways (e.g., Irvine Boulevard), the project applicant or its successor shall provide a final noise study to the Director of Community Development that demonstrates how the exterior and interior noise requirements (65 dBA CNEL and 45 dBA CNEL, respectively) of the City General Plan Noise Element will be met. To attain the exterior and interior noise requirements, the final noise study shall include, but not be limited to the following measures, in addition to such measures as the final noise study determines are required and shall be shown on the final map:

Exterior

- Provide a minimum 6-foot high noise barrier for single-family detached residences shown in Figures 5.7-3 through 5.7-7 of this Draft Subsequent Environmental Impact Report (DSEIR).

Interior

- Provide a "windows closed" condition, requiring a means of mechanical ventilation (e.g., air conditioning) for all units.
- Provide standard and upgraded dual-glazed windows with a minimum Sound Transmission Coefficient rating of 26. Specific window recommendations shall be made once final architectural plans are available and detailed interior noise reduction calculations can be calculated based on actual building assembly details.

- N-2** Prior to authorization to use, occupy and/or operate any multi-family residential unit, the project applicant or its successor shall submit evidence to the satisfaction of the Director of Community Development that occupancy disclosure notices for residential units with balconies that do not meet the City's exterior noise standard of 65 dBA CNEL will be provided to all future tenants pursuant to the City's Noise Ordinance.

The SSEIR identified the following measures as existing PPPs that apply to the proposed Project and will help reduce or avoid potential noise impacts:

Of the PPPs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

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- PPP 8-1** Title 6 (Public Works), Division 8 (Pollution), Chapter 2 (Noise) of the Irvine Municipal Code, also known as the City's Noise Ordinance, outlines the regulations necessary to control unnecessary, excessive and annoying noise in the City. The provisions of this chapter are applicable to nontransportation-related stationary noise sources. It outlines the noise level measurement criteria; establishes the noise zones and the maximum permitted exterior and interior noise standards in each zone; and discloses special noise provisions for construction, truck delivery and maintenance activities. For example, as outlined in Section 6-8-205 of the Noise Ordinance, no construction shall be permitted outside of the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday and 9:00 a.m. to 6:00 p.m. Saturdays, unless a temporary waiver is granted by the Chief Building Official or authorized representative. Trucks, vehicles, and equipment that are making, or are involved with, material deliveries, loading, or transfer of materials, equipment service, maintenance of any devices or appurtenances for or within any construction project in the City shall not be operated or driven on City streets outside of these hours or on Sundays and federal holidays unless a temporary waiver is granted by the City. Any waiver granted shall take impact upon the community into consideration. No construction activity will be permitted outside of these hours except in emergencies including maintenance work on the City rights-of-way that might be required.
- PPP 8-2** Prior to the issuance of building permits for each structure or tenant improvement, other than a parking structure, the applicant shall submit a final acoustical report prepared to the satisfaction of the Director of Community Development. The report shall demonstrate that the development will be sound attenuated against present and projected noise levels including stationary, roadway, aircraft, helicopter, and railroad noise to meet City interior and exterior noise standards. The final acoustical report shall include all information required by the City's Acoustical Report Information Sheet (Form 42-48). The report shall be accompanied by a list identifying the sheet(s) of the building plans that include required sound attenuation measures (Standard Condition 3.5).
- PPP 8-3** Title 5 (Planning), Division 10 (Grading Code and Encroachment Regulations), Chapter 1 (Grading Code), Section 5-10-127.G (Import and Export of Earth Materials) of the City Municipal Code, states that if a grading project includes the movement of earth material to or from the site in an amount considered substantial by the Chief Building Official, the permittee is required to submit the proposed haul route for review and approval by the Chief Building Official. Special conditions of the grading permit may be imposed that require alternate routes or other measures in consideration of the possible impact on the adjacent community environment or effect on the public right-of-way itself.

The Second Supplemental Environmental Impact Report (SSEIR) also identified the following measure as PDF that apply to the proposed Project and will help reduce or avoid potential noise impacts. The following PDF, as applicable, will be incorporated into the proposed Project upon project implementation.

- PDF 8-1 Construction Noise:** Prior to issuance of grading permits, the project applicant or its successor shall incorporate the following measures as a note on the grading plan cover sheet to ensure that the greatest distance between noise sources and sensitive receptors during construction activities has been achieved, and that construction noise has been

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reduced.

- During construction activities, all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, consistent with manufacturers' standards. All stationary construction equipment shall be placed so that emitted noise is directed away from the noise-sensitive receptors nearest the proposed Project site boundaries.
- Equipment shall be staged in areas that will create the greatest distance between construction-related noise sources and the noise-sensitive receptors nearest the proposed Project site during all project construction.
- All construction-related activities shall be restricted to the construction hours outlined in the City's Noise Ordinance (Municipal Code Section 6-8-205).
- Haul truck and other construction-related trucks traveling to and from the proposed Project site shall be restricted to the same hours specified for the operation of construction equipment. To the extent feasible, haul routes shall not pass directly by sensitive land uses or residential dwellings.
- Where construction will occur adjacent to any developed/occupied noise-sensitive uses, a construction-related noise mitigation plan shall be submitted the Director of Community Development for review and approval prior to the issuance of grading permits. The plan must depict the location of construction equipment and how the noise from this equipment will be mitigated during construction of the 2012 Modified Project, through the use of such methods as: (1) temporary noise attenuation fences; (2) preferential location of equipment; and (3) use of current technology and noise-suppression equipment.
- Construction of planned sound walls that have been incorporated into the project design shall be installed prior to construction of the building foundation; or temporary sound blankets (fences typically composed of poly-vinyl-chloride-coated outer shells with absorbent inner insulation) shall be placed along the boundary of the proposed Project site facing the nearest noise-sensitive receptors during construction activities.

4.12 POPULATION AND HOUSING

4.12.1 Environmental Setting

The OCGP FEIR examined demographics in the context of the existing and projected population of the Orange County region and the City. Population and housing information was developed based on the 2000 United States Bureau of Census population, household, and employment census information. The most recent Census was conducted in 2010 (2010 Census) and this data is used, when available, for analysis in this section. The areas surrounding the former base and the Orange County subregion are considered jobs-rich and housing-poor. The SCAG seeks to encourage housing growth over job growth in the Orange County subregion.

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The OCGP FEIR reported that the ratio of jobs to housing in the area has environmental implications related to transportation and air quality. Thus, a major focus of the regional planning efforts has been to improve the ratio of jobs to housing in all affected subregions in order to reduce the vehicular trips, costly infrastructure improvements, and resultant air emissions.

4.12.2 Impacts Identified in the OCGP FEIR

As noted above, the area surrounding the former MCAS El Toro and the Orange County subregion are considered jobs-rich and housing-poor. SCAG seeks to improve the jobs-to-housing ratio in the Orange County subregion. The OCGP FEIR reported that regional projections are dynamic and, as a compilation of local land use projections, reflect changing community views on the location and the types of growth desired. The Orange County Council of Governments adopted the Orange County Projections 2010 report (OCP-2010), which provides projections of anticipated growth for Orange County in terms of population, housing and employment based on detailed information about growth trends, development and local land use provided by Orange County jurisdictions and public agencies; infrastructure, utility and service providers; and the private sector. OCP-2010 accounts for projects in progress, including the 1,269 density bonus units. According to the OCP-2010, forecast growth rates for population, dwelling units, and employment in Irvine over the 2008–2035 period are all higher than the corresponding rates for the entire Orange County area, as shown in Table 4.12-1.

Table 4.12-1. OCP-2010 Projections for Orange County and the City of Irvine, 2008–2035

	2008	2010	2020	2035	Change, 2010-2035	
					Total	Percent
Orange County						
Population	3,123,058	3,182,061	3,430,505	3,582,266	400,205	12.6%
Dwelling Units	1,035,005	1,045,959	1,100,260	1,174,912	128,953	12.3%
Employment	1,624,061	1,510,928	1,646,437	1,799,477	288,549	19.1%
City of Irvine						
Population	210,761	223,024	271,340	309,977	86,953	39.0%
Dwelling Units	78,955	83,103	100,572	117,427	34,324	41.3%
Employment	223,480	203,831	236,641	286,492	82,661	40.6%

Source: OCGP DSEIR, Table 5.8-3, p. 5.8-3; Center for Demographic Research, Cal State Fullerton, "2010 Orange County Projections," released January 27, 2011.

According to OCP-2000, as of June 2000, Orange County had approximately 1.5 million jobs. According to OCP-2010, that number was projected to increase to approximately 1.51 million by 2010. OCP-2010 projects that jobs in Orange County will grow by 288,549 between 2010 and 2035, which amounts to an average of 11,542 jobs per year (i.e., a 19.1 percent increase in jobs over the 25-year period).

Although implementation of the Overlay Plan would not have exceeded the OCP-2010 employment projections, its impact on employment was considered significant because the Orange County subregion is anticipated to become increasingly jobs-rich over the next 20 years and the Overlay Plan-related employment would exacerbate the subregional jobs/housing imbalance. As discussed in the OCGP FEIR, the Overlay Plan was expected to result in:

- An increase of up to 9,000 residents

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- A provision of 3,625 dwelling units
- An approximate increase of 16,510 jobs
- An on-site jobs-housing ratio of 4.55

The increase in population would not substantially exceed projections contained for the site in OCP-2010. The increase in jobs, however, would contribute to worsening Orange County's jobs/housing ratio imbalance and is therefore considered a significant impact. The OCGP FEIR identified less than significant impacts for population and housing, and a significant and unavoidable impact for employment.

In 2008, the City granted 1,269 density bonus residential units to Heritage Fields pursuant to State law. Consequently, the Overlay Plan included a total of 4,894 residential units, and a total of 12,462 residents, based on estimates of persons per household in the City's General Plan. The Overlay Plan, including the 1,269 density bonus units, was included in the City's data for OCP-2010, which was then in turn used by SCAG to establish regional growth forecasts. Therefore, the population, housing and employment growth created by the Overlay Plan was consistent with OCP-2010 regional planning projections, and was consistent with anticipated forecasts forthcoming from SCAG. OCP-2010 estimates a jobs-housing balance of 2.45 in Irvine in 2010 and 2.44 in 2035, as shown in Table 4.12-2. The Overlay Plan would contribute to making the community more jobs-housing balanced over time.

Table 4.12-2. OCP-2010 Jobs to Housing Ratio for Orange County and the City of Irvine, 2008–2035

	2008	2010	2020	2035
Orange County				
Dwelling Units	1,035,005	1,045,959	1,100,260	1,174,912
Employment	1,624,061	1,510,928	1,646,437	1,799,477
Jobs-Housing Ratio	1.57	1.44	1.50	1.53
City of Irvine				
Dwelling Units	78,955	83,103	100,572	117,427
Employment	223,480	203,831	236,641	286,492
Jobs-Housing Ratio	2.83	2.45	2.35	2.44

Source: OCGP DSEIR, Table 5.8-7, p. 5.8-8; Center for Demographic Research, Cal State Fullerton. "2010 Orange County Projections," released January 27, 2011.

The 16,510 new jobs contemplated in the 2003 EIR would still be generated under the Overlay Plan. Therefore, the Overlay Plan, which includes 4,894 residential units, would have an on-site jobs-housing ratio of 3.37, which is substantially improved from the 4.55 ratio associated with the 3,625 units analyzed in the FEIR. However, since the 3.37 jobs-housing ratio is still greater than Irvine's existing jobs-housing ratio of 2.45, the Overlay Plan's significant impact to the jobs-housing balance remained.

Although OCP-2010 was originally approved in January 2011, publication was delayed until 2012 to incorporate 2010 Census population and housing data. The OCP-2010 Modified represents the growth projected in the approved 2010 projections, with the inclusion of the 2010 Census data. According to the OCP-2010, forecast growth rates for population, dwelling units, and employment in Irvine over the 2010–2035 period are all higher than the corresponding rates for the entire Orange County area, as shown in Table 4.12-3.

4. Discussion of Checklist and Mitigation Measures

Table 4.12-3. OCP-2010 Projections for Orange County and the City of Irvine, 2010–2035

	2010	2020	2035	Change, 2010–2035	
				Total	Percent
Orange County					
Population	3,019,356	3,266,107	3,421,228	401,872	13.3%
Dwelling Units	1,050,330	1,105,238	1,180,929	130,599	12.4%
Employment	1,490,296	1,625,805	1,778,845	288,549	19.4%
City of Irvine					
Population	215,644	265,605	304,242	88,598	41.1%
Dwelling Units	84,189	103,303	120,158	35,969	42.7%
Employment	209,152	241,962	291,813	82,661	39.5%

Source: Center for Demographic Research, Cal State Fullerton. "2010 Orange County Projections Modified," released January 26, 2012.

According to OCP-2000, there were a total of 1.49 million jobs in Orange County in 2010 (as shown in Table 4.12-2). OCP-2010 projects that jobs in Orange County will grow by 288,549, between 2010 and 2035, which amounts to an average of 11,542 jobs per year (a 19.4 percent increase in jobs over the 25-year period).

OCP-2010 estimates a jobs-housing balance of 2.48 in Irvine in 2010 and 2.43 in 2035, as shown in Table 4.12-4. These are well above the industry standard for an ideal jobs-housing ratio in the range of 1.3 to 1.7. OCP-2010 projects that Irvine will outpace Orange County's housing and employment growth rates between 2010 and 2035.

Table 4.12-4. OCP-2010 Jobs to Housing Ratio for Orange County and the City of Irvine, 2010–2035

	2010	2020	2035
Orange County			
Dwelling Units	1,050,330	1,105,238	1,180,929
Employment	1,490,296	1,625,805	1,778,845
<i>Jobs-Housing Ratio</i>	1.42	1.47	1.51
City of Irvine			
Dwelling Units	84,189	103,303	120,158
Employment	209,152	241,962	291,813
<i>Jobs-Housing Ratio</i>	2.48	2.34	2.43

Source: Center for Demographic Research, Cal State Fullerton. "2010 Orange County Projections Modified," released January 26, 2012.

The 2012 Modified Project consisted of the reduction of 410,400 sf of non-residential intensity and a corresponding addition of 3,412 dwelling units, as well as 1,194 density bonus units for a total of 4,606 new dwelling units (9,500 total dwelling units). In terms of jobs-housing imbalance, the SSEIR concluded that the implementation the 2012 Modified Project would improve this condition by increasing the amount of housing opportunities. The additional housing proposed by the 2012 Modified Project would assist the City in achieving a healthier jobs-housing balance with the ratio of 1.85. Therefore, the jobs-housing impact was not considered a significant impact.

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4.12.3 Impacts Associated with the Expansion of the OCGP Community Ice Facility

The proposed Project would not alter the population or housing information contained in the OCGP FEIR. The three ice sheet Community Ice Facility evaluated in Addendum No. 8 would have employed approximately 80 full time equivalent employees. While the proposed Project would employ approximately 120 full time equivalent employees, the proposed Project would not create new jobs because there would be no net increase in developed square footage within the OCGP Master Plan. Therefore, the proposed Project would not change the ratio of jobs to housing beyond that already analyzed in the OCGP FEIR, SSEIR, and Addenda. The Project's impacts would be the same as those identified in the OCGP FEIR, less than significant for population and housing, and significant and unavoidable for employment.

4.12.4 Findings

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the Proposed project would require a major change to the certified OCGP FEIR. The proposed modification to the OCGP Master Plan and the WSPDP, which does not include any major change to park development areas identified in the approved OCGP Master Plan, will not result in any new significant environmental impact nor will there be a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to population and housing that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance that was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant effects on population and housing identified in and considered by the OCGP FEIR.

4. *Discussion of Checklist and Mitigation Measures*

4.12.5 Mitigation from the OCGP FEIR and Applicability to the Expanded Community Ice Facility

The OCGP FEIR identified a significant impact associated with the jobs-housing ratio. The OCGP FEIR also stated that no mitigation is available to rectify conflicts between the numerical objectives of regional planning documents including the jobs-housing ratio. This finding remains applicable to the proposed Project.

The SSEIR identified the following measure as existing PPP that would help reduce or avoid potential population and housing impacts. The proposed Project is not a housing Project and, therefore, the following PPP is not applicable; the PPP would remain applicable to future housing projects within the OCGP Master Plan area.

PPP 9-1 Compliance with the City's Housing Element. Compliance with the City's Housing Element policies provides a strategic blueprint to ensure the siting of new very low, low, and moderate income housing units in future development projects under the 2012 Modified Project to help the City continue to meet its State fair share housing targets. The Housing Ordinance mandates that all projects with 50 or more housing units shall set-aside 15 percent of the total units for very low, low, and moderate income households.

4.13 PUBLIC SERVICES

Environmental Setting Law Enforcement

The Irvine Police Department (IPD) provides law enforcement services to the Project site. IPD is headquartered at the Irvine Civic Center Complex located at one Civic Center Plaza and has a satellite facility in the Irvine Spectrum Entertainment Complex. Primary response to the Project site would be patrol vehicles assigned geographically throughout the City. The ratio of police officers to population is 0.94 officers per 1,000 residents. At any given time, a minimum of 9 sworn officers are available to respond to calls for service anywhere in Irvine.

The James A. Musick Jail Facility is owned by the County of Orange and operated by the Orange County Sheriff's Department. The jail facility is located on a 105-acre parcel in PA 35 located northeast of the proposed Project site. The jail facility has permanently assigned staff personnel that guard the jail 24 hours a day. The staff includes deputies, special officers, and correctional service technicians. The jail facility is currently a minimum-security detention and corrections facility. Inmate housing and detention facilities are located in the northeast corner of the jail facility site. The remainder of the site is used for agriculture uses associated with inmate detention. The IPD also has a mutual aid agreement with the County Sheriff's Department and is available to assist the Sheriff with law enforcement at the Musick Jail Facility, if requested by the Sheriff.

Fire and Emergency Medical Services

The Orange County Fire Authority (OCFA) provides fire protection services to the city of Irvine, unincorporated Orange County, and 22 other jurisdictions. It maintains mutual aid agreements with all other cities in Orange County and with the State of California. Prior to annexation of the Project site, primary fire protection to PA 51 was provided by OCFA under contract to the county of Orange on an interim basis. Subsequent to the annexation of the property into the city of Irvine, OCFA has continued

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and will continue to provide fire protection service to the project area. OCFA has 71 fire stations, and 11 of these stations are in Irvine. Nearby OCFA fire stations outside of the City limits (i.e., Tustin and Lake Forest) may respond to calls in the City, if necessary. OCFA also has in place Secured Fire Protection Services Agreement with the Irvine Company, as part of the Northern Sphere Area that funds fire protection facilities and apparatus and would help provide adequate service to all areas surrounding the Project site.

Parks and Recreation

The private neighborhood park serving Pavilion Park (first phased residential development for the Great Park Neighborhoods) and the newly constructed Beacon Park in Development District 1-North are open and serving residents. A portion of the WSPDP Phase I is currently operating with recreation facilities that are open to the public. In addition, many public facilities are located within five miles of the OCGP including neighborhood and community parks, recreational trails, and open space.

There are approximately 506 acres of neighborhood and community parks and recreational trails in the City of Irvine's public park system, including one aquatic complex containing three competition size pools. Irvine presently has 18 community parks, 37 public neighborhood parks, and 200 private neighborhood parks. William R. Mason Regional Park, a County of Orange facility, and numerous private parks and recreation facilities are also available throughout Irvine that provide additional recreational opportunities for the City's residents.

The City of Irvine, through its Conservation and Open Space Element has established an open space program comprehensively aggregating open space, adjoining other regional open space, and promoting conservation and passive recreational opportunities (e.g. Bommer Canyon, Shady Canyon and Limestone Canyon).

School Services

PA 51 is within the school service boundaries of the Irvine Unified School District (IUSD) and the Saddleback Valley Unified School District (SVUSD). Prior to the closure of the base, an IUSD elementary school (El Toro Marine Elementary School at 8171 Southeast Trabuco Road) with a 650- student capacity was operating on the former base property. There are currently 40 schools in IUSD, including 23 elementary schools, 6 middle schools, 7 high schools, and 3 alternative education schools. There are currently 36 schools in SVUSD, including 24 elementary schools, 5 intermediate schools, 7 high schools, 1 continuation high school, 1 independent study high school, and 1 special education school.

Library Services

The Orange County Public Library (OCPL) provides library services to municipalities and unincorporated parts of Orange County through 33 library branches located throughout the OCPL service area. Irvine is served by three OCPL branches, the Heritage Park Regional Library at 14361 Yale Avenue, the University Park Library at 4512 Sandburg Way, and the Katie Wheeler Library at 13109 Old Myford Road.

4. Discussion of Checklist and Mitigation Measures

In addition, there are three colleges and universities, each with academic libraries, in Irvine. Residents can use these academic libraries to supplement the public library branches, as each academic library allows nonstudents to purchase a library card that provides borrowing privileges.

4.13.1 Impacts Identified in the OCGP FEIR

Law Enforcement

The OCGP FEIR discussed the law enforcement needs of PA 51 and stated that following annexation, the Irvine Police Department would provide law enforcement for the entire project area. The OCGP FEIR also analyzed the number of police officers, police supervisors and support staff, as well as the number of vehicles, equipment, and services. The OCGP FEIR stated that police protection for the park area would be funded through the use of a special park assessment. As stated in the OCGP FEIR, the general impacts associated with construction and operation of public facilities were analyzed in the OCGP FEIR as part of the planned land uses which also included the construction of a new Police substation. The OCGP FEIR concluded that the police facilities were adequate to handle the personnel and equipment that were employed and utilized by the department.

Additional police personnel and associated equipment would be provided through the continued implementation of the City's Strategic Business Plan and annual budget review process. Pursuant to the Amended and Restated Development Agreement (ARDA), Heritage Field has provided 5.5-acre site in District 1 North to the City for civic uses. It is anticipated that the City will be funding and constructing a new IPD substation at this location. During the development review and permitting process, the IPD would review and approve any new development plans to ensure that adequate facilities and personnel are provided to allow the IPD to serve the needs of all of Irvine residents. All standard conditions and guidelines would be applied during the normal review process, including the PPPs outlined in Section 4.13.4. Implementation of the PPPs would reduce potential impacts associated with police protection to less than significant.

Fire and Emergency Medical Services

Subsequent to annexation of the property, PA 51 would continue to be served by OCFA. The OCGP FEIR stated that it was likely that additional fire services infrastructure would be required to support the proposed project. OCFA had not provided the detailed calculations of the extent of new services. The OCGP FEIR stated that the final determination of fire station needs and locations would be made at a future date when more information is known about risk, layout, and types of occupancy. The specific environmental impact of constructing the new fire facilities to serve the project could not be determined at the General Plan level of analysis as specific site plans and locations had not been prepared. However, the general impacts associated with the construction and operation of public facilities were addressed within the OCGP FEIR. A temporary fire station is currently located a short distance from the planned ceremonial entrance to the OCGP along Trabuco Road.

Table 5.10-1 of the SSEIR (see Table 4.13-1 below) includes the stations that would provide initial response and the next level of response to calls for emergency services from the project site and surrounding area. All portions of the project site are within 4 minutes (2 miles) of an existing fire station.

4. Discussions of Checklist and Mitigation Measures

Table 4.13-1. OCFA Responding Stations (Table 5.10-2 of the SSEIR)

Station Number	Station Location	Equipment and Personnel
Initial Responding Stations to Project Site		
Fire Station 20	7020 Trabuco Road	1 Paramedic Engine/1 Water Tender/12 Personnel
Fire Station 27	12400 Portola Springs Road	1 Paramedic Engine/9 Personnel
Fire Station 38	26 Parker	1 Engine/1 Medic Van/15 Personnel
Fire Station 51 ¹	18 Cushing Division Chief Headquarters	1 Paramedic Engine/14 Personnel (including Division II Chief and Administrative Captain)
Next Level of Responding Stations to Project Site		
Fire Station 26	4861 Walnut Avenue	1 Engine/1 Medic Van/1 Patrol/15 Personnel/Reserve Firefighters
Fire Station 55	4955 Portola Parkway	1 Paramedic Assessment Unit (PAU) Engine/9 Personnel
Fire Station 47	47 Fossil Road	1 Paramedic Assessment Unit (PAU) Engine/9 Personnel
Fire Station 22	24001 Paseo de Valencia, City of Laguna Woods	2 Paramedic Engines/1 Truck/1 Battalion/39 Personnel
Fire Station 19	23022 El Toro Road, City of Lake Forest	1 Paramedic Engine/1 Squad/12 personnel/Reserve Firefighters

Source: SSEIR 2012

¹ Fire Station 51 is the initial responding station for PA 51.

PA = Planning Area

In addition to the fire stations listed above, OCFA has in place a Secured Fire Protection Services Agreement with the Irvine Company as part of the Northern Sphere Area that funds fire protection facilities and apparatus and would help provide adequate service to all areas surrounding and within the proposed Project site. Overall, compliance with the Mitigation Measures HH-3 and HH-4, PPP 10-1 through 10-10, and PDF 10-1 would ensure a less than significant impact on fire protection and emergency services.

Parks and Recreation

As discussed in detail in OCGP FEIR, the parkland acreage under the project would greatly exceed the existing City standards, and would provide a regional open space amenity for the benefit of Orange County. The OCGP FEIR calculated a total of 45.1 acres of parkland required for the Great Park Neighborhoods development. A portion of that acreage would be in neighborhood parks.

The community park requirement for the future Great Park Neighborhoods development has been addressed through the Development Agreement between the City and Heritage Fields (recorded on July 12, 2005) and reflected in the ARDA (December 2010). Based on the SSEIR, the requirement for dedication of community parkland has been met via past dedication of 165 acres of parkland and payment of fees to the City as set forth in the ARDA. Conveyance of the OCGP to the City satisfied any requirement imposed on the developer for the dedication or development of community parks as required by the City's General Plan and Municipal Ordinance. The neighborhood park requirements for the future Great Park Neighborhoods development would be met within the Great Park Neighborhoods development, outside the OCGP. Details of specific park locations, ownership, sizes, and improvements would be presented to the Community Services Commission and Planning Commission as a part of the Park Plan for the new residential developments. Since the OCGP Master Plan does not create a demand for parks and recreation but is itself a park and recreation amenity, no new impacts on parks and recreation are anticipated. This is consistent with the findings of the OCGP FEIR.

4. *Discussion of Checklist and Mitigation Measures*

School Services

The OCGP FEIR discussed in detail the proposed project, the related student generation, and the required school facilities. Based on an initial analysis, IUSD estimated the need for one 13-acre K-8 site as well as funding for expansion and modernization of existing middle and high school facilities by project buildout.

According to the SSEIR, per the Heritage Fields Mitigation Agreement with IUSD, two K-8 schools, each with a maximum capacity of 1,000 students, and a new high school (High School No. 5) with a maximum capacity of 2,600 students are planned for construction. Based on the current projections and the provisions contained within the Heritage Field Mitigation Agreement with IUSD, IUSD would be able to provide adequate school services and facilities. As for SVUSD, with payment of the SB 50 Fees, no significant impacts to the SVUSD would occur.

Library Services

Impacts to library services are determined only by the development of residential land uses. To meet the demand of library services, the City completed a Library Needs Assessment Study in October 2006 to evaluate the State of library services and identify options for enhanced library services within the City. The study determined that new facilities are needed, especially in light of anticipated population growth.

The 2007 Library Alternatives Study prepared by the City present six potential sites for new libraries, and identifies library facility options, including construction of a new branch library and/or a new main library, totaling 39,000 square feet, at the Great Park. The study further recommended inclusion of new library facilities in the Citywide Capital Improvement Program and Public Facilities Master Plan that would allow the City Council to assess development of new library facilities. However, there are no capital funds designated for expansion of the OCPL system.

Since a portion of property taxes are specifically allocated for capital improvement and operating costs for the OCPL system, new residents of the Irvine (including the project) would be required to make a financial contribution to expand and/or construct new library facilities. Development of the project would also be required to comply with PPP 10-10. In addition, residents of Irvine, including future residents of the City have access to any branch of OCPL library system, including those within neighboring cities (e.g., Tustin, Lake Forest, and Costa Mesa) and also those within academic libraries and resources of the colleges and universities within the City. Therefore, significant impacts related to library services are not anticipated.

4.13.2 Impacts Associated with the Expanded Community Ice Facility

Although the proposed Project would increase the square footage and spectator seating in the community ice rink, the proposed Project would not result in new uses not previously anticipated in the OCGP Master Plan and there would be a corresponding decrease in the square footage of another use within the OCGP Master Plan area. The proposed addition of building square feet for the Community Ice Facility site would be deducted from other approved uses so that the maximum building square footage allocated for the overall uses within the OCGP will not be exceeded. Therefore, the increase in size and seating would not substantively alter the provision of public services or create additional demand on existing levels of service when compared to what was anticipated in the FEIR and Addenda.

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Law Enforcement

The proposed Project would not result in new uses not previously anticipated in the OCGP Master Plan. The increase in spectator seating may result in an increase in calls for service, however, all standard conditions and guidelines would be applied during the normal review process, including the PPPs outlined in Section 4.13.5. As such, impacts associated with police protection would be less than significant and substantially similar to the impacts disclosed in the FEIR.

Fire and Emergency Medical Services

The proposed Project would not result in new uses not previously anticipated in the OCGP Master Plan. The increase in spectator seating may result in an increase in calls for service, however, all standard conditions and guidelines would be applied during the normal review process, including the PPPs outlined in Section 4.13.5. As such, impacts associated with fire and emergency medical services would be less than significant and substantially similar to the impacts disclosed in the FEIR.

Parks and Recreation

Since the OCGP Master Plan does not create a demand for parks and recreation but is itself a park and recreation amenity, no new impacts on parks and recreation are anticipated. Likewise, the Community Ice Facility and the proposed expansion of the Community Ice Facility would be recreation amenities for the City and the County of Orange. The proposed Project would not directly generate additional residents and any incidental use of parks within the City would be minimal. Impacts on existing parks would be less than significant. This is consistent with the findings of the OCGP FEIR.

School Services

The proposed Project would not directly generate additional students for IUSD or SVUSD. The proposed Project would be required to pay applicable school facility fees. Impacts on existing parks would be less than significant. With payment of applicable fees (refer to PPP 10-9 in Section 4.15.5), no significant impacts to IUSD or SVUSD would occur. Therefore, the demand and potential impact on school services remains consistent with the analysis contained in the OCGP FEIR.

Library Services

Impacts to library services are determined only by the development of residential land uses. The proposed Project would not directly generate additional residents. The proposed Project would be required to comply with PPP 10-10 provided in Section 4.16.5. Therefore, the demand and potential impact on library services remains consistent with the analysis contained in the OCGP FEIR.

4.13.3 Findings

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the Proposed project would require a major change to the certified OCGP FEIR. The proposed modification to the OCGP Master Plan, which does not include any major change to park development areas identified in the approved OCGP Master Plan, would not result in any new significant

4. Discussion of Checklist and Mitigation Measures

environmental impact nor would there be a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to public services that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the proposed Project would have one or more significant effects not discussed in the OCGP FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated and addenda were approved, indicating that: (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the OCGP FEIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant public services-related effects identified in and considered by the OCGP FEIR.

4.13.4 Mitigation from the OCGP FEIR and Applicability to the Expanded Community Ice Facility

The OCGP FEIR determined the mitigation measures identified in other sections of the OCGP FEIR (Sections 5.1-5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of facilities for police, fire protection, park and recreation, and education services.

In addition, the SSEIR identified the following measures as existing PPPs that apply to the proposed Project and would help reduce or avoid potential public services impacts:

Of the PPPs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

PPP 10-1 Every project applicant shall comply with all applicable Orange County Fire Authority codes, ordinances, and standard conditions regarding fire prevention and suppression measures relating to water improvement plans, fire hydrants, automatic fire extinguishing systems, fire access, access gates, combustible construction, water availability, and fire sprinkler systems.

4. Discussions of Checklist and Mitigation Measures

- PPP 10-2** Prior to the approval of the first certificate of occupancy the applicant shall arrange for and have passed an inspection, to be performed by the Police Department and OCFA, to ensure compliance with the Emergency Access Plan requirements. The inspector shall verify test acceptance and locations of all Knox boxes and key switches as depicted on the approved plan (Standard Condition 4.9).
- PPP 10-3** Prior to the issuance of the first building permit, the applicant shall submit and have approved by the Chief of Police an Emergency Access Plan, which identifies and locates all Knox Boxes, Knox key switches, and Click2Enter radio access control receivers. Said plan shall be incorporated into the plan set approved for building permits (Standard Condition 3.17).
- PPP 10-4** Prior to the issuance of the first building permit, the applicant shall have executed a Secured Fire Protection Agreement with the OCFA (Standard Condition A.15).
- PPP 10-5** The project applicant shall comply with all applicable requirements of the City Uniform Security Code (Municipal Code Title 5, Division 9, Chapter 5).
- PPP 10-6** Prior to issuance of the first building permit, a Construction Site Security Plan, per the City Uniform Security Code, Section 5-9-521, shall be approved by the Chief of Police. Said plan shall be incorporated into the plan set approved for building permits (Standard Condition 3.20).
- PPP 10-7** Prior to approval of the first certificate of occupancy, the project applicant shall demonstrate to the City's Police Department that an Opticom traffic light control system has been installed at all signalized intersections servicing or adjacent to the proposed Project site (Condition of Approval).
- PPP 10-8** The project applicant shall implement the concepts of Crime Prevention Through Environmental Design in the design and layout of individual development projects within the proposed Project site to reduce criminal opportunity and calls for police service. Implementation of these concepts shall be verified by the City's Police Department during the development review process (Condition of Approval).
- PPP 10-9** Pursuant to California Government Code Section 65995, the individual applicant shall pay developer fees to the appropriate school districts at the time building permits are issued; payment of the adopted fees would provide full and complete mitigation of school impacts. Alternatively, the applicant may enter into a school finance agreement with the school district(s) to address mitigation to school impacts in lieu of payment of developer fees. The agreement shall establish financing mechanisms for funding facilities to serve the students from the project. If the applicant and the affected school district(s) do not reach a mutually satisfying agreement, then project impact would be subject to development fees.
- PPP 10-10** In the event that a city-wide library impact fee is adopted and in force, the developer shall pay this fee prior to issuance of building permits for new development. Since a 39,000 sf library facility is approved for development within Existing PA 51, this would satisfy payment of a library impact fee, if adopted by the City at a future date.

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The SSEIR also identified the following measure as a PDF that applies to the proposed Project and would help reduce or avoid potential public services impacts. The following PDF, as applicable, will be incorporated into the proposed Project upon project implementation:

PDF 10-1 A key consideration in the final planting program for the Relocated Wildlife Corridor Feature will be to ensure that the planting plan does not create a fire hazard for adjacent development. The Wildlife Corridor (WLC) has been designed with native grasslands and southern cactus scrub within 150 feet of future development. Maintenance of vegetation within the WLC is not anticipated, but is allowed as needed for fire control. Final approval of the planting schemes and palettes will require approval from OCFA and assurance that the WLC will not create a fire hazard for the adjacent development or require mitigation by the adjacent development.

4.14 RECREATION

Issues related to Recreation are discussed above under Section 4.13, *Public Services*.

4.15 TRANSPORTATION AND TRAFFIC

4.15.1 Environmental Setting

The OCGP FEIR described the traffic and circulation conditions of a study area that encompassed 145 existing intersections (2007) and an additional 11 future intersections (Post 2025) in the City, and portions of seven adjacent jurisdictions including the Cities of Lake Forest, Mission Viejo, Laguna Hills, Laguna Woods, Aliso Viejo, Laguna Beach, and unincorporated areas of Orange County.

The OCGP FEIR used the City Traffic Performance Criteria, which establishes LOS A to D as the peak-hour minimum acceptable service level. In its adoption of the Overlay Plan, the City General Plan Policy B-1(C), which allowed for the consideration of LOS E as acceptable for application to intersections in PAs 13, 31, 32, 34, 35 and 39, was changed to include the effects of future development in PA 51, including former PA 30, on the intersections in those PAs.

The City's performance criteria also includes a standard of 0.02 or greater for existing deficiencies, roadway volume to capacity (V/C) ratio or the intersection capacity utilization (ICU) or an increase from acceptable to unacceptable LOS, to identify significant project impacts and associated need for improvements at both roadways and intersections.

4.15.2 Impacts Identified in the OCGP FEIR

The OCGP FEIR assessed the traffic impacts of two development scenarios for the overall OCGP project, the Base Plan and the Overlay Plan. The OCGP FEIR concluded that the adopted Overlay Plan would cause an increase in traffic which would be substantial in relation to the existing traffic load and capacity of the street system in the year 2007, year 2025, and post-2025 scenarios.

The OCGP FEIR concluded that the adopted Overlay Plan would exceed, either individually or cumulatively, a LOS standard established by the county congestion management agency for designated roads or highways in the 2007 and 2025 scenarios.

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The OCGP FEIR utilized trip thresholds (also known as trip caps) for each of the planning areas within the OCGP area. The trip cap is based on socioeconomic data average daily trip generation for the approved OCGP plan (the Overlay Plan area), which includes the Heritage Fields development. The traffic impacts of the 2006 GPA/ZC project were analyzed in Addendum No. 2 by distributing project-related traffic over existing and future traffic conditions. The three future conditions (year 2010, year 2025 and post-2025) were based on the circulation system plus fully funded intersection improvements that were planned to be in place in each future time frame and the land use and development growth that is projected in each future time frame. In each case, project impacts were identified by comparing traffic conditions with and without the 2006 GPA/ZC project.

The circulation system performance criteria applied in the analysis were the criteria approved in the 2003 North Irvine Transportation Mitigation (NITM) Program Nexus Study. The performance criteria were also consistent with the criteria adopted by the jurisdictions that are within the project study area. The criteria include components for arterial roadways, intersections, freeway/tollway ramps, and freeway/tollway mainline segments.

The results of the year 2010, year 2025 and post-2025 analysis indicated that the proposed 2006 GPA/ZC project was not forecast to significantly impact any roadway segment based on the second level of analysis (the City's peak hour link capacity analysis methodology), intersection, freeway/tollway ramp, or any freeway/tollway mainline segment.

Subsequently, as addressed in Addendum No. 3, a Traffic Study for the Master Subdivision Map was prepared by Austin-Foust Associates, Inc. to address the transportation impacts for the "project," i.e. backbone infrastructure with no new land use development in an interim year timeframe consistent with the TTM scope of work of the North Irvine Transportation Mitigation (NITM) Program Ordinance. The Traffic Study analyzed the impacts of the Master Subdivision Map (MSM) application based on Year 2010 traffic conditions in the traffic analysis study area.

An Internal Circulation Analysis for the Master Subdivision Map in the Overlay Plan area was prepared by Austin-Foust Associates, Inc. to analyze the access and internal circulation for the Heritage Fields project. The project traffic loaded directly onto the surrounding arterial system at several locations.

The intersections were analyzed using ICU values to determine LOS. The results of this analysis showed that all intersections operate at an acceptable LOS under Post-2025 buildout conditions. The intersections were then analyzed for signalization needs. Traffic signal warrants based on peak-hour volumes (as adopted by the Federal Highway Administration and Caltrans) were used to determine the need for signalization. Based on the application of the warrants, it was determined that traffic signals should be installed at all of the analyzed intersections except for the intersections of C Street and D Street at Marine Way.

Recommended on-site traffic-control measures included stop signs, traffic signals, and roundabouts. Left-turn pocket lengths for project access intersections with exclusive left-turn lanes were estimated using the County of Orange Environmental Management Agency (EMA) Highway Design Manual. The estimated left-turn storage length requirements for the analyzed intersections were based on peak hour volumes. Right-turn lanes were proposed to be provided for select project access locations on site where additional intersection capacity is needed.

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Addendum No. 4 analyzed the impacts of the proposed OCGP Master Plan. Since the proposed land uses within the OCGP Master Plan were consistent with those analyzed in the OCGP FEIR and the updated traffic study for the Revised Overlay Plan, no additional traffic analysis was found to be necessary, and no new significant impacts related to traffic were anticipated.

Addendum No. 5 analyzed the impacts associated with realignment of the Marine Way/Bake Parkway intersection and concluded that the project would not produce or substantially worsen significant impacts identified in the OCGP FEIR. Consistent with the conclusions in the OCGP FEIR, traffic and circulation impacts associated with the project would be less than significant, as the future development would implement all applicable laws and regulations to reduce impacts on traffic and circulation.

Addendum No. 7 analyzed potential impacts associated with the removal of certain NITM Improvements from the OCGP FEIR that were determined to no longer be necessary. Based on the findings of the NITM Five-Year Review Traffic Study, it was determined that previously proposed traffic mitigation strategies were not required for seven intersections and one ramp since they operate at an acceptable LOS under all interim year and build-out conditions. In addition, improvements above and beyond the baseline conditions for these locations were not warranted based on forecast future traffic activity.

The SEIR analyzed the potential impacts of the 2nd Amended VTTM 17008, Amended TTM 17283, TTM 17202, TTM 17364, TTM 17366 and TTM 17368 within the Heritage Fields site located in PA 51, including former PA 30, in the City of Irvine. The purpose of the comprehensive and tract map-level NITM traffic studies was to identify the location, timing and prioritization of applicable NITM improvements and any necessary project-related improvements that address potential impacts caused by project traffic.

The results of the analyses indicated the need for the following NITM improvements:

- Alton & Technology (2030): Westbound Technology restripe to include 2.5 left turn lanes, 1.5 through lanes, and a defacto right turn lane.
- El Toro & Jeronimo (2030): Add second southbound El Toro left turn lane.
- Alicia & Muirlands (2015): Add second southbound Alicia left turn lane.
- I-5 Southbound off-ramp to Sand Canyon (Post-2030): Add a second drop lane from the I-5 to the off-ramp.
- I-5 Southbound off-ramp to Alton (Post-2030): Add a second auxiliary lane from the I-5 to the off-ramp.
- I-5 Southbound off-ramp to El Toro (2030): Add a second drop lane from the I-5 to the off-ramp.

Additional improvements needed to address traffic impacts caused by the project include:

- Jeffrey & Roosevelt (2030): Restripe eastbound Roosevelt approach to provide a shared through/right turn lane.
- Bake & Portola (Post-2030): Restripe the northbound Bake approach to provide a shared through/left lane (which currently exists as a through lane) and modify the traffic signal for a north/south split phase signal operation. Alternatively, restripe the northbound approach to provide dual left turn lanes

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in combination with a single through lane and single right turn lane, and modify signal operation to include northbound right turn overlap.

- Lake Forest & Portola (2030, fair-share): Conversion of the northbound Lake Forest approach from de-facto right-turn to dedicated right-turn, and modification of the traffic signal to include right turn overlap phase.

As part of Addendum No. 8, two traffic studies were prepared by LSA for the OCGP Western Sector Development Plan Phase 1 located in PA 51 in the City of Irvine. The results of the August 2011 parking and traffic generation analysis indicated that 2,804 parking spaces would be necessary to accommodate the park visitors on a weekday, and 3,842 spaces would be required on a weekend. The conceptual Great Park design included regular day-to-day parking for 5,505 vehicles. This supply of parking would be more than sufficient to accommodate the parking demand for the entire park at any given time on a typical weekday or weekend. The analysis also concluded that the maximum daily trip generation of the park modification would be 13,537 trips on a typical weekday. This is below the 19,083 weekday trips calculated in the OCGP FEIR, and therefore no changes to the impact analysis would occur.

According to the traffic data used to prepare Addendum No. 8, full build-out of the OCGP Master Plan would result in a total of 19,030 weekday trips, which is below the FEIR maximum; however, the FEIR traffic analysis was not based on weekend conditions. The weekend trip analysis was conducted for the parking demand calculations and was not included in the original OCGP FEIR.

As presented in the August 2011 traffic study, the WSPDP Project would generate approximately 4,635 daily trips, which was significantly below the 19,083 daily trips approved as part of the OCGP FEIR. The AM peak hour is forecast at 184 and the PM peak hour at 659.

The project would not produce new or substantially increase the severity of significant impacts previously identified in the OCGP FEIR. Consistent with the conclusions in the OCGP FEIR, traffic and circulation impacts associated with the project would be less than significant as the future development would implement all applicable laws and regulations to reduce impacts on traffic and circulation.

The 2011 SEIR concluded that with the 2011 Approved Project all intersections and roadway/freeway/tollway/ramp segments would operate at acceptable levels of service with the existing or planned improvements. However, it stated that since the primary responsibility for approving and/or completing certain improvements outside of the City of Irvine limits lie with agencies other than the City (i.e., City of Lake Forest, Laguna Woods, Mission Viejo, County of Orange, and Caltrans), there is the potential that significant impacts may not be fully mitigated if such improvements are not completed for reasons beyond the City's control. Should that occur, impacts relating to traffic generated by the 2011 Approved Project would remain significant.

Addendum No. 9 addressed the potential for environmental impacts associated with the modifications to the 688-acre OCGP Improvement Area, which included both the Unilateral Program Changes allowed in the ALA II and other staff-recommended changes to the OCGP Improvement Area 1. The proposed modifications to the OCGP Improvement Area were within the Bosque and Sports Park Districts of the 688-acre OCGP Improvement Area. Additionally, two design features of the Project that would be incorporated upon project implementation and included dual 250-foot -long eastbound left-turn pockets at Marine Way and Great Park Boulevard West (562) (Great Park Street 1) and a 250-foot -long westbound

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right -turn lane at the Marine Way right -in/right -out driveway (669), located west of Great Park Boulevard (West) (Great Park Street 1).

A Traffic Study for the 688-acre Park Development Plan was prepared to analyze the potential traffic impacts of the Project in general accordance with the North Irvine Transportation Mitigation (NITM) Program per City Council Resolution 03-61 and applicable sections of the City's Traffic Study Guidelines (updated August 24, 2004) and the City of Irvine Transportation Guidelines (TG) dated July 31, 1993. The analysis identified potential impacts of the proposed Project in the Project area based on Existing (2012) and Future Year (2017) traffic conditions using the Irvine Transportation Analysis Model (ITAM 12.3). The Traffic Study found that the proposed Project, reducing the number of sports courts, expanding passive recreational area, relocating some of the Improvement Area components to optimize visibility, access and efficiency, and assessing adequacy of parking plan, would not introduce new uses that would impact traffic, circulation and access within the proposed Project area. Therefore, the traffic related impacts of the proposed Modifications to the OCGP Improvement Area would be less than significant.

4.15.3 Impacts Associated with the Expanded Community Ice Facility

In January 2016, LSA prepared a Traffic Impact Analysis (TIA) for the proposed expansion of the OCGP Community Ice Facility. The TIA analyzed traffic generated from the proposed sheet of ice, consistent with the previously approved traffic study for the WSPDP. As shown in Table 4.15-1, the proposed expansion to four sheets of ice is forecast to generate approximately 960 ADT, including 32 a.m. peak-hour trips (16 inbound and 16 outbound) and 128 p.m. peak-hour trips (80 inbound and 48 outbound). This represents the addition of 240 ADT, 8 a.m. peak-hour trips (4 more inbound and 4 more outbound), and 32 p.m. peak-hour trips (20 more inbound and 12 more outbound) compared to the current Master Plan.

Table 4.15-1. Project Trip Generation

Land Use	Size (TSF)	Unit	ADT	A.M. Peak Hour			P.M. Peak Hour		
				In	Out	Total	In	Out	Total
Ice Rink Trip Rates	1	Sheet	240	4	4	8	20	12	32
Proposed Expansion									
Trip Generation ¹	4	Sheets	960	16	16	32	80	48	128
Approved Trip Generation									
Trip Generation ¹	3	Sheets	720	12	12	24	60	36	96
Net Trip Generation (1 sheet of ice)			240	4	4	8	20	12	32

¹ Western Sector Park Development Plan Phase 1 Traffic Analysis (LSA Associates, Inc., August 2011).

ADT = average daily trips

TSF = thousand square feet

Building square footage was not used in the TIA because any proposed addition of building square feet on the Community Ice Facility site compared to current approvals would be deducted from other uses so that the maximum building square footage or trip budget allocated for the overall uses within the OCGP will not be exceeded.

The TIA focused on the daily, a.m. peak-hour, and p.m. peak-hour LOS at 11 intersections and on 11 roadway segments. Project impacts were determined based on analysis of the following scenarios:

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- 2017 Baseline Approved (three sheets of ice); and
- 2017 Baseline Approved Plus Project (four sheets of ice).

2017 Baseline Approved

Table 4.15-2 presents a summary of the intersection LOS for the 2017 Baseline Approved conditions (including three sheets of ice). As this table indicates, all study area intersections are forecast to operate at satisfactory LOS (defined as LOS D or better).

Table 4.15-2. 2017 Baseline Approved Intersection LOS Summary

Intersection		A.M. Peak Hour		P.M. Peak Hour	
		ICU/Delay	LOS	ICU/Delay	LOS
1	Ridge Valley Street/Trabuco Road (ITAM Int. 559)	0.41	A	0.55	A
2	Ridge Valley Street/Champion Way (ITAM Int. 623)	0.13	A	0.14	A
3	Ridge Valley Street/LV Street (ITAM Int. 575)	0.14	A	0.14	A
4	Ridge Valley Street/Project RIRO Driveway (ITAM Int. 493) HCM	8.40	A	8.60	A
5	Ridge Valley Street/8 th Street (ITAM Int. 655)	0.30	A	0.18	A
6	Ridge Valley Street/C Street (ITAM Int. 576)	0.19	A	0.16	A
7	Ridge Valley Street/Marine Way (ITAM Int. 560)	0.36	A	0.35	A
8	G Street/LV Street (ITAM Int. 654) HCM	9.00	A	9.40	A
9	G Street/Full-Access Project Driveway (ITAM Int. 496) HCM	0.00	A	0.00	A
10	G Street/8 th Street (Roundabout) (ITAM Int. 497) HCM	3.80	A	3.90	A
11	C Street/LV Street (Roundabout) (ITAM Int. 498) HCM	4.00	A	4.40	A

Delay is reported in seconds per vehicle using the HCM 2010 unsignalized intersection methodology.

HCM = Highway Capacity Manual

ICU = Intersection Capacity Utilization

Int. = Intersection

ITAM = Irvine Transportation Analysis Model

LOS = level of service

RIRO = right-turn in/right-turn out

Table 4.15-3 presents the daily traffic volumes and volume-to-capacity (v/c) ratios for 2017 Baseline Approved conditions. As this table indicates, all study area roadway segments are forecast to operate at satisfactory LOS (defined as LOS D or better).

Table 4.15-3. 2017 Baseline Approved Daily Traffic Volumes and V/C Ratios

Roadway	Segment	Capacity	ADT	V/C	LOS
Ridge Valley Street	Trabuco Road to Champion Way (B Street) (ITAM 2013)	32,000	5,300	0.17	A
	Champion Way to LV Street (ITAM 2013)	32,000	5,300	0.17	A
	LV Street to Project RIRO Driveway (ITAM 4096)	32,000	1,700	0.05	A
	Project RIRO Driveway to 8 th Street (ITAM 4155)	32,000	1,700	0.05	A
	8 th Street to C Street (ITAM 4099)	32,000	4,800	0.15	A
	C Street to Marine Way (ITAM 2016)	32,000	5,400	0.17	A
G Street	LV Street to Full-Access Project Driveway (ITAM 4165)	13,000	300	0.02	A
	Full-Access Project Driveway to 8 th Street (ITAM 4166)	13,000	100	0.01	A
LV Street	Ridge Valley Street (O St) to G Street (ITAM 4097)	13,000	600	0.05	A
	G Street to C Street (ITAM 4164)	13,000	400	0.03	A
8 th Street	Ridge Valley Street (O Street) to G Street (ITAM 4169)	13,000	1,300	0.10	A

ADT = average daily trips

ITAM = Irvine Transportation Analysis Model

LOS = level of service

RIRO = right-turn in/right-turn out

V/C = volume-to-capacity

4. Discussion of Checklist and Mitigation Measures

Based on the results of the LOS analysis, the study area intersections and roadway segments are forecast to operate at acceptable LOS with the added sheet of ice in 2017. No project impacts have been identified on the study area intersections or roadway segments.

Project design features were also analyzed based on the design guidelines in the City's Transportation Guidelines (TGs) and TDPs. No impacts to vehicular access were identified. The proposed access points would meet the City's design guidelines.

2017 Baseline Approved Plus Project

Table 4.15-4 presents the summary of the 2017 Baseline Approved Plus Project intersection LOS. As this table indicates, all study area intersections are forecast to operate at satisfactory LOS (defined as LOS D or better). Therefore, the project (addition of one sheet of ice) can be implemented in a 2017 Baseline Approved condition with no peak-hour intersection impacts.

Table 4.15-4. 2017 Baseline Approved Plus Project Intersection LOS Summary

Intersection		A.M. Peak Hour		P.M. Peak Hour	
		ICU/Delay	LOS	ICU/Delay	LOS
1	Ridge Valley Street/Trabuco Road (ITAM Int. 559)	0.41	A	0.54	A
2	Ridge Valley Street/Champion Way (ITAM Int. 623)	0.12	A	0.13	A
3	Ridge Valley Street/LV Street (ITAM Int. 575)	0.13	A	0.14	A
4	Ridge Valley Street/Project RIRO Driveway (ITAM Int. 493) HCM	8.40	A	8.60	A
5	Ridge Valley Street/8 th Street (ITAM Int. 655)	0.28	A	0.19	A
6	Ridge Valley Street/C Street (ITAM Int. 576)	0.20	A	0.16	A
7	Ridge Valley Street/Marine Way (ITAM Int. 560)	0.37	A	0.35	A
8	G Street/LV Street (ITAM Int. 654) HCM	9.40	A	9.80	A
9	G Street/Full-Access Project Driveway (ITAM Int. 496) HCM	8.50	A	8.80	A
10	G Street/8 th Street (Roundabout) (ITAM Int. 497) HCM	3.90	A	3.80	A
11	C Street/LV Street (Roundabout) (ITAM Int. 498) HCM	4.00	A	4.40	A

¹ Delay is reported in seconds per vehicle using the HCM 2010 unsignalized intersection methodology.

HCM = Highway Capacity Manual

LOS = level of service

ICU = intersection capacity utilization

RIRO = right-turn in/right-turn out

ITAM = Irvine Transportation Analysis Model

Int. = Intersection

Table 4.15-5 lists the daily traffic volumes and v/c ratios for the 2017 Baseline Approved Plus Project scenario. As this table indicates, all study area roadway segments are forecast to operate at satisfactory LOS (defined as LOS E or better). Therefore, no significant project impacts are created on roadway segments with implementation of the project.

Special Issues.

The Project proposes special events up to 12 times per year. Special events are defined as those events that are anticipated to exceed the ice facility's on-site parking supply. Per an agreement with the City, the project will provide a minimum of 665 parking spaces on site. A Traffic Management Plan (TMP) will be required and coordinated with City staff and Public Safety for these special events. The specific issues addressed in this special event permit will include traffic management, traffic control and signage plans, parking management, and queuing analyses among others and are therefore not detailed in this analysis.

An access analysis, consistent with the City's Transportation Guidelines (TGs) and Transportation Design

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Procedures (TDPs), was conducted for the proposed project. Based on this analysis, the recommended requirements for TG-1, TG-8, TG-10, TG-11, TG-15, and TDP-17 have been met or shall be met through subsequent phases of the process via a detailed site design plan.

Table 4.15-5. 2017 Baseline Approved Plus Project Daily Traffic Volumes and V/C Ratios

Roadway	Segment	Capacity	ADT	V/C	LOS
Ridge Valley Street	Trabuco Road to Champion Way (B Street) (ITAM 2013)	32,000	5,400	0.17	A
	Champion Way to LV Street (ITAM 2013)	32,000	5,400	0.17	A
	LV Street to Project RIRO Driveway (ITAM 4096)	32,000	1,200	0.04	A
	Project RIRO Driveway to 8 th Street (ITAM 4155)	32,000	1,200	0.04	A
	8 th Street to C Street (ITAM 4099)	32,000	4,500	0.14	A
	C Street to Marine Way (ITAM 2016)	32,000	5,800	0.18	A
G Street	LV Street to Full-Access Project Driveway (ITAM 4165)	13,000	1,100	0.08	A
	Full-Access Project Driveway to 8 th Street (ITAM 4166)	13,000	900	0.07	A
LV Street	Ridge Valley Street (O Street) to G Street (ITAM 4097)	13,000	600	0.05	A
	G Street to C Street (ITAM 4164)	13,000	400	0.03	A
8 th Street	Ridge Valley Street (O Street) to G Street (ITAM 4169)	13,000	1,500	0.12	A

ADT = average daily trips

RIRO = right-turn in/right-turn out

ITAM = Irvine Transportation Analysis Model

V/C = volume-to capacity ratio

LOS = level of service

Potential Impacts and/or Recommendations

Based on the results of the TIA, the proposed Project can be implemented without significant impacts to the surrounding roadway system in the 2017 horizon. The addition of Project traffic to study area intersections and roadway segments does not result in City thresholds for performance being exceeded and is not considered significant; therefore, mitigation is not required. Special events (held up to 12 times per year) that exceed the parking capacity on site would require a special permit from the City. As part of this, a TMP would be required and coordinated with City staff and Public Safety for these special events. The specific issues addressed in this special event permit would include traffic management, traffic control and signage plans, parking management, and queuing analyses among others and are therefore not detailed in the traffic analysis. Further, an access analysis consistent with the City's TGs and TDPs was conducted for the proposed Project. Based on this analysis, the recommended requirements for TG-1, TG-8, TG-10, TG-11, TG-15, and TDP-17 have been met or shall be met through subsequent phases of the process via a detailed site design plan.

4.15.4 Findings

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the Proposed project would require a major change to the certified OCGP FEIR. The proposed modification to the OCGP Master Plan and the WSPDP, which does not include any major change to park development areas identified in the approved OCGP Master Plan, would not result in any new significant environmental impact nor would there be a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to transportation/traffic that would require major changes to the certified OCGP FEIR.

4. Discussion of Checklist and Mitigation Measures

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. This environmental evaluation has analyzed all available relevant information and has determined that there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that the Project would have one or more significant effects not discussed in the previous FEIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous FEIR would substantially reduce one or more significant effects on the environment, but the proposed project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant transportation/traffic-related effects identified in and considered by the OCGP FEIR.

4.15.5 Mitigation from the OCGP FEIR and Applicability to the Expanded Community Ice Facility

The OCGP FEIR identified Mitigation Measures TRAN1 through TRAN8 which, if fulfilled prior to specified development approvals, would eliminate or substantially reduce the traffic and circulation effects of development under the adopted Master Plan. The SEIR proposed that several mitigation measures from the certified OCGP FEIR be deleted (because they have been completed or they are no longer necessary in light of the NITM Program and new mitigation measures being proposed for Modified Project-specific impacts identified in the Traffic Study for the Modified Project). Mitigation Measure TRAN 1 would be carried forward for this project; however, it was modified by the City and approved as shown with 2nd AVTTM 17008 (PC Resolution 11-3109). References to PA 30 were proposed to be removed since the 2012 Modified Project's proposed GPA/ZC consolidated PAs 30 and 51 into one PA to be designated Combined PA 51.

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

TRAN1 Prior to the approval of any final map of a subsequent subdivision map (other than a financing and conveyance map) for any land use, excluding single family land uses (single family land use includes single family detached and single family attached projects), parks, schools, daycare, and religious institutions, that allocates building intensity within Combined PA 51, the landowner or subsequent project applicant shall either (i) apply for annexation of any areas within the final map to the Irvine Spectrum Transportation Management Association (TMA) (Spectrumotion) in accordance with Article X of the recorded Declaration of Covenants, Conditions and Restrictions (CC&Rs) for the Irvine Spectrum TMA, including any supplementary or amended CC&Rs, to reduce traffic, air quality and noise impacts or (ii)

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develop and implement a similar transportation management plan containing the elements and meeting the criteria described below as approved by the Director of Public Works. The transportation management plan shall be implemented via payment of assessment dues to an organization similar to Spectrumotion for all land uses, with the exceptions noted above. While affordable housing units will be included, their assessment fees will be covered by other remaining adjacent land uses. The implementation (payment of assessment dues) for either option described above shall occur prior to issuance of building permit(s):

Transportation Management Plan (TMP)

The development and implementation of a Transportation Management Plan is an identified mitigation measure to manage transportation access for Combined PA 51. This document summarizes the key elements of the TMP.

A. Introduction

The purpose of this document is to provide an outline for a comprehensive TMP for the Combined PA 51 (Great Park TMP). This report is not intended to provide the specific details of the plan, but rather to highlight the key components and provide direction for subsequent detailed planning and implementation activities. When preparation of the TMP is undertaken, all of the agency and stakeholders will be invited to provide input.

The applicant may elect to annex Combined PA 51 into the Irvine Spectrum Transportation Management Association (Spectrumotion). Spectrumotion is a private, nonprofit Transportation Management Association (TMA) formed to reduce traffic congestion in Irvine Spectrum. Spectrumotion promotes, markets, and subsidizes alternatives to solo-commuting and assists the business community in complying with trip reduction related requirements. Membership is mandatory to property owners with deed restrictions requiring participation in the TMA. Membership dues provide the funding for the Association and its programs, which offer a variety of employer and commuter services focused on reducing vehicular trip generation.

In the event that applicant elects not to annex into Spectrumotion, a TMP similar to that provided by Spectrumotion will be developed and implemented. This document sets forth the components of the TMP should it be necessary.

B. Transportation Management Plan Framework

The key elements of the Great Park TMP are set forth below:

New Hire Orientation: Inform newly hired employees of commuting services available to them.

Public Transportation Pass Sales: Provide a central location for purchase of passes to available transit services (e.g., OCTA buses, Metrolink, and Amtrak).

Vanpool and Carpool Formation Assistance: Perform all of the administrative work necessary to establish van pools and car pools.

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Onsite Promotions: Hold rideshare promotions at work sites and assist in employer assistance promotions.

Telecommuting/Alternative Work Schedule Consulting: Assist employers in developing and implementing a telecommuting or alternative work schedule program.

Personalized Commute Consulting: Provide a personalized commute profile to any commuter, which includes carpool match list containing the names of other commuters in the North Irvine Sphere that live and work near each other.

Website: Maintain a website with all of their program information available.

Rideshare Promotions: Conduct high visibility rideshare promotions as a means to advertise its services.

Subsidies: To the extent financially feasible, offer subsidies to assist in the formation of vanpools, the formation of carpools, and to encourage the trying of transit services.

Public Agency Coordination: Work closely with various public and quasi-public agencies to improve bus and commuter rail service to the Spectrum and North Irvine Sphere areas.

C. Transportation Management Plan Implementation

As part of the TMP, a process will be established to monitor its effectiveness in reducing peak hour trip generation in the Combined PA 51. Provision shall be made for the Plan to be modified as appropriate to enhance its effectiveness.

TRAN2 Following adoption of a land use plan and circulation plan for the OCGP property and before the issuance of any building permits within the base property, the City shall request a cooperative study with OCTA and other affected jurisdictions to amend the Orange County Master Plan of Arterial Highways. Marine Way, Trabuco Road from the SR-133 toll way to "O" Street (formerly College Road), and Ridge Valley (formerly Y Street) should be included on the Orange County Master Plan of Arterial Highways.

TRAN3 Prior to issuance of the first building permit for dwelling units or nonresidential square footage, a Fee Reallocation Study shall be completed to recalculate the NITM Fees, reflecting any fair share allocation modifications. The landowner or subsequent property owner shall submit the Fee Reallocation Study under a separate cover to be approved by the Director of Public Works in consultation with the NITM Advisory Committee.

TRAN4 Prior to approval of the last final map for the Modified Project (or any portion thereof in the event that the final map is approved in multiple phases), the landowner or subsequent property owner shall pay the costs of the following mitigation in an amount to be mutually agreed upon between the landowner or subsequent property owner and the City and reflective of the costs of the mitigation at the time of payment:

- 286 Jeffrey Road and Roosevelt: Restripe the eastbound approach to provide a

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shared through/right-turn lane.

- 361 Bake Parkway and Portola Parkway: Restripe the northbound approach to provide a share through/left lane (which currently exists as a through lane) and modify the traffic signal for a north/south split phase signal operation. Alternatively, restripe the northbound approach to provide dual left-turn lanes in combination with a single through lane and single right-turn lane, and modify signal operation to include northbound right-turn overlap phase.
- 374 Lake Forest Drive and Portola Parkway (Pending Projects analysis impact): Convert the existing northbound approach from de-facto right-turn to a dedicated right-turn, and modify the existing traffic signal operation to include right-turn overlap phase.

The following additional mitigation measures were proposed in the SSEIR:

TRAN5 (For specific Project-related non-NITM improvements): In conjunction with the submittal of any tentative tract maps/tentative parcel maps (TTM/TPM) for the Project within Combined PA 51, the landowner or subsequent project applicant shall prepare, subject to review and approval of the City, the required TTM/TPM level traffic study per City Resolution No. 03-61. This Traffic Study will verify whether the intersection locations listed below, which have been identified as impacted in this SSEIR, are projected to be impacted by the subject project of the Interim Year Analysis. For those intersections impacted by subject project of the TTM/TPM Traffic Study, the TTM/TPM will be conditioned to construct the necessary improvements that have been identified in the TTM/TPM Traffic Study. For those intersections listed below, which are not projected to be impacted by the subject project of the TTM/TPM Traffic Study, and prior to approval of the last final map for the 2012 Modified Project (or any portion thereof in the event that the final map is approved in multiple phases), the land owner or subsequent property owner shall construct, pay fair share of the costs or enter into an agreement with the City to establish the mechanism in which the funds generated by the fair share mitigations shall be provided and utilized by Caltrans, City of Lake Forest, City of Tustin and/or City of Irvine toward implementing the improvements.

- 16. Newport Avenue and Irvine Boulevard – Modification of signal to provide a northbound right-turn overlap phase. (2030, Option 2) Improvement no longer needed if Pending projects are approved.
- 54. Browning Avenue and Irvine Boulevard – Application of ATMS, subject to approval by City of Tustin. (2030, Options 1 and 2)
- 221. Culver Drive and Bryan Avenue – Addition of a westbound defacto right-turn lane. (2030, Option 2) Improvement no longer needed if Pending projects are approved.
- 286. Jeffrey Road and Roosevelt – Conversion of the eastbound shared through/right lane into a through lane and addition of a second right-turn lane.

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(Post-2030, Options 1 and 2)

- 290. Jeffrey Road and Barranca Parkway – Application of PA9C-identified ATMS. (2030, Options 1 and 2)
- 291. Jeffrey Road and Alton Parkway – Provision of an eastbound standard right-turn lane with right- turn overlap resulting in an ultimate eastbound lane configuration of 2 left-turn lanes, 2 through lanes, and 1 right-turn lane. (Post-2030, Options 1 and 2)
- 303. Sand Canyon Avenue and I-5 northbound ramp/Marine Way – Conversion of the northbound defacto right-turn lane to a standard right-turn lane with right-turn overlap signal operation. (2030, Options 1 and 2)
- 306. Sand Canyon Avenue and Oak Canyon – Fair Share contribution toward conversion of the westbound shared through/right lane to a single through lane and conversion of the westbound right-turn lane into a free-right turn lane, as identified in the PA40/12 GPA/ZC. (2030, Options 1 and 2) Improvement no longer needed if Pending projects are approved.
- 321. Laguna Canyon Road and Old Laguna Canyon – Application of ATMS, subject to approval by the Director of Public Works. Alternate improvement is the addition of a fourth northbound through lane. (Post-2030, Options 1 and 2) Improvement no longer needed if Pending projects are approved.
- 366. Bake Roadway and Rockfield Boulevard – Fully funded Lake Forest Transportation Mitigation (LFTM) improvement: Conversion of a westbound through lane to a third left-turn lane. (2030, Options 1 and 2)

TRAN6 (For specific Project-related NITM improvements): The NITM Program provides a funding mechanism for the coordinated and phased installation of required traffic and transportation improvements established in connection with land use entitlements for City PAs 1, 5, 6, 8, 9, 40, and 51. As established by City Ordinance No. 03-20, Combined PA 51 is included in this program and, as such, is required to pay its fair share towards the List of NITM Improvements included within the established NITM Program. The following Project-impacted locations are included in the NITM List of Improvements and thus, payment of NITM fees will mitigate the Combined PA 51 project's fair share responsibility toward these improvements:

- 228. Culver Drive and Barranca Parkway – Conversion of the westbound defacto right-turn lane to a through lane. (2030, Options 1 and 2)
- 424. Los Alisos Boulevard and Rockfield Boulevard – Addition of a southbound right-turn lane. (2030, Option 1)
- I-5 Northbound Off-ramp to Jamboree Road – Addition of a second drop lane from the I-5 to the Jamboree Road off-ramp. (2030, Option 1)

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TRAN7 (If pending projects are approved, **Project-related non-NITM improvements**): In the event that all of the pending (not approved) projects analyzed are approved and in conjunction with the submittal of any TTM/TPM for the Project within Combined PA 51, the landowner or subsequent project applicant shall prepare, subject to review and approval of the City, the required TTM/TPM level Traffic Study per City Resolution No. 03-61. This Traffic Study will verify whether the intersection locations listed below, which have been identified as impacted in this SSEIR, are projected to be impacted by the subject project of the Interim Year Analysis. For those intersections impacted by subject project of the TTM/TPM Traffic Study, the TTM/TPM will be conditioned to construct the necessary improvements that have been identified in the TTM/TPM Traffic Study. For those intersections listed below, which are not projected to be impacted by the subject project of the TTM/TPM Traffic Study, and prior to approval of the last final map for the 2012 Modified Project (or any portion thereof in the event that the final map is approved in multiple phases), the land owner or subsequent property owner shall construct, pay fair share of the costs or enter into an agreement with the City to establish the mechanism in which the funds generated by the fair share mitigations shall be provided and utilized by Caltrans, City of Lake Forest, City of Tustin, and/or City of Irvine toward implementing the improvements.

- 54. Browning Avenue and Irvine Boulevard – Application of ATMS, subject to approval by City of Tustin. (2030, Options 1 and 2)
- 286. Jeffrey Road and Roosevelt – Conversion of the eastbound shared through/right lane into a through lane and addition of a second right-turn lane. (Post-2030, Options 1 and 2)
- 290. Jeffrey Road and Barranca Parkway – Application of PA9C-identified ATMS.
- 291. Jeffrey Road and Alton Parkway – Provision of an eastbound standard right-turn lane with right- turn overlap resulting in an ultimate eastbound lane configuration of two left-turn lanes, two through lanes, and one right-turn lane. (2030 & Post-2030, Options 1, Post-2030, Option 2)
- 303. Sand Canyon Avenue and I-5 northbound ramp/Marine Way – Conversion of the northbound defacto right-turn lane to a standard right-turn lane with right-turn overlap signal operation. (2030, Options 1 and 2)
- 366. Bake Parkway and Rockfield Boulevard – Fully funded LFTM improvement: Conversion of a westbound through lane to a third left-turn lane. (2030, Options 1 and 2)
- 417. El Toro Road and Portola Parkway – Fully funded LFTM improvement: Addition of a southbound right-turn overlap phase. (2030, Options 1 and 2)

TRAN8 (If pending projects are approved, for specific Project-related NITM improvements): The NITM Program provides a funding mechanism for the coordinated and phased installation of required traffic and transportation improvements established in connection with land use

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entitlements for City PAs 1, 5, 6, 8, 9, 40, and 51. As established by City Ordinance No. 03-20, Combined PA 51 is included in this program and, as such, is required to pay its fair share towards the List of NITM Improvements included within the established NITM Program. In the event that all of the pending (not approved) projects analyzed are approved, the following Project-impacted locations are included in the NITM List of Improvements and thus, payment of NITM fees will mitigate the Combined PA 51 project's fair share responsibility toward these improvements:

- 228. Culver Drive and Barranca Parkway – Conversion of the westbound defacto right-turn lane to a through lane. (2030, Options 1 and 2)
- I-5 northbound Off-ramp to Jamboree Road – Addition of a second drop lane from the I-5 to the Jamboree off-ramp. (2030 & Post-2030, Option 1 and 2)

TRAN9 (Caltrans Fair Share): Prior to approval of the last final map for the 2012 Modified Project (or any portion thereof in the event that the final map is approved in multiple phases), the land owner or subsequent property owner shall make a good-faith effort to enter into a fair share agreement with Caltrans and the City to establish its fair share allocation towards the future implementation of the following freeway facility improvements. It may not be possible for the City to successfully negotiate the agreement. Fair share contribution shall be calculated using the same methodology for determining fair share contributions as included in the NITM Program. The Agreement shall establish the mechanism in which the funds generated by the Project's fair share mitigations shall be provided and utilized by Caltrans and/or the City toward implementing the following improvements:

- I-5 Northbound, north of Culver Drive – Directional capacity enhancement equivalent to a single general-purpose lane. (2030, Options 1 and 2)
- I-5 Northbound, north of Jeffrey – Directional capacity enhancement equivalent to a single general-purpose lane. (2030, Options 1 and 2) Improvement no longer needed if Pending projects are approved.
- I-405 Northbound, north of Jeffrey Road – Directional capacity enhancement equivalent to a single general-purpose lane. (2030 and Post-2030, Options 1 and 2) Improvement no longer needed if Pending projects are approved.

TRAN10 (If pending projects are approved, Caltrans Fair Share): In the event that all of the pending (not approved) projects analyzed are approved, and prior to approval of the last final map for the 2012 Modified Project (or any portion thereof in the event that the final map is approved in multiple phases), the land owner or subsequent property owner shall make a good-faith effort to enter into a fair share agreement with Caltrans and the City to establish its fair share allocation towards the future implementation of the following freeway facility improvements. It may not be possible for the City to successfully negotiate the agreement with Caltrans. Fair share contribution shall be calculated using the same methodology for determining fair share contributions as included in the NITM Program. The Agreement shall establish the mechanism in which the funds generated by the Project's fair share mitigations shall be provided and utilized by Caltrans and/or the City toward implementing the following improvements:

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- SR-133 northbound loop on-ramp at Barranca Parkway – Conversion of the high-occupancy vehicle (HOV) preferential lane to a second metered mixed-flow lane (2015, Option 2)
- I-5 Northbound, north of Culver Drive – Directional capacity enhancement equivalent to a single general-purpose lane. (2030, Options 1 and 2)

TRAN11 (Rockfield Boulevard Master Plan of Arterial Highways Amendment) The City shall submit a request to OCTA and other affected jurisdictions to amend the Orange County Master Plan of Arterial Highways to eliminate the extension of Rockfield Boulevard from the eastern project boundary to Marine Way.

TRAN12 (If Rockfield Boulevard Master Plan of Arterial Highways Amendment is not approved by OCTA) In the event that the Rockfield Boulevard Master Plan of Arterial Highways change does not occur and the Rockfield Boulevard connection to Marine Way is ultimately constructed, and in addition to previously identified Post-2030 Option 1 improvements, the land owner or subsequent property owner shall enter into a fair share agreement with the City to establish its fair share allocation towards the future implementation of the conversion of the HOV preferential lane at the SR-133 northbound loop on-ramp at Barranca Parkway to a second metered mixed-flow lane. The fair share contribution shall be calculated using the same methodology for determining fair share contributions as included in the NITM Program. For Option 2, the mitigations as indicated in TRAN5 through TRAN10 remain unchanged in the event that the Rockfield MPAH change does not occur and the Rockfield connection to Marine Way is ultimately constructed.

Additionally, the SSEIR identified the following PDF to help reduce or avoid potential traffic impacts. The following PDF, as applicable, will be incorporated into the proposed Project upon project implementation:

PDF 12-1 The 2012 Modified Project's optional conversion of nonresidential square footage to residential units, if implemented, will be subject to a traffic analysis to assess traffic impacts, if any, due to the specific changes in land use and will include a reduction in allowable Multi- Use intensity in terms of equivalent traffic generation (excluding DB units) based on AM peak, PM peak, and ADT. Conversions to other nonresidential uses within the Multi-Use category, if implemented, will also be subject to a traffic analysis to assess traffic impacts, if any, and shall be reflected in terms of equivalent traffic generation based on AM peak, PM peak, and ADT.

4.16 UTILITIES AND SERVICE SYSTEMS

4.16.1 Environmental Setting Potable Water

The Irvine Ranch Water District (IRWD) is the purveyor of potable and nonpotable water service to the project site. IRWD is a multiservice agency that provides potable and nonpotable water supply and wastewater collection, treatment, and disposal services to an area covering 84,610 acres (132 square miles). PA 51 is within Zone 3 North, Zone 4, and Zone 5 of the IRWD water system. The existing on-site distribution system includes a network of distribution system pipelines, six reservoirs, and two pump stations. The original water system for the former MCAS El Toro property was designed and built as a stand-alone system. Currently, IRWD supplies potable water through four metered connections that

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connect to the IRWD Zone 3 North and Zone 4 water system. The on-site existing distribution system consists of a network of distribution system pipelines, six reservoirs, and two pump stations.

Recycled Water

The IRWD is the jurisdictional agency responsible for water service for the project area. Recycled water is currently supplied to PA 51 via a 12-inch IRWD Zone B pipeline that connects to an 8-inch pipeline in the southwest corner of the project area. PA 51 lies within three separate IRWD recycled water system pressure zones, including Zone B East Irvine, Zone C East Irvine, and Zone D AMP East.

Sewer

The IRWD is the jurisdictional agency responsible for sewer service for the project area. Wastewater treatment is provided by IRWD's Michelson Wastewater Reclamation Plant (MWRP) that has a capacity of 28 million gallons per day (mgd). PA 51 is served by a two-branched system with flow from the northeast to the southwest, mainly by gravity. The system includes a series of pipes ranging from 6- to 15-inches in diameter. The sewer discharge exits PA 51 at the southwest boundary of the project site, flows through the system, and discharges through the San Diego Creek Interceptor on the north side of the I-405.

Solid Waste

OC Waste & Recycling (OCWR) is the regulating agency that operates the local Orange County landfills, including the Frank R. Bowerman Landfill, located in the City. Waste Management of Orange County is the private contract waste hauler for all residential developments in the City. Solid waste at the project site is collected by Waste Management, Inc., and is disposed of at the Frank R. Bowerman Landfill. The average daily rate of disposal for the Frank R. Bowerman landfill is 5,500 tons per day (tpd), with a maximum daily permitted capacity of 11,500 tpd. This landfill has capacity through year 2053.

Energy and Communications

SCE serves the project area via two primary substations, and the Southern California Gas Company (SCGC) provides natural gas to the project area. AT&T is the telephone service provider. Cox Communications provides cable video, data, and telephone service to south Orange County, including the City.

4.16.2 Impacts Identified in the OCGP FEIR

Potable Water

The OCGP FEIR projected the potable water demand to be less than 1.75 million gallons per day (MGD) calculated for the land uses proposed within the project. As stated in the OCGP FEIR, selected portions of the existing potable water facilities are assumed to remain in place and operational through project buildout. The OCGP FEIR stated that the existing system will be expanded and integrated into the IRWD system and thus provide a backbone service to all users on the project site. The OCGP FEIR assumed a potable water system that would follow the routing of existing and proposed roadways.

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The SSEIR concluded that even though the 2012 Modified Project would increase water consumption, the 2011 SAMP included a Sensitivity Analysis which considered development of up to 9,500 residential units. Subsequent demand projections for the 2012 Modified Project were not considered significant changes in comparison to the 2011 SAMP. Therefore, no significant changes to the planned on-site water infrastructure were considered necessary to serve the 2012 Modified Project, and it was further indicated that there was sufficient supply capacity to accommodate full buildout through 2032, upon completion of under development supplies.

Recycled Water

The OCGP FEIR stated that on January 27, 2003, the IRWD Board of Directors approved the assessment of water supply for the project. According to the findings of the assessment, the IRWD has determined that a sufficient non-potable water supply is available to serve the project. Since the proposed Modifications do not increase the intensity or change the mix of land uses, the total non-potable water supplies will meet the demand.

The OCGP FEIR stated that the implementation of the project would require the expansion of the recycled water transmission lines to serve the project. It was assumed that selected on-site facilities would remain in place and operational through buildout. The OCGP FEIR stated that the existing system will be expanded and integrated into the IRWD system and provide a backbone service to all users in the project site. The OCGP FEIR assumed a non-potable system that would follow the routing of existing and proposed roadways within the project.

The SSEIR concluded that the demand for recycled water decreased compared to previous projects due to the removal of the golf course. Therefore, no impact related to increased demand was anticipated, and it was further indicated that there was sufficient recycled water supply capacity to accommodate full buildout through 2032, upon completion of under development supplies.

Sewer

The OCGP FEIR stated that the IRWD will continue to provide sewer service to the project. The IRWD has indicated that it would have sufficient capacity to meet the future demand; however, additional wastewater treatment capacity may need to be purchased by project proponents as specific development projects come forward. The OCGP FEIR indicated that projected buildout demand for sewer services based on the land uses in the project were 0.89 MGD and that the project would require an increase of sewer transmission capacity to serve the project. The proposed sewer system would preserve selected, existing on-site facilities in place, remain operational through buildout and expand the system through extension of existing sewer lines. The OCGP FEIR stated that additional IRWD maintenance and equipment could be required to operate and maintain the proposed system.

The adopted Master Subdivision Map ensured that any projected use of the existing sewer system would be in conformance with all applicable regional and State requirements and the mitigation requirements of the OCGP FEIR and addenda. It included the alignment for the sewer lines throughout the project, which was an additional project design detail and did not change the project description.

The SSEIR indicated that IRWD has adequate wastewater treatment capacity for the 2012 Modified Project's estimate wastewater generation. Therefore, development of the project would not require

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construction of new or expanded wastewater treatment facilities.

Although the 2012 Modified Project would increase wastewater generation, the 2011 SAMP included a Sensitivity Analysis which considered development of up to 9,500 residential units. Subsequent demand projections for the 2012 Modified Project were not considered significant changes in comparison to the 2011 SAMP. Therefore, no significant changes to the planned on-site sewer infrastructure were considered necessary to serve the 2012 Modified Project.

Solid Waste

As stated in OCGP FEIR, demolition of existing runways, buildings, and structures within PA 51 will generate debris materials that would have to be disposed of at local landfills. Green waste would also be generated as a result of ongoing park and landscaping maintenance. In addition to the City requirement for recycling of construction and demolition material to reduce waste, solid waste reduction would also be achieved through compliance with AB 939, which requires that a minimum of 50 percent of the solid waste generated in cities in California be diverted from landfills. Further, SB 1374 requires that all cities implement measures that would divert 75 percent of all construction and demolition waste from landfills. While the OCGP FEIR identified a potential impact related to solid waste, it concluded that, with the recommended, City-adopted mitigation measures, the impact would be less than significant.

The SSEIR indicated that the 2012 Modified Project would increase the amount of solid waste generated and would increase the demand for solid waste services, there was adequate capacity at the Frank R. Bowerman Landfill to accommodate the 2012 Modified Project and cumulative development.

Energy and Communications

The Overlay Plan has proposed to install the new systems generally along a route that coincides with the existing and proposed roadway within the project. A portion of the routing, (specifically the portion along the loop road) is not included in the project and would require an adjustment to the routing system for the expansion of the dry utilities system. However, the expansion of the system would generally coincide with the existing and proposed roadways consistent with the OCGP FEIR. The OCGP FEIR further stated that the specific impacts of constructing new energy and communication transmission facilities could not be determined at the program level analysis, as site-specific plans for the installation of the energy and communication transmission backbone system have not been prepared. The general significant impacts associated with the construction and operation of public facilities, including the project's construction and operation of the transmission system, were addressed in the OCGP FEIR.

The SSEIR concluded that the no impacts related to energy and communications were anticipated and that the energy and communications providers indicated there was adequate capacity to serve the 2012 Modified Project as well as cumulative development in the area.

4.16.3 Impacts Associated with the Expanded Community Ice Facility

Although the proposed Project would increase the square footage and spectator seating in the community ice rink, it would not result in new uses not previously anticipated in the OCGP Master Plan and there would be a corresponding decrease in the square footage of another use within the OCGP. The proposed addition of building square feet for the Community Ice Facility site will be deducted from other approved

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uses so that the maximum building square footage allocated for the overall uses within the OCGP will not be exceeded. Therefore, the increase in size and seating would not substantively alter the provision of utilities or create additional demand on existing levels of service when compared to what was anticipated in the FEIR, and Addenda.

Potable Water

The proposed Project does not propose additional development intensity. As stated above, the proposed addition of building square feet for the Community Ice Facility site will be deducted from other approved uses so that the maximum building square footage allocated for the overall uses within the OCGP will not be exceeded. Therefore, the demand projection for potable water is consistent with the OCGP FEIR. No additional mitigation measures or change in any mitigation measure is required. Therefore, the proposed Project would not demand increased supplies or require construction of new water treatment facilities that would create an impact on the environment.

Recycled Water

The proposed Project not propose any additional development intensity, and the total non-potable water supplies would meet the project demand, as analyzed in the OCGP FEIR. As stated above, the proposed addition of building square feet for the Community Ice Facility site will be deducted from other approved uses so that the maximum building square footage allocated for the overall uses within the OCGP will not be exceeded. Therefore, the demand projection for recycled water is consistent with the OCGP FEIR. No additional mitigation measures or change in any mitigation measure is required. Therefore, the proposed Project would not demand increased supplies or require construction of new water treatment facilities that would create an impact on the environment.

Sewer

The proposed Project does not propose any additional development intensity. Therefore, demand projections and proposed system expansion requirements would remain the same and the demand projection for wastewater treatment would be consistent with the OCGP FEIR. No additional mitigation measures or change in any mitigation measure is required. Therefore, the proposed Project would not result in increased demand for wastewater treatment exceeding the requirements of the applicable RWQCB or require construction of new wastewater treatment facilities that would create an impact on the environment.

Solid Waste

As stated in OCGP FEIR, demolition of existing runways, buildings, and structures within PA 51 would generate debris materials that would have to be disposed of at local landfills. Green waste would also be generated as a result of ongoing park and landscape maintenance. The proposed Project would not change the land uses or intensity of the uses; therefore, no change in impact to solid waste is anticipated as a result of the modifications to the Improvement Area. Additionally, there is adequate capacity at the Frank R. Bowerman Landfill to accommodate the solid waste disposal demand of the proposed Project.

Energy and Communications

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The OCGP FEIR stated that the specific impacts of constructing new energy and communication transmission facilities could not be determined at the program level analysis, as site-specific plans for the installation of the energy and communication transmission backbone system have not been prepared. The analysis and conclusions in the OCGP FEIR do not change since the proposed Project does not introduce new land uses that would increase demand on energy and communications infrastructure. The general significant impacts, associated with the construction and operation of public facilities, were addressed in the OCGP FEIR.

4.16.4 Findings

Major FEIR Revisions Not Required. Based on the foregoing analysis and information, there is no evidence that the Proposed project would require a major change to the certified OCGP FEIR. The proposed modification to the OCGP Master Plan, which does not include any major change to park development areas identified in the approved OCGP Master Plan, would not result in any new significant environmental impact nor would there be a substantial increase in the severity of impacts from that described in the certified OCGP FEIR.

No Substantial Change in Circumstances Requiring Major FEIR Revisions. There is no information in the record or otherwise available that indicates that there are substantial changes in circumstances pertaining to utilities that would require major changes to the certified OCGP FEIR.

No New Information of Substantial Importance Showing Greater Significant Effects Than Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise of reasonable diligence at the time the OCGP EIR was approved, augmented, and/or updated, indicating that the proposed Project will have one or more significant effects not discussed in the OCGP EIR or result in a substantial increase in the severity of previously identified effects.

No New Information of Substantial Importance Showing Ability to Reduce Significant Effects in Previous FEIR. All available relevant information has been analyzed, and there is no new information of substantial importance, which was unknown and could not have been known with the exercise or reasonable diligence at the time the OCGP FEIR was approved, augmented, and/or updated, indicating that (1) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the proposed Project, but the project proponent declines to adopt the mitigation measures or alternatives; or (2) mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives. There are no alternatives to the proposed Project or additional mitigation measures that would substantially reduce one or more of the significant effects identified in and considered by the OCGP FEIR.

4.16.5 Mitigation from the OCGP FEIR and Applicability to the Expanded Community Ice Facility

The OCGP FEIR determined the mitigation measures identified in other sections of the OCGP FEIR (5.1–5.13) address the impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of facilities for the following types of utilities to serve the project area:

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- Potable water
- Recycled water
- Wastewater
- Energy and communication transmission facilities

Mitigation Measures SW1 through SW5 apply to future demolition and new construction, and would be carried forward through permit approvals for subsequent development projects.

Of the Mitigation Measures listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

SW1 It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other deconstruction of the aged structures and property, including but not limited to buildings and runways, at MCAS El Toro is contaminated with lead-based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the MCAS El Toro site by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City Community Development Department. The City must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed.

If it is determined by the technical evaluation that material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by State law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as waste-to-energy (WTE) plants.

SW2 For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant must submit a written plan to the City and implement such plan to ensure that 75 percent of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with State statutes and regulations.

SW3 For that solid waste which the technical study deems to be suitable for recycling, the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City-authorized solid waste hauler or recycling agent, and that a minimum of 75 percent of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180 (recycling does not include transformation, as defined in Public Resources Code Section 40201).

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- SW4** To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City on City-approved forms, accompanied by weight ticket receipts from State-certified disposal, nondisposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City to comply with AB 939.

To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.

- SW5** For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City-authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50 percent of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.

The SSEIR identified the following measures as existing PPPs that apply to the proposed Project and will help reduce or avoid potential utilities and service system impacts:

Of the PPPs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

Water

- PPP 13-1 Requirement to Use Recycled Water:** IRWD will identify areas within the Subarea Master Plan that are capable of receiving service from the IRWD's recycled water system, and will determine the feasibility of providing recycled water service to these areas. IRWD will also review applications for new permits to determine the feasibility of providing recycled water service to these applicants. If recycled water service is determined by IRWD to be feasible, applicants for new water service shall be required to install on-site facilities to accommodate both potable water and recycled water service in accordance with IRWD's Rules and Regulations.
- PPP 13-2 Connection Fees:** The Project Applicant shall enter into agreement or agreements as necessary with IRWD to establish the appropriate financial fair share costs to be borne by the project proponent. Fair share costs may include, but are not limited to, those associated with the preparation of studies necessary to analyze the needs of the 2012 Modified Project and infrastructure expansion necessary to serve the 2012 Modified Project.
- PPP 13-3 Fire Flow Analysis:** In accordance with IRWD requirements, each tentative tract map in the 2012 Modified Project must provide a fire flow analysis. If the analysis identifies any deficiencies, the developer will be responsible for any water system improvements associated with the development project required to rectify the deficiencies and meet IRWD fire flow requirements.

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Wastewater

PPP 13-2 is applicable.

Solid Waste

- PPP 13-4** The City Construction and Demolition (C&D) Debris Recycling and Reuse ordinance requires that (1) all residential projects of more than one unit, (2) nonresidential developments on 5,000 sf or larger, and (3) nonresidential demolition/renovations with more than 10,000 sf of building recycle or reuse a minimum of 75 percent of concrete and asphalt and 50 percent of nonhazardous debris generated.
- PPP 13-5** The City adopted a Zero Waste program in 2007 to approach waste management. The City recovers approximately 66 percent of its waste for recycling and composting, which exceeds the State's AB 939 waste diversion goals. Furthermore, waste haulers establish rate schedules according to bin size and frequency of collection. Commercial customers that subscribe to smaller bins (e.g., 2 cubic-yard bins) are routinely charged less by haulers. This pricing structure encourages waste reduction and recycling, and tends to minimize hauler pickups.
- PPP 13-6** The Irvine Sustainable Community Initiative (Initiative Ordinance 10-11), adopted by the voters of the City as Initiative Measure S on November 2, 2010, and certified by the City Council on December 14, 2010, became effective December 24, 2010. The ordinance was adopted to ratify and implement policies in support of renewable energy and environmental programs for a sustainable community. It outlines the City's direction for continuing to develop and implement programs geared towards green building, renewable energy and sustainability. For example, the City would continue to develop and implement recycling, zero waste or other innovative on-site business programs to divert waste from landfills and also continue to develop and implement the use of native, California-friendly and drought-tolerant landscaping.
- PPP 13-7** Prior to the issuance of grading permits for a project that involves the demolition of an asphalt or concrete parking lot on site, the applicant shall submit a waste management plan demonstrating compliance with the requirements of Title 6, Division 7 of the City Municipal Code relating to recycling and diversion of demolition waste as applicable to said project. Over the course of demolition or construction, the applicant shall ensure compliance with all code requirements related to the use of City-authorized waste haulers (Standard Condition 2.24).
- PPP 13-8** Prior to the issuance of building permits for a project that involves new construction or that involves the demolition or renovation of existing buildings on site, the applicant shall comply with requirements of Title 6, Division 7 of the City Municipal Code relating to recycling and diversion of construction and demolition waste as applicable to said project. Over the course of demolition or construction, the applicant shall ensure compliance with all code requirements related to the use of City-authorized waste haulers (Standard Condition 3.7).

4. Discussion of Checklist and Mitigation Measures

Energy and Communications

PPP 4-3 California's Building and Energy Efficiency Standards (CCR Title 24): Prior to the issuance of a building permit for residential, commercial, or office structures in the proposed Project site, development plans for these structures shall be required to demonstrate that the project meets the Building and Energy Efficiency Standards in place at the time of building permit issuance. Commonly known as Title 24, these standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2008 standards are approximately 15 percent more energy efficient than the 2005 Building and Energy Efficiency Standards. The 2013 Building Energy Efficiency Standards are 25 percent more efficient than previous standards for residential construction and 30 percent more efficient for nonresidential construction. The 2013 Standards, which take effect on January 1, 2014, offer builders more efficient windows, insulation, lighting, ventilation systems and other features that reduce energy consumption in homes and businesses. Plans submitted for building permits shall include written notes demonstrating compliance with the energy standards and shall be reviewed and approved by the Public Utilities Department prior to issuance of building permits. Design strategies to meet this standard may include maximizing solar orientation for daylighting and passive heating/cooling, installing appropriate shading devices and landscaping, utilizing natural ventilation, and installing cool roofs. Other techniques include installing insulation (high R value) and radiant heat barriers, low-e window glazing, or double-paned windows.

PPP 4-4 Title 24 Code Cycles: Net-Zero Buildings (Residential and Nonresidential): The California Public Utilities Commission adopted its Long-Term Energy Efficiency Strategic Plan on September 18, 2008, presenting a roadmap for all new residential and commercial construction to achieve a zero-net energy standard. This Plan outlines the goal of reaching zero net energy in residential construction by 2020 and in commercial construction by 2030. Achieving this goal will require increased stringency in each code cycle of California's Energy Code (Title 24).

PPP 4-5 California Renewable Portfolio Standard: CARB's Renewable Portfolio Standard (RPS) is a foundational element of the State's emissions reduction plan. In 2002, SB 1078 established the California RPS program, requiring 20 percent renewable energy by 2017. In 2006, SB 107 advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II. On September 15, 2009, Gov. Arnold Schwarzenegger signed Executive Order S-21-09 directing CARB to adopt regulations increasing RPS to 33 percent by 2020. These mandates apply directly to investor-owned utilities, which in the case of the 2012 Modified Project is SCE.

The SSEIR also identified the following measures as existing PDFs that apply to the proposed Project and will help reduce or avoid potential utilities and service system impacts.

Of the PDFs listed below, applicable measures will be incorporated into the proposed Project upon project implementation.

Water

4. Discussions of Checklist and Mitigation Measures

PDF 4-3 Low-Flow Fixtures: The 2012 Modified Project incorporates low-flow water fixtures that will meet the requirements of the California Green Building Standards Code standards. Prior to issuance of building permit, the Applicant or its successor shall submit evidence to the satisfaction of the Director of Community Development that toilets, urinals, sinks, showers, and other water fixtures installed on-site are low-flow water fixtures that meet the California Green Building Standards Code standard.

PDF 4-4 Landscaping and Irrigation Systems: The 2012 Modified Project incorporates automated, high-efficiency landscaping irrigation systems on all master landscaped areas that reduce water use, such as evapotranspiration "smart" weather-based irrigation controllers, and bubbler irrigation; low-angle, low-flow spray heads; moisture sensors; and use of a California-friendly landscape palette. Prior to approval of landscape plans, the Applicant or its successor shall submit evidence to the satisfaction of the Director of Community Development that such landscaping irrigation systems will be installed so as to make the 2012 Modified Project consistent with the intent of the California Water Conservation in Landscaping Act of 2006 (AB 1881), including provisions to reduce the wasteful, uneconomic, inefficient, and unnecessary consumption of water.

PDF 4-5 Use of Recycled Water on All Master Landscaped Areas: Prior to approval of landscape plans, the Applicant or its successor shall submit evidence to the satisfaction of the Director of Community Development and IRWD that the 2012 Modified Project incorporates the use of recycled water in all master landscaped areas, including master landscaped commercial, multifamily, common, roadways, and park areas. Master landscapes will also incorporate weather-based controllers and efficient irrigation system designs to reduce overwatering, combined with the application of a California-friendly landscape palette.

Wastewater

PDF 4-3 is applicable.

4.17 DETERMINATION

Based on the information and analysis in this Initial Study/Addendum, and pursuant to Section 15162 of the State CEQA Guidelines, the City has determined that:

1. There are no substantial changes to the project that will require major revisions to the OCGP FEIR due to new, significant environmental effects or a substantial increase in the severity of impacts identified in the OCGP FEIR;
2. Substantial changes have not occurred in the circumstances under which the project is being undertaken that will require major revisions of the OCGP FEIR to disclose new, significant environmental effects or a substantial increase in the severity of the impacts identified in the OCGP FEIR; and
3. There is no new information of substantial importance not known at the time the OCGP FEIR was approved, augmented, and/or updated that shows any of the following:

4. Discussion of Checklist and Mitigation Measures

- a. The project will have any new significant effects not discussed in the OCGP FEIR;
- b. There are impacts that were determined to be significant in the OCGP FEIR that will be substantially increased;
- c. There are additional mitigation measures or alternatives to the project that would substantially reduce one or more of the significant effects identified in the OCGP FEIR; or
- d. There are additional mitigation measures or alternatives that were rejected by the project proponent that are considerably different from those analyzed in the OCGP FEIR that would substantially reduce any significant impact identified in that EIR.

4. Discussions of Checklist and Mitigation Measures

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5. Organizations and Persons Consulted

5.1 PREPARERS

City Of Irvine (Lead Agency)

Community Development Department

Susan Emery	Director of Community Development
Barry Curtis, AICP	Manager of Planning Services
Kerwin Lau	Project Development Administrator
Darlene Nicandro	Principal Planner
Sherman Jones, AICP	Senior Planner

LSA Associates, Inc.

Les Card	Principal/CEO
Nicole Dubois	Principal
Ken Wilhelm	Principal
Amy Fischer	Principal
Tin Cheung	Senior Air Quality Analyst
Mark Friedlander	Assistant Planner

5. Organizations and Persons Consulted

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Appendix A

OCGP FEIR Mitigation Monitoring and Reporting Program

(Available at the City of Irvine, Community Development Department)

Appendix B

**Air Quality Emissions Reports, February 2016,
LSA Associates, Inc.**

Great Park Community Ice Facility - Previously Proposed Project

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	655.00	Space	5.89	262,000.00	0
Arena	117.64	1000sqft	6.21	117,635.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2017

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr)	630.89	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project site acreage

Construction Phase - Estimated construction schedule

Grading - Project site acreage

Architectural Coating - Architectural coatings will consist mainly of primers, flats and nonflats with VOC content per SCAQMD Rule 1113.

Vehicle Trips - Based on traffic study

Vehicle Emission Factors - Fleet mix adjusted to recreational uses

Vehicle Emission Factors - Fleet mix adjusted to recreational uses

Vehicle Emission Factors - Fleet mix adjusted to recreational uses

Land Use Change -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	300.00	301.00
tblConstructionPhase	NumDays	30.00	31.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	10.00	11.00
tblConstructionPhase	PhaseStartDate	6/25/2016	6/27/2016
tblGrading	AcresOfGrading	77.50	12.10
tblGrading	AcresOfGrading	0.00	12.10
tblLandUse	LandUseSquareFeet	117,640.00	117,635.00
tblLandUse	LotAcreage	37.81	6.21
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleEF	HHID	0.01	0.00
tblVehicleEF	HHID	0.01	0.00

tbVehicleEF	HHD	0.01	0.00
tbVehicleEF	LDA	0.51	0.55
tbVehicleEF	LDA	0.51	0.55
tbVehicleEF	LDA	0.51	0.55
tbVehicleEF	LDT1	0.06	0.06
tbVehicleEF	LDT1	0.06	0.06
tbVehicleEF	LDT1	0.06	0.06
tbVehicleEF	LDT2	0.19	0.21
tbVehicleEF	LDT2	0.19	0.21
tbVehicleEF	LDT2	0.19	0.21
tbVehicleEF	LHD1	0.04	0.01
tbVehicleEF	LHD1	0.04	0.01
tbVehicleEF	LHD1	0.04	0.01
tbVehicleEF	LHD2	5.8870e-003	0.00
tbVehicleEF	LHD2	5.8870e-003	0.00
tbVehicleEF	LHD2	5.8870e-003	0.00
tbVehicleEF	MCY	4.7160e-003	5.1000e-003
tbVehicleEF	MCY	4.7160e-003	5.1000e-003
tbVehicleEF	MCY	4.7160e-003	5.1000e-003
tbVehicleEF	MDV	0.15	0.16
tbVehicleEF	MDV	0.15	0.16
tbVehicleEF	MDV	0.15	0.16
tbVehicleEF	MH	2.2510e-003	2.4000e-003
tbVehicleEF	MH	2.2510e-003	2.4000e-003
tbVehicleEF	MH	2.2510e-003	2.4000e-003
tbVehicleEF	MHD	0.02	0.00
tbVehicleEF	MHD	0.02	0.00
tbVehicleEF	MHD	0.02	0.00

tblVehicleEF	OBUS	1.4400e-003	0.00
tblVehicleEF	OBUS	1.4400e-003	0.00
tblVehicleEF	OBUS	1.4400e-003	0.00
tblVehicleEF	SBUS	5.0900e-004	5.0000e-004
tblVehicleEF	SBUS	5.0900e-004	5.0000e-004
tblVehicleEF	SBUS	5.0900e-004	5.0000e-004
tblVehicleEF	UBUS	2.1450e-003	0.00
tblVehicleEF	UBUS	2.1450e-003	0.00
tblVehicleEF	UBUS	2.1450e-003	0.00
tblVehicleTrips	DV_TP	0.28	28.00
tblVehicleTrips	PB_TP	0.60	6.00
tblVehicleTrips	PR_TP	0.66	66.00
tblVehicleTrips	ST_TR	10.71	2.04
tblVehicleTrips	SU_TR	10.71	2.04
tblVehicleTrips	WD_TR	10.71	2.04

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
2016	6.5488	74.9034	50.2354	0.0644	19.4340	3.5858	22.3741	10.1100	3.2989	12.8149	0.0000	6,641.901	6,641.901	1.9457	0.0000	6,682.759
2017	55.8307	31.9321	32.0527	0.0618	2.1648	1.8692	4.0340	0.5817	1.7540	2.3357	0.0000	5,696.705	5,696.705	0.7377	0.0000	5,712.196
Total	62.3795	106.8355	82.2881	0.1262	21.5988	5.4550	26.4081	10.6917	5.0529	15.1506	0.0000	12,338.60	12,338.60	2.6833	0.0000	12,394.95

Mitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
2016	6.5488	74.9034	50.2354	0.0644	8.8560	3.5858	11.7960	4.5789	3.2989	7.2837	0.0000	6,641.901	6,641.901	1.9457	0.0000	6,682.759
2017	55.8307	31.9321	32.0527	0.0618	2.1648	1.8692	4.0340	0.5817	1.7540	2.3357	0.0000	5,696.705	5,696.705	0.7377	0.0000	5,712.196
Total	62.3795	106.8355	82.2881	0.1262	11.0208	5.4550	15.8301	5.1606	5.0529	9.6194	0.0000	12,338.60	12,338.60	2.6833	0.0000	12,394.95

ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	48.98	0.00	40.06	51.73	0.00	36.51	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	8.3213	7.6000e-004	0.0804	1.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		0.1691	0.1691	4.7000e-004		0.1790
Energy	0.0752	0.6838	0.5744	4.1000e-003		0.0520	0.0520		0.0520	0.0520		820.5065	820.5065	0.0157	0.0150	825.5000
Mobile	0.6048	0.5408	5.6268	0.0143	1.0826	7.8700e-003	1.0904	0.2872	7.2600e-003	0.2944		1,168.7965	1,168.7965	0.0515		1,169.8781
Total	9.0014	1.2253	6.2815	0.0184	1.0826	0.0601	1.1427	0.2872	0.0595	0.3467		1,989.4721	1,989.4721	0.0677	0.0150	1,995.5570

Mitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	8.3213	7.6000e-004	0.0804	1.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		0.1691	0.1691	4.7000e-004		0.1790
Energy	0.0752	0.6838	0.5744	4.1000e-003		0.0520	0.0520		0.0520	0.0520		820.5065	820.5065	0.0157	0.0150	825.5000
Mobile	0.6048	0.5408	5.6268	0.0143	1.0826	7.8700e-003	1.0904	0.2872	7.2600e-003	0.2944		1,168.7965	1,168.7965	0.0515		1,169.8781
Total	9.0014	1.2253	6.2815	0.0184	1.0826	0.0601	1.1427	0.2872	0.0595	0.3467		1,989.4721	1,989.4721	0.0677	0.0150	1,995.5570

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days/Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/10/2016	6/24/2016	5	11	
2	Grading	Grading	6/27/2016	8/8/2016	5	31	
3	Building Construction	Building Construction	8/9/2016	10/3/2017	5	301	
4	Paving	Paving	10/4/2017	11/1/2017	5	21	
5	Architectural Coating	Architectural Coating	11/2/2017	11/30/2017	5	21	

Acres of Grading (Site Preparation Phase): 12.1

Acres of Grading (Grading Phase): 12.1

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 188,243; Non-Residential Outdoor: 62,748 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	159.00	62.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	32.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2016**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					19.2328	0.0000	19.2328	10.0566	0.0000	10.0566			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	5.0771	54.6323	41.1053	0.0391	19.2328	2.9387	22.1715	10.0566	2.7036	12.7602		4,065.0053	4,065.0053	1.2262		4,090.7544

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0625	0.0807	0.9882	2.4400e-003	0.2012	1.4100e-003	0.2026	0.0534	1.3000e-003	0.0547		204.2283	204.2283	9.6000e-003		204.4300
Total	0.0625	0.0807	0.9882	2.4400e-003	0.2012	1.4100e-003	0.2026	0.0534	1.3000e-003	0.0547		204.2283	204.2283	9.6000e-003		204.4300

3.2 Site Preparation - 2016

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					8.6548	0.0000	8.6548	4.5255	0.0000	4.5255			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036	0.0000	4,065.005 3	4,065.005 3	1.2262		4,090.754 4
Total	5.0771	54.6323	41.1053	0.0391	8.6548	2.9387	11.5934	4.5255	2.7036	7.2291	0.0000	4,065.005 3	4,065.005 3	1.2262		4,090.754 4

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0625	0.0807	0.9882	2.4400e-003	0.2012	1.4100e-003	0.2026	0.0534	1.3000e-003	0.0547		204.2283	204.2283	9.6000e-003		204.4300
Total	0.0625	0.0807	0.9882	2.4400e-003	0.2012	1.4100e-003	0.2026	0.0534	1.3000e-003	0.0547		204.2283	204.2283	9.6000e-003		204.4300

3.3 Grading - 2016**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	H2O	CO2e
lb/day																
Fugitive Dust					6.4360	0.0000	6.4360	3.3549	0.0000	3.3549			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975		6,414.9807	6,414.9807	1.9350		6,455.6154
Total	6.4795	74.8137	49.1374	0.0617	6.4360	3.5842	10.0203	3.3549	3.2975	6.6524		6,414.9807	6,414.9807	1.9350		6,455.6154

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	H2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0694	0.0896	1.0980	2.7100e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4400e-003	0.0607		226.9203	226.9203	0.0107		227.1444
Total	0.0694	0.0896	1.0980	2.7100e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4400e-003	0.0607		226.9203	226.9203	0.0107		227.1444

3.3 Grading - 2016**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					2.8962	0.0000	2.8962	1.5097	0.0000	1.5097			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975	0.0000	6,414.9807	6,414.9807	1.9350		6,455.6154
Total	6.4795	74.8137	49.1374	0.0617	2.8962	3.5842	6.4805	1.5097	3.2975	4.8072	0.0000	6,414.9807	6,414.9807	1.9350		6,455.6154

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0694	0.0896	1.0980	2.7100e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4400e-003	0.0607		226.9203	226.9203	0.0107		227.1444
Total	0.0694	0.0896	1.0980	2.7100e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4400e-003	0.0607		226.9203	226.9203	0.0107		227.1444

3.4 Building Construction - 2016

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669,286 4	2,669,286 4	0.6620		2,683,189 0
Total	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669,286 4	2,669,286 4	0.6620		2,683,189 0

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5421	5.3631	6.3372	0.0134	0.3875	0.0850	0.4724	0.1103	0.0781	0.1885		1,344,525 0	1,344,525 0	9.5500e- 003		1,344,725 5
Worker	0.5516	0.7127	8.7287	0.0216	1.7772	0.0124	1.7897	0.4713	0.0114	0.4828		1,804,016 4	1,804,016 4	0.0848		1,805,798 0
Total	1.0937	6.0758	15.0659	0.0350	2.1647	0.0974	2.2621	0.5817	0.0896	0.6713		3,148,541 4	3,148,541 4	0.0944		3,150,523 5

3.4 Building Construction - 2016**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5421	5.3631	6.3372	0.0134	0.3875	0.0850	0.4724	0.1103	0.0781	0.1885		1,344.5250	1,344.5250	9.5500e-003		1,344.7255
Worker	0.5516	0.7127	8.7287	0.0216	1.7772	0.0124	1.7897	0.4713	0.0114	0.4828		1,804.0164	1,804.0164	0.0848		1,805.7980
Total	1.0937	6.0758	15.0659	0.0350	2.1647	0.0974	2.2621	0.5817	0.0896	0.6713		3,148.5414	3,148.5414	0.0944		3,150.5235

3.4 Building Construction - 2017

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639,805 ₃	2,639,805 ₃	0.6497		2,653,449 ₀
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639,805 ₃	2,639,805 ₃	0.6497		2,653,449 ₀

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5002	4.8793	5.9618	0.0134	0.3876	0.0759	0.4634	0.1104	0.0698	0.1802		1,322,641 ₁	1,322,641 ₁	9.2400e-003		1,322,835 ₂
Worker	0.5022	0.6471	7.9618	0.0216	1.7772	0.0121	1.7894	0.4713	0.0112	0.4826		1,734,259 ₃	1,734,259 ₃	0.0787		1,735,912 ₅
Total	1.0024	5.5264	13.9236	0.0350	2.1648	0.0880	2.2528	0.5817	0.0810	0.6627		3,056,900 ₄	3,056,900 ₄	0.0880		3,058,747 ₈

3.4 Building Construction - 2017

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.805 3	2,639.805 3	0.6497		2,653.449 0
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.805 3	2,639.805 3	0.6497		2,653.449 0

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5002	4.8793	5.9618	0.0134	0.3876	0.0759	0.4634	0.1104	0.0698	0.1802		1,322.641 1	1,322.641 1	9.2400e- 003		1,322.835 2
Worker	0.5022	0.6471	7.9618	0.0216	1.7772	0.0121	1.7894	0.4713	0.0112	0.4826		1,734.259 3	1,734.259 3	0.0787		1,735.912 5
Total	1.0024	5.5264	13.9236	0.0350	2.1648	0.0880	2.2528	0.5817	0.0810	0.6627		3,056.900 4	3,056.900 4	0.0880		3,058.747 8

3.5 Paving - 2017**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.7349					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.6422	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0474	0.0611	0.7511	2.0400e-003	0.1677	1.1500e-003	0.1688	0.0445	1.0600e-003	0.0455		163.6094	163.6094	7.4300e-003		163.7653
Total	0.0474	0.0611	0.7511	2.0400e-003	0.1677	1.1500e-003	0.1688	0.0445	1.0600e-003	0.0455		163.6094	163.6094	7.4300e-003		163.7653

3.5 Paving - 2017**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.9074	20.2964	14.7270	0.0223	1.1384	1.1384	1.1384	1.0473	1.0473	1.0473	0.0000	2,281,058	2,281,058	0.6989		2,295,736
Paving	0.7349				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total	2.6422	20.2964	14.7270	0.0223	1.1384	1.1384	1.1384	1.0473	1.0473	1.0473	0.0000	2,281,058	2,281,058	0.6989		2,295,736

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0474	0.0611	0.7511	2.0400e-003	0.1677	1.1500e-003	0.1688	0.0445	1.0600e-003	0.0455		163.6094	163.6094	7.4300e-003		163.7653
Total	0.0474	0.0611	0.7511	2.0400e-003	0.1677	1.1500e-003	0.1688	0.0445	1.0600e-003	0.0455		163.6094	163.6094	7.4300e-003		163.7653

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Archit. Coating	55.3973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	55.7296	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1011	0.1302	1.6024	4.3400e-003	0.3577	2.4400e-003	0.3601	0.0949	2.2600e-003	0.0971		349.0333	349.0333	0.0158		349.3661
Total	0.1011	0.1302	1.6024	4.3400e-003	0.3577	2.4400e-003	0.3601	0.0949	2.2600e-003	0.0971		349.0333	349.0333	0.0158		349.3661

3.6 Architectural Coating - 2017

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	55.3973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	55.7296	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1011	0.1302	1.6024	4.3400e-003	0.3577	2.4400e-003	0.3601	0.0949	2.2600e-003	0.0971		349.0333	349.0333	0.0158		349.3661
Total	0.1011	0.1302	1.6024	4.3400e-003	0.3577	2.4400e-003	0.3601	0.0949	2.2600e-003	0.0971		349.0333	349.0333	0.0158		349.3661

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	0.6048	0.5408	5.6268	0.0143	1.0826	7.8700e-003	1.0904	0.2872	7.2600e-003	0.2944		1,168.7965	1,168.7965	0.0515		1,169.8781
Unmitigated	0.6048	0.5408	5.6268	0.0143	1.0826	7.8700e-003	1.0904	0.2872	7.2600e-003	0.2944		1,168.7965	1,168.7965	0.0515		1,169.8781

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Arena	240.01	240.01	240.01	518,060	518,060
Parking Lot	0.00	0.00	0.00		
Total	240.01	240.01	240.01	518,060	518,060

4.3 Trip Type Information

Land Use	Miles				Trip %				Trip Purpose %			
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by			
Arena	16.60	8.40	6.90	0.00	81.00	19.00	66	28	6			
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0			

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.549700	0.061400	0.206600	0.163600	0.010800	0.000000	0.000000	0.000000	0.000000	0.000000	0.005100	0.000500	0.002400

5.0 Emissions Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Natural Gas Mitigated	0.0752	0.6838	0.5744	4.1000e-003		0.0520	0.0520		0.0520	0.0520		820.5065	820.5065	0.0157	0.0150	825.5000
Natural Gas Unmitigated	0.0752	0.6838	0.5744	4.1000e-003		0.0520	0.0520		0.0520	0.0520		820.5065	820.5065	0.0157	0.0150	825.5000

5.2 Energy by Land Use - Natural Gas**Unmitigated**

Land Use	Natural Gas Use kBTU/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																	
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Arena	6974.31	0.0752	0.6838	0.5744	4.1000e-003		0.0520	0.0520		0.0520	0.0520		820.5065	820.5065	0.0157	0.0150	825.5000
Total		0.0752	0.6838	0.5744	4.1000e-003		0.0520	0.0520		0.0520	0.0520		820.5065	820.5065	0.0157	0.0150	825.5000

5.2 Energy by Land Use - NaturalGas

Mitigated

Land Use	NaturalGas Use kBtu/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																	
Arena	6.97431	0.0752	0.6838	0.5744	4.1000e-003		0.0520	0.0520		0.0520	0.0520		820.5065	820.5065	0.0157	0.0150	825.5000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0752	0.6838	0.5744	4.1000e-003		0.0520	0.0520		0.0520	0.0520		820.5065	820.5065	0.0157	0.0150	825.5000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Mitigated	8.3213	7.6000e-004	0.0804	1.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		0.1691	0.1691	4.7000e-004		0.1790
Unmitigated	8.3213	7.6000e-004	0.0804	1.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		0.1691	0.1691	4.7000e-004		0.1790

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	0.7968					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.5168					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.7600e-003	7.6000e-004	0.0804	1.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		0.1691	0.1691	4.7000e-004		0.1790
Total	8.3213	7.6000e-004	0.0804	1.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		0.1691	0.1691	4.7000e-004		0.1790

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	0.7968					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.5168					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.7600e-003	7.6000e-004	0.0804	1.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		0.1691	0.1691	4.7000e-004		0.1790
Total	8.3213	7.6000e-004	0.0804	1.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		0.1691	0.1691	4.7000e-004		0.1790

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Great Park Community Ice Facility - New Proposed Project

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	655.00	Space	7.86	262,000.00	0
Arena	270.00	1000sqft	6.20	270,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2017

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr)	630.89	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project site acreage

Construction Phase - Estimated construction schedule

Grading - Project site acreage

Architectural Coating - Architectural coatings will consist mainly of primers, flats and nonflats with VOC content per SCAQMD Rule 1113.

Vehicle Trips - Based on traffic study

Vehicle Emission Factors - Fleet mix adjusted to recreational uses

Vehicle Emission Factors - Fleet mix adjusted to recreational uses

Vehicle Emission Factors - Fleet mix adjusted to recreational uses

Land Use Change -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	300.00	301.00
tblConstructionPhase	NumDays	30.00	31.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	10.00	11.00
tblConstructionPhase	PhaseStartDate	6/25/2016	6/27/2016
tblGrading	AcresOfGrading	77.50	14.06
tblGrading	AcresOfGrading	0.00	14.06
tblLandUse	LotAcreage	5.89	7.86
tblLandUse	LotAcreage	86.79	6.20
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleEF	HHD	0.01	0.00
tblVehicleEF	HHD	0.01	0.00

tblVehicleEF	HHD	0.01	0.00
tblVehicleEF	LDA	0.51	0.55
tblVehicleEF	LDA	0.51	0.55
tblVehicleEF	LDA	0.51	0.55
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT2	0.19	0.21
tblVehicleEF	LDT2	0.19	0.21
tblVehicleEF	LDT2	0.19	0.21
tblVehicleEF	LHD1	0.04	0.01
tblVehicleEF	LHD1	0.04	0.01
tblVehicleEF	LHD1	0.04	0.01
tblVehicleEF	LHD2	5.8870e-003	0.00
tblVehicleEF	LHD2	5.8870e-003	0.00
tblVehicleEF	LHD2	5.8870e-003	0.00
tblVehicleEF	MCY	4.7160e-003	5.1000e-003
tblVehicleEF	MCY	4.7160e-003	5.1000e-003
tblVehicleEF	MCY	4.7160e-003	5.1000e-003
tblVehicleEF	MDV	0.15	0.16
tblVehicleEF	MDV	0.15	0.16
tblVehicleEF	MDV	0.15	0.16
tblVehicleEF	MH	2.2510e-003	2.4000e-003
tblVehicleEF	MH	2.2510e-003	2.4000e-003
tblVehicleEF	MH	2.2510e-003	2.4000e-003
tblVehicleEF	MHD	0.02	0.00
tblVehicleEF	MHD	0.02	0.00
tblVehicleEF	MHD	0.02	0.00

tblVehicleEF	OBUS	1.4400e-003	0.00
tblVehicleEF	OBUS	1.4400e-003	0.00
tblVehicleEF	OBUS	1.4400e-003	0.00
tblVehicleEF	SBUS	5.0900e-004	5.0000e-004
tblVehicleEF	SBUS	5.0900e-004	5.0000e-004
tblVehicleEF	SBUS	5.0900e-004	5.0000e-004
tblVehicleEF	UBUS	2.1450e-003	0.00
tblVehicleEF	UBUS	2.1450e-003	0.00
tblVehicleEF	UBUS	2.1450e-003	0.00
tblVehicleTrips	DV_TP	0.28	28.00
tblVehicleTrips	PB_TP	0.60	6.00
tblVehicleTrips	PR_TP	0.66	66.00
tblVehicleTrips	ST_TR	10.71	3.56
tblVehicleTrips	SU_TR	10.71	3.56
tblVehicleTrips	WD_TR	10.71	3.56

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
2016	6.5488	74.9034	50.2354	0.0759	19.6230	3.5858	22.5631	10.1304	3.2989	12.8353	0.0000	7,086.1200	7,086.1200	1.9457	0.0000	7,126.9788
2017	123.1298	34.1600	37.6614	0.0759	3.0365	1.9047	4.9412	0.8159	1.7866	2.6025	0.0000	6,928.0954	6,928.0954	0.7731	0.0000	6,944.3302
Total	129.6786	109.0634	87.8968	0.1518	22.6594	5.4905	27.5042	10.9463	5.0855	15.4378	0.0000	14,014.2154	14,014.2154	2.7188	0.0000	14,071.3090

Mitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
2016	6.5488	74.9034	50.2354	0.0759	8.9410	3.5858	11.8811	4.5880	3.2989	7.2929	0.0000	7,086.1200	7,086.1200	1.9457	0.0000	7,126.9788
2017	123.1298	34.1600	37.6614	0.0759	3.0365	1.9047	4.9412	0.8159	1.7866	2.6025	0.0000	6,928.0954	6,928.0954	0.7731	0.0000	6,944.3302
Total	129.6786	109.0634	87.8968	0.1518	11.9774	5.4905	16.8222	5.4040	5.0855	9.8955	0.0000	14,014.2154	14,014.2154	2.7188	0.0000	14,071.3090
Percent Reduction	0.00	0.00	0.00	0.00	47.14	0.00	38.84	50.63	0.00	35.90	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational Unmitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	12.3071	9.1000e-004	0.0962	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.6000e-004		0.2143
Energy	0.1726	1.5694	1.3183	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1.883.2554	1,883.2554	0.0361	0.0345	1,894.7166
Mobile	2.4192	2.1630	22.5066	0.0571	4.3301	0.0315	4.3616	1.1487	0.0291	1.1777		4,675.0665	4,675.0665	0.2060		4,679.3928
Total	14.8989	3.7333	23.9211	0.0666	4.3301	0.1511	4.4812	1.1487	0.1487	1.2974		6,558.5244	6,558.5244	0.2427	0.0345	6,574.3237

Mitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	12.3071	9.1000e-004	0.0962	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.6000e-004		0.2143
Energy	0.1726	1.5694	1.3183	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1.883.2554	1,883.2554	0.0361	0.0345	1,894.7166
Mobile	2.4192	2.1630	22.5066	0.0571	4.3301	0.0315	4.3616	1.1487	0.0291	1.1777		4,675.0665	4,675.0665	0.2060		4,679.3928
Total	14.8989	3.7333	23.9211	0.0666	4.3301	0.1511	4.4812	1.1487	0.1487	1.2974		6,558.5244	6,558.5244	0.2427	0.0345	6,574.3237

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/10/2016	6/24/2016	5	11	
2	Grading	Grading	6/27/2016	8/8/2016	5	31	
3	Building Construction	Building Construction	8/9/2016	10/3/2017	5	301	
4	Paving	Paving	10/4/2017	11/1/2017	5	21	
5	Architectural Coating	Architectural Coating	11/2/2017	11/30/2017	5	21	

Acres of Grading (Site Preparation Phase): 14.06

Acres of Grading (Grading Phase): 14.06

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 416,790; Non-Residential Outdoor: 138,930 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	223.00	87.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	45.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2016**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Fugitive Dust					19.4218	0.0000	19.4218	10.0771	0.0000	10.0771			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	5.0771	54.6323	41.1053	0.0391	19.4218	2.9387	22.3605	10.0771	2.7036	12.7806		4,065.0053	4,065.0053	1.2262		4,090.7544

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0625	0.0807	0.9882	2.4400e-003	0.2012	1.4100e-003	0.2026	0.0534	1.3000e-003	0.0547		204.2283	204.2283	9.6000e-003		204.4300
Total	0.0625	0.0807	0.9882	2.4400e-003	0.2012	1.4100e-003	0.2026	0.0534	1.3000e-003	0.0547		204.2283	204.2283	9.6000e-003		204.4300

3.2 Site Preparation - 2016

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					8.7398	0.0000	8.7398	4.5347	0.0000	4.5347			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036	0.0000	4,065.005 3	4,065.005 3	1.2262		4,090.754 4
Total	5.0771	54.6323	41.1053	0.0391	8.7398	2.9387	11.6785	4.5347	2.7036	7.2383	0.0000	4,065.005 3	4,065.005 3	1.2262		4,090.754 4

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0625	0.0807	0.9882	2.4400e-003	0.2012	1.4100e-003	0.2026	0.0534	1.3000e-003	0.0547		204.2283	204.2283	9.6000e-003		204.4300
Total	0.0625	0.0807	0.9882	2.4400e-003	0.2012	1.4100e-003	0.2026	0.0534	1.3000e-003	0.0547		204.2283	204.2283	9.6000e-003		204.4300

3.3 Grading - 2016**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					6.5031	0.0000	6.5031	3.3622	0.0000	3.3622			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975		6,414.980 7	6,414.980 7	1.9350		6,455.615 4
Total	6.4795	74.8137	49.1374	0.0617	6.5031	3.5842	10.0873	3.3622	3.2975	6.6597		6,414.980 7	6,414.980 7	1.9350		6,455.615 4

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0694	0.0896	1.0980	2.7100e- 003	0.2236	1.5600e- 003	0.2251	0.0593	1.4400e- 003	0.0607		226.9203	226.9203	0.0107		227.1444
Total	0.0694	0.0896	1.0980	2.7100e- 003	0.2236	1.5600e- 003	0.2251	0.0593	1.4400e- 003	0.0607		226.9203	226.9203	0.0107		227.1444

3.3 Grading - 2016**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					2.9264	0.0000	2.9264	1.5130	0.0000	1.5130			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975	0.0000	6,414.9807	6,414.9807	1.9350		6,455.6154
Total	6.4795	74.8137	49.1374	0.0617	2.9264	3.5842	6.5106	1.5130	3.2975	4.8105	0.0000	6,414.9807	6,414.9807	1.9350		6,455.6154

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0694	0.0896	1.0980	2.7100e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4400e-003	0.0607		226.9203	226.9203	0.0107		227.1444
Total	0.0694	0.0896	1.0980	2.7100e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4400e-003	0.0607		226.9203	226.9203	0.0107		227.1444

3.4 Building Construction - 2016

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7606	7.5257	8.8925	0.0188	0.5437	0.1193	0.6630	0.1548	0.1087	0.2645		1,886.6722	1,886.6722	0.0134		1,886.9535
Worker	0.7736	0.9995	12.2422	0.0303	2.4926	0.0174	2.5100	0.6611	0.0161	0.6771		2,530.1614	2,530.1614	0.1190		2,532.6601
Total	1.5342	8.5252	21.1346	0.0491	3.0363	0.1367	3.1730	0.8159	0.1257	0.9416		4,416.8336	4,416.8336	0.1324		4,419.6136

3.4 Building Construction - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7606	7.5257	8.8925	0.0188	0.5437	0.1193	0.6630	0.1548	0.1097	0.2645		1,886.6722	1,886.6722	0.0134		1,886.9535
Worker	0.7736	0.9995	12.2422	0.0303	2.4926	0.0174	2.5100	0.6611	0.0161	0.6771		2,530.1614	2,530.1614	0.1190		2,532.6601
Total	1.5342	8.5252	21.1346	0.0491	3.0363	0.1367	3.1730	0.8159	0.1257	0.9416		4,416.8336	4,416.8336	0.1324		4,419.6136

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639,805 3	2,639,805 3	0.6497		2,653,449 0
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639,805 3	2,639,805 3	0.6497		2,653,449 0

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7018	6.8468	8.3657	0.0188	0.5438	0.1065	0.6503	0.1549	0.0979	0.2528		1,855,964 1	1,855,964 1	0.0130		1,856,236 5
Worker	0.7044	0.9076	11.1666	0.0303	2.4926	0.0170	2.5096	0.6611	0.0157	0.6768		2,432,325 9	2,432,325 9	0.1104		2,434,644 6
Total	1.4062	7.7544	19.5323	0.0491	3.0364	0.1235	3.1599	0.8159	0.1136	0.9296		4,288,290 1	4,288,290 1	0.1234		4,290,881 2

3.4 Building Construction - 2017

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7018	6.8468	8.3657	0.0188	0.5438	0.1065	0.6503	0.1549	0.0979	0.2528		1,855.9641	1,855.9641	0.0130		1,856.2365
Worker	0.7044	0.9076	11.1666	0.0303	2.4926	0.0170	2.5096	0.6611	0.0157	0.6768		2,432.3259	2,432.3259	0.1104		2,434.6446
Total	1.4062	7.7544	19.5323	0.0491	3.0364	0.1235	3.1599	0.8159	0.1136	0.9296		4,288.2901	4,288.2901	0.1234		4,290.8812

3.5 Paving - 2017**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.9808					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.8882	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0474	0.0611	0.7511	2.0400e-003	0.1677	1.1500e-003	0.1688	0.0445	1.0600e-003	0.0455		163.6094	163.6094	7.4300e-003		163.7653
Total	0.0474	0.0611	0.7511	2.0400e-003	0.1677	1.1500e-003	0.1688	0.0445	1.0600e-003	0.0455		163.6094	163.6094	7.4300e-003		163.7653

3.5 Paving - 2017**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473	0.0000	2,281,058	2,281,058	0.6989		2,295,736
Paving	0.9808					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.8882	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473	0.0000	2,281,058	2,281,058	0.6989		2,295,736

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0474	0.0611	0.7511	2.0400e-003	0.1677	1.1500e-003	0.1688	0.0445	1.0600e-003	0.0455		163.6094	163.6094	7.4300e-003		163.7653
Total	0.0474	0.0611	0.7511	2.0400e-003	0.1677	1.1500e-003	0.1688	0.0445	1.0600e-003	0.0455		163.6094	163.6094	7.4300e-003		163.7653

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	122.6563					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	122.9877	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1421	0.1832	2.2533	6.1100e-003	0.5030	3.4400e-003	0.5064	0.1334	3.1700e-003	0.1366		490.8281	490.8281	0.0223		491.2960
Total	0.1421	0.1832	2.2533	6.1100e-003	0.5030	3.4400e-003	0.5064	0.1334	3.1700e-003	0.1366		490.8281	490.8281	0.0223		491.2960

3.6 Architectural Coating - 2017

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
ArchitL Coating	122.6553					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	122.9877	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1421	0.1832	2.2533	6.1100e-003	0.5030	3.4400e-003	0.5064	0.1334	3.1700e-003	0.1366		490.8281	490.8281	0.0223		491.2960
Total	0.1421	0.1832	2.2533	6.1100e-003	0.5030	3.4400e-003	0.5064	0.1334	3.1700e-003	0.1366		490.8281	490.8281	0.0223		491.2960

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	2.4192	2.1630	22.5066	0.0571	4.3301	0.0315	4.3616	1.1487	0.0291	1.1777		4.675,066 5	4.675,066 5	0.2060		4,679,392 8
Unmitigated	2.4192	2.1630	22.5066	0.0571	4.3301	0.0315	4.3616	1.1487	0.0291	1.1777		4.675,066 5	4.675,066 5	0.2060		4,679,392 8

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Arena	960.01	960.01	960.01	2,072,188	2,072,188
Parking Lot	0.00	0.00	0.00		
Total	960.01	960.01	960.01	2,072,188	2,072,188

4.3 Trip Type Information

Land Use	Miles				Trip %				Trip Purpose %			
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by			
Arena	16.60	8.40	6.90	0.00	81.00	19.00	66	28	6			
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0			

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.549700	0.061400	0.206600	0.163600	0.010800	0.000000	0.000000	0.000000	0.000000	0.000000	0.005100	0.000500	0.002400

5.0 Emissions Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
NaturalGas Mitigated	0.1726	1.5694	1.3183	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,883.2554	1,883.2554	0.0361	0.0345	1,894.7166
NaturalGas Unmitigated	0.1726	1.5694	1.3183	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,883.2554	1,883.2554	0.0361	0.0345	1,894.7166

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day															
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Arena	16007.7	0.1726	1.5694	1.3183	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,883.2554	1,883.2554	0.0361	0.0345	1,894.7166
Total		0.1726	1.5694	1.3183	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,883.2554	1,883.2554	0.0361	0.0345	1,894.7166

5.2 Energy by Land Use - Natural Gas

Mitigated

Land Use	Natural Gas Use kBtu/yr	ROG	NOx	CO	SO ₂	Fugitive PM ₁₀	Exhaust PM ₁₀	PM ₁₀ Total	Fugitive PM _{2.5}	Exhaust PM _{2.5}	PM _{2.5} Total	Bio- CO ₂	NBio- CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
lb/day																	
Arena	16,0077	0.1726	1.5694	1.3183	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1.883,2554	1,883,2554	0.0361	0.0345	1,894,7166
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.1726	1.5694	1.3183	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,883,2554	1,883,2554	0.0361	0.0345	1,894,7166

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO ₂	Fugitive PM ₁₀	Exhaust PM ₁₀	PM ₁₀ Total	Fugitive PM _{2.5}	Exhaust PM _{2.5}	PM _{2.5} Total	Bio- CO ₂	NBio- CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
lb/day																
Category																
Mitigated	12,3071	9.1000e-004	0.0962	1.0000e-005	3.5000e-004	3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.6000e-004		0.2143
Unmitigated	12,3071	9.1000e-004	0.0962	1.0000e-005	3.5000e-004	3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.6000e-004		0.2143

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	1.7642					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.5336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.2900e-003	9.1000e-004	0.0962	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.6000e-004		0.2143
Total	12.3071	9.1000e-004	0.0962	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.6000e-004		0.2143

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	1.7642					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.5336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.2900e-003	9.1000e-004	0.0962	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.6000e-004		0.2143
Total	12.3071	9.1000e-004	0.0962	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.6000e-004		0.2143

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Great Park Community Ice Facility - Previously Proposed Project

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	655.00	Space	5.89	262,000.00	0
Arena	117.64	1000sqft	6.21	117,635.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2017

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr)	630.89	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project site acreage

Construction Phase - Estimated construction schedule

Grading - Project site acreage

Architectural Coating - Architectural coatings will consist mainly of primers, flats and nonflats with VOC content per SCAQMD Rule 1113.

Vehicle Trips - Based on traffic study

Vehicle Emission Factors - Fleet mix adjusted to recreational uses

Vehicle Emission Factors - Fleet mix adjusted to recreational uses

Vehicle Emission Factors - Fleet mix adjusted to recreational uses

Land Use Change -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	300.00	301.00
tblConstructionPhase	NumDays	30.00	31.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	10.00	11.00
tblConstructionPhase	PhaseStartDate	6/25/2016	6/27/2016
tblGrading	AcresOfGrading	77.50	12.10
tblGrading	AcresOfGrading	0.00	12.10
tblLandUse	LandUseSquareFeet	117,640.00	117,635.00
tblLandUse	LotAcreage	37.81	6.21
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleEF	HHD	0.01	0.00
tblVehicleEF	HHD	0.01	0.00

tblVehicleEF	HHD	0.01	0.00
tblVehicleEF	LDA	0.51	0.55
tblVehicleEF	LDA	0.51	0.55
tblVehicleEF	LDA	0.51	0.55
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT2	0.19	0.21
tblVehicleEF	LDT2	0.19	0.21
tblVehicleEF	LDT2	0.19	0.21
tblVehicleEF	LHD1	0.04	0.01
tblVehicleEF	LHD1	0.04	0.01
tblVehicleEF	LHD1	0.04	0.01
tblVehicleEF	LHD2	5.8870e-003	0.00
tblVehicleEF	LHD2	5.8870e-003	0.00
tblVehicleEF	LHD2	5.8870e-003	0.00
tblVehicleEF	MCY	4.7160e-003	5.1000e-003
tblVehicleEF	MCY	4.7160e-003	5.1000e-003
tblVehicleEF	MCY	4.7160e-003	5.1000e-003
tblVehicleEF	MDV	0.15	0.16
tblVehicleEF	MDV	0.15	0.16
tblVehicleEF	MDV	0.15	0.16
tblVehicleEF	MH	2.2510e-003	2.4000e-003
tblVehicleEF	MH	2.2510e-003	2.4000e-003
tblVehicleEF	MH	2.2510e-003	2.4000e-003
tblVehicleEF	MHD	0.02	0.00
tblVehicleEF	MHD	0.02	0.00
tblVehicleEF	MHD	0.02	0.00

tbVehicleEF	OBUS	1.4400e-003	0.00
tbVehicleEF	OBUS	1.4400e-003	0.00
tbVehicleEF	OBUS	1.4400e-003	0.00
tbVehicleEF	SBUS	5.0900e-004	5.0000e-004
tbVehicleEF	SBUS	5.0900e-004	5.0000e-004
tbVehicleEF	SBUS	5.0900e-004	5.0000e-004
tbVehicleEF	UBUS	2.1450e-003	0.00
tbVehicleEF	UBUS	2.1450e-003	0.00
tbVehicleEF	UBUS	2.1450e-003	0.00
tbVehicleTrips	DV_TP	0.28	28.00
tbVehicleTrips	PB_TP	0.60	6.00
tbVehicleTrips	PR_TP	0.66	66.00
tbVehicleTrips	ST_TR	10.71	2.04
tbVehicleTrips	SU_TR	10.71	2.04
tbVehicleTrips	WD_TR	10.71	2.04

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
2016	6.5525	74.9123	50.1716	0.0643	19.4340	3.5858	22.3741	10.1100	3.2989	12.8149	0.0000	6,629.894 3	6,629.894 3	1.9457	0.0000	6,670.753 1
2017	55.8359	32.1087	32.8323	0.0605	2.1648	1.8700	4.0348	0.5817	1.7547	2.3364	0.0000	5,593.688 9	5,593.688 9	0.7380	0.0000	5,609.186 1
Total	62.3884	107.0211	83.0040	0.1248	21.5988	5.4558	26.4089	10.6917	5.0536	15.1513	0.0000	12,223.58 32	12,223.58 32	2.6836	0.0000	12,279.93 92

Mitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
2016	6.5525	74.9123	50.1716	0.0643	8.8560	3.5858	11.7960	4.5789	3.2989	7.2837	0.0000	6,629.894 3	6,629.894 3	1.9457	0.0000	6,670.753 1
2017	55.8359	32.1087	32.8323	0.0605	2.1648	1.8700	4.0348	0.5817	1.7547	2.3364	0.0000	5,593.688 9	5,593.688 9	0.7380	0.0000	5,609.186 1
Total	62.3884	107.0211	83.0040	0.1248	11.0208	5.4558	15.8308	5.1606	5.0536	9.6201	0.0000	12,223.58 32	12,223.58 32	2.6836	0.0000	12,279.93 92
Percent Reduction	0.00	0.00	0.00	0.00	48.98	0.00	40.05	51.73	0.00	36.51	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Area	8.3213	7.6000e-004	0.0804	1.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		0.1691	0.1691	4.7000e-004		0.1790
Energy	0.0752	0.6838	0.5744	4.1000e-003		0.0520	0.0520		0.0520	0.0520		820.5065	820.5065	0.0157	0.0150	825.5000
Mobile	0.6421	0.5897	5.5647	0.0136	1.0826	7.8700e-003	1.0904	0.2872	7.2700e-003	0.2945		1,109.3912	1,109.3912	0.0515		1,110.4728
Total	9.0386	1.2742	6.2195	0.0177	1.0826	0.0601	1.1427	0.2872	0.0595	0.3467		1,930.0668	1,930.0668	0.0677	0.0150	1,936.1518

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Area	8.3213	7.6000e-004	0.0804	1.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004		0.1691	0.1691	4.7000e-004		0.1790
Energy	0.0752	0.6838	0.5744	4.1000e-003		0.0520	0.0520		0.0520	0.0520		820.5065	820.5065	0.0157	0.0150	825.5000
Mobile	0.6421	0.5897	5.5647	0.0136	1.0826	7.8700e-003	1.0904	0.2872	7.2700e-003	0.2945		1,109.3912	1,109.3912	0.0515		1,110.4728
Total	9.0386	1.2742	6.2195	0.0177	1.0826	0.0601	1.1427	0.2872	0.0595	0.3467		1,930.0668	1,930.0668	0.0677	0.0150	1,936.1518

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/10/2016	6/24/2016	5	11	
2	Grading	Grading	6/27/2016	8/8/2016	5	31	
3	Building Construction	Building Construction	8/9/2016	10/3/2017	5	301	
4	Paving	Paving	10/4/2017	11/1/2017	5	21	
5	Architectural Coating	Architectural Coating	11/2/2017	11/30/2017	5	21	

Acres of Grading (Site Preparation Phase): 12.1

Acres of Grading (Grading Phase): 12.1

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 188,243; Non-Residential Outdoor: 62,748 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	159.00	62.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	32.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2016**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Fugitive Dust					19.2328	0.0000	19.2328	10.0566	0.0000	10.0566			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	5.0771	54.6323	41.1053	0.0391	19.2328	2.9387	22.1715	10.0566	2.7036	12.7602		4,065.0053	4,065.0053	1.2262		4,090.7544

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0657	0.0887	0.9308	2.3100e-003	0.2012	1.4100e-003	0.2026	0.0534	1.3000e-003	0.0547		193.4222	193.4222	9.6000e-003		193.6239
Total	0.0657	0.0887	0.9308	2.3100e-003	0.2012	1.4100e-003	0.2026	0.0534	1.3000e-003	0.0547		193.4222	193.4222	9.6000e-003		193.6239

3.2 Site Preparation - 2016

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					8.6548	0.0000	8.6548	4.5255	0.0000	4.5255			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036	0.0000	4,065.005 3	4,065.005 3	1.2262		4,090.754 4
Total	5.0771	54.6323	41.1053	0.0391	8.6548	2.9387	11.5934	4.5255	2.7036	7.2291	0.0000	4,065.005 3	4,065.005 3	1.2262		4,090.754 4

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0657	0.0887	0.9308	2.3100e-003	0.2012	1.4100e-003	0.2026	0.0534	1.3000e-003	0.0547		193.4222	193.4222	9.6000e-003		193.6239
Total	0.0657	0.0887	0.9308	2.3100e-003	0.2012	1.4100e-003	0.2026	0.0534	1.3000e-003	0.0547		193.4222	193.4222	9.6000e-003		193.6239

3.3 Grading - 2016**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.4360	0.0000	6.4360	3.3549	0.0000	3.3549			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975		6,414.980 ₇	6,414.980 ₇	1.9350		6,455.615 ₄
Total	6.4795	74.8137	49.1374	0.0617	6.4360	3.5842	10.0203	3.3549	3.2975	6.6524		6,414.980 ₇	6,414.980 ₇	1.9350		6,455.615 ₄

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0730	0.0986	1.0342	2.5700e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4400e-003	0.0607		214.9136	214.9136	0.0107		215.1377
Total	0.0730	0.0986	1.0342	2.5700e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4400e-003	0.0607		214.9136	214.9136	0.0107		215.1377

3.3 Grading - 2016**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Fugitive Dust					2.8962	0.0000	2.8962	1.5097	0.0000	1.5097			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975	0.0000	6,414.9807	6,414.9807	1.9350		6,455.6154
Total	6.4795	74.8137	49.1374	0.0617	2.8962	3.5842	6.4805	1.5097	3.2975	4.8072	0.0000	6,414.9807	6,414.9807	1.9350		6,455.6154

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0730	0.0986	1.0342	2.5700e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4400e-003	0.0607		214.9136	214.9136	0.0107		215.1377
Total	0.0730	0.0986	1.0342	2.5700e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4400e-003	0.0607		214.9136	214.9136	0.0107		215.1377

3.4 Building Construction - 2016

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8433	7.7029	10.6869	0.0187	0.5437	0.1205	0.6642	0.1548	0.1108	0.2657		1,870.7642	1,870.7642	0.0138		1,871.0540
Worker	0.8144	1.0993	11.5314	0.0286	2.4926	0.0174	2.5100	0.6611	0.0161	0.6771		2,396.2862	2,396.2862	0.1190		2,398.7849
Total	1.6577	8.8022	22.2184	0.0473	3.0363	0.1379	3.1742	0.8159	0.1269	0.9428		4,267.0503	4,267.0503	0.1328		4,269.8388

3.4 Building Construction - 2016

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	3.4062	28.5063	18.5066	0.0288		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	3.4062	28.5063	18.5066	0.0288		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8433	7.7029	10.6869	0.0187	0.5437	0.1205	0.6642	0.1548	0.1108	0.2657		1,870.7642	1,870.7642	0.0138		1,871.0540
Worker	0.8144	1.0993	11.5314	0.0286	2.4926	0.0174	2.5100	0.6611	0.0161	0.6771		2,396.2862	2,396.2862	0.1190		2,398.7849
Total	1.6577	8.8022	22.2184	0.0473	3.0363	0.1379	3.1742	0.8159	0.1269	0.9428		4,267.0503	4,267.0503	0.1328		4,269.8388

3.4 Building Construction - 2017

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.805 3	2,639.805 3	0.6497		2,653.449 0
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.805 3	2,639.805 3	0.6497		2,653.449 0

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7756	7.0041	10.1392	0.0187	0.5438	0.1075	0.6514	0.1549	0.0989	0.2538		1,840.275 5	1,840.275 5	0.0134		1,840.556 5
Worker	0.7404	0.9981	10.4874	0.0286	2.4926	0.0170	2.5096	0.6611	0.0157	0.6768		2,303.523 9	2,303.523 9	0.1104		2,305.842 6
Total	1.5160	8.0022	20.6266	0.0473	3.0364	0.1246	3.1610	0.8159	0.1146	0.9306		4,143.799 4	4,143.799 4	0.1238		4,146.399 2

3.4 Building Construction - 2017

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.805 3	2,639.805 3	0.6497		2,653.449 0
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.805 3	2,639.805 3	0.6497		2,653.449 0

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7756	7.0041	10.1392	0.0187	0.5438	0.1075	0.6514	0.1549	0.0989	0.2538		1,840.275 5	1,840.275 5	0.0134		1,840.556 5
Worker	0.7404	0.9981	10.4874	0.0286	2.4926	0.0170	2.5096	0.6611	0.0157	0.6768		2,303.523 9	2,303.523 9	0.1104		2,305.842 6
Total	1.5160	8.0022	20.6266	0.0473	3.0364	0.1246	3.1610	0.8159	0.1146	0.9306		4,143.799 4	4,143.799 4	0.1238		4,146.399 2

3.5 Paving - 2017**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281,058 ⁸	2,281,058 ⁸	0.6989		2,295,736 ⁰
Paving	0.9808					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.8882	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281,058⁸	2,281,058⁸	0.6989		2,295,736⁰

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0498	0.0671	0.7054	1.9300e-003	0.1677	1.1500e-003	0.1688	0.0445	1.0600e-003	0.0455		154.9456	154.9456	7.4300e-003		155.1015
Total	0.0498	0.0671	0.7054	1.9300e-003	0.1677	1.1500e-003	0.1688	0.0445	1.0600e-003	0.0455		154.9456	154.9456	7.4300e-003		155.1015

3.5 Paving - 2017**Mitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.9808					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.8882	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0498	0.0671	0.7054	1.9300e-003	0.1677	1.1500e-003	0.1688	0.0445	1.0600e-003	0.0455		154.9456	154.9456	7.4300e-003		155.1015
Total	0.0498	0.0671	0.7054	1.9300e-003	0.1677	1.1500e-003	0.1688	0.0445	1.0600e-003	0.0455		154.9456	154.9456	7.4300e-003		155.1015

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Archit. Coating	122.6553					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	122.9877	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1494	0.2014	2.1163	5.7800e-003	0.5030	3.4400e-003	0.5064	0.1334	3.1700e-003	0.1366		464.8367	464.8367	0.0223		465.3046
Total	0.1494	0.2014	2.1163	5.7800e-003	0.5030	3.4400e-003	0.5064	0.1334	3.1700e-003	0.1366		464.8367	464.8367	0.0223		465.3046

3.6 Architectural Coating - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Archit. Coating	122.6553				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003	0.1733	0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	122.9877	2.1850	1.8681	2.9700e-003	0.1733	0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1494	0.2014	2.1163	5.7800e-003	0.5030	3.4400e-003	0.5064	0.1334	3.1700e-003	0.1366		464.8367	464.8367	0.0223		465.3046
Total	0.1494	0.2014	2.1163	5.7800e-003	0.5030	3.4400e-003	0.5064	0.1334	3.1700e-003	0.1366		464.8367	464.8367	0.0223		465.3046

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Mitigated	2.5682	2.3588	22.2584	0.0542	4.3301	0.0315	4.3616	1.1487	0.0291	1.1778		4,437,451	4,437,451	0.2060		4,441,777
												5	5			9
Unmitigated	2.5682	2.3588	22.2584	0.0542	4.3301	0.0315	4.3616	1.1487	0.0291	1.1778		4,437,451	4,437,451	0.2060		4,441,777
												5	5			9

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate				Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Arena	960.01	960.01	960.01	2,072,188	2,072,188	2,072,188	2,072,188	2,072,188
Parking Lot	0.00	0.00	0.00					
Total	960.01	960.01	960.01	2,072,188	2,072,188	2,072,188	2,072,188	2,072,188

4.3 Trip Type Information

Land Use	Miles				Trip %				Trip Purpose %			
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by	Diverted	Pass-by	Pass-by
Arena	16.60	8.40	6.90	0.00	81.00	19.00	66	28	6			
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0			

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.549700	0.061400	0.206600	0.163600	0.010800	0.000000	0.000000	0.000000	0.000000	0.000000	0.005100	0.000500	0.002400

5.0 Emissions Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Natural Gas Mitigated	0.1726	1.5694	1.3183	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,883.2554	1,883.2554	0.0361	0.0345	1,894.7166
Natural Gas Unmitigated	0.1726	1.5694	1.3183	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,883.2554	1,883.2554	0.0361	0.0345	1,894.7166

5.2 Energy by Land Use - Natural Gas**Unmitigated**

Land Use	Natural Gas Use kBtu/yr	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																	
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Arena	16007.7	0.1726	1.5694	1.3183	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,883.2554	1,883.2554	0.0361	0.0345	1,894.7166
Total		0.1726	1.5694	1.3183	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,883.2554	1,883.2554	0.0361	0.0345	1,894.7166

5.2 Energy by Land Use - Natural Gas

Mitigated

Land Use	Natural Gas Use kBtu/yr	ROG	NOx	CO	SO ₂	Fugitive PM ₁₀	Exhaust PM ₁₀	PM ₁₀ Total	Fugitive PM _{2.5}	Exhaust PM _{2.5}	PM _{2.5} Total	Bio- CO ₂	NBio- CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
lb/day																	
Arena	16,007.7	0.1726	1.5694	1.3183	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,883.2554	1,883.2554	0.0361	0.0345	1,894.7166
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.1726	1.5694	1.3183	9.4200e-003		0.1193	0.1193		0.1193	0.1193		1,883.2554	1,883.2554	0.0361	0.0345	1,894.7166

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO ₂	Fugitive PM ₁₀	Exhaust PM ₁₀	PM ₁₀ Total	Fugitive PM _{2.5}	Exhaust PM _{2.5}	PM _{2.5} Total	Bio- CO ₂	NBio- CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
lb/day																
Category																
Mitigated	12,307.1	9.1000e-004	0.0962	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.6000e-004		0.2143
Unmitigated	12,307.1	9.1000e-004	0.0962	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.6000e-004		0.2143

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	1.7642					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.5336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.2900e-003	9.1000e-004	0.0962	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.6000e-004		0.2143
Total	12.3071	9.1000e-004	0.0962	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.6000e-004		0.2143

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	1.7642					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.5336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.2900e-003	9.1000e-004	0.0962	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.6000e-004		0.2143
Total	12.3071	9.1000e-004	0.0962	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		0.2024	0.2024	5.6000e-004		0.2143

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Appendix C
Community Ice Facility Traffic Study, January 2016,
LSA Associates, Inc.

LIMITED SCOPE

TRAFFIC IMPACT ANALYSIS

GREAT PARK COMMUNITY ICE FACILITY
CITY OF IRVINE, ORANGE COUNTY, CALIFORNIA

PLANNING AREA 51
ORANGE COUNTY GREAT PARK

This Traffic Impact Analysis has been prepared under the supervision of
Leslie E. Card, P.E.

Signed

Leslie E. Card



LSA

February 17, 2016

LIMITED SCOPE

TRAFFIC IMPACT ANALYSIS

**GREAT PARK COMMUNITY ICE FACILITY
CITY OF IRVINE, ORANGE COUNTY, CALIFORNIA**

**PLANNING AREA 51
ORANGE COUNTY GREAT PARK**

Prepared for:

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(949) 553-0666**

LSA Project No. RNK1501

LSA

February 17, 2016

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EXECUTIVE SUMMARY

LSA Associates, Inc. (LSA) has prepared the following analysis to determine the traffic impacts resulting from the proposed modification to the approved Master Plan for the Orange County Great Park (OCGP) located at the former El Toro Marine Corps Air Station (MCAS El Toro) in the City of Irvine (City). The first phase of the OCGP, referred to as the Western Sector Park Development Plan (WSPDP) Phase 1, will include sports fields, supportive uses, and displays consistent with the approved Master Plan. A Traffic Impact Analysis (TIA) for the WSPDP was approved by the City in 2011 (LSA, August 2011).

A community ice rink facility (Area L) and western picnic area (Area E) are included in the description of uses approved for this area of the OCGP. This area is bounded by LV Street to the north, 8th Street to the south, G Street to the east (a new north/south roadway between the special event parking area and the project site, proposed as part of the project) and Ridge Valley Street to the west. As part of the approved TIA, the community ice facility included three sheets of ice, seating for up to 1,200 at one rink and 100 each for the other rinks (1,400 total seats), and special events up to 6 weekdays per year.

An expansion to the approved community ice facility portion of the Western Sector is proposed. The project proposes four sheets of ice (including three National Hockey League [NHL] size sheets and one Olympic-size sheet), seating for up to 2,500 at one rink and 500 each for the others (4,000 total seats), and special events up to 12 times per year. Special events are defined as those events that are anticipated to exceed the ice facility's on-site parking supply. Per an agreement with the City, the project will provide a minimum of 665 parking spaces on site. A Traffic Management Plan (TMP) will be required and coordinated with City staff and Public Safety for these special events.

The proposed ice sheets will drive facility usage, with additional square footage assigned to common area, circulation, and accessory uses that support the ice sheets. The seating will accommodate spectators for ice-related sporting events, such as hockey tournaments and figure skating competitions, within the four sheets proposed. The ice facility includes the following uses that would be an accessory to the sheets of ice (i.e., the primary services provided on site) and would not generate new traffic:

- Locker facilities
- Lobby, skating support, and retail spaces, including a pro shop, party rooms, and a restaurant
- Dedicated figure skating room
- Administrative space
- Mechanical/electrical space
- Training and team space

Access to the proposed community ice facility would be provided via a right-turn in/right-turn out (RIRO) only driveway on Ridge Valley Street and a full-access driveway on G Street, which is a new local roadway on the eastern boundary of the project site between LV Street to the north and 8th Street to the south.

This TIA was prepared in accordance with the applicable sections of the City's TIA Guidelines (adopted August 24, 2004), the City's Transportation Guidelines (TGs) (adopted July 1993), and the City's Transportation Development Guidelines (TDPs) (adopted February 2007), and in general accordance with the requirements of the North Irvine Transportation Mitigation (NITM) Program. A Scope of Work was approved by City staff on January 6, 2016, that outlines the study area and methodologies followed in this TIA (Appendix A).

This Executive Summary presents the findings of a traffic study carried out to determine the impacts of the proposed modifications of the community ice rink facility (Area L) and western picnic area (Area E) of the OCGP Western Sector Development Plan Phase 1 located in Planning Area 51 in the City of Irvine.

This study focuses on the daily, a.m. peak-hour, and p.m. peak-hour levels of service (LOS) at 11 intersections and on 11 roadway segments. Project impacts were determined based on analysis of the following scenarios:

- 2017 Baseline Approved; and
- 2017 Baseline Approved Plus Project.

City staff provided the forecast traffic volume data for each scenario consistent with the latest version of the Irvine Transportation Analysis Model (ITAM) (Model Number 12).

Summary of Findings

Based on the results of the LOS analysis, the study area intersections and roadway segments are forecast to operate at acceptable LOS with the added sheet of ice in 2017. No project impacts have been identified on the study area intersections or roadway segments.

Project design features were also analyzed based on the following design guidelines from the City's TGs and TDPs:

Transportation Guidelines:

- **TG-1:** Left-turn pocket length.
- **TG-8:** Distance between driveways and intersections.
- **TG-10:** Left-turn in/out access.
- **TG-11:** Right-turn lanes at uncontrolled driveways.
- **TG-15:** Driveway lengths.

Transportation Development Procedures:

- **TDP-17:** Roundabouts.

As a result, no impacts to vehicular access were identified. The proposed access points will meet the City's design guidelines.

INTRODUCTION

Project Site

The project site is bounded by LV Street to the north, 8th Street to the south, G Street to the east, and Ridge Valley Street to the west, as shown on Figure 1. This 14.06-acre site will be developed into an enclosed ice skating facility incorporating four sheets of ice, including three sized for regulation ice hockey and one sized for Olympic-style skating. Access to the proposed community ice facility would be provided via a RIRO-only driveway on Ridge Valley Street and a full-access driveway on G Street, which is a new local roadway on the eastern boundary of the project site that connects LV Street to the north and 8th Street to the south. It is located between Ridge Valley Street and Olympic Way (currently C Street). The street name of Olympic Way is used as a placeholder for reference purposes. The ultimate street name for this street is yet to be determined. Figure 2 illustrates a circulation plan of the community ice facility project.

The enclosed facility will include ancillary uses, support facilities, and seating for up to 2,500 spectators at one rink and 500 spectators at each of the other three rinks (4,000 total seats). The proposed expansion to the facility will support exhibitions, clinics, and leagues on the NHL-quality sheet, and figure skating and recreational uses on the Olympic sheet. A special event permit will be required prior to hosting a large event and will only be permitted up to 12 times per year. Special events are defined as those events that are anticipated to exceed the ice facility's on-site parking supply. A condition will be placed on the Park Design and/or Master Plan Modification indicating that additional traffic analysis may be required in the event that the number of large events per year is proposed to be increased. The facility operator shall be responsible for obtaining a special event permit with the City.

The proposed ice sheets will drive facility usage, with additional square footage assigned to common area, circulation, and accessory uses that support the ice sheets. The seating will accommodate spectators for ice-related sporting events, such as hockey tournaments and figure skating competitions, within the four sheets proposed. The ice facility includes the following uses that would be an accessory to the sheets of ice (i.e., the primary services provided on site) and would not generate new traffic:

- Locker facilities
- Lobby, skating support, and retail spaces, including a pro shop, party rooms, and a restaurant
- Dedicated figure skating room
- Administrative space
- Mechanical/electrical space
- Training and team space

The current approved Master Plan for the OCGP includes a community ice facility with three sheets of ice. As defined in the previous traffic study for the WSPDP, this generated 24 a.m. peak-hour trips, 96 p.m. peak-hour trips, and 720 average daily trips (ADT). The project's proposed expansion (i.e., one sheet of ice) will generate an additional 8 a.m. peak-hour trips, 32 p.m. peak-hour trips, and 240 ADT. Based on the City's TIA Guidelines, a project that generates less than 50 peak-hour trips would require a Limited Scope TIA, which includes a short-term horizon year analysis.



FIGURE 1

LSA



0 500 1000
FEET

SOURCE: Bing Aerial, 2015

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- Project Location
- Study Area Intersections
- Future Roads

Great Park Community Ice Facility
Regional and Project Location
and Study Area Intersections

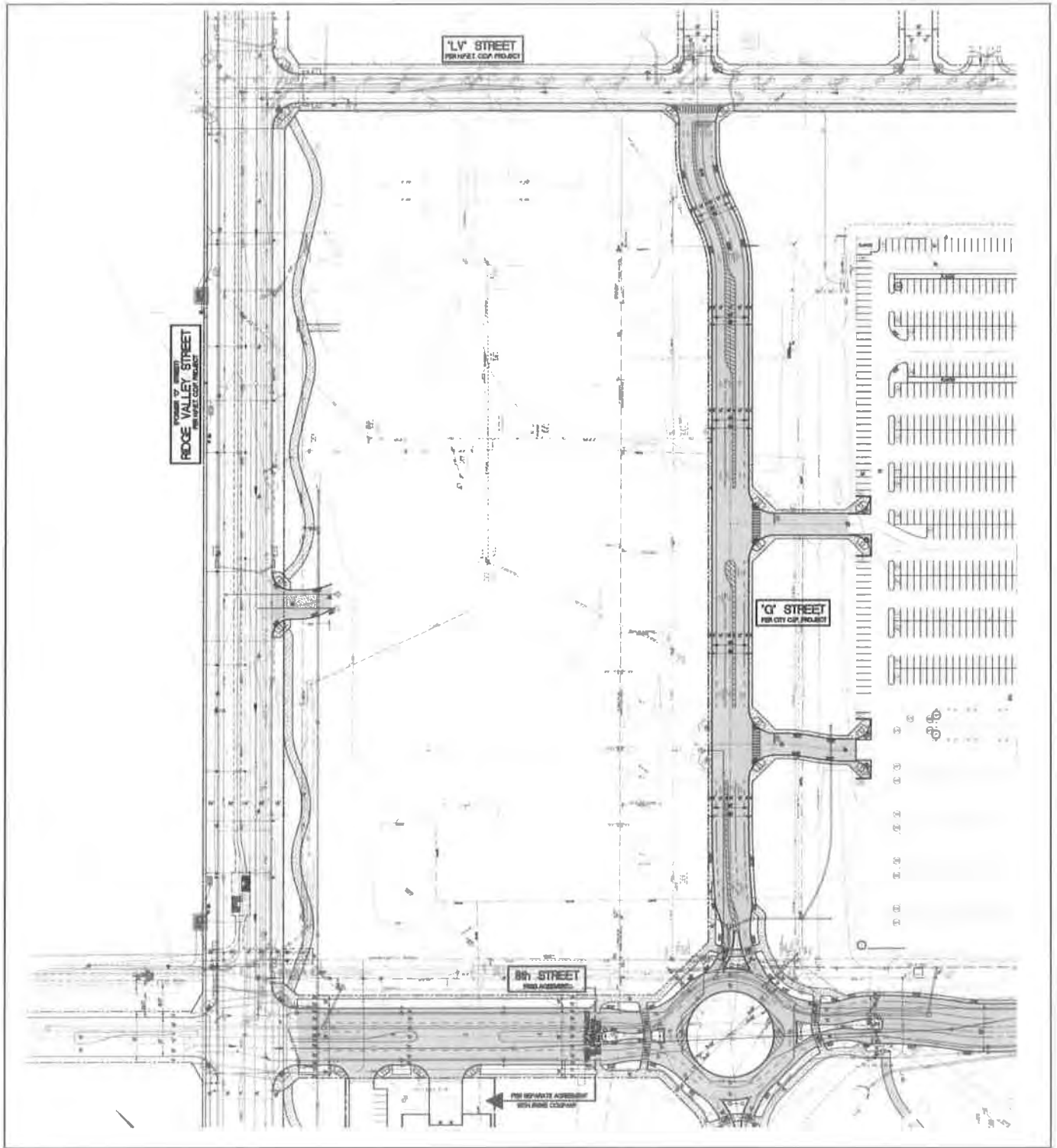


FIGURE 2

LSA



SOURCE: DMc Engineering, 01/22/2016.

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Great Park Community Ice Facility
Preliminary Circulation Plan

Encumbrance Map

This traffic study focuses on traffic generated from the proposed sheet of ice, consistent with the previously approved traffic study for the Western Sector. Building square footage is not used in this calculation. Any proposed addition of building square feet on site compared to the current approvals will be deducted from other uses so that the maximum building square footage or trip budget allocated for the overall uses within the OCGP will not be exceeded. The western picnic area will be replaced by the community ice facility and will not be relocated within the OCGP.

Study Area Boundary

As illustrated on previously referenced Figure 1, the study area as approved in the Scope of Work includes the following intersections within the area bounded by Trabuco Road on the north, Marine Way on the south, Olympic Way and C Street on the east, and Ridge Valley Street (formerly O Street) on the west:

1. Ridge Valley Street/Trabuco Road (ITAM Intersection [Int.] 559);
2. Ridge Valley Street/Champion Way (B Street) (ITAM Int. 623);
3. Ridge Valley Street/LV Street (ITAM Int. 575);
4. Ridge Valley Street/Project RIRO Driveway (ITAM Int. 493);
5. Ridge Valley Street/8th Street (ITAM Int. 655);
6. Ridge Valley Street/C Street (ITAM Int. 576);
7. Ridge Valley Street/Marine Way (ITAM Int. 560);
8. G Street/LV Street (ITAM Int. 654);
9. G Street/Full-Access Project Driveway (ITAM Int. 496);
10. G Street/8th Street (Roundabout) (ITAM Int. 497); and
11. Olympic Way/LV Street (Roundabout) (ITAM Int. 498).

The study area also includes the following roadway segments:

1. Ridge Valley Street between Trabuco Road and Champion Way (B Street);
2. Ridge Valley Street between Champion Way (B Street) and LV Street;
3. Ridge Valley Street between LV Street and Project RIRO Driveway;
4. Ridge Valley Street between Project RIRO Driveway and 8th Street;
5. Ridge Valley Street between 8th Street and C Street;
6. Ridge Valley Street between C Street and Marine Way;
7. G Street between LV Street and Full-Access Project Driveway;
8. G Street between Full-Access Project Driveway and 8th Street;
9. LV Street between Ridge Valley and G Street;

10. LV Street between G Street and Olympic Way;
11. 8th Street between Ridge Valley Street and G Street.

Figure 3 illustrates the future geometrics at each of the study area intersections.

Existing, General Plan, and Proposed Site Uses

In 1993, MCAS El Toro was listed by the Department of Defense in the Base Realignment and Closure Act for closure by 1999, with the site transferring to civilian use. The site of the OCGP consisted of buildings, military facilities, and runways that were left after closure. Current uses on site include the Balloon Park; Incredible Edible Farm; Picnic Meadow; Farmer's Market; Giving Grove; Festival Site; North Lawn; four soccer fields; Farm and Food Lab; Palm Court; Art Gallery; Hangar 244; Artist Studios; Walkable Timeline; Carousel; Visitor's Center Pavilion; Kid's Rock Playground; Great Park Operations Office; and Tierra Verde Industries.

The OCGP is owned, operated, maintained, and being developed by the City of Irvine. The City identifies the General Plan land use category for the site as "Orange County Great Park," and the Zoning District is classified as 1.9 Orange County Great Park.

The proposed uses for the site are consistent with Final Environmental Impact Report (FEIR) for the OCGP. An Addendum to the FEIR is being prepared to incorporate the additional sheet of ice and change to the roadway network (addition of G Street). The General Plan land use designations and related zoning district's permissible land uses include open space, parks, cultural facilities, golf courses, habitat preserves, wildlife corridors, agriculture, educational, institutional, and exposition centers. The proposed OCGP Master Plan Modification No. 3 for the Community Ice Facility is consistent with the City's General Plan and Zoning Ordinance.

PERFORMANCE CRITERIA

The intersection capacity utilization (ICU) methodology was used to determine the peak-hour operations at signalized intersections within the study area. The ICU methodology compares the volume-to-capacity (v/c) ratios of conflicting turn movements at an intersection, sums these critical conflicting v/c ratios for each intersection approach, and determines the overall ICU. The resulting ICU is expressed in terms of LOS, where LOS A represents free-flow activity and LOS F represents overcapacity operation. Parameters set by the City for ICU calculations, including lane capacity, right-turn treatment, and clearance interval, are included in the analysis.

According to the City's TIA Guidelines, LOS at an intersection or roadway is considered to be unsatisfactory when the ICU exceeds 0.90 (LOS D). Table A demonstrates the relationship of ICU to LOS.

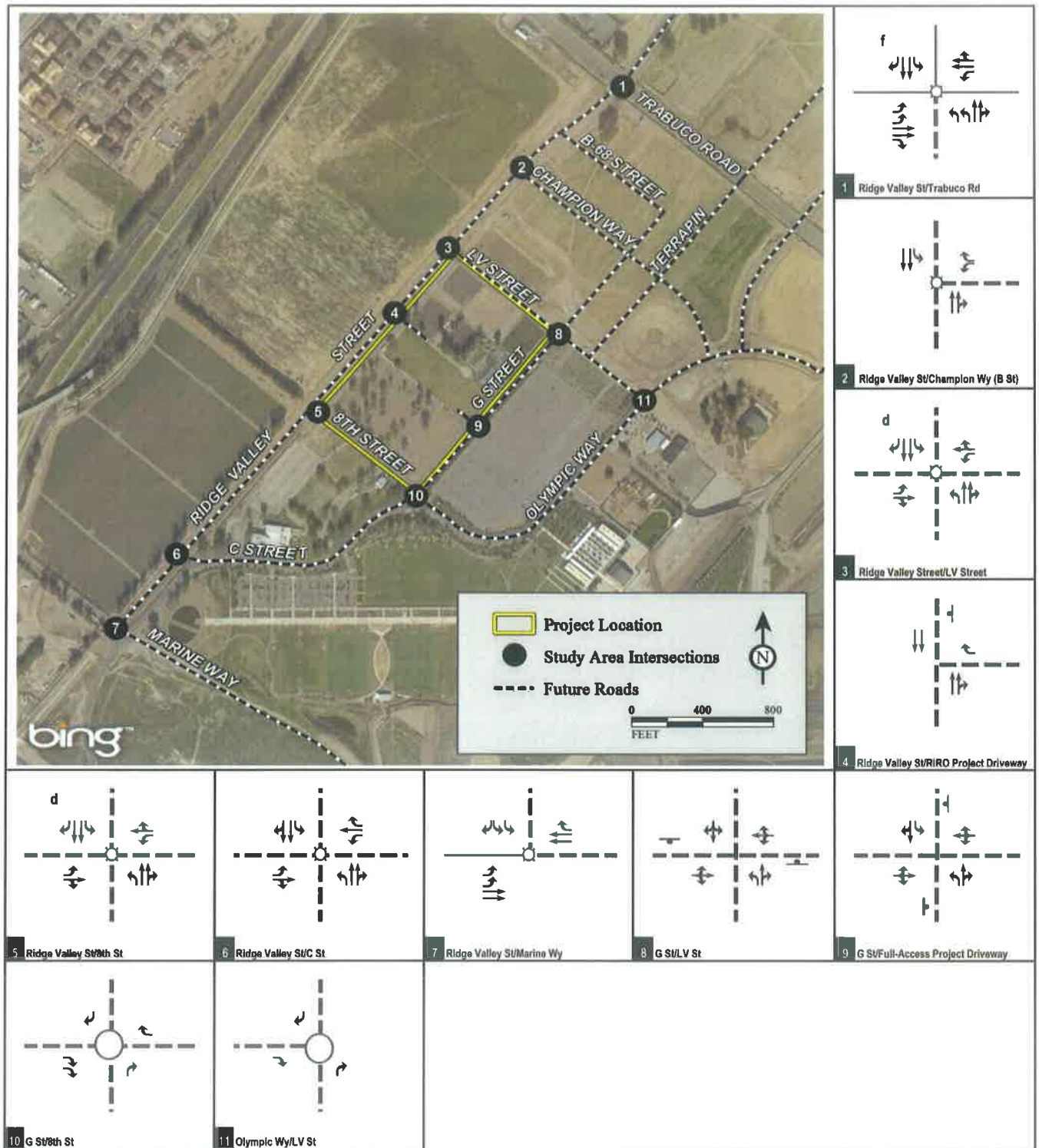


FIGURE 3

LSA

Legend
 □ Signal
 + Stop Sign
 ○ Roundabout
 f Free Right-Turn
 d Defacto Right-Turn

Great Park Community Ice Facility

2017 Baseline Approved With Project
 Intersection Geometrics and Stop Control

Table A: Intersection Capacity Utilization and Volume-to-Capacity Ratio

Level of Service	ICU or V/C	Level of Service	ICU or V/C
A	0.00–0.60	D	0.81–0.90
B	0.61–0.70	E	0.91–1.00
C	0.71–0.80	F	> 1.00

ICU = intersection capacity utilization
V/C = volume-to-capacity ratio

A project impact occurs when the intersection in question exceeds the acceptable LOS or the impact of the development is greater than or equal to 0.02 in ICU or v/c, if already at an unacceptable LOS. Mitigation will be required back to 0.90 or the baseline, if the baseline is greater than 0.90.

The 2010 Highway Capacity Manual (HCM 2010) methodology was used to calculate intersection LOS at unsignalized study area intersections. The HCM 2010 unsignalized intersection methodology presents LOS in terms of total intersection delay and approach delay of the major and minor streets (in seconds per vehicle). Table B summarizes the relationship of delay and LOS at unsignalized intersections.

Table B: Delay and Level of Service at Unsignalized Intersections

Level of Service	Unsignalized Intersection Delay (seconds)	Level of Service	Unsignalized Intersection Delay (seconds)
A	≤10.0	D	>25.0 and ≤35.0
B	>10.0 and ≤15.0	E	>35.0 and ≤50.0
C	>15.0 and ≤25.0	F	>50.0

Roadway link v/c ratios were determined using the City's theoretical daily capacities as contained in the City's TIA Guidelines. Facility types were taken from the General Plan and the countywide Master Plan of Arterial Highways (MPAH). Table C illustrates theoretical daily capacities for roadways within the study area.

Table C: Theoretical Daily Capacities for Roadways in the Study Area

Facility Type	Number of Lanes	Theoretical Capacity
Major Highway	8 augmented	86,000
	8	72,000
	7 divided	63,000
	6 augmented	65,000
	6	54,000
Primary Highway	5 divided	43,000
	4 augmented	42,000
	4	32,000
Secondary Highway	4	28,000
Commuter	2	13,000

Ridge Valley Street is designated as a four-lane augmented commuter facility. Within the project study area, G Street, Olympic Way, C Street, and LV Street are designated as two-lane Local streets. A project impact occurs when the roadway link in question exceeds the acceptable LOS and the impact of the development is greater than or equal to 0.02 in ICU or v/c. Mitigation will be required back to 0.90 or the baseline, if the baseline is greater than 0.90.

Based on discussions with City staff, Signalized (and unsignalized) Intersection Design Research Aid (SIDRA) 6.0 software was used to determine roundabout intersection LOS at the intersections of G Street/8th Street and Olympic Way/LV Street. SIDRA is as an advanced lane-based microanalytical tool that measures roundabout capacity and delay for vehicles and pedestrians using HCM 2010 methodologies.

ANALYSIS METHODOLOGY/APPROACH

The future scenarios were analyzed based on the latest version of ITAM (Model Number 12). The future conditions described below are based on the funded roadway network and land use assumptions envisioned to be in place by the respective horizon year. There are two ITAM runs required for this traffic analysis. These model runs are examined with and without the proposed project conditions under approved development conditions. The “approved” condition includes each application for development currently approved by the City. City staff prepared the forecast data for this project. The scenarios examined for each condition are as follows:

- 2017 Baseline Approved; and
- 2017 Baseline Approved Plus Project.

Daily traffic volumes and v/c ratios are presented in the analysis for the study area roadway segments for each scenario. Traffic volumes and ICU calculations for the 2017 scenarios are referenced throughout this document and provided in Appendix B. The HCM LOS worksheets are provided in Appendix C.

FUTURE CONDITIONS

2017 Baseline Approved Traffic Volumes and LOS

Table D presents a summary of the intersection LOS for the 2017 Baseline Approved conditions (including three sheets of ice). As this table indicates, all study area intersections are forecast to operate at satisfactory LOS (defined as LOS D or better).

Table E presents the daily traffic volumes and v/c ratios for 2017 Baseline Approved conditions. As this table indicates, all study area roadway segments are forecast to operate at satisfactory LOS (defined as LOS D or better).

Table D: 2017 Baseline Approved Intersection LOS Summary

	Intersection	A.M. Peak Hour		P.M. Peak Hour	
		ICU/Delay	LOS	ICU/Delay	LOS
1	Ridge Valley Street/Trabuco Road (ITAM Int. 559)	0.41	A	0.55	A
2	Ridge Valley Street/Champion Way (ITAM Int. 623)	0.13	A	0.14	A
3	Ridge Valley Street/LV Street (ITAM Int. 575)	0.14	A	0.14	A
4	Ridge Valley Street/Project RIRO Driveway (ITAM Int. 493) HCM	8.40	A	8.60	A
5	Ridge Valley Street/8 th Street (ITAM Int. 655)	0.30	A	0.18	A
6	Ridge Valley Street/C Street (ITAM Int. 576)	0.19	A	0.16	A
7	Ridge Valley Street/Marine Way (ITAM Int. 560)	0.36	A	0.35	A
8	G Street/LV Street (ITAM Int. 654) HCM	9.00	A	9.40	A
9	G Street/Full-Access Project Driveway (ITAM Int. 496) HCM	0.00	A	0.00	A
10	G Street/8 th Street (Roundabout) (ITAM Int. 497) HCM	3.80	A	3.90	A
11	Olympic Way/LV Street (Roundabout) (ITAM Int. 498) HCM	4.00	A	4.40	A

Delay is reported in seconds per vehicle using the HCM 2010 unsignalized intersection methodology.

HCM = Highway Capacity Manual

ICU = Intersection Capacity Utilization

Int. = Intersection

ITAM = Irvine Transportation Analysis Model

LOS = level of service

RIRO = right-turn in/right-turn out

Table E: 2017 Baseline Approved Daily Traffic Volumes and V/C Ratios

Roadway	Segment	Capacity	ADT	V/C	LOS
Ridge Valley Street	Trabuco Road to Champion Way (B Street) (ITAM 2013)	32,000	5,300	0.17	A
	Champion Way to LV Street (ITAM 2013)	32,000	5,300	0.17	A
	LV Street to Project RIRO Driveway (ITAM 4096)	32,000	1,700	0.05	A
	Project RIRO Driveway to 8 th Street (ITAM 4155)	32,000	1,700	0.05	A
	8 th Street to C Street (ITAM 4099)	32,000	4,800	0.15	A
	C Street to Marine Way (ITAM 2016)	32,000	5,400	0.17	A
G Street	LV Street to Full-Access Project Driveway (ITAM 4165)	13,000	300	0.02	A
	Full-Access Project Driveway to 8 th Street (ITAM 4166)	13,000	100	0.01	A
LV Street	Ridge Valley Street (O St) to G Street (ITAM 4097)	13,000	600	0.05	A
	G Street to Olympic Way (ITAM 4164)	13,000	400	0.03	A
8 th Street	Ridge Valley Street (O Street) to G Street (ITAM 4169)	13,000	1,300	0.10	A

ADT = average daily trips

ITAM = Irvine Transportation Analysis Model

LOS = level of service

RIRO = right-turn in/right-turn out

V/C = volume-to capacity ratio

PROPOSED PROJECT IMPACTS

Trip Generation

Traffic volume forecasts were prepared using the latest version of ITAM (Model Number 12). Trip generation, distribution, and assignment are integrated into the methodology that the traffic model uses to forecast trips. The project trips assigned to study area intersections and roadway segments for 2017 are based on ITAM, which is the OCTA-sanctioned subarea model for the City. All modeling protocols (including trip generation, distribution, and assignment) are consistent with local, regional, and national guidance for such features.

All project trip generation is accounted for in ITAM, and the impacts of the project reflect the contribution of its trips to the local street system. All project traffic, as well as cumulative traffic and growth within the City and adjacent cities, is accounted for. ITAM is the only appropriate tool to evaluate discrete project-related circulation impacts for the City.

Table F presents the trip generation for the current Master Plan (three sheets of ice) and proposed Master Plan modification (four sheets of ice) using rates from the WSPDP Phase 1 Traffic Analysis (LSA, August 2011).

Table F: Project Trip Generation

Land Use	Size	Unit	ADT	A.M. Peak Hour			P.M. Peak Hour		
				In	Out	Total	In	Out	Total
Ice Rink Trip Rates	1	Sheet	240	4	4	8	20	12	32
Proposed Expansion									
Trip Generation ¹	4	Sheets	960	16	16	32	80	48	128
Approved Trip Generation									
Trip Generation ¹	3	Sheets	720	12	12	24	60	36	96
Net Trip Generation (1 sheet of ice)			240	4	4	8	20	12	32

¹ Western Sector Park Development Plan Phase 1 Traffic Analysis (LSA Associates, Inc., August 2011).

ADT = average daily trips

TSF = thousand square feet

As shown in Table F, the proposed expansion to four sheets of ice is forecast to generate approximately 960 ADT, including 32 a.m. peak-hour trips (16 inbound and 16 outbound) and 128 p.m. peak-hour trips (80 inbound and 48 outbound). This represents the addition of 240 ADT, 8 a.m. peak-hour trips (4 more inbound and 4 more outbound), and 32 p.m. peak-hour trips (20 more inbound and 12 more outbound) compared to the current Master Plan.

The traffic impacts in the 2017 Baseline Approved scenario analyze the proposed expansion project and the approved use. The access analysis, discussed later in the report, analyzes the total project trip generation at the project driveways.

Trip Distribution and Assignment

Directions of approach to and departure from the site were determined based on a select zone assignment from ITAM. The proposed community ice facility is located in Traffic Analysis Zone [TAZ] 950. Select zone plots for the 2017 Baseline Approved Plus Project volumes are provided in Appendix D (i.e., daily, a.m. peak hour, and p.m. peak hour). Figure 4 illustrates the project trip distribution and shows that approximately 48 percent of the inbound trips enter the site via Ridge Valley Street and 52 percent enter the site via G Street. Of the outbound trips, 58 percent exit onto Ridge Valley Street and 42 percent exit onto G Street.

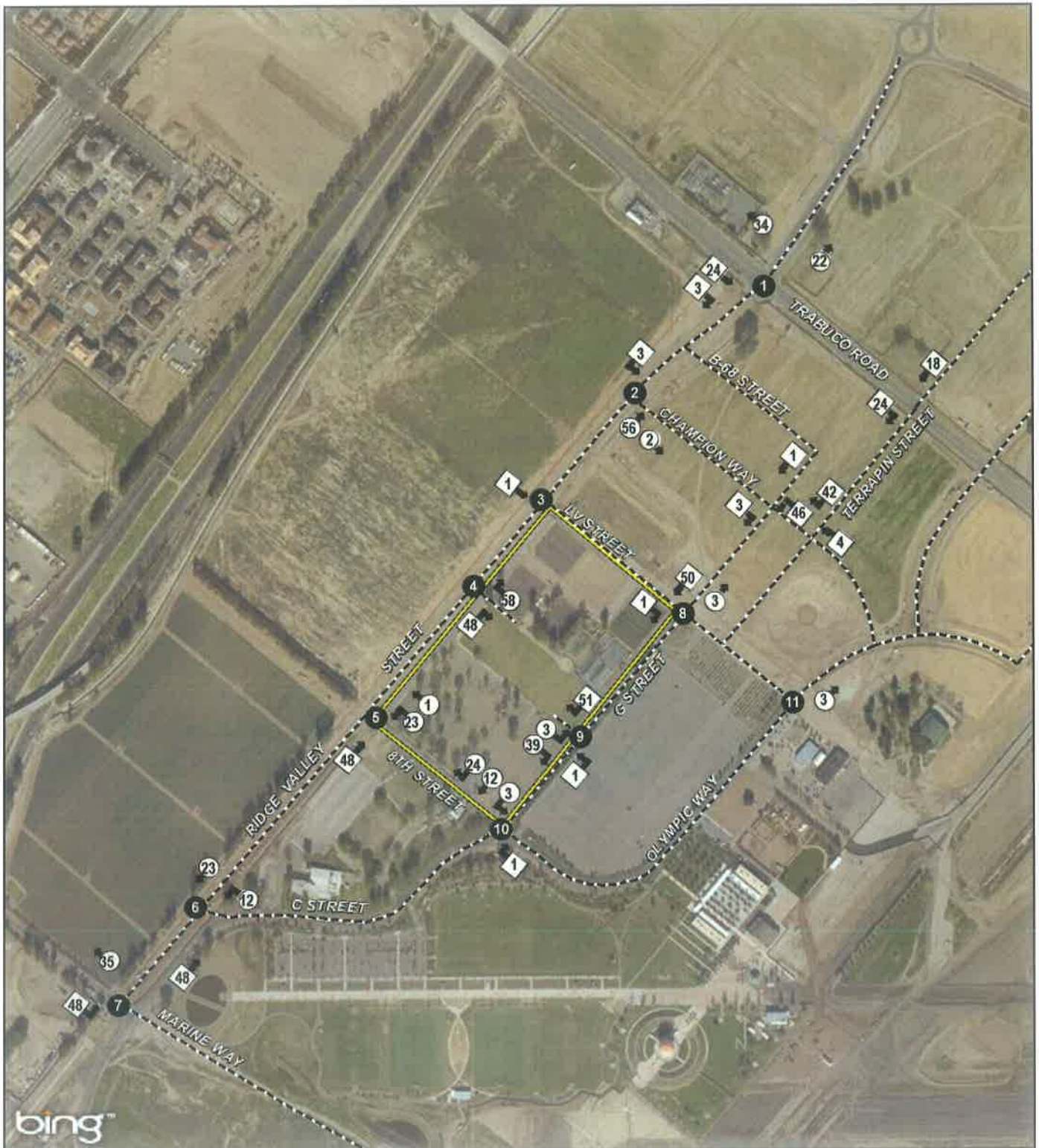


FIGURE 4

LSA



0 300 600
FEET

SOURCE: Bing Aerial, 2015

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- Project Location
- Study Area Intersections
- Future Roads
- Outbound Project Trip Distribution Percentage
- Inbound Project Trip Distribution Percentage

Great Park Community Ice Facility

Trip Distribution

FUTURE TRAFFIC WITH PROPOSED PROJECT

2017 Baseline Approved Plus Project Traffic Volumes and LOS

Table G presents the summary of the 2017 Baseline Approved Plus Project intersection LOS.

Table G: 2017 Baseline Approved Plus Project Intersection LOS Summary

	Intersection	A.M. Peak Hour		P.M. Peak Hour	
		ICU/Delay	LOS	ICU/Delay	LOS
1	Ridge Valley Street/Trabuco Road (ITAM Int. 559)	0.41	A	0.54	A
2	Ridge Valley Street/Champion Way (ITAM Int. 623)	0.12	A	0.13	A
3	Ridge Valley Street/LV Street (ITAM Int. 575)	0.13	A	0.14	A
4	Ridge Valley Street/Project RIRO Driveway (ITAM Int. 493) HCM	8.40	A	8.60	A
5	Ridge Valley Street/8 th Street (ITAM Int. 655)	0.28	A	0.19	A
6	Ridge Valley Street/C Street (ITAM Int. 576)	0.20	A	0.16	A
7	Ridge Valley Street/Marine Way (ITAM Int. 560)	0.37	A	0.35	A
8	G Street/LV Street (ITAM Int. 654) HCM	9.40	A	9.80	A
9	G Street/Full-Access Project Driveway (ITAM Int. 496) HCM	8.50	A	8.80	A
10	G Street/8 th Street (Roundabout) (ITAM Int. 497) HCM	3.90	A	3.80	A
11	Olympic Way/LV Street (Roundabout) (ITAM Int. 498) HCM	4.00	A	4.40	A

Delay is reported in seconds per vehicle using the HCM 2010 unsignalized intersection methodology.

HCM = Highway Capacity Manual

LOS = level of service

ICU = intersection capacity utilization

RIRO = right-turn in/right-turn out

ITAM = Irvine Transportation Analysis Model

As this table indicates, all study area intersections are forecast to operate at satisfactory LOS (defined as LOS D or better). Therefore, the project (addition of one sheet of ice) can be implemented in a 2017 Baseline Approved condition with no peak-hour intersection impacts.

Table H lists the daily traffic volumes and v/c ratios for the 2017 Baseline Approved Plus Project scenario. As this table indicates, all study area roadway segments are forecast to operate at satisfactory LOS (defined as LOS E or better). Therefore, no significant project impacts are created on roadway segments with implementation of the project.

SPECIAL ISSUES

Project Access and Internal Circulation

The approved WSPDP study included three sheets of ice within the OCGP site. The project proposes to expand the community ice facility to include one additional sheet of ice (total of four sheets) within Area L of the OCGP site. Access to the project site will be provided via a RIRO driveway on Ridge Valley Street and a full-access driveway on G Street.

Figure 5 illustrates driveway locations and project traffic volumes (including four sheets of ice on the project site). As shown on Figure 5, the project RIRO driveway on Ridge Valley Street anticipates 6 a.m. peak-hour vehicles and 37 p.m. peak-hour vehicles entering the project site, and 7 a.m. peak-hour vehicles and 34 p.m. peak-hour vehicles exiting the project site. The G Street full-access project driveway anticipates 10 a.m. peak-hour vehicles and 43 p.m. peak-hour vehicles entering the project

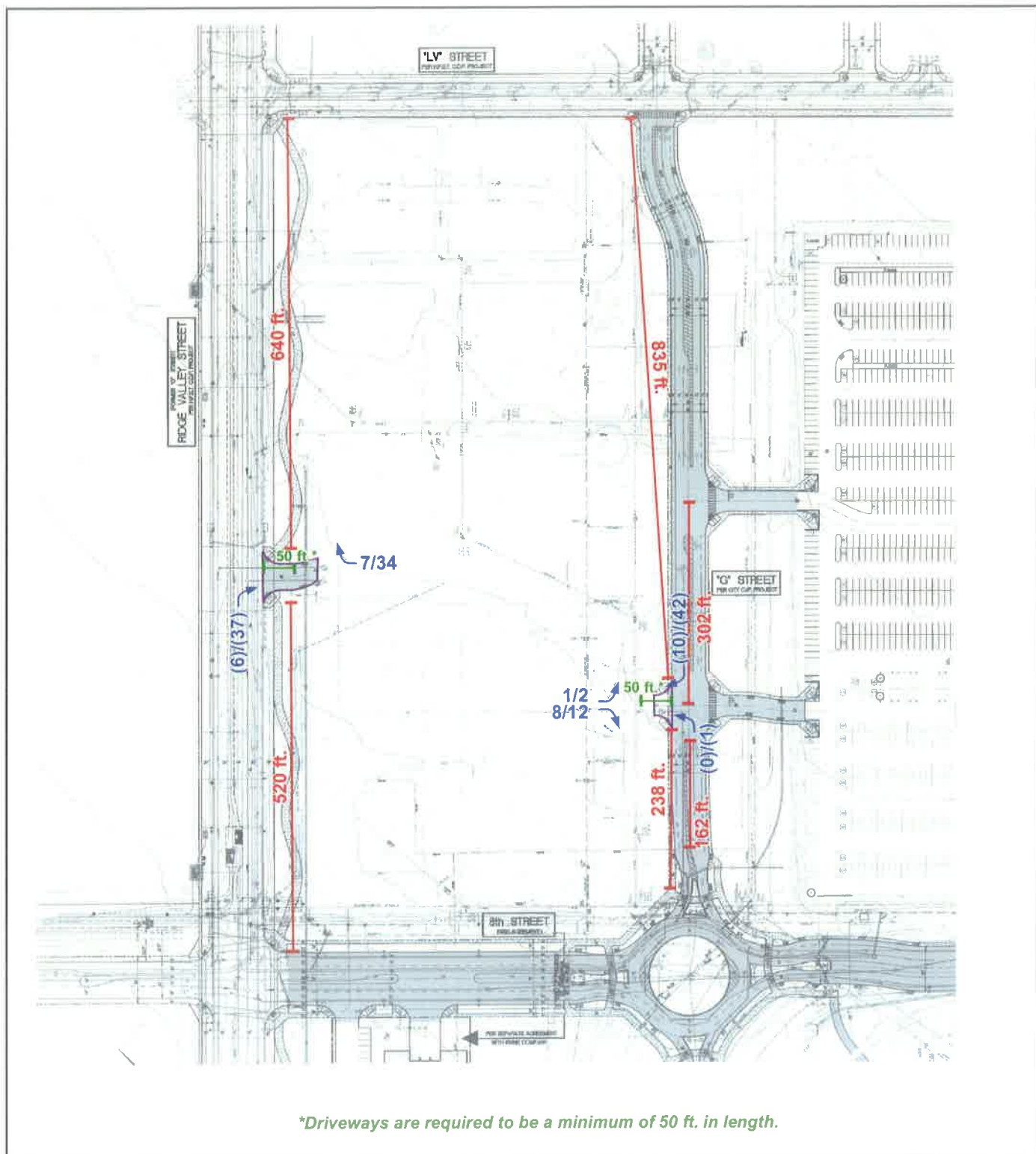


FIGURE 5

LSA



0 100 200
FEET

Future Project Driveway

XX/XX AM/PM Peak Volume, Outbound

(YY)/(YY) AM/PM Peak Volume, Inbound

Great Park Community Ice Facility

Driveway Locations and
Project Traffic Volumes

SOURCE: DMc Engineering, 2015

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Table H: 2017 Baseline Approved Plus Project Daily Traffic Volumes and V/C Ratios

Roadway	Segment	Capacity	ADT	V/C	LOS
Ridge Valley Street	Trabuco Road to Champion Way (B Street) (ITAM 2013)	32,000	5,400	0.17	A
	Champion Way to LV Street (ITAM 2013)	32,000	5,400	0.17	A
	LV Street to Project RIRO Driveway (ITAM 4096)	32,000	1,200	0.04	A
	Project RIRO Driveway to 8 th Street (ITAM 4155)	32,000	1,200	0.04	A
	8 th Street to C Street (ITAM 4099)	32,000	4,500	0.14	A
	C Street to Marine Way (ITAM 2016)	32,000	5,800	0.18	A
G Street	LV Street to Full-Access Project Driveway (ITAM 4165)	13,000	1,100	0.08	A
	Full-Access Project Driveway to 8 th Street (ITAM 4166)	13,000	900	0.07	A
LV Street	Ridge Valley Street (O Street) to G Street (ITAM 4097)	13,000	600	0.05	A
	G Street to Olympic Way (ITAM 4164)	13,000	400	0.03	A
8 th Street	Ridge Valley Street (O Street) to G Street (ITAM 4169)	13,000	1,500	0.12	A

ADT = average daily trips

ITAM = Irvine Transportation Analysis Model

LOS = level of service

RIRO = right-turn in/right-turn out

V/C = volume-to capacity ratio

site (primarily from the north), and 9 a.m. peak-hour vehicles and 14 p.m. peak-hour vehicles exiting the proposed ice facility. Dimensions to adjacent streets and intersections are also shown on Figure 5.

This analysis has been conducted consistent with the approved Scope of Work, TGs and TDPs. For TGs and TDPs that are traffic volume-dependent, evaluation of the proposed project driveway is provided in the 2017 Baseline Approved Plus Project condition, when the roadways and intersections are planned to be fully built out. Applicable design criteria for this project include TG-1 (turn lane pocket lengths), TG-8 (distance between driveways and intersections), TG-10 (left-turn in/out access), TG-11 (right-turn lane at uncontrolled driveways), TG-15 (driveway length), and TDP-17 (roundabouts).

The HCM 2010 unsignalized intersection methodology was used to calculate the LOS at the project driveways along Ridge Valley Street and G Street under 2017 Plus Project conditions. The project driveway LOS worksheets are provided in Appendix E. Table I summarizes the 2017 Baseline Approved Plus Project LOS at the project driveway and indicates that the driveways are forecast to operate at satisfactory LOS (LOS A during both peak hours).

Table I: 2017 Baseline Approved Plus Project Driveway LOS Summary

Intersection	Baseline Approved Plus Project			
	A.M. Peak Hour		P.M. Peak Hour	
	Delay	LOS	Delay	LOS
Ridge Valley Street/Project RIRO Driveway (ITAM Int. 493) HCM	8.40	A	8.60	A
G Street/Full-Access Project Driveway (ITAM Int. 496) HCM	8.50	A	8.80	A

HCM = Highway Capacity Manual

Int. = Intersection

ITAM = Irvine Transportation Analysis Model

LOS = level of service

RIRO = right-turn in/right-turn out

The project driveway is also analyzed based on the design criteria recommended in the City's TGs and TDPs. TGs and TDPs establish uniform policies and procedures for reviewing traffic design plans in the City. These guidelines were used to evaluate the roadway design features that may be impacted by the proposed project. A description and analysis of each applicable design criterion are provided below.

TG-1: Turn-Lane Pocket Lengths

The purpose of the turn pocket length is to allow the turning vehicle to exit the through movement and decelerate into the turn pocket without impacts to the through movement. The recommended acceptable design length for a turn pocket is 150 feet for Major, Primary, and Secondary highways with speeds greater than 45 miles per hour (i.e., Ridge Valley Street). For Commuter and Local streets (i.e., G Street, LV Street, and 8th Street), pocket lengths as short as 90 feet are permitted when volumes warrant.

An evaluation of the left-turn lane length at G Street/full-access project driveway (northbound left) has been provided. The 2017 Baseline Approved Plus Project volumes for this intersection are included in Appendix B.

G Street/Full-Access Project Driveway. According to the project circulation plan, the proposed northbound left-turn lane striped on G Street/full-access project driveway will have a storage capacity of approximately 162 feet. The 2017 Baseline Approved Plus Project left-turn demand at this location is 0 a.m. and 1 p.m. peak-hour vehicles. TG-1 states that the minimum turn pocket length on a local road (G Street) would be 90 feet. This minimum TG-1 requirement would satisfy forecast project volumes. Therefore, the northbound left-turn pocket meets TG-1 criteria.

TG-8: Distance between Driveways and Intersections

According to the criteria contained in TG-8, it is recommended that there be a minimum of 105 feet between a driveway and an intersection (or between two driveways) on Local streets (i.e., G Street) and 150 feet between a driveway and a Commuter street. The distance between driveways should be measured from the centerline of each driveway. The distance between an intersection and a driveway should be measured from the curb face of the street to the curb face of the driveway.

Based on the circulation plan (previously referenced on Figure 2), the proposed west-end project RIRO driveway (along Ridge Valley Street) will be located approximately 520 feet north of 8th Street (measured from the nearside curb face of the project driveway to the curb face of 8th Street) and 640 feet south of LV Street. The project driveway meets the minimum recommended distances per TG-8.

The east-end full-access project driveway will be located approximately 238 feet north of 8th Street (measured from the nearside curb face of the project driveway to the curb face of 8th Street) and approximately 302 feet south of a proposed driveway into the special event parking area (measured from centerline to centerline). The project driveway meets the minimum recommended distances per TG-8.

TG-10: Left-Turn In/Out Access

TG-10 provides guidelines to determine whether left-in-only or left-in/left-out access will be considered along Major, Primary, Secondary, and Commuter Streets. This guideline is based on the volume of vehicles entering and/or exiting a driveway in relationship to the conflicting volumes along the highway. Left-Turn Access Criteria in the City's TG presents a graph in which the left-turn volumes are compared to the conflicting volumes. Left-turn in/out access is considered acceptable when the point representing the left-turn volume and the conflicting volume lies below the line. Left-turn in/out access is not recommended when this point is above the line.

As illustrated on Figure 5 and the select zone plots included in Appendix D, fewer than 10 vehicles are forecast to make a left turns out of the project driveway onto G Street. According to TG-10 criteria, the threshold of acceptable conflicting (through and turn) volumes for 2 vehicles is approximately 1,085 vehicles. At the project driveway, the conflicting (through and turn) volumes along G Street are fewer than 1,085 vehicles. Therefore, the criteria for left-turn in/out access are satisfied for the project driveway.

TG-11: Right-Turn Lanes at Uncontrolled Driveways

TG-11 states that right-turn lanes on Commuter streets (i.e., Ridge Valley Street) and Local streets (i.e., G Street) are not required.

TG-15: Driveway Lengths

TG-15 provides guidance regarding a sufficient driveway length to allow vehicles "to enter the parking area without causing subsequent vehicles to back out on the City street system." The measurement of sufficient length is based on the distance from the back of the sidewalk or stop bar to the near curb line of the first intersecting parking stall or traffic control measure (i.e., internal drive aisle or pedestrian crosswalk). This TG is expressly used when evaluating access into parking lots. A summary of the TG-15 analysis is provided in Table J.

Table J: Summary of TG-15 (Driveway Length)

Driveway	Scenario	Peak-Hour Inbound Volume	Lane Length Required (feet)
Ridge Valley Street/Project RIRO Driveway (ITAM Int. 493)	2017 Baseline Approved Plus Project	37	50
G Street/Full-Access Project Driveway (ITAM Int. 496)	2017 Baseline Approved Plus Project	43	50

Int. = Intersection

ITAM = Irvine Transportation Analysis Model

RIRO = right-turn in/right-turn out

TG = Transportation Guidelines

The Ridge Valley Street/project RIRO driveway anticipates 6 a.m. peak-hour vehicles and 37 p.m. peak-hour vehicles will enter this driveway. Based on the recommended TG-15 criteria, a driveway length of 50 feet would accommodate the peak-hour inbound volume. The G Street/full-access project driveway anticipates 10 a.m. peak-hour vehicles and 43 p.m. peak-hour vehicles will enter this driveway. TG-15 recommends a driveway length of 50 feet for an inbound traffic volume of 43 vehicles. The detailed project site plan, once developed, should incorporate these recommended driveway lengths into the design of the project.

TDP-17: Roundabouts

TG-17 provides guidance regarding the recommended design, safety, capacity and vehicle approach speeds of a roundabout. It provides a description of the relationship between the central island diameter and the inscribed center circle diameter (ICD). Larger vehicles at small roundabouts with a 60-foot central island diameter require a minimum ICD of 120 feet to prevent overturning. Table K presents guidelines that should be followed when designing single- or double-lane roundabout.

Table K: TDP-17 Roundabout Criteria

Central Island Diameter (feet)		Minimum Inscribed Circle Diameter (feet)
13		92
20		94
26		98
33		101
39		105
46		109
52		113
59		118
Site Category	Typical Design Vehicle	Inscribed Circle Diameter Range
Mini-Roundabout	Single-Unit Truck	45–80 feet
Urban Compact	Single-Unit Truck/Bus	80–100 feet
Urban Single Lane	WB-50	100–130 feet
Urban Double Lane	WB-50	150–180 feet
Rural Single Lane	WB-67	115–130 feet
Rural Double Lane	WB-67	180–200 feet

Source: City of Irvine Transportation Design Procedures (February 2007) TDP-17 Criteria.

Note: Assumes 90-degree angles between entries and no more than four legs.

Two intersections were evaluated as potential modern roundabouts: G Street/8th Street and Olympic Way/LV Street. The intersection of G Street/8th Street, according to the circulation plan, is assumed to be a two-lane roundabout and Olympic Way/LV Street is assumed as a one-lane roundabout.

Based on the circulation plan, the intersection of G Street/8th Street will be designed with a 120-foot central island diameter and an ICD of 180 feet. According to the guidelines, an “Urban Double Lane” roundabout will be designed within an ICD range of 150–180 feet; therefore, the proposed G Street/8th Street roundabout meets the minimum criteria per TDP-17.

The single-lane Olympic Way/LV Street roundabout is planned to have a 110-foot central island diameter and an ICD of 130 feet. According to the WSPDP Phase 1, both roundabouts were designed with standard approach and exit widths, splitter islands, a central island, and inscribed circle distance. As a result, TDP-17 is met at both of the proposed roundabouts.

POTENTIAL IMPACTS AND/OR RECOMMENDATIONS

Based on the results of this analysis, the proposed project can be implemented without significant impacts to the surrounding roadway system in the 2017 horizon. The addition of project traffic to study area intersections and roadway segments does not result in City thresholds for performance being exceeded and is not considered significant; therefore, mitigation is not required.

Special events (up to 12 times per year) that exceed the parking capacity on site will require a special permit by the City. As part of this, a TMP will be required and coordinated with City staff and Public Safety for these special events. The specific issues addressed in this special event permit will include traffic management, traffic control and signage plans, parking management, and queuing analyses among others and are therefore not detailed in this analysis.

CONCLUSIONS

Based on the results of this analysis, the proposed project can be implemented without impacts to the surrounding roadway system. The evaluation of the study area intersection and roadway segment LOS with the expansion of one additional sheet of ice, for a total of four sheets of ice on site, shows that the proposed project will not create any significant adverse impacts.

An access analysis, consistent with the City's TGs and TDPs, was conducted for the proposed project. Based on this analysis, the recommended requirements for TG-1, TG-8, TG-10, TG-11, TG-15, and TDP-17 have been met or shall be met through subsequent phases of the process via a detailed site design plan.

APPENDIX A

APPROVED SCOPE OF WORK

SCOPE OF WORK GREAT PARK COMMUNITY ICE FACILITY LIMITED SCOPE TRAFFIC IMPACT ANALYSIS

The Orange County Great Park site is located north of Marine Way, east of future Ridge Valley Street, south of Irvine Boulevard and west of Alton Parkway in the City of Irvine, California. The first phase of the Great Park, referred to as the Western Sector Park Development Plan Phase 1, will include sports fields, supportive uses and displays consistent with the approved Master Plan. A traffic study (LSA Associates, Inc., August 2011) was approved by the City for the Western Sector Park Development Plan.

A community ice rink facility (Area L) and western picnic area (Area E) is included in the description of uses approved for this area of the Great Park. This area is bounded by LV Street to the north, 8th Street to the south, G Street to the east (a new north/south roadway between the special event parking area and the project site, proposed as part of the project) and Ridge Valley Street to the west. As part of the approved traffic study, the community ice facility included 3 sheets of ice, seating for up to 1,200 at one rink and 100 each for the others (1,400 total seats), and special events (more than 300 people) up to 6 weekdays per year.

An expansion to the approved community ice facility portion of the Western Sector is proposed. The project proposes 4 sheets of ice, seating for up to 2,500 at one rink and 500 each for the others (4,000 total seats), and special events up to 12 times per year. Special events are defined as those events which are anticipated to exceed the ice facility's on-site parking supply.

The facility includes the following uses which would be ancillary to the primary services provided on-site and as a result would not generate new traffic:

- Locker facilities
- Skating Support and Retail Spaces including a pro shop and a restaurant
- Administrative space
- Training and Team Space

It should be noted that the current Master Plan for the Great Park includes a community ice facility with 117,635 sf, which generates 24 a.m. peak hour, 93 p.m. peak hour and 720 ADT. The proposed square footage expansion of the ice rink facility will be deducted from other uses so that the maximum building sf or trip budget allocated for the overall uses within the Great Park will not be exceeded. The western picnic area is a 6.8 acre site that generates 93 ADT. This western picnic area will be replaced by the community ice facility and will not be relocated within the Great Park.


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Specific access to the proposed community ice facility would be provided via a right turn in/out only driveway on Ridge Valley Street, and a full access driveway on G Street, which is a new local roadway on the eastern boundary of the project site between LV Street to the north and 8th Street to the south.

The purpose of this analysis is to determine potential traffic impacts on the adjacent circulation system resulting from the addition of one sheet of ice for typical operations. The analysis will assess the project impacts based on the City's latest ITAM model short range horizon year scenario. It should be noted that special events will occur on site that may maximize the seating capacity. However, these events are infrequent (up to 12 times per year) and will require a special permit from the City. A Traffic Management Plan (TMP) will be required and coordinated with City staff and Public Safety for these special events.

Per the City's Traffic Impact Analysis (TIA) Guidelines (adopted by the City Council on August 24, 2004), a project that generates less than 50 peak hour trips would require a Limited Scope TIA, which includes a short-term horizon year analysis. This Limited Scope TIA will be developed pursuant to the applicable sections of the City's TIA Guidelines, the City's Transportation Guidelines (TGs) (adopted July 1993), and in general accordance with the requirements of the North Irvine Transportation Mitigation (NITM) Program Traffic Study.

The traffic study will include the following key elements:

I. EXECUTIVE SUMMARY

This section will provide a short, clear, and concise description of the project and TIA findings. The proposed study recommendations and project mitigation measures will also be included in this section, if necessary. A discussion will be included to indicate that for purposes of the traffic analysis, the Great Park will not be fully built-out in the short range horizon.

II. INTRODUCTION

This section of the report will include a comprehensive description of the project and key elements of the TIA, including Western Sector Park Development Plan, general terrain features, and existing/proposed uses on site. The following elements are identified for the purpose of conducting the TIA.

A. Project Site

A project conceptual site plan has been attached to this scope of work and will be provided in the TIA. The project site is bounded by LV Street to the north, 8th Street to the south, G Street to the east and Ridge Valley Street to the west.



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1/6/16

Access to the project site will be provided via provided via a right turn in/out (RIRO) only driveway on Ridge Valley Street and a full access driveway on G Street.

B. Study Area Boundary

The study area will include the following intersections:

1. Ridge Valley Street/Trabuco Road (ITAM Int. 559)
2. Ridge Valley Street/Champion Way (B Street)
3. Ridge Valley Street/LV Street (ITAM Int. 575)
4. Ridge Valley Street/Project RIRO driveway
5. Ridge Valley Street/8th Street (ITAM Int. 576)
6. Ridge Valley Street/C Street
7. Ridge Valley Street/Marine Way (ITAM Int. 560)
8. G Street/LV Street
9. G Street/Project Driveway
10. G Street/8th Street (Roundabout)
11. Olympic Way/LV Street (Roundabout)

Adjacent roadway links in the study area will be analyzed in the study. If significant project distribution is identified at the boundary of the initial study area, the analysis area will be expanded accordingly.

C. Existing, General Plan, and Proposed Site Uses

The approved Western Sector Park Development Plan Phase 1 land uses will be described and tabulated. The proposed community ice facility will be described and compared to the approved uses.

III. PERFORMANCE CRITERIA

The performance criteria to determine potential project impacts and associated improvements will be consistent with the City's criteria, as utilized in the NITM program analysis. Also, the most recently approved peak-hour link capacity methodology will be utilized for evaluating roadway capacity conditions and the need for improvements (if necessary).

The City's Transportation Guidelines (July 1993) will be used as the performance criteria to evaluate the access design features of the project site plan.


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IV. EXISTING CONDITIONS

A. Existing Site Uses

Existing land uses in the vicinity of the project site will be identified.

B. Existing Roadways and Intersections

The characteristics of the site's surrounding roadway network will be documented to verify the existing and planned number of lanes, traffic signal locations, intersection configurations, and other visible factors that may have to be included in the analysis.

V. ANALYSIS METHODOLOGY/APPROACH

Study area intersections will be analyzed using the Intersection Capacity Utilization (ICU) methodology for signalized intersections and the Highway Capacity Manual (HCM) methodology for unsignalized intersections. Roundabouts will be analyzed using the appropriate software. The roadway segments between the intersections will also be analyzed in the report. Daily traffic volumes and v/c ratios will be presented in the analysis for these roadway segments. A peak-hour link analysis will be conducted for roadway segments operating at LOS F.

Consistent with the previous traffic study for the Western Sector Park Development Plan, the impacts will be based on the latest version of the Irvine Transportation Analysis Model (ITAM). The analysis will report the "No Project" (2017 Baseline) condition developed from the traffic model. The 2017 Baseline condition will represent the approved land uses on the project site (i.e., 3 sheets of ice) and approved roadway network (i.e., no G Street) consistent with the approved Master Plan.

Trip rates for the ice rink will be consistent with rates used in the approved Western Sector Park Development Plan traffic study. The trip generation characteristics for the expanded ice rink facility are the same as previously analyzed for the Western Section Park Development Plan. As such, for one additional sheet of ice, the proposed trip generation is 8 a.m. peak hour, 31 p.m. peak hour and 240 ADT. As described above, this trip generation (i.e., less than 50 peak hour trips) warrants a Limited Scope TIA including analysis of a short-term horizon year analysis.

The directions of approach to and departure from the site will be obtained based on an ITAM 2017 select zone assignment. A map indicating regional directions of trip distribution will be presented in the Limited Scope TIA.

The 2017 Baseline condition will be modified to include the addition of daily and peak hour traffic associated with one sheet of ice using the ITAM model. The 2017 "With Project" condition will also include the added roadway network of G Street between LV Street and 8th Street.

City staff will make all necessary land use and network changes for the baseline and "With Project" scenarios and will provide LSA with the model data (including intersection ICUs, roadway segment ADT volumes and a select zone assignment within the study area).



1/6/16

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VI. PROPOSED PROJECT IMPACTS

Project impacts will be identified at study area intersections for the 2017 conditions, assuming improvements to the circulation system identified by the City. The resulting levels of service analysis (ICU and HCM) will be presented in the Limited Scope TIA to determine whether the project exceeds the standard level of service and improvements are required. Daily traffic volumes and v/c ratios will also be presented in the analysis for the study area roadway segments for each scenario. The City's peak-hour link analysis (per the adopted City TIA Guidelines) will be utilized for evaluating roadway capacity conditions and the need for mitigation measures (if necessary). The peak-hour link analysis will determine directional a.m. and p.m. peak-hour v/c ratios for each link which is projected to exceed LOS standards. The peak-hour capacity will be determined by multiplying the midblock number of lanes for each direction by a lane capacity of 1,600 vehicles per hour. Where the distance between controlled intersections is one or more miles, the midblock number of lanes shall be multiplied by a lane capacity of 2,000 vehicles per hour.

Special events (up to 12 times per year) that exceed the parking capacity on site will require a special permit by the City. A TMP will be required and coordinated with City staff and Public Safety for these special events. The specific issues addressed in this special event permit will include traffic control plans, parking management, and queuing analyses.

VII. SPECIAL ANALYSES/ISSUES

A. Access Analysis

An access analysis of the proposed project driveways on Ridge Valley Street and G Street will be performed based on typical operations of the ice facility. LSA will review project volume forecasts (associated with 4 sheets of ice) at the access locations and determine the adequacy of the interface with the arterial street system using the City's TGs. LSA will also determine access intersection turn-lane requirements for consistency with City standards.

The project peak-hour trips will be assigned in and out of the project access driveways. Trip distribution and driveway allocation will be determined using the distribution patterns from the most recent version of the ITAM. An exhibit will be provided that shows the "With Project" turning volumes at the access driveways to the project site. The exhibit will depict the project driveways, as well as any adjacent and opposing driveways. The exhibit will be drawn roughly to scale, with the distances between driveways and intersections dimensioned. The adjacent and opposing driveways to the project site will be included as part of the access analysis.

The internal circulation and access analysis will address specific design requirements of the City based on the proposed access plan and the project trip assignment. This analysis is to ensure that the project will meet or exceed the City's TG requirements (with the exception of roundabouts which will be evaluated per the Transportation Design Procedures (TDP-17). Specific design features to be evaluated include left turn pocket length (TG-1), distance between driveways and intersections (TG-8), left-turn in/out access (TG-10), right-turn lanes at uncontrolled driveways (TG-11), and driveway lengths (TG-15).


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A summary of the proposed project and results of the analysis will be prepared. Based upon these results, recommendations will be presented for the design of the project access driveway and interface with adjacent streets. These recommendations will be consistent with the City's TGs.

VIII. POTENTIAL IMPACTS AND/OR RECOMMENDATIONS

Based on the results and in accordance with the adopted City TIA Guidelines, physical and/or operational improvements required in order to address any potential impacts will be identified in the traffic study. If NITM improvements are proposed to be constructed as part of the project, the analysis shall be performed to identify the Level of Service at the location of the NITM improvement both with and without the proposed NITM Improvement.

If the analysis identifies any impacts at a location where there are no proposed NITM improvements, then the applicant must implement the required improvements if the impact is caused by the project. However, if the project is adding to an existing deficiency at this location, then the applicant will be required to pay its fair share of the required improvements. The fair share responsibility shall be determined consistent with the procedures utilized to determine NITM fees.

IX. CONCLUSIONS

A summary of the results of the analysis and recommendations will be prepared.

X. REVISIONS TO ANALYSIS

Revisions to the TIA will be provided in response to the City's comments.

XI. SIGNATURE

The Limited Scope TIA will be prepared under the supervision of, and signed, stamped, and dated by, a registered traffic engineer or a registered professional civil engineer with appropriate engineering and/or planning credentials.

Attachment: Figure 1 – Project Location (For Reference Purposes Only)

 1/4/16
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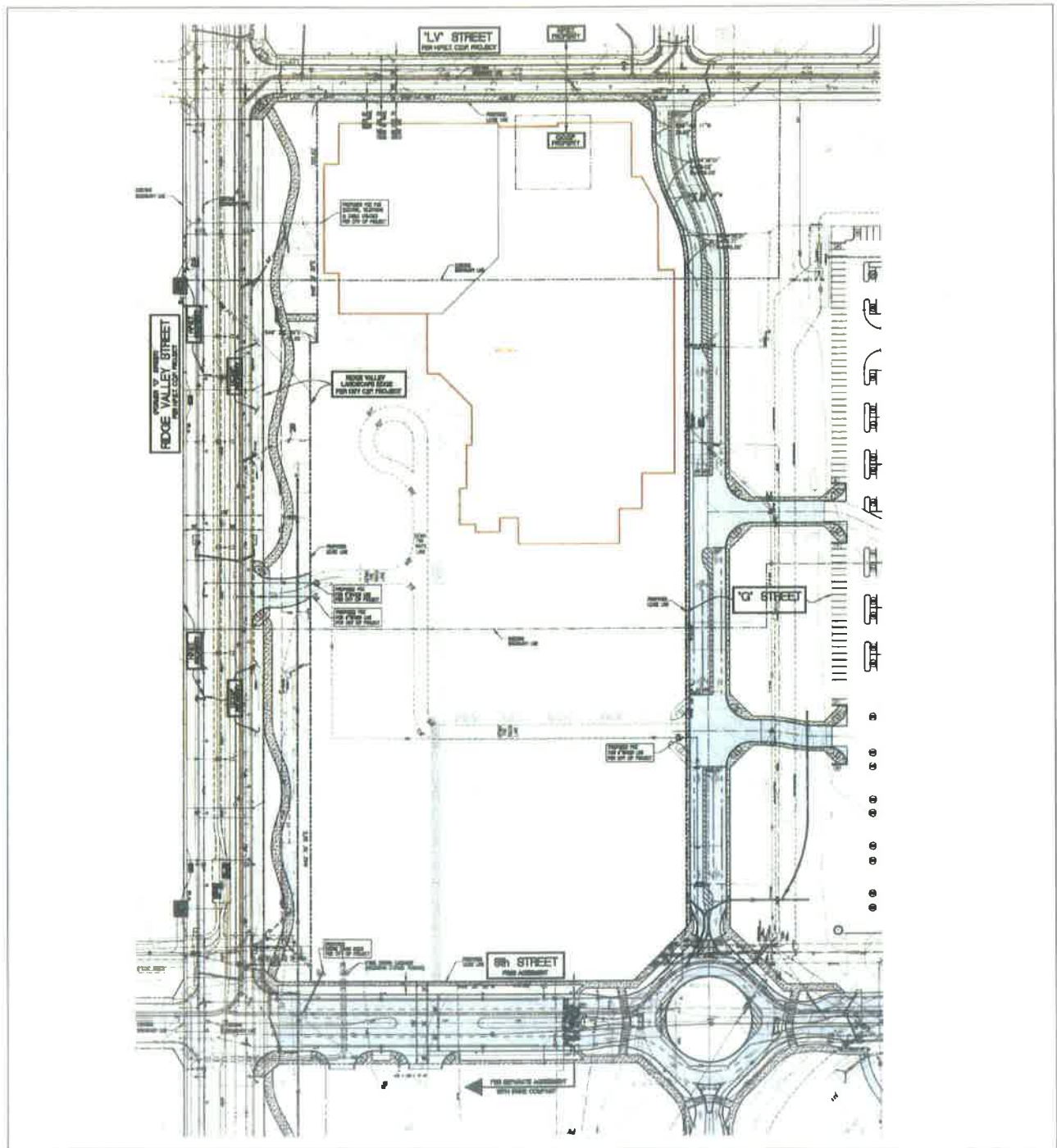


FIGURE 1

LSA



0 100 200
FEET

SOURCE: DMc Engineering 1/2 1/6/16
I:\RNK1501\GVCommunity Ice Facility.cdr (1/4/16)

Great Park
Community Ice Facility

APPENDIX B

ITAM MODEL NUMBER 12 TRAFFIC FORECASTS

Adt Refinement Summary

Scenario:

Project: ITAM 12-4

Existing Model RunID:

JobNumber:

Future Model RunID:

Analyst: Peter Anderson

Existing Validation Year:

2012 2017 2012 Date: 1/8/2016

Future Analysis Year: 2017 No Project

Adt Post Location	Adt Post Location Description	Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	Intermed. adt Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (Clear Input)	Final Growth %	Final Growth	Refined Adt
2012 O St.	n/o Trabuco Rd.		0	14,836	Increment	14,836	0%	0%	-100%	0%	0	14,800
2013 O St.	s/o Trabuco Rd.		0	5,330	Increment	5,330	0%	0%	-100%	0%	0	5,300
2016 O St.	b/w C St and Marine Wy.		0	5,439	Increment	5,439	0%	0%	-100%	0%	0	5,400
2018 Marine Wy.	e/o O St.		0	7,854	Increment	7,854	0%	0%	-100%	0%	0	7,900
2019 Marine Wy.	w/o O St.	2,000	2,448	12,833	Ratio	8,484	424%	424%	-100%	424%	8,484	10,500
4096 O St.	s/o LV St.	1	0	1,655	Increment	1,655	165500%	165500%	-100%	165500%	1,655	1,700
4097 LV St.	e/o O St.	1	0	590	Increment	590	59000%	59000%	-100%	59000%	590	600
4099 O St.	n/o C St.		0	4,826	Increment	4,826	0%	0%	-100%	0%	0	4,800
4100 C St.	e/o O St.		1,634	613	Increment	-1,021	0%	0%	-100%	0%	0	600
4151 C St.	n/o LV St.	1	0	1,600	Increment	1,600	160000%	160000%	-100%	160000%	1,600	1,600
4153 C St.	s/o LV St.	1	0	1,582	Increment	1,582	158200%	158200%	-100%	158200%	1,582	1,600
4155 O St.	n/o 8th St.	1	0	1,670	Increment	1,670	167000%	167000%	-100%	167000%	1,670	1,700
4155 O St.	n/o 8th St.	1	0	1,670	Increment	1,670	167000%	167000%	-100%	167000%	1,670	1,700
4156 8th St.	e/o O St.	1	0	1,233	Increment	1,233	123300%	123300%	-100%	123300%	1,233	1,200
4157 O St.	s/o 8th St.	1	0	4,826	Increment	4,826	482600%	482600%	-100%	482600%	4,826	4,800
4158 O St.	n/o LM St.		0	5,330	Increment	5,330	0%	0%	-100%	0%	0	5,300
4160 O St.	e/o LM St.		0	2,686	Increment	2,686	0%	0%	-100%	0%	0	2,700
4164 LV St.	w/o Olympic	1	0	355	Increment	355	35500%	35500%	-100%	35500%	355	400
4165 G St.	s/o LV St.		0	259	Increment	259	0%	0%	-100%	0%	0	300
4166 G St.	n/o 8th St.		0	125	Increment	125	0%	0%	-100%	0%	0	100
4167 Ice Rink	e/o G St.		0	383	Increment	383	0%	0%	-100%	0%	0	400
4168 C St.	s/o 8th St.		0	123	Increment	123	0%	0%	-100%	0%	0	100
4169 8th St.	e/o G St.		0	1,296	Increment	1,296	0%	0%	-100%	0%	0	1,300
4170 8th St.	w/o G St.		0	1,297	Increment	1,297	0%	0%	-100%	0%	0	1,300
4171 Ice Rink	e/o Ridge Valley	1	0	430	Increment	430	43000%	43000%	-100%	43000%	430	400

Scenario:

Existing Model RunID:

Future Model RunID:

Existing Validation Year:

Future Analysis Year: 2017 No Project

Project: ITAM 12-4

JobNumber:

Analyst: Peter Anderson

Date: 1/8/2016

2012

2017

2012

Alt Post Location	Alt Post Location Description	Existing Count	Existing Alt Model	Existing Alt Model	Future Model Alt	Procedure Type	Intermed SW Growth	Interim Low Growth %	Smooth Low Growth %	Minimum Growth % (Over Input)	Final Growth %	Final Growth	Refined Alt
4172 68 th	n/o LY St.	1	0	0	260	Increment	260	26000%	26000%	-100%	26000%	260	300
4173 LY St	e/o G St	1	0	0	583	Increment	583	58300%	58300%	-100%	58300%	583	600
4174 8 th	w/o Ridge Valley	1	0	0	2,093	Increment	2,093	209300%	209300%	-100%	209300%	2,093	2,100

493 . Ridge Valley at Ice Rink

ITAM 12.4 2017 No Project

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	2	3400	10	.00	31	.01
NBR	0	0	5		16	
SBL	0	0	0		0	
SBT	2	3400	200	.06*	83	.02*
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	1	1700	10	.01	31	.02

Right Turn Adjustment
Clearance Interval

TOTAL CAPACITY UTILIZATION .11 .08

496 . G St at Ice Rink

ITAM 12.4 2017 No Project

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	1	1700	0	.00	0	.00
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	1	1700	1	.01*	1	.02*
SBR	0	0	10		40	
EBL	0	0	0		0	
EBT	1	1700	0	.01*	0	.01*
EBR	0	0	9		9	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	

Clearance Interval .05* .05*

TOTAL CAPACITY UTILIZATION .07 .08

497 . G St at 8th St.

ITAM 12.4 2017 No Project

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	1	1700	0	.00	0	.00
NBR	0	0	0		0	
SBL	0	0	3		3	
SBT	1	1700	3	.01*	2	.01*
SBR	0	0	4		5	
EBL	0	0	0		0	
EBT	1	1700	27	.02	57	.04
EBR	0	0	3		4	
WBL	0	0	4		4	
WBT	1	1700	56	.04*	85	.05*
WBR	0	0	0		0	

Clearance Interval .05* .05*

TOTAL CAPACITY UTILIZATION 10 .11

498 . Olympic at LV St.

ITAM 12.4 2017 No Project

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	4		23 { .01}*	
NBT	1	1700	16	.01	86	.06
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	1	1700	84	.05*	104	.07*
SBR	0	0	6		17	
EBL	0	0	4		4	
EBT	1	1700	0	.01*	0	.01*
EBR	0	0	16		6	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	

Clearance Interval .05* .05*

TOTAL CAPACITY UTILIZATION .11 .14

559 . Ridge Valley at Trabuco Rd.

ITAM 12.4 2017 No Project						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	2	3400	92 .03	344 10*		
NBT	2	3400	21 .01*	110 .04		
NBR	0	0	10	19		
SBL	1	1700	102 .06*	33 .02		
SBT	2	3400	75 .02	35 .01*		
SBR	f		1006	580		
EBL	2	3400	253 .07	626 .18*		
EBT	2	3400	989 .29*	978 .29		
EBR	1	1700	78 .05	120 .07		
WBL	1	1700	6 .00	5 .00		
WBT	2	3400	652 .20	676 .21*		
WBR	0	0	16	24		
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION			.41	.55		

560 . Ridge Valley at Marine Wy.

ITAM 12.4 2017 No Project						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0	0	0	0		
NBT	0	0	0	0		
NBR	0	0	0	0		
SBL	2	3400	41 .01*	35 .01*		
SBT	0	0	0	0		
SBR	1	1700	426 .25	216 .13		
EBL	2	3400	66 .02	236 .07*		
EBT	2	3400	289 .09*	575 .17		
EBR	0	0	0	0		
WBL	0	0	0	0		
WBT	2	3400	174 .05	514 .15*		
WBR	1	1700	4 .00	34 .02		
Right Turn Adjustment			SBR	.21*	SBR	.07*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.36	.35		

575 . Ridge Valley at LV St.

ITAM 12.4 2017 No Project						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	1	1700	4 .00	17 .01*		
NBT	2	3400	16 .01	64 .02		
NBR	0	0	1	2		
SBL	1	1700	13 .01	16 .01		
SBT	2	3400	162 .05*	63 .02*		
SBR	d	1700	41 .02	106 .06		
EBL	1	1700	41 .02	35 .02*		
EBT	1	1700	26 .04*	12 .01		
EBR	0	0	36	5		
WBL	1	1700	2 .00	2 .00		
WBT	1	1700	5 .00	28 .02*		
WBR	0	0	3	11		
Right Turn Adjustment				SBR	.02*	
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION			.14	.14		

576 . Ridge Valley at C St.

ITAM 12.4 2017 No Project						
	LANES	CAPACITY	AM PK HOUR VOL V/C	PM PK HOUR VOL V/C		
NBL	0.5		0	0		
NBT	1.5	3400	59 .02	195 .08*		
NBR	0		6	60		
SBL	0.5		4	10 { .01}*		
SBT	1.5	3400	441 13*	203 .06		
SBR	0	0	0	0		
EBL	0	0	0	0		
EBT	0	0	0	0		
EBR	0	0	0	0		
WBL	1	1700	9 .01*	31 .02*		
WBT	1	1700	0 .00	0 .00		
WBR	0	0	1	5		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION			.19	.16		

623 . Ridge Valley at Champion

ITAM 12.4 2017 No Project						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	2	3400	52	.02	105	.03
NBR	0	0	6		6	
SBL	0.5		4		14	
SBT	1.5	3400	158	.05*	145	.05*
SBR	0	0	0		0	
EBL	1	1700	0	.00	0	.00
EBT	1	1700	0	.00*	0	.00
EBR	0	0	0		0	
WBL	1	1700	52	.03*	40	.02
WBT	1	1700	0	.00	0	.04*
WBR	0	0	8		60	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.13		.14

654 . G St at LV St.

ITAM 12.4 2017 No Project						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	1	1700	0	.00	0	.00
NBR	0	0	0		0	
SBL	0	0	4		8	
SBT	1	1700	4	.01*	23	.02*
SBR	0	0	2		9	
EBL	0	0	0		0	
EBT	1	1700	36	.02*	22	.02*
EBR	0	0	4		8	
WBL	0	0	2		9	{.01}*
WBT	1	1700	8	.01	31	.02
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.08		.10

655 . Ridge Valley at 8th St.

ITAM 12.4 2017 No Project						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	21	.01*	69	.04*
NBT	2	3400	37	.02	85	.04
NBR	0	0	25		47	
SBL	1	1700	1	.00	1	.00
SBT	2	3400	132	.04*	40	.01*
SBR	d	1700	1	.00	1	.00
EBL	1	1700	3	.00	2	.00
EBT	1	1700	13	.15*	11	.04*
EBR	0	0	236		59	
WBL	1	1700	87	.05*	71	.04*
WBT	1	1700	4	.00	19	.01
WBR	0	0	1		3	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.30		.18

Adt Refinement Summary

Scenario:

Project: ITAM 12-4

Existing Model RunID:

JobNumber:

Future Model RunID:

Analyst: Peter Anderson

Existing Validation Year:

Date: 1/8/2016

Future Analysis Year: 2017 With Project

Adt Post Location	Adt Post Location Description	Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	Interim Raw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
2012 C St	w/o Trabuco Rd.		0	14,850	Increment	14,850	0%	0%	-100%	0%	0	14,900
2015 C St	s/o Trabuco Rd.		0	5,420	Increment	5,420	0%	0%	-100%	0%	0	5,400
2016 C St	w/o C St and Marine Wy		0	5,765	Increment	5,765	0%	0%	-100%	0%	0	5,800
2018 Marine Wy	e/o O St		0	7,851	Increment	7,851	0%	0%	-100%	0%	0	7,900
2019 Marine Wy	w/o O St	2,000	2,448	13,144	Ratio	8,739	437%	437%	-100%	437%	8,739	10,700
4096 C St	s/o LV St		0	1,198	Increment	1,198	119800%	119800%	-100%	119800%	1,198	1,200
4097 LV St	e/o O St		0	554	Increment	554	55400%	55400%	-100%	55400%	554	600
4099 C St	w/o C St		0	4,535	Increment	4,535	0%	0%	-100%	0%	0	4,500
4106 C St	e/o O St		1,634	1,230	Increment	-404	0%	0%	-100%	0%	0	1,200
4151 C St	w/o LV St		0	1,604	Increment	1,604	160400%	160400%	-100%	160400%	1,604	1,600
4153 C St	s/o LV St		0	1,627	Increment	1,627	162700%	162700%	-100%	162700%	1,627	1,600
4155 C St	w/o 8th St		0	1,217	Increment	1,217	121700%	121700%	-100%	121700%	1,217	1,200
4155 C St	w/o 8th St		0	1,217	Increment	1,217	121700%	121700%	-100%	121700%	1,217	1,200
4156 8th St	e/o O St		0	1,451	Increment	1,451	145100%	145100%	-100%	145100%	1,451	1,500
4157 C St	s/o 8th St		0	4,535	Increment	4,535	453500%	453500%	-100%	453500%	4,535	4,500
4158 D St	w/o LM St		0	5,420	Increment	5,420	0%	0%	-100%	0%	0	5,400
4160 C St	e/o LM St		0	2,690	Increment	2,690	0%	0%	-100%	0%	0	2,700
4164 LV St	w/o Olympic		0	394	Increment	394	39400%	39400%	-100%	39400%	394	400
4165 C St	s/o LV St		0	1,078	Increment	1,078	0%	0%	-100%	0%	0	1,100
4166 C St	w/o 8th St		0	947	Increment	947	0%	0%	-100%	0%	0	900
4167 Ice Rink	e/o G St		0	459	Increment	459	0%	0%	-100%	0%	0	500
4168 C St	s/o 8th St		0	740	Increment	740	0%	0%	-100%	0%	0	700
4169 8th St	e/o G St		0	1,514	Increment	1,514	0%	0%	-100%	0%	0	1,500
4170 8th St	w/o G St		0	1,355	Increment	1,355	0%	0%	-100%	0%	0	1,400
4171 Ice Rink	e/o Ridge Valley		0	505	Increment	505	50500%	50500%	-100%	50500%	505	500

Scenario:
Existing Model RunID:
Future Model RunID:
Existing Validation Year:
Future Analysis Year: 2017 With Project

Project: ITAM 12-4
JobNumber:
Analyst: Peter Anderson
Date: 1/8/2016

2012
2017
2012

Adt Post Location	Adt Post Location Description	Existing Count	Existing Model Adt	Future Model Adt	Procedure Type	Interim Raw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
4172	n/o L Y St	1	0	1,079	Increment	1,079	107900%	107900%	-100%	107900%	1,079	1,100
4173	n/o G St	1	0	547	Increment	547	54700%	54700%	-100%	54700%	547	500
4174	w/o Ridge Valley	1	0	2,037	Increment	2,037	203700%	203700%	-100%	203700%	2,037	2,000

493 . Ridge Valley at Ice Rink

ITAM 12.4 2017 With Ducks

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	2	3400	5	.00	26	.01
NBR	0	0	5		22	
SBL	0	0	0		0	
SBT	2	3400	190	.06*	55	.02*
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	1	1700	10	.01	36	.02
Right Turn Adjustment					WBR	.01*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.11		.08

496 . G St at Ice Rink

ITAM 12.4 2017 With Ducks

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	5	.00	3	.00
NBT	1	1700	25	.01	20	.01
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	1	1700	25	.02*	48	.05*
SBR	0	0	5		37	
EBL	0	0	5		10	{.01}*
EBT	1	1700	0	.01*	0	.01
EBR	0	0	5		2	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.08		.11

497 . G St at 8th St.

ITAM 12.4 2017 With Ducks

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	1		9	{.01}*
NBT	1	1700	6	.01	6	.01
NBR	0	0	2		4	
SBL	0	0	4		12	
SBT	1	1700	22	.02*	12	.03*
SBR	0	0	3		26	
EBL	0	0	10	{.01}*	8	
EBT	1	1700	26	.03	47	.04
EBR	0	0	15		5	
WBL	0	0	26		4	
WBT	1	1700	28	.04*	80	.05*
WBR	0	0	16		6	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.12		.14

498 . Olympic at LV St.

ITAM 12.4 2017 With Ducks

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	4		23	{.01}*
NBT	1	1700	16	.01	86	.06
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	1	1700	84	.05*	104	.07*
SBR	0	0	6		17	
EBL	0	0	4		4	
EBT	1	1700	0	.01*	0	.01*
EBR	0	0	16		6	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.11		.14

559 . Ridge Valley at Trabuco Rd.

ITAM 12.4 2017 With Ducks

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	91	.03	343	.10*
NBT	2	3400	22	.01*	111	.04
NBR	0	0	9		20	
SBL	1	1700	103	.06*	34	.02
SBT	2	3400	75	.02	36	.01*
SBR	f		980		590	
EBL	2	3400	251	.07	625	.18*
EBT	2	3400	978	.29*	976	.29
EBR	1	1700	89	.05	119	.07
WBL	1	1700	6	.00	5	.00
WBT	2	3400	669	.20	667	.20*
WBR	0	0	17		24	

Clearance Interval .05* .05*

TOTAL CAPACITY UTILIZATION .41 .54

560 . Ridge Valley at Marine Wy.

ITAM 12.4 2017 With Ducks

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	2	3400	41	.01*	38	.01*
SBT	0	0	0		0	
SBR	1	1700	447	.26	222	.13
EBL	2	3400	85	.03	252	.07*
EBT	2	3400	289	.09*	572	.17
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	173	.05	508	.15*
WBR	1	1700	5	.00	38	.02

Right Turn Adjustment SBR .22* SBR .07*
Clearance Interval .05* .05*

TOTAL CAPACITY UTILIZATION .37 .35

575 . Ridge Valley at LV St.

ITAM 12.4 2017 With Ducks

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	2	.00	16	.01
NBT	2	3400	7	.00	53	.02*
NBR	0	0	1		1	
SBL	1	1700	11	.01	9	.01*
SBT	2	3400	146	.04*	35	.01
SBR	d	1700	42	.02	105	.06
EBL	1	1700	40	.02	37	.02*
EBT	1	1700	28	.04*	9	.01
EBR	0	0	41		4	
WBL	1	1700	2	.00	1	.00
WBT	1	1700	5	.00	29	.02*
WBR	0	0	2		10	

Right Turn Adjustment SBR .02*
Clearance Interval .05* .05*

TOTAL CAPACITY UTILIZATION .13 .14

576 . Ridge Valley at C St.

ITAM 12.4 2017 With Ducks

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0.5		0		0	
NBT	1.5	3400	67	.02	187	.08*
NBR	0		17		84	
SBL	0.5		3		8	
SBT	1.5	3400	411	.12*	197	.06
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1	1700	59	.03*	58	.03*
WBT	1	1700	0	.00	0	.00
WBR	0	0	3		6	

Clearance Interval .05* .05*

TOTAL CAPACITY UTILIZATION .20 .16

623 . Ridge Valley at Champion

ITAM 12.4 2017 With Ducks

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	0		0	
NBT	2	3400	50	.01	106	.03
NBR	0	0	0		1	
SBL	0.5		0		9	
SBT	1.5	3400	170	.05*	141	.04*
SBR	0	0	0		0	
EBL	1	1700	0	.00	0	.00
EBT	1	1700	0	.00*	0	.00
EBR	0	0	0		0	
WBL	1	1700	30	.02*	9	.01
WBT	1	1700	0	.01	0	.04*
WBR	0	0	10		64	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .12 .13

654 . G St at LV St.

ITAM 12.4 2017 With Ducks

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	0	0	3		7	
NBT	1	1700	20	.02	19	.02
NBR	0	0	7		4	
SBL	0	0	7		8	
SBT	1	1700	20	.02*	60	.05*
SBR	0	0	3		12	
EBL	0	0	7		4	
EBT	1	1700	25	.02*	8	.01
EBR	0	0	7		8	
WBL	0	0	3		12	
WBT	1	1700	4	.01	21	.02*
WBR	0	0	3		7	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .09 .12

655 . Ridge Valley at 8th St.

ITAM 12.4 2017 With Ducks

	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	23	.01*	62	.04*
NBT	2	3400	24	.01	76	.04
NBR	0	0	40	.02	49	
SBL	1	1700	1	.00	1	.00
SBT	2	3400	135	.04*	25	.01*
SBR	d	1700	1	.00	1	.00
EBL	1	1700	1	.00	2	.00
EBT	1	1700	24	.15*	10	.04*
EBR	0	0	233		59	
WBL	1	1700	51	.03*	82	.05*
WBT	1	1700	3	.00	17	.01
WBR	0	0	1		2	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION 28 .19

APPENDIX C

HCM LOS WORKSHEETS

HCM 2010 TWSC
8: G Street & LV Street

1/25/2016

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	36	4	2	8	0	0	0	0	4	4	2
Future Vol, veh/h	0	36	4	2	8	0	0	0	0	4	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	205	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	39	4	2	9	0	0	0	0	4	4	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	9	0	0	43	0	0	57	54	41	54	56	9
Stage 1	-	-	-	-	-	-	41	41	-	13	13	-
Stage 2	-	-	-	-	-	-	16	13	-	41	43	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1611	-	-	1566	-	-	940	837	1030	944	835	1073
Stage 1	-	-	-	-	-	-	974	861	-	1007	885	-
Stage 2	-	-	-	-	-	-	1004	885	-	974	859	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1611	-	-	1566	-	-	934	836	1030	943	834	1073
Mov Cap-2 Maneuver	-	-	-	-	-	-	934	836	-	943	834	-
Stage 1	-	-	-	-	-	-	974	861	-	1007	884	-
Stage 2	-	-	-	-	-	-	996	884	-	974	859	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.5			0			9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	-	-	1611	-	-	1566	-	-	917			
HCM Lane V/C Ratio	-	-	-	-	-	0.001	-	-	0.012			
HCM Control Delay (s)	0	0	0	-	-	7.3	0	-	9			
HCM Lane LOS	A	A	A	-	-	A	A	-	A			
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	-	0			

HCM 2010 TWSC
8: G Street & LV Street

1/25/2016

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	22	8	9	31	0	0	0	0	8	23	9
Future Vol, veh/h	0	22	8	9	31	0	0	0	0	8	23	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	205	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	24	9	10	34	0	0	0	0	9	25	10
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	34	0	0	33	0	0	99	81	28	81	86	34
Stage 1	-	-	-	-	-	-	28	28	-	53	53	-
Stage 2	-	-	-	-	-	-	71	53	-	28	33	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1578	-	-	1579	-	-	883	809	1047	907	804	1039
Stage 1	-	-	-	-	-	-	989	872	-	960	851	-
Stage 2	-	-	-	-	-	-	939	851	-	989	868	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1578	-	-	1579	-	-	850	804	1047	903	799	1039
Mov Cap-2 Maneuver	-	-	-	-	-	-	850	804	-	903	799	-
Stage 1	-	-	-	-	-	-	989	872	-	960	846	-
Stage 2	-	-	-	-	-	-	897	846	-	989	868	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.6			0			9.4		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	-	-	1578	-	-	1579	-	-	864			
HCM Lane V/C Ratio	-	-	-	-	-	0.006	-	-	0.05			
HCM Control Delay (s)	0	0	0	-	-	7.3	0	-	9.4			
HCM Lane LOS	A	A	A	-	-	A	A	-	A			
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	-	0.2			

HCM 2010 TWSC
8: G Street & LV Street

1/28/2016

Intersection												
Int Delay, s/veh	5.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	7	25	7	3	4	3	3	20	7	7	20	3
Future Vol, veh/h	7	25	7	3	4	3	3	20	7	7	20	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	205	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	27	8	3	4	3	3	22	8	8	22	3
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	8	0	0	35	0	0	71	60	31	74	63	6
Stage 1	-	-	-	-	-	-	46	46	-	13	13	-
Stage 2	-	-	-	-	-	-	25	14	-	61	50	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1612	-	-	1576	-	-	920	831	1043	916	828	1077
Stage 1	-	-	-	-	-	-	968	857	-	1007	885	-
Stage 2	-	-	-	-	-	-	993	884	-	950	853	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1612	-	-	1576	-	-	894	825	1043	886	822	1077
Mov Cap-2 Maneuver	-	-	-	-	-	-	894	825	-	886	822	-
Stage 1	-	-	-	-	-	-	963	853	-	1002	883	-
Stage 2	-	-	-	-	-	-	964	882	-	914	849	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.3			2.2			9.3			9.4		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	894	872	1612	-	-	1576	-	-	857			
HCM Lane V/C Ratio	0.004	0.034	0.005	-	-	0.002	-	-	0.038			
HCM Control Delay (s)	9	9.3	7.2	0	-	7.3	0	-	9.4			
HCM Lane LOS	A	A	A	A	-	A	A	-	A			
HCM 95th %tile Q(veh)	0	0.1	0	-	-	0	-	-	0.1			

HCM 2010 TWSC
8: G Street & LV Street

1/28/2016

Intersection												
Int Delay, s/veh	7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	4	8	8	12	21	7	7	19	4	8	60	12
Future Vol, veh/h	4	8	8	12	21	7	7	19	4	8	60	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	205	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	9	9	13	23	8	8	21	4	9	65	13
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	30	0	0	17	0	0	114	79	13	87	79	27
Stage 1	-	-	-	-	-	-	22	22	-	53	53	-
Stage 2	-	-	-	-	-	-	92	57	-	34	26	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1583	-	-	1600	-	-	863	811	1067	899	811	1048
Stage 1	-	-	-	-	-	-	996	877	-	960	851	-
Stage 2	-	-	-	-	-	-	915	847	-	982	874	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1583	-	-	1600	-	-	793	802	1067	870	802	1048
Mov Cap-2 Maneuver	-	-	-	-	-	-	793	802	-	870	802	-
Stage 1	-	-	-	-	-	-	993	874	-	957	844	-
Stage 2	-	-	-	-	-	-	827	840	-	952	871	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.5			2.2			9.4			9.8		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	793	838	1583	-	-	1600	-	-	838			
HCM Lane V/C Ratio	0.01	0.03	0.003	-	-	0.008	-	-	0.104			
HCM Control Delay (s)	9.6	9.4	7.3	0	-	7.3	0	-	9.8			
HCM Lane LOS	A	A	A	A	-	A	A	-	A			
HCM 95th %tile Q(veh)	0	0.1	0	-	-	0	-	-	0.3			

DELAY (CONTROL)

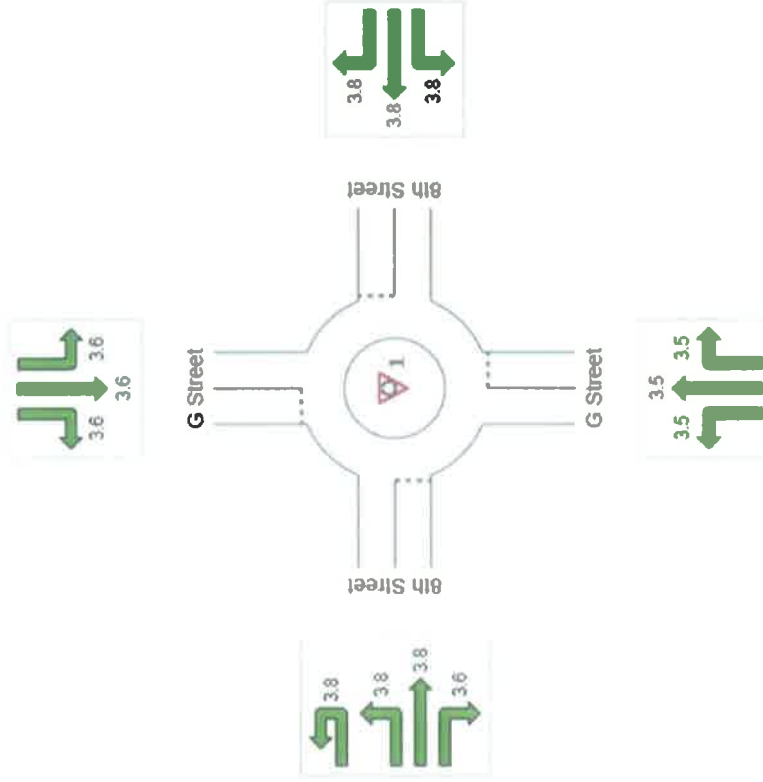
Average control delay per vehicle, or average pedestrian delay (seconds)

 Site: 10. G Street/8th Street (497)

Great Park Community Ice Facility - 2017 Approved AM Peak Hour Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	A	A	A	A	A
	3.5	3.8	3.6	3.7	3.8



Colour code based on Level of Service

LOS A	LOS B	LOS C	LOS D	LOS E	LOS F	Continuous
-------	-------	-------	-------	-------	-------	------------

Level of Service Method: Delay & v/c (HCM 2010)
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection)
Roundabout Level of Service Method: Same as Sign Control
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Processed: Friday, January 15, 2016 8:56:54 AM
SIDRA INTERSECTION 6.24.40
Project: RUMK1801.HCS 2010RoundaboutRoundabout Analysis01 2017Apr01 NP AM ap6
8600081 6022914 LSA ASSOCIATES, INC. NETWORK / IPC

SIDRA
INTERSECTION 6

DELAY (CONTROL)

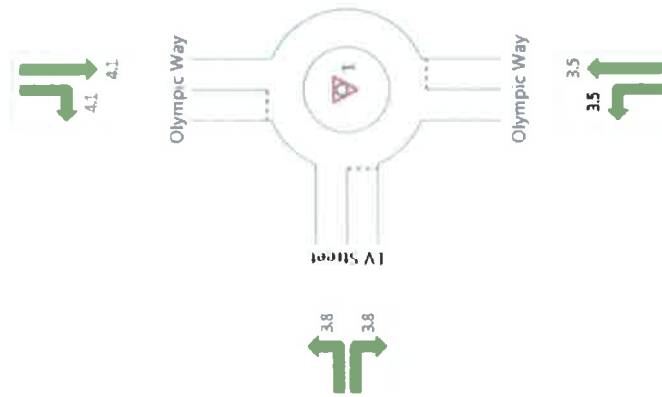
Average control delay per vehicle, or average pedestrian delay (seconds)

Site: 11. Olympic Way/LV Street (498)

Great Park Community Ice Facility - 2017 Approved AM Peak Hour Roundabout

All Movement Classes

	South	North	West	Intersection
LOS	A	A	A	A
	3.5	4.1	3.8	4.0



Colour code based on Level of Service						
LOS A	LOS B	LOS C	LOS D	LOS E	LOS F	Continuous

Level of Service Method: Delay & v/c (HCM 2010)

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection)

Roundabout Level of Service Method: Same as Sign Control

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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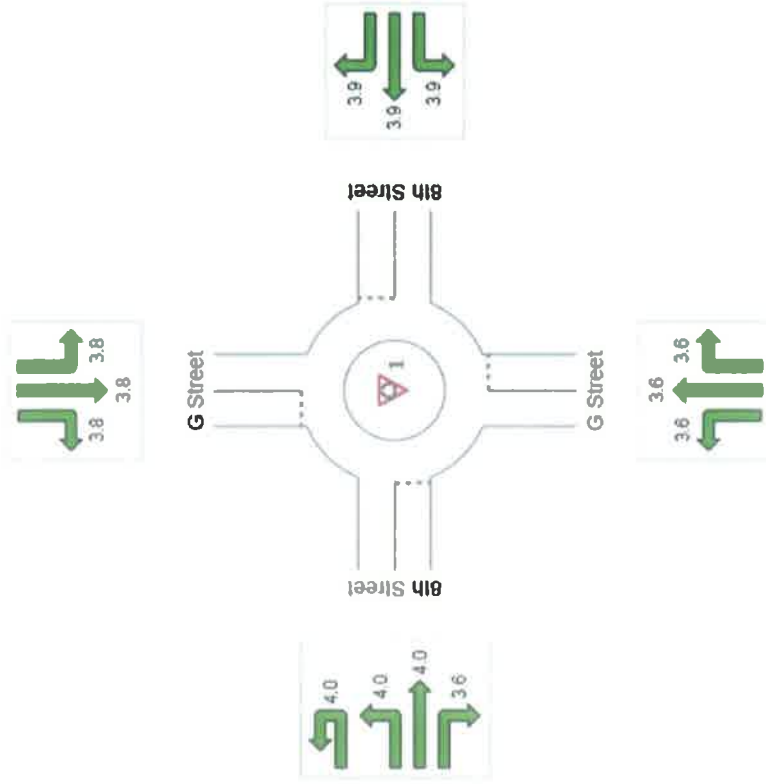
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8006961, 6022914, LSA ASSOCIATES, INC. NETWORK / IPC

Average control delay per vehicle, or average pedestrian delay (seconds)

Great Park Community Ice Facility - 2017 Approved PM Peak Hour Roundabout

	South	East	North	West	Intersection
LOS	3.6	3.9	3.8	4.0	3.9
	A	A	A	A	A



Level of Service Method: Delay & v/c (HCM 2010)
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Roundabout Level of Service Method: Same as Sign Control
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay is checked.

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Project: R2RNK1501NHS-2010RoundaboutFoundation
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**SIDRA
INTERSECTION 6**

Average control delay per vehicle, or average pedestrian delay (seconds)

Site: 11. Olympic Way/LV Street (498)

Great Park Community Ice Facility - 2017 Approved PM Peak Hour Roundabout

	South	North	West	Intersection
LOS	4.3	4.5	3.8	4.4
	A	A	A	A



Level of Service Method: Delay & v/c (HCM 2010)
LOS F will result if $v/c > 1$ irrespective of movement delay value (does not apply for approaches and intersection)
Roundabout Level of Service Method: Same as Sign Control
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay is selected.

Processed: Friday, January 15, 2016 9:43:06 AM
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B000081, 5022914, LSAAssociates, INC, NETWORK / 1PC

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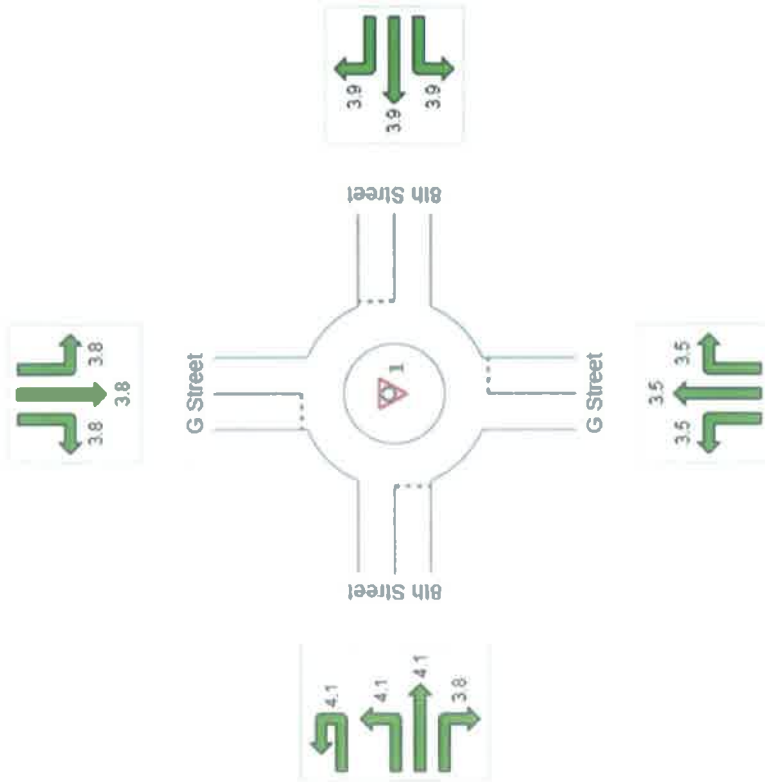
Average control delay per vehicle, or average pedestrian delay (seconds)

 Site: 10. G Street/8th Street (497)

Great Park Community Ice Facility - 2017 Approved With Project AM Peak Hour Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	A	A	A	A	A
	3.5	3.9	3.8	4.0	3.9



Colour code based on Level of Service

LOS A	LOS B	LOS C	LOS D	LOS E	LOS F	Continuous
-------	-------	-------	-------	-------	-------	------------

Level of Service Method: Delay & v/c (HCM 2010)
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Roundabout Level of Service Method: Same as Sign Control
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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SIDRA Intersection Analysis
Project: R16N41301 HCS 2010 Roundabout Roundabout
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DELAY (CONTROL)

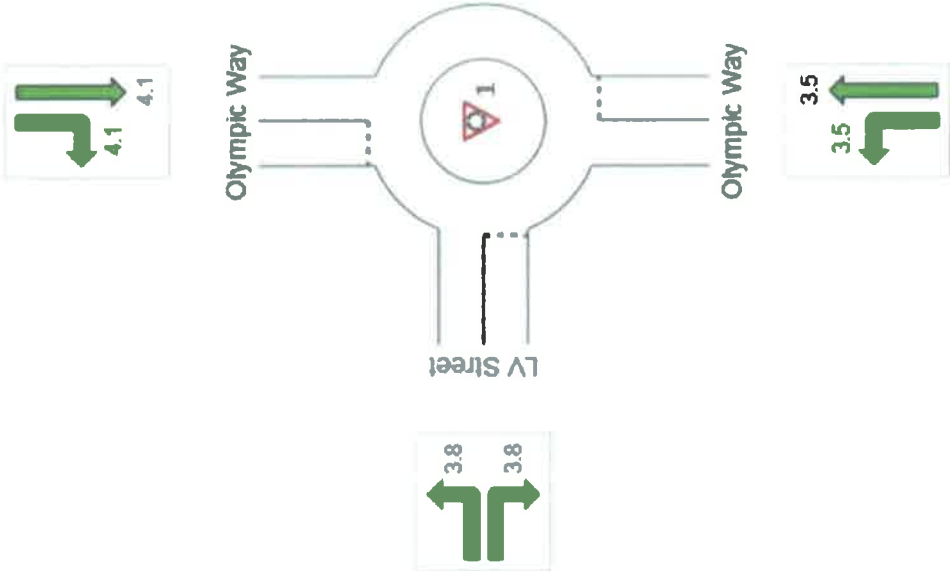
Average control delay per vehicle, or average pedestrian delay (seconds)

Site: 11. Olympic Way/LV Street (498)

Great Park Community Ice Facility - 2017 Approved With Project AM Peak Hour Roundabout

All Movement Classes

	South	North	West	East	Intersection
LOS	A	A	A	A	A



Colour code based on Level of Service

LOS A	LOS B	LOS C	LOS D	LOS E	LOS F	Continuous
-------	-------	-------	-------	-------	-------	------------

Level of Service Method: Delay & v/c (HCM 2010)

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection)

DELAY (CONTROL)

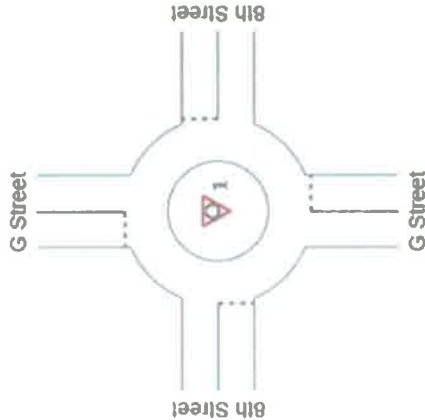
Average control delay per vehicle, or average pedestrian delay (seconds)

 Site: 10. G Street/8th Street (497)

Great Park Community Ice Facility - 2017 Approved With Project PM Peak Hour Roundabout

All Movement Classes

	South	East	North	West	Intersection
LOS	A	A	A	A	A
	3.7	3.6	4.1	3.8	3.8



Colour code based on Level of Service

LOS A LOS B LOS C LOS D LOS E LOS F Continuous

Level of Service Method: Delay & v/c (HCM 2010)

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection)

Roundabout Level of Service Method: Same as Sign Control

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies

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RUNDIA12011005201009roundabout@roundabout
8000811 8022914, LSA ASSOCIATES, INC. NETWORK / IPC

SIDRA
INTERSECTION 6

DELAY (CONTROL)

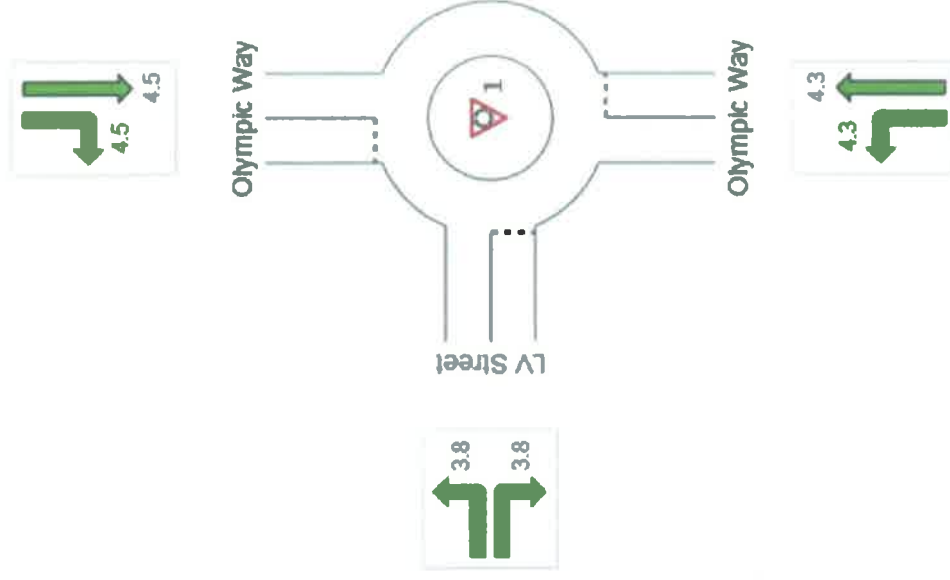
Average control delay per vehicle, or average pedestrian delay (seconds)

 Site: 11. Olympic Way/LV Street (498)

Great Park Community Ice Facility - 2017 Approved With Project PM Peak Hour Roundabout

All Movement Classes

	South	North	West	Intersection
LOS	A	A	A	A
	4.3	4.5	3.8	4.4



Colour code based on Level of Service

LOS A	LOS B	LOS C	LOS D	LOS E	LOS F	Continuous
-------	-------	-------	-------	-------	-------	------------

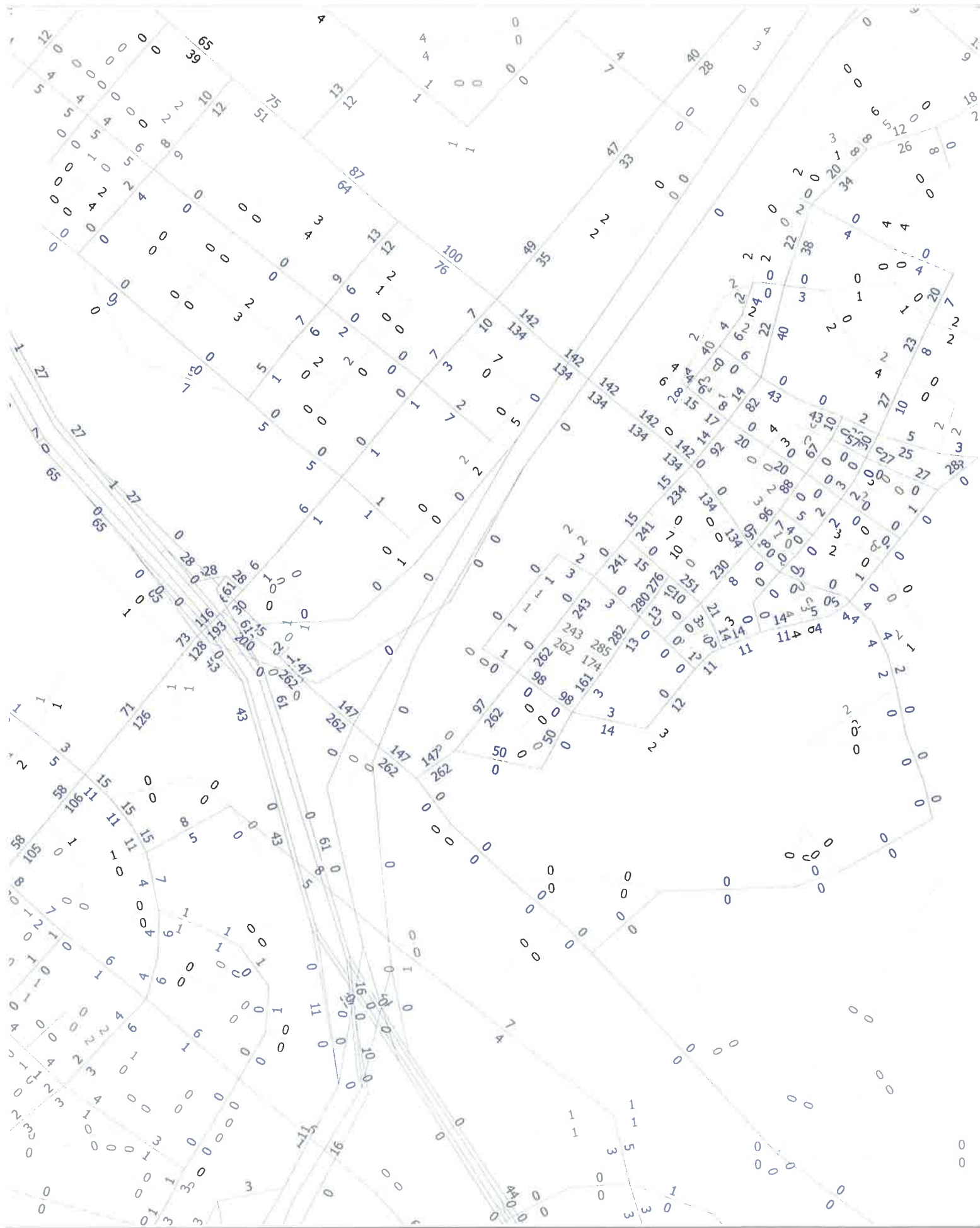
Level of Service Method: Delay & v/c (HCM 2010)
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection)

APPENDIX D

SELECT ZONE PLOTS







APPENDIX E

PROJECT DRIVEWAY LOS WORKSHEETS

HCM 2010 TWSC
4: Ridge Valley Street & RIRO Prj Dwy

1/25/2016

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	10	10	5	0	200
Future Vol, veh/h	0	10	10	5	0	200
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	11	5	0	217

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	123	8	0
Stage 1	14	-	-
Stage 2	109	-	-
Critical Hdwy	6.84	6.94	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	2.22
Pot Cap-1 Maneuver	859	1072	1600
Stage 1	1007	-	-
Stage 2	903	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	859	1072	1600
Mov Cap-2 Maneuver	859	-	-
Stage 1	1007	-	-
Stage 2	903	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 1072	1600	-
HCM Lane V/C Ratio	-	- 0.01	-	-
HCM Control Delay (s)	-	- 8.4	0	-
HCM Lane LOS	-	- A	A	-
HCM 95th %tile Q(veh)	-	- 0	0	-

HCM 2010 TWSC
4: Ridge Valley Street & RIRO Prj Dwy

1/25/2016

Intersection						
Int Delay, s/veh	1.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	31	31	16	0	83
Future Vol, veh/h	0	31	31	16	0	83
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	34	34	17	0	90
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	87	26	0	0	51	0
Stage 1	42	-	-	-	-	-
Stage 2	45	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	904	1044	-	-	1553	-
Stage 1	975	-	-	-	-	-
Stage 2	972	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	904	1044	-	-	1553	-
Mov Cap-2 Maneuver	904	-	-	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	972	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	8.6		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	- 1044	1553	-		
HCM Lane V/C Ratio	-	- 0.032	-	-		
HCM Control Delay (s)	-	- 8.6	0	-		
HCM Lane LOS	-	- A	A	-		
HCM 95th %tile Q(veh)	-	- 0.1	0	-		

HCM 2010 TWSC
4: Ridge Valley Street & RIRO Prj Dwy

1/28/2016

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	7	5	6	0	190
Future Vol, veh/h	0	7	5	6	0	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	5	7	0	207
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	112	6	0	0	12	0
Stage 1	9	-	-	-	-	-
Stage 2	103	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	873	1075	-	-	1605	-
Stage 1	1012	-	-	-	-	-
Stage 2	910	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	873	1075	-	-	1605	-
Mov Cap-2 Maneuver	873	-	-	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	910	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	8.4		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	- 1075	1605	-		
HCM Lane V/C Ratio	-	- 0.007	-	-		
HCM Control Delay (s)	-	- 8.4	0	-		
HCM Lane LOS	-	- A	A	-		
HCM 95th %tile Q(veh)	-	- 0	0	-		

HCM 2010 TWSC
4: Ridge Valley Street & RIRO Prj Dwy

1/28/2016

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	34	26	37	0	55
Future Vol, veh/h	0	34	26	37	0	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	37	28	40	0	60
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	78	34	0	0	68	0
Stage 1	48	-	-	-	-	-
Stage 2	30	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	916	1032	-	-	1531	-
Stage 1	968	-	-	-	-	-
Stage 2	989	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	916	1032	-	-	1531	-
Mov Cap-2 Maneuver	916	-	-	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	989	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	8.6		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	- 1032	1531	-		
HCM Lane V/C Ratio	-	- 0.036	-	-		
HCM Control Delay (s)	-	- 8.6	0	-		
HCM Lane LOS	-	- A	A	-		
HCM 95th %tile Q(veh)	-	- 0.1	0	-		

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	9	0	0	0	0	0	0	0	1	10
Future Vol, veh/h	0	0	9	0	0	0	0	0	0	0	1	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	165	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	10	0	0	0	0	0	0	0	1	11
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	7	7	7	11	12	0	12	0	0	0	0	0
Stage 1	7	7	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	11	12	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	1013	888	1075	1007	883	-	1607	-	-	-	-	-
Stage 1	1015	890	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	1010	886	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	888	1075	998	883	-	1607	-	-	-	-	-
Mov Cap-2 Maneuver	-	888	-	998	883	-	-	-	-	-	-	-
Stage 1	1015	890	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	1001	886	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s				0			0			0		
HCM LOS				A								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1607	-	-	-	-	-	-	-				
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-				
HCM Control Delay (s)	0	-	-	-	0	0	-	-				
HCM Lane LOS	A	-	-	-	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	-	-	-	-	-				

HCM 2010 TWSC
9: G Street & Full-Access Prj Dwy/Private Dwy

2/9/2016

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	9	0	0	0	0	0	0	0	1	40
Future Vol, veh/h	0	0	9	0	0	0	0	0	0	0	1	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	165	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	10	0	0	0	0	0	0	0	1	43
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	23	23	23	28	45	0	45	0	0	0	0	0
Stage 1	23	23	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	28	45	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	989	870	1054	981	847	-	1563	-	-	-	-	-
Stage 1	995	876	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	989	857	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	870	1054	972	847	-	1563	-	-	-	-	-
Mov Cap-2 Maneuver	-	870	-	972	847	-	-	-	-	-	-	-
Stage 1	995	876	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	980	857	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s				0			0			0		
HCM LOS				A								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1563	-	-	-	-	-	-	-				
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-				
HCM Control Delay (s)	0	-	-	-	0	0	-	-				
HCM Lane LOS	A	-	-	-	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	-	-	-	-	-				

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	1	0	8	0	0	0	0	25	0	0	25	10
Future Vol, veh/h	1	0	8	0	0	0	0	25	0	0	25	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	165	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	9	0	0	0	0	27	0	0	27	11
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	60	60	33	64	65	27	38	0	0	27	0	0
Stage 1	33	33	-	27	27	-	-	-	-	-	-	-
Stage 2	27	27	-	37	38	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	936	831	1041	930	826	1048	1572	-	-	1587	-	-
Stage 1	983	868	-	990	873	-	-	-	-	-	-	-
Stage 2	990	873	-	978	863	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	936	831	1041	922	826	1048	1572	-	-	1587	-	-
Mov Cap-2 Maneuver	936	831	-	922	826	-	-	-	-	-	-	-
Stage 1	983	868	-	990	873	-	-	-	-	-	-	-
Stage 2	990	873	-	970	863	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	8.5			0			0			0		
HCM LOS	A			A								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1572	-	-	1028	-	1587	-	-				
HCM Lane V/C Ratio	-	-	-	0.01	-	-	-	-				
HCM Control Delay (s)	0	-	-	8.5	0	0	-	-				
HCM Lane LOS	A	-	-	A	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0	-	0	-	-				

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	2	0	12	0	0	0	1	20	0	0	48	42
Future Vol, veh/h	2	0	12	0	0	0	1	20	0	0	48	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	175	-	-	165	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	13	0	0	0	1	22	0	0	52	46

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	99	99	75	106	122	22	98	0	0	22	0	0
Stage 1	75	75	-	24	24	-	-	-	-	-	-	-
Stage 2	24	24	-	82	98	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	883	791	986	873	768	1055	1495	-	-	1593	-	-
Stage 1	934	833	-	994	875	-	-	-	-	-	-	-
Stage 2	994	875	-	926	814	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	883	790	986	861	767	1055	1495	-	-	1593	-	-
Mov Cap-2 Maneuver	883	790	-	861	767	-	-	-	-	-	-	-
Stage 1	933	833	-	993	874	-	-	-	-	-	-	-
Stage 2	993	874	-	914	814	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.8	0	0.4	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1495	-	-	970	-	1593	-	-
HCM Lane V/C Ratio	0.001	-	-	0.016	-	-	-	-
HCM Control Delay (s)	7.4	-	-	8.8	0	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	-	0	-	-